REACH: EU Chemicals Policy- Actors, Networks, Parties and Political Opportunities

A dissertation presented
By

Mark Hengen

to
The Department of Sociology and Anthropology

In partial fulfillment of the requirements for the degree of
Doctor of Philosophy
in the field of
Sociology

Northeastern University
Boston, MA
April 24, 2015
Dedication

To Anais
Acknowledgements

I owe a great deal of appreciation to Dr. Daniel Faber, Chair of my dissertation committee for providing support and guidance throughout the process. His positive attitude, perseverance and encouragement made this possible. I deeply value the members of my committee, Dr. Ineke Marshall, Dr. Thomas Koenig, and Dr. Christopher Bosso for their insights, patience and kindness.
REACH: EU Chemicals Policy- Actors, Networks, Parties and Political Opportunities

by

Mark Hengen

Abstract of Dissertation

Submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Sociology in the College of Social Sciences and Humanities of Northeastern University
April 24, 2015
REACH: EU Chemicals Policy- Actors, Networks, Parties and Political Opportunities

Mark Hengen

Abstract

Openings in political opportunity structures determine policy outcomes. A movement’s success depends on their effective mobilizing strategies geared towards exploiting windows of opportunity. The methods included qualitative research of several primary sources including government documents, organization reports, corporate media information, policy documents, position papers, the scholarly literature, and key informant interviews. The results show that the European environmental movement effectively used several favorable strategies to enact a law to regulate chemicals called Registration, Evaluation, Authorization, of Chemicals (REACH) founded upon the precautionary principle and reversal of the burden of proof onto industry. “Pioneer” green states used the Europeanization process in concert with configurations of political elites to access cleavages. Environmental movement activists and science experts accessed a pluralist Commission to influence political decision makers. A proREACH advocacy coalition served as an effective organizational mechanism for coordinating multifaceted lobbying, public information and media campaigns. Environmental epistemic communities played crucial roles in transferring technical information into regulatory language supporting a precautionary approach. Identifying favorable elements in the political opportunity structure and predicting movement success defends the value of the political opportunity model for predicting the effectiveness of social movement strategies. Social movements can choose between party movement and interest group tactics within the European Union institutional structure to challenge existing policies. Future collective actions can learn from the data when organizing their contentious actions within and around the European Union.
<table>
<thead>
<tr>
<th>Table of Contents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedication</td>
<td>2</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>3</td>
</tr>
<tr>
<td>Abstract</td>
<td>5</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>6</td>
</tr>
<tr>
<td>List of Tables</td>
<td>7</td>
</tr>
<tr>
<td>List of Abbreviations</td>
<td>8</td>
</tr>
<tr>
<td>Introduction</td>
<td>10</td>
</tr>
<tr>
<td>Chapter 1    REACH – Political Opportunities for EU Chemical Policies</td>
<td>27</td>
</tr>
<tr>
<td>Chapter 2    European Union Institutions</td>
<td>79</td>
</tr>
<tr>
<td>Chapter 3    ProREACH Actors, Institutions, Issues and Strategies</td>
<td>109</td>
</tr>
<tr>
<td>Chapter 4    REACH Opposition and Member States</td>
<td>179</td>
</tr>
<tr>
<td>Chapter 5    Epistemes – Precautionary Principle versus Risk</td>
<td>222</td>
</tr>
<tr>
<td>Chapter 6    Conclusions</td>
<td>271</td>
</tr>
<tr>
<td>Appendix A   Institutional Review Board Information</td>
<td>281</td>
</tr>
<tr>
<td>Sources</td>
<td>289</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table                                      Page

Table 2.1  Rotating presidencies from January 1995 to July 2006      107

Table 3.1 Table 3.1 Key Events in REACH through the EU Policy Process 112

Table 3.2. “Business” coalition versus “Green” coalition.            153
**List of Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC</td>
<td>American Chemical Council</td>
</tr>
<tr>
<td>AmCham</td>
<td>American Chamber of Commerce</td>
</tr>
<tr>
<td>BAuA</td>
<td>Federal Institute for Occupational Safety and Health</td>
</tr>
<tr>
<td>BBU</td>
<td>Bundesverband Burgerinitiativen Umweltschutz</td>
</tr>
<tr>
<td>BDI</td>
<td>Bundesverband der Deutschen Industrie</td>
</tr>
<tr>
<td>BEUC</td>
<td>European Consumers Organization</td>
</tr>
<tr>
<td>CC</td>
<td>Competiveness Council</td>
</tr>
<tr>
<td>Cefic</td>
<td>European Chemical Industry Council</td>
</tr>
<tr>
<td>CoP</td>
<td>Conference of Presidents</td>
</tr>
<tr>
<td>COREPER</td>
<td>Committee of Permanent Representatives</td>
</tr>
<tr>
<td>Defra</td>
<td>Department for Environment, Food, and Rural Affairs</td>
</tr>
<tr>
<td>DG</td>
<td>Directorate General</td>
</tr>
<tr>
<td>DG ENTI</td>
<td>Directorate General Enterprise</td>
</tr>
<tr>
<td>DG ENV</td>
<td>Directorate General Environment</td>
</tr>
<tr>
<td>EC</td>
<td>European Commission</td>
</tr>
<tr>
<td>ECDC</td>
<td>European Centre for Disease Prevention and Control</td>
</tr>
<tr>
<td>ECHA</td>
<td>European Chemicals Agency</td>
</tr>
<tr>
<td>ECJ</td>
<td>European Court of Justice</td>
</tr>
<tr>
<td>ECSC</td>
<td>European Coal and Steel Community</td>
</tr>
<tr>
<td>EEB</td>
<td>European Environmental Board</td>
</tr>
<tr>
<td>EFSA</td>
<td>The European Safety Authority</td>
</tr>
<tr>
<td>EMCEF</td>
<td>European Mine, Chemicals, and Energy Workers Federation of the European Trade Union Confederation</td>
</tr>
<tr>
<td>EMEA</td>
<td>European Medicines Agency</td>
</tr>
<tr>
<td>ENGO</td>
<td>Environmental non-government organization</td>
</tr>
<tr>
<td>EP</td>
<td>European Parliament</td>
</tr>
<tr>
<td>EPHA</td>
<td>European Public Health Association</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>Euratom</td>
<td>European Atomic Energy Community</td>
</tr>
<tr>
<td>FECC</td>
<td>European Association of Chemical Distributors</td>
</tr>
<tr>
<td>FoE</td>
<td>Friends of the Earth</td>
</tr>
<tr>
<td>FVO</td>
<td>Food and Veterinary Office</td>
</tr>
<tr>
<td>GDCh</td>
<td>Advisory Committee on Existing Chemicals</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>ICCA</td>
<td>International Council of Chemical Associations</td>
</tr>
<tr>
<td>IG BCE</td>
<td>Mining, Chemical and Energy Industrial Union</td>
</tr>
<tr>
<td>ITRE</td>
<td>Committee on Industry, Research and Energy</td>
</tr>
<tr>
<td>KemI</td>
<td>National Chemicals Inspectorate Sweden</td>
</tr>
<tr>
<td>MEP</td>
<td>Member of European Parliament</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
</tr>
<tr>
<td>OECD</td>
<td>Organization for Economic Co-operation and Development</td>
</tr>
<tr>
<td>OSPAR</td>
<td>The North Sea Conference, and the Oslo and Paris</td>
</tr>
<tr>
<td>QMV</td>
<td>Qualified Majority Voting</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorization of Chemicals</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>SIDS</td>
<td>Screening Information Data Set</td>
</tr>
<tr>
<td>SOMS</td>
<td>Strategy on the Management of Substances</td>
</tr>
<tr>
<td>SVHC</td>
<td>Substances of Very High Concern</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
</tr>
<tr>
<td>TTIP</td>
<td>Transatlantic Trade and Investment Partnership</td>
</tr>
<tr>
<td>UIC</td>
<td>Union des Industries Chimiques</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>UNCED</td>
<td>United Nations Conference on Environment and Development</td>
</tr>
<tr>
<td>VCI</td>
<td>German Chemical Industry</td>
</tr>
<tr>
<td>WWF</td>
<td>World Wildlife Fund</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organization</td>
</tr>
</tbody>
</table>
A. INTRODUCTION

The dissertation demonstrates that the success of the European Union’s (EU) environmental movement to reform chemicals policy depended upon effective mobilization of political resources. The demands of the European environmental movement directly challenged the dangers of hazardous chemical policies in a post-materialist era (Ingelhart 1995). It was important to sort out which strategic actions best fit the movement’s likelihood of success within the political context of Europeanization (Kitshelt 1986). Social movements work outside party systems or the Parliament if they are marginalized. They can engage in disruptive or confrontational collective actions seeking to gain party support (Piven and Cloward 1979). They could also target a political opportunity structure as an alternative mechanism for voicing their grievances and preferred policy outcomes.

In the 1960’s and 1970’s, traditional economic and labor challenges in Western Europe expanded to include environmental claims. The environmental movement developed organizational structures and tactics that differed from unions and employers associations (Rucht 1983). The movement challenged European chemicals policies using elite alliances, interest group structures and advocacy coalitions as their organizational forms for mobilizing collective action (Kriesi 1996). A new political opportunity structure existed in and around the European Union institutions, allowing environmental interest groups and coalitions access to European policy discussions.
The European institutions and policy processes of co-decision and conciliation provided multiple access points for collective action. They operated in an *ad hoc* fashion, each European Institution with distinct characteristics from the others. Vertical and horizontal interactions occurred between Member States in corporatist or pluralist governance styles, leading to a mix of regulatory frameworks. As a result, the impact of the European Union’s political opportunity structure on a social movement remained highly variable (Marks and McAdam 1996).

In the new millennium, a strategy for regulating chemicals has instigated the most contentious political battle in European Union legislative history. In the 2000’s, European environmentalists took advantage of several openings and processes in the Union’s opportunity structure to bring about a new strategy for regulating chemicals. It is called the Registration, Evaluation, and Authorization of Chemicals (REACH). It reverses the burden of proof on to corporations for proving a chemical is safe and incorporates the precautionary principle. This means a manufacturer or importer of chemicals has the responsibility of showing that a chemical is safe before it can be marketed (no data, no market).

A multitude of interests participated in the contentious debates seeking to influence EU policy (Bomberg 1998). The European environmental movement shaped the enactment of REACH by establishing themselves as legitimate stakeholders with valid interests and concerns (Gamson 1990). The relative success of the European environmental movement depended on the structure of the decision-making system they chose to access based on their available resources (McAdam, McCarthy and Zald 1996). They focused on the agenda stage of the policy process, usually the most open to the European environmental movement and the Green Party (Bomberg 1998).
The main political opportunity strategies and tactics explaining the successful passage of REACH included: (1) favorable political elite alliances between Member States; (2) a set of political elite alliances with the environmental movement within the European Union; (3) advocacy coalitions taking advantage of the Commission’s pluralistic objectives; (4) the rise of a powerful environmental epistemic community; and (5) pioneering Member States. Pioneering Member States have an interest in expanding their own level of environmental protection to the whole of the EU while maintaining a right to have more stringent standards (Andersen and Liefferink 1997). Member state political elites and environmental interest groups maneuvered through the Commission, Parliament and Council of Ministers. Green actors remained significantly disadvantaged by the overwhelming level of resources expended by the chemicals industry (Bomberg 2002).

The Swedish environmental activists and the proREACH coalition targeted the European Union political opportunity structure using an interest group strategy (Kriesi 1986; Kitschelt 1986; Rohrschneider 1993). Although, political parties provided a forum for people to participate in the policy process (Dalton 1988), traditional European parties competed with the Greens for control over the political process (Rohrscheider 1993). The Green Party emerged outside the closed structures of traditional party governments (Inglehart 1990). They ultimately gained access to governmental participation, overcoming the system of class-based party representation. Green parties questioned the dominant neo-liberal ideology of progress as uncontrolled economic growth, and unlimited technological development (including chemicals). The Greens also shared a common concern for international and transnational issues in (Bomberg 2002). The inherent contradictions that prevailed between national and supranational levels of representation incrementally widened political agendas, organizations and
strategies in favor of compromise (Bomberg 2006; Rihoux 2006). Their ideologies were mainstreamed and de-radicalized into more pragmatic goals of gaining power as a minority group (Carter 2001). They chose safe issues over contentious battles (Bomberg and Carter 2006). Although the Parliament became the main public space for Green political activity, it continually changed and adapted to European Union changes because of its less rigid structure. The Europeanization of the Party professionalized the Green strategy and softened previously more radical policies (Bomberg and Carter 2006). Kitschelt (1986) argues that limited organizational resources geared Green efforts towards the party’s core supporters and the creation of a more mainstream party.

Sweden, as a strong uncompromising “pioneer” Member State (Andersen and Liefferink 1997), also worked closely with the environmental movement and proREACH interest groups to head off industry-inspired compromises by the European Parliament. The existence of a European Union political opportunity structure best fit the proREACH coalition needs. Party elites played important individual roles as Council of Ministers and Environmental Commissioners from several Member States such as France, Germany, Italy, Sweden and Finland. They acted as allies for the environmental movement. Green party members were especially important in playing such roles in Parliament.

The political elite alliances with the environmental movement were particularly important in providing a foundation of political support for REACH and facilitating progress of a new approach to regulating chemicals. McAdam (1996) and others suggest the presence of elite allies as one of the key variables providing wider access for social movements. Shared interests among influential decision makers provided valuable resources for taking advantage of political opportunities. Michael Meacher, the United Kingdom’s environmental minister, began setting
up informal meetings with other environmental ministers from Sweden and other Nordic Member States in 1998, intending to form an advocacy coalition of Member States just joining the Single Market (Sabatier and Jenkins-Smith 1993). They shared common frustrations with the existing ineffective patchwork of chemical regulations and were feeling the international pressures of harmonization from above by the Organization for Economic Co-operation and Development (OECD). OECD officials constantly pushed for more common regulations across countries. Meacher and the others recognized the UK’s turn as Council President was approaching. The political power of the Presidency with new Member States joining the Union provided an ideal opening for initiating chemicals policy reform. The power dynamics within the formal institutional structure of the EU were about to change with the accession of Sweden and the Nordic States. These Member States had sufficient coalition votes in the Council of Ministers to block any legislative proposals.

These states already had strong environmental and science expertise in their own countries to support the development of a new chemicals policy. They planned on uploading their more stringent chemicals policy upon joining the Single Market as a strategy for improving their competitive positions (Haverland and Liefferink 2012; Bomberg 1998). European enlargement forces and a stable elite coalition provided increased openings in the political opportunity structure. Sweden and the Nordic countries formed a minority coalition in the Council with sufficient strength to influence its agenda, and Meacher had the support of the Council’s new president. Pollack (2005) suggests that the Council of Ministers demonstrated a type of intergovernmentalism specific to European integration. Member States voice their national political preferences and then negotiated or bargained over the adoption of new policies (Pollack 2005).
Sweden and the Nordic States utilized the power of the Council of Ministers and elite allies to request the Commission’s review of existing chemicals policies in efforts to construct a new strategy (McAdam et al. 1996). REACH became part of the EU political agenda. The Commission initiated their review of the regulations concerning chemicals in 1998. The Council continued to adopt resolutions including making the precautionary principle a key part of REACH.

A second set of elite allies inside the EU political opportunity structure provided informal and formal political support for the development of a new chemicals policy. A configuration of administrative elites formed between the newly appointed Environmental Commissioner named Margo Wallstrom, a Green Member of European Parliament named Inger Schorling, and the Swedish Directorate General Chemicals Head of Unit, Eva Hellsten. European enlargement of Sweden and the Nordic countries opened up opportunities for national experts to take administrative positions in the Commission based on their expertise or competence. Sweden had a long history of progressive environmental legislation and strong regulatory chemical policies. Schorling would become the Rapporteur for REACH for the Environment Committee in the Parliament guiding the political discourse. Wallstrom and Hellsten supported REACH in the Commission, and prioritized chemicals policy reform.

Another driving factor leading up to the “White Paper on a Strategy for a Future Chemicals Policy” demonstrated expanding influences by EU level environmental organizations and a proREACH coalition that exerted strong pressure on decision makers in the EU institutions. A proREACH coalition of environmentalists, health care groups, animal welfare organizations, and consumer groups started working together as an advocacy coalition (Sabatier and Jenkins-Smith 1993), engaging in EU political dialogues and organizing informational
campaigns and lobbying strategies. The core group included the European Environmental Board, Greenpeace, Friends of the Earth, and the World Wild Fund. A public education campaign called DETOX was particularly successful as environmental ministers volunteered blood samples for testing the level of toxic chemicals in their system. They also conducted scientific studies of chemical exposures in toys and household dust as informational and media campaigns to build external public pressure on EU decision makers.

These same environmental organizations hired professionalized lobbyists to run expert driven information programs. This supports Long and Lorinczi (2009) contention that environmental movement has increasingly established campaigns and lobbying activities at the supranational level. Environmentalists continually found more efficient ways to integrate information campaigns with direct and indirect lobbying as their sophistication increased (Tilly 1995; Eisinger 1973). My research findings demonstrate that multi-tiered information campaigns were focused on the agenda-setting phase of the policy process, and primarily targeted EU decision-makers. They incorporated Member State media events linked to Brussels-based direct and indirect lobbying strategies. The proREACH coalition realigned their resources toward participation in Commission and Parliament stakeholder discussions, work groups, and complicated committee processes involving science-based decision-making.

The EU Commission operates as a multi-level governance structure (Hooghe and Marks 1997; Jordan 2005) facilitating debates over new legislative proposals and enforcing EU Directives. Although the institutional structure remained intact, the priority towards a pluralistic mode of governance significantly expanded openings for members of the proREACH coalition. Political processes changed, enabling greater participation by environmental movement actors (McCarthy and Zald 1977). A new emphasis on legitimacy, accountability, and science-based
decision-making significantly expanded the Commission’s interactions with non-governmental organizations (NGOs). ProREACH coalition members gained greater informal and formal access to Commission staff and acquired an insider status with Directorate General administrators, but not to the extent that Imig and Tarrow (2001) would argue. The Environmental movement instead shared information and conducted its own scientific analyses.

New processes of decision-making (McAdam et. al. 1996) encouraged a science-based decision approach. The importance of expertise increased in conjunction with greater access. Environmental organizations reoriented their mobilized resources towards conducting scientific studies and centering their operations in Brussels. They still targeted state authorities, as Rucht (2002) suggests, but more in cooperation than protest. The Commission supplied the environmental movement with funds for research activities related to informing policy decisions (Greenpeace denied the funding). The Commission’s focus on a pluralist government approach balanced out the power between the proREACH coalition and corporate interests.

Finally, I want to highlight the critical role played by environmental epistemic communities (Haas 1992; Zito 2001) in contributing to the success of REACH. Haas (1992) defined epistemic communities as networks of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy relevant knowledge within that domain. The proREACH epistemic community constantly battled industry science experts in Commission meetings and Parliamentary hearings advocating for the precautionary principle. The external support of proREACH lobbying and media campaigns added political weight to their arguments. However, there were two separate epistemic communities opposed to each other in REACH negotiations. Two policy frames, a “market” frame and a “Green” frame appeared. Their epistemic ideologies each promoted different mechanisms for governing risk.
Environmental movement epistemic communities constantly advocated for the precautionary principle during stakeholder forums, working group meetings and ad-hoc committees. Activist scientists were important in translating the complex language action into practical policy prescriptions. The strategic use of precautionary framing as a tactic helped maintain constant support for this approach to be part of REACH. The proREACH epistemic community interacted in both technocratic and political ways advocating for precaution. Oppositional epistemic communities, mainly from corporate interests, demonstrated strong contradictory ideologies, using dose-response curves and risk communication strategies as the preferred method for protecting human health and the environment from chemical substances of very high concern. A precautionary epistemic ideology recognizes that precautionary measures be taken when uncertainty or insufficient risk information prevails. It is better to err on the side of precaution then risk health damage from exposure. REACH was finally enacted as a hybrid approach merging two types of epistemic value systems together.

The research results show that corporate actors executed similar tactics as environmental organizations at the EU level. They operated within the same formal institutional characteristics and competitive elements that influence a movement’s activities (Van der Heiden 2006). The EU political opportunity structure influenced their choice of actions. The corporatist nature of the industry’s relationship with regulatory officials at the Member States did not directly transfer to the EU level (especially in the Commission) as expected in a multi-leveled governance system (Jordan 2005). The Directorate General Environment administrators weighted their political influence at equal levels with environmental organizations. In the Council, Sweden and the Nordic block supplied sufficient political force to influence the political decision-making process. Their voting alliance as a minority voting block had sufficient force to block legislative
proposals. Although Germany initially supported chemicals reform, their position changed due to their national elections when Schroder became chancellor. A more conservative government came into power.

The findings demonstrate corporate interests started with medium influence in the EU institutions, especially since public sentiments towards multinational chemical corporations were low. They slowly gained more power as the economy slowed, elite arrangements shifted (Kriesi at al 1994) and their strategies intensified (Kitschelt 1986; della Porta and Tarrow 2005). Corporate leaders reoriented their public image tactics towards aggressive direct and indirect lobbying and heavily financed media campaigns. They sought out other interest groups and allies outside the EU as a strategy to assert political pressure on EU institutions. They began a strategy at the OECD level to lower the level of harmonization standards.

In 1998, Tirouflet, the leader of Cefic, the chemicals manufacturer’s biggest lobbying federation, chose a public relations strategy focused on raising the industry’s public’s image in conjunction with direct lobbying in the Commission against a new strategy to regulate chemicals. The Business REACH coalition utilized a multi-tiered lobbying approach. It focused on media campaigns, direct and indirect lobbying tactics of Member States and in Brussels. Cefic, the European Association of Chemical Distributors (FECC), and the Big Three chemical company giants (BASF, Bayer, and Hoechst), were core members of the Business REACH coalition. They worked closely with the Directorate General Enterprise, national economic affairs ministries, conservative Members of the European Parliament, and Member State leaders from countries with well-established chemical industries (Sabatier and Jenkins-Smith 1993; Diani and McAdam 2003; Borzel 1998; Peterson 2003). They worked to broaden and consolidate their voice across a
wider set of actors. Their corporatist relationships with the state provided coalition members with greater access during the entire policy process (Coen and Richardson 2009).

Big business directly lobbied DG units who shared similar political positions as the chemical industry and participated in the DG ENV’s expanded participatory decision-making processes, including stakeholder forums and working groups (Kluver 2013). They utilized their vast resources to conduct scientific studies for the Commission and had their scientific experts provide technical information for Directorate General regulatory officials in committees. They worked to build informal and formal ties to Commission administrators. Cefic and ad hoc expert groups also utilized existing lobbying networks to gain insider status to EU institutions. They exploited elite access and informal networks with lobbying tactics, media events and coalition building strategies (Kluver 2013; Sabatier and Jenkins-Smith 1993).

During REACH’s agenda setting stage the chemical industry coalition lacked sufficient political influence to successfully contest the White Paper process. They could not match the political influence of the proREACH coalition (Sabatier and Jenkins-Smith 1993) and its configuration of pro-environment political elites in the Commission and Parliament. They eventually weakened many of the aspects of the chemicals legislation during subsequent steps of the policy process from 2003-2006 due to constant lobbying, shifts in elite alliances, and political elite configuration changes.

One key strategy targeted animal welfare groups. They published several scientific studies arguing that a greater number of animals were needed to meet the testing requirements outlined in the proposed REACH legislation. This caused a splinter in the movement as part of a counter-offensive. Animal welfare groups reconsidered their position and left the proREACH
co�ition. Also downstream users were important. They mobilized all users along their supply chains to build the resistance against the new strategy to regulate chemicals.

In 2000, Cefic at first deliberately approached REACH from a positive point of view, in 2000 hoping their corporatist ties and willingness to work with Commission officials would result in a favorable outcome. However, it was not the case. The determined Nordic block and Wallstrom pushed for the adoption of the White Paper’s recommendation sending shock waves through industry and in the European Union and the United States. This led to the American Chemical Society and the US chemical industry to intervene several times through the State and Commerce Departments, employing direct lobbying tactics in the Commission and Parliament. They stated concerns that REACH would lead to the globalization of higher chemical’s standards. However, the United States advocated independently and never joined the EU’s Business coalition. Their efforts backfired. The US bullish style towards Member of the European Parliament ended up helping support the European chemicals industry coalition. The German chemicals industry in particular strengthened their lobbying efforts and directed their campaign on parliamentarians that included workshops, meetings, lunches, and dinners. The Business coalition used information tactics by distributing letters, mailings, and media releases to MEP’s representing France, Germany, the UK, and Italy. They framed REACH as anti-industry. They also attempted to expand their Business coalition to include trade unions and the Labour party.

The BASF chairman, Eggert Voscherau, took over the anti-REACH lobbying effort in 2002, promoting a more confrontational style of political discourse. Voscherau and Cefic also reoriented their frames and strategies towards an emphasis on the economy and competitiveness during the co-decision process taking place in the Parliament and Council of Ministers. An
economic recession and Cefic’s reframing gained new allies. Chemical companies exploited the Commission’s and Parliaments focus on scientific expertise and published a large number of reports, consultant analysis, and research studies in support of the industry’s claim in Parliamentary hearings and Commission stakeholder forums. Countless position papers and cost analyses were submitted. However, the constant participation of science experts from the proREACH coalition continually worked to discredit corporate reports.

My research here reveals that the configuration of political elites again influenced the political opportunity structure (McAdam et. al. 1996). In 2003, for example, Italy took over the EU Presidency and focused on economic growth. Cefic and the Business coalition realized the window of opportunity had opened (Kitschelt 1986). REACH was transferred to the Competitiveness Council and watered down by the industry’s informal links to Tony Blair, Jacques Chirac and Gerhard Schroder. Corporate epistemic community members shared strong beliefs in risk management based on dose-response types of risk assessment. They preferred a risk communication strategy over a precautionary approach or the banning of substances when scientific uncertainty remained at a high level. They continued their “market as solution” frame, backed up by industry-sponsored research, to support their claims. The final REACH legislation integrated a risk management style of regulatory approaches with a precautionary approach.

A. Summary

The findings show that alternative mechanisms for challenging policies can be found through open or closed opportunity structures available in democratic post-industrial countries. The EU political opportunity structure provided the environmental movement’s proREACH advocacy coalition with an initial advantage. The EU Commission was the most receptive to
environmental concerns. It provided the environmental lobby with greater access and inclusion around science-based decision-making objectives. National positions and intergovernmentalism reflected how the Council worked. Member States asserted their position through bargaining strategies with other Member States. My research demonstrates how the European Union’s environmental movement employed advocacy coalitions as the preferred method for challenging environmental policies. Several key factors such as the configuration of political elites and the use of scientific experts in the agenda setting and policy processes were crucial for maintaining the strength of REACH. Leading Member States helped drive a new strategy of regulating chemicals up to the supranational level based on their own interests, while the environmental movement and chemical industry epistemic communities battled over inclusion of the precautionary principle in risk assessment and regulatory procedures. The growing influence of professionalized environment organizations is significant, as they mobilized sufficient resources to match those of the private sector.

In conclusion, it is now clear that the EU is becoming a global leader in international environmental politics, spurring other parts of the world to raise their standards in response to EU market demands. Member State epistemic ideologies may drive higher supranational chemicals policy that link with harmonization forces to bring about global change. The United States continually resists these standards and has taken the REACH controversy to the Transatlantic Trade and Investment Partnership (TTIP) negotiations in hopes of resisting change. The European Union continues to maintain its higher environmental standards that materialized from the environmental movement’s success during the agenda setting stage of REACH.

B. Methods
This research builds upon framing, social movement studies and institutional conceptual frameworks used to analyze environmental movement actors’ activities during the REACH policy processes. I specifically examine strategies, tactics and framing approaches utilized to access EU political opportunity structures. My research examines the frames used by proREACH groups, corporate interests, government officials, elected representatives and experts in setting the agenda for chemicals. I assumed that the political actors who successfully constructed the final master frame were the successors in the political debate. The winner of that framing contest established a policy foundation compatible with their own preferences (Snow and Benford, 1992).

My research employs an "interpretive research approach" (Yanow 2000) within a "grounded theory analysis" of documents, the media, and public testimony, along with interviews of leaders and key staff in social movements (Burawoy 1991; Charmaz 2001; Glaser and Strauss 1967; Strauss 1987). Interpretive research strategies presume that the social world is characterized by a wide variety of potential outcomes with multiple interpretations (Yanow 2000). This method targets the meaning of policies, and how those meanings are communicated and interpreted. It facilitates the identification of the issue's architecture and the communities of discourse involved in constructing symbols and meaning to the social dilemma.

A modified grounded theory analysis of archival sources and interviews with transnational environmental network actors (Commission officials, Member of the European Parliament) provided data measuring the influence of private interests, extended coalitions, and activists on political agendas. The grounded theory method stresses discovery and theory development rather than logical deductive reasoning, which relies on prior theoretical frameworks (Charmaz 2001). This methodology parallels Glaser's and Strauss' grounded theory,
but makes use of a more integrative and iterative approach (Glaser and Strauss 1967; Strauss 1987). It utilizes induction processes and iterative loops to leap from the literature to actual case studies (Burawoy 1991).

Coding occurred during the initial phase to categorize and sort data. It separated and compiled data from documents, media transcripts, public hearing documents, interviews and other collected materials. They helped make connections between discourses and behaviors. Most importantly the codes were determined for discovering processes where the codes fit the data, rather than forcing the data into codes (Charmaz 2001).

Semi-structured interviews took place consisting of an interview guide that includes a consistent set of questions or topics. Semi-structured interviews were specifically useful for understanding social movement mobilization from the context of individual actors or audiences. More in-depth data was collected and extended across larger parameters. My semi-structured interview process focused on exploration, discovery, and interpretation of complex social events and processes, and was combined with participant observation and/or documentary methods (McAdam 1988; Whittier 1995).

Key informant interviews took place to obtain descriptive information that may be time consuming to acquire through other types of data gathering techniques. Johnston and Klandermas (1995) find this approach useful to examine the evolution of a movement's collective action frame and strategies (Johnston and Klandermas 1995).

The methods used in this dissertation include the collection of preliminary information through exploratory research activities, investigating cursory information on European Union institutions, the array of actors involved, and ideologies of political institutions. Data from key informant interviews was collected along with European legislative databases. Political actor and
agency web pages provided cursory information. Public documents from recorded minutes of committee meetings provided were compiled.

Concerns about the validity (measurement validity and causal validity) and generalizability of conclusions are particularly important for qualitative research. Measurement validity occurs when the research measures what they think they are measuring (Schutt 2004.) Generalizability exists when a conclusion holds true for the population, group, setting, or event that the researcher says it does, provided that given condition that are specified (Schutt 2004). The goal of qualitative research is not necessarily quantifiable generalizations but analytical generalizations.

The results of the data collected were generalized to a broader theory through a detailed understanding of the event. I position the concept of generalizability into the context of the European Union and members-state policy development, where the processes result in specific European Union chemicals policy and “Precautionary Principle” policy instruments. The processes involved transpired in similar policies in other cases even though the particular policy instrument may be entirely different. This issue was addressed by choosing events that provided a wealth of understanding of the European Union policy process and courses of action taken by actors and institutions.

Validity was addressed through triangulation, the use of various types of methods and data. Triangulation is the use of multiple methods to study one research question (Schutt 2004.) In this research, data triangulation was accomplished by employing a number of data collection methods and types of documentation. Interdisciplinary triangulation occurred by examining the policy process from a social movement, political opportunity structure, science and technology, and policy process conceptual framework.
CHAPTER 1 REACH–POLITICAL OPPORTUNITIES FOR EU CHEMICAL POLICIES

“We discovered that neither consumers nor the government was informed about the chemical properties of what is in those and other products and how they break down, an overhaul was needed” (Schapiro 2007).

“Mr. Meacher says: Every day we come into contact with a myriad of chemicals which have been developed this century, from detergents to paints to plastics. Yet for most of these chemicals questions remain about the risks which they pose to us and to the environment at large.” (Facassini 1998)

“We don’t have to accept what industry proposes. If we don’t like the standards which are proposed we are going to have to consider tougher measures said Mr. Meacher,” (Crowe 1998).

A. The Role of Political Opportunity Structures (POS) in Guiding New Chemical Policy Strategies

Members of civil society have progressively become more concerned about the real and perceived hazards of chemicals in their environment. According to Ulrich Beck (1992), we live in a “risk society,” where the consequences of human actions are no longer limited by geographic scale or time, but are far more reaching and potentially destructive (Fuchs 2009). People are very concerned about their health and raise concerns based upon the principles of preventing harm, anticipating potential risks, and taking prudent precautions to reduce the harmful effects of exposure.

In response to this expanded public demand for action, new social movement organizations such as environmental and ecology groups emerged, and chose different mechanisms for interacting with restructured political opportunities at different points in time, to foster a new approach to addressing dangerous chemicals. Economically driven institutional transformations at the European level unfroze traditional power relations, allowing for fundamental shifts in environmental policies.
This research applies social movement approaches to investigate the emergence of a new European Union (EU) chemicals policy called REACH (Registration, Evaluation, Authorization of Chemicals) (COM (2001)88). This legislation surfaced during a time of tumultuous changes in the tactics environmental movements employed, the strategies corporate lobbyists chose, and the progressive actions “Leader states” engaged in during European integration. The research examines the factors influencing newly opened versus closed political opportunities, as the Europeanization of a common market matured into a multi-level institutional structure. It takes advantage of the fact that the EU represented a promising political opportunity structure for organized interests (Kluver 2013). It further examines resource mobilization and interactions social movement organizations and interest groups employed to address chemical risks during this particular moment in time. Environmental groups mobilized through informal and formal alliances to engage in strategic collective actions aimed at gaining access to supranational policy processes. Environmental policy making significantly shifted to the supranational level, indicating a dramatic change in the character of European governance. Emerging intergovernmental interactions called for new framing strategies targeting Brussels institutions that mediated interests between movement organizations, interest groups, green Member States, and science experts.

The research addresses how movement and countermovement actors adjusted their strategies and resources when adapting to changes in political opportunity structures and in competing for positive policy outcomes. Collective actions responded to external forces while political conditions subsequently affected their actions. Environmental movement mobilizations did not occur as isolated incidents in proposing REACH. They influenced future strategic interactions between formal and informal alliances including transnational advocacy networks. The
investigation seeks to integrate resource mobilization theories with organizational approaches to explain the character of domestic and international opportunity structures which remain fluid over time. During this period, more volatile changes seen in electoral patterns and elite preferences caused tensions between Member State leaders. Innovative strategies and organizational adjustments were needed to incorporate a two dimensional approach matching the political conditions at the domestic level with the Member State’s perceived ability to induce changes at the supranational level (Anderson and Liefferink 1997). EU political opportunities opened up while political elite alignments adjusted to European expansion. The political forces demanding inclusion, transparency and accountability from EU institutions further presented a means for environmental organizations to gain access to the political agenda and become institutionalized political groups.

B. Why Chemicals Need Regulating and a New Approach called REACH

1. Chemicals in Society

This case study applies social movement analytical frameworks to help explain how a new and innovative EU chemicals risk regulation came about in a fluid supranational political opportunity structure. It seeks to synthesize resource mobilization theory with organizational paradigms in investigating the interactions taking place between environmental movement groups, corporate lobbying groups, political leaders and political opportunity structures. Regulating chemicals effectively has been a persistent concern for people in the EU dating back to the 1960’s. More recently, the public became increasingly upset that chemicals adversely
affecting their health were not being removed from their environment (Lind 2004). Government regulatory frameworks inadequately protected people and animals from exposure to potentially harmful substances. Citizens were aggravated that adequate precautions were not being taken to protect the health of people and animals.

The growing concern over unhealthy industrial conditions, ineffectual corporate oversight, chemical spills, and the consequences of toxic chemicals on human populations and wildlife across all Member States helped REACH emerge onto the supranational political agenda. Environmental movement organizations staged successful public events elevating citizens’ concerns about chemicals, especially when high levels of hazardous chemicals were found in people’s blood. A policy window opened where ineffectual “limitation” directives were ready to be replaced by an integrative regulatory approach for controlling the production, import and use of chemicals in Europe (Warhurst 2005).

Almost all aspects of human existence involve the use of chemicals. People living in Europe have been using naturally found chemicals in their everyday activities for centuries. They have increased their consumption of non-natural substances since synthetic organics revolutionized the industry. The need for new dyestuffs for the textile industry has led to the emergence of new commodities, opening the road to plastics, synthetic fibers, and modern pharmaceuticals (Grant, et. al. 1988), significantly increasing the health risks to members of society. Although chemicals provide useful benefits to people’s lives and their health, they also can be extremely dangerous. Every day activities can lead to unexpected negative effects due to short and long term toxic chemical exposures. New laws are needed to protect the public’s well-being and ecological processes. New social movement organizations in partnership with Members of the European Parliament (MEP’s), national environmental ministers, and European Commission
representatives successfully constructed and passed improved regulations to proactively address how chemicals are regulated in the EU. They helped expand EU environmental policy by judiciously accessing the supranational political opportunity structure during key moments in the policy process to bring about positive change in chemicals management in the single European market. REACH, the Registration, Evaluation, and Authorization of Chemicals (COM (2001)88), contains more stringent chemical rules and strengthens protection standards. The passage of REACH fundamentally transformed European chemical regulation (Vogel 2012). It is founded upon two key and highly controversial principles: the Precautionary Principle and reversing the burden of proof onto chemical producers. Past chemical regulatory frameworks were overly complex and outdated and lacked sufficient strength to provide adequate protection from chemical risks. REACH was one of the most controversial and largest pieces of legislation ever passed in the EU.

Over 100,000 synthetic chemicals are used in consumer products, contributing 1.2% of the European Union’s total gross domestic product (GDP); 1.9% when pharmaceuticals were added in 2007 (Fuchs 2009). The over 500 million consumers in the internal EU market have boosted revenues due to intra-trade among EU countries, particularly among new Member States. Europe is one of the biggest chemical producing regions in the World. In 2011 the EU was the second-most chemical sales leader in the world behind China, accounting for 20.9% or €1437 billion of the world’s sales (CEFIC 2011). Although worldwide competition, specifically from Asia, has weakened the EU’s market position, it remains strong (CEFIC 2011). EU chemical sales were valued at €491 billion in 2010 due in part to sales to EU partner countries, which doubled from 1995 to 2010 (CEFIC 2011). The chemicals industry provides a strong manufacturing base for the European Union. It is one of the region’s most internationally
competitive and successful industries. The chemicals industry supports other sectors of the economy through the commodities it produces for downstream users, including construction materials, rubber and plastics, pulp and paper, cosmetics and products for the automotive industry. In 2012, the chemical industry contributed 1.1% to the EU’s gross domestic product.

Modern society depends upon chemicals and their diverse set of uses to support local and supranational economies through consumer consumption and downstream products. Unfortunately, this infusion of chemicals into society also brings with it significant environment consequences. Hazardous chemicals found in the natural and even in our homes can cause significant health problems ranging from cancer to disruptions of endocrine systems and adverse effects on peoples’ reproductive health. Hazardous chemicals are released into the environment everywhere and at several points along their life cycle. They can travel long distances across national boundaries and persist for decades, accumulating in the food chains of wildlife. They also generate vast amounts of hazardous waste often located near vulnerable populations. The production of synthetic chemicals includes substances that are used to make pesticides, synthetic fibers and plastics. A review of the German industry showed that in the manufacture of plastics, every unit of product creates four units of waste (Karliner 1997).

Although the European chemical industry drives a significant part of the EU’s economy (Harnick 2010) and employs over 1.2 million workers, the use of chemical products has also led to pollution and fatal health problems for those who are exposed, both humans and wildlife (Lind 2004). Studies revealed that high doses of contaminants commonly found in household products ended up in the bodies of children (Greenpeace and WWF 2004). Concentrations of mined chemicals expanded during the Industrial Revolution, accompanied by extensive invention of chemical and synthetic substances. Chemical companies have developed a vast assortment of
engineered chemicals since World War I, increasing food supplies and making life easier. Chemicals such as mercury and lead have been used in a variety of products permeating all aspects of our economy and society. However, what seems to be benign innovation and beneficial social value can also paradoxically cause harmful effects on human health and ecological processes through the thousands of chemical products consumed in everyday life. Many have properties leading to health problems for workers or negative impacts on the environment (Warhurst 2005). Consumer products such as toys, computers, perfume, and shoes have been discovered to contain hormone-disruptors, triclosan, DDT, and a whole host of other toxins. Expanded toxic chemical production and accompanying waste creation directly correlates with considerable increases in damage to people’s health and to ecological systems. Cancer rates have increased and a growing amount of evidence suggests synthetic chemical compounds are accumulating in terrestrial and aquatic ecosystems, and especially in human populations.

Products such as brominated flame retardants containing hexabromocyclododecane affect the liver or thyroid while also significantly impacting organisms in aquatic ecosystems (Fuchs 2009). A Greenpeace study found that blood samples of people in the Netherlands contained high concentrations of particular phthalates, the brominated flame retardant BDE-13, and the artificial musks tonalide and galaxolide (Peters 2004). Furthermore, Santillo et. al.’s (2003) investigation of household dust in 100 United Kingdom homes found that all dust samples from UK households contained phthalates, brominated flame retardants and organotin compounds. More than three quarters also contained nonylphenol and short-chained chlorinated paraffins. The data demonstrates a continued use of hazardous chemicals in consumer products leading to high amounts of contamination in people’s home environments. Overwhelming evidence of chemical toxins in wildlife, coupled with corresponding data on widespread human exposure,
demonstrated the urgency for reforming EU chemical policies to protect human health and the wellbeing of wildlife. There is no doubt that even low levels of certain synthetic chemicals are responsible for or contributing to a multitude of serious effects on the environment and human health that must be addressed by the EU).

2. Why a New Chemicals Policy?

REACH emerged out of the deficiencies found in existing chemical regulations at the Member State and EU levels, in parallel with growing public concerns about the effectiveness of government officials in protecting human health and wildlife from exposures to toxic substances. A mix of actors, ranging from environmental ministries to ENGO (Environmental Nongovernmental Organizations) activists, played key roles in proposing and passing a new approach to chemicals regulation. Since the 1970’s government regulators and scientists have realized that the availability of timely and reliable information about the health and environmental impacts of chemical substances was crucial for effectively governing and managing chemicals risks. Prior to 2007, the control of chemicals in the EU was governed by a complicated and confusing set of Directives and Regulations (Heyvaert 2007).

European market access to chemical products depended upon vital information about the toxicity of commodities containing potentially harmful substances using several risk management frameworks (Heyvaert 2008). Data about products was crucial. Directives introduced to harmonize restrictions did not oblige the chemical industry to find out specific information about the risks of their chemicals (Warhurst 2005). Member State government agencies were the critical lynch pin responsible for collecting chemical risk assessments in
technical dossiers. They were further responsible for distributing risk data to the EU Commission so that appropriate restrictions could be placed on the marketing and use of potentially dangerous chemicals in the common market. The lack of adequate safety information put a significant burden on regulatory authorities. Member State chemical risk departments were hampered by the long, cumbersome process of collecting risk information if it existed at all. Prior to REACH, the information requirements of regulatory approaches favored old, more risky toxic chemicals over innovative and less threatening ingredients. Hazardous chemicals were widely circulated in the market without precaution, until human health effects became evident. Remarkably, little was known about 30,000 older chemicals regularly traded for over 25 years (Heyvaert 2008). The REACH regulation (Regulation (EC) No 1907/2006) was finally adopted on December 18, 2006 by the European Parliament and representatives of the Council of Ministers, providing a comprehensive regulatory framework for all chemicals produced and/or distributed in the EU market. It was a new institutional design for governing chemicals by infusing the Precautionary Principle into its founding scientific principles and reversing the burden of proof from government regulatory authorities onto the private sector, corporate manufacturers and downstream users. The new REACH regulation protects human health and ecosystems from the destruction of hazardous chemicals.

3. Growing Public Discontent, Political Opportunity Interactions, and REACH

REACH did not emerge overnight in a vacuum, nor did its final approval and initial implementation in 2007. Beginning in the 1970’s, a series of regulatory failures and crises increased the political salience of the need for a change in European risk management policies
(Vogel 2000). Several chemical disasters and influential scientific reports undermined public confidence in regulatory officials and science experts. Environmental protection and the fight against pollution in the United Kingdom, Norway, Sweden, Germany, France, and other Member States became an immediate and urgent problem in the view of 85% of EU citizens in 1992 (Bomberg 1998).

European environmentalism in the 1980’s paralleled what was happening throughout other western industrialized countries and in the United States. Anti-nuclear groups and political ecology organizations developed in conjunction with previously formed conservation associations (Diani 2003). Initial pressures for tackling more effective chemicals management targeted local political opportunities. Parochial struggles emerged as inchoate movements. Green movement activists began responding to growing public concerns regarding chemical exposure and the environmental degradation of local neighborhoods. Community Green Lists developed in the form of decentralized grass roots groups who were mostly operating at the neighborhood level. They mobilized resources in reaction to industrial environmental damage, chemical contamination and deteriorating human health conditions emanating from adjacent polluting factories and chemical plants. Environmental activism took place primarily where the political authority resided (Eisinger 2004).

Environmentalists were able to access local political opportunities using increased direct mobilization tactics especially where the number of activists in environmental and ecological movements expanded considerably. They mobilized direct actions against large multi-national companies such as BASF, Bayer and Dow. In several EU Member States the social impacts of this rise in environmental consciousness permeated to the federal level where Greens were represented in national Parliaments, increasing the potential pressure on the chemical industry.
Domestic level mobilized resources dominated the venue shopping by social movement actors into the late 1990’s. They were able to confront national governments regarding traditional models of economic development and nuclear power policies.

However, when the Hoffman-LaRoche’s plant in Seveso, Italy exploded in 1976, the scale of public concern for chemicals management expanded. People realized that the health risks of chemicals and the extent of environmental damage were not limited to national political boundaries. Regional approaches were necessary to adequately address the potential risks chemical substances posed to the environment. Yet another chemical disaster at the Sandoz plant in Basel, Switzerland, further reinforced the mounting public fear regarding chemicals management. Not only did these accidents elevate the public’s anger regarding the lack of protection provided by national governments, but they also sparked a demand for regional or EU environmental policies. These pivotal chemical exposures played significant roles in pressing the EU to incorporate environmental regulations into the legal framework of the Single European market. The chemicals industry operates internationally and its impact affects the health of people and animals beyond Member State borders. The costs of environmental regulation should be leveled up on a Community-wide basis (Grant et. al 1988). Although the Seveso accident in 1976 provoked a new EU directive (the Seveso Directive), slow and incremental regulatory improvements resulted in only furthering ineffectual piecemeal attempts to control the use of chemicals in the EU. New chemical policies were constantly sacrificed in favor of the free market. “Corporate friendly” regulatory frameworks prevailed, especially for large chemical sites that demonstrated high profitability margins. Government agencies continued to maintain close consultation and corporatist relations with chemical industry experts, keeping environmental protection and human health concerns at lower levels of the political agenda.
Environmental groups remained very weak in relation to the considerable political resources of the chemical industry (Grant et al. 1988).

Several key actors from diverse political locations responded to the public’s growing skepticism and exploited political cleavages to bring about substantial change in the way society managed chemical risks. Members of the environmental movement and countermovement mobilized resources, interacting with each other and the changing political power structures as part of a dynamic policy process. They played important roles in transforming the institutional design for regulating chemical risks in European society. Some were influenced by the movement themselves others by European enlargement forces. Member State political officials, Green Party EP legislators, environmental groups, corporate advocacy networks, and science experts participated in one of the most controversial political discourses in EU legislative history at a time when EU governance and Europeanization was experiencing dramatic changes. Reciprocal interactions occurred between political opportunity structures and social movements affecting policy outcomes (Della Porta 1996; Gamson and Meyer 1996).

Collective actors in the environmental movement or those who shared common knowledge interests (Eyerman and Jamison 1991) as environmentalists performed vital roles in mobilizing resources to transform EU chemical policies. Activists in Greenpeace, Friends of the Earth and World Wildlife Fund strategically interacted with institutions and corporate opposition organizations such as CEFIC in distinctive ways at different times depending on their perceptions of political opportunity. Their actions affected the actions of others. Leading environmental organizations coordinated public events as part of their repertoire of tactics that did not stand alone as independent occurrences. They reacted to the external political institutions and favorable public sentiment mounting at that time. They were able to build upon the efforts of
politicians of leading “green” member states that advanced their interests in EU policy making. For example, Swedish politicians and experts uploaded their chemical policies to attain favorable policy outcomes at the EU level. Each of these single actions altered the prospects of future actions. Actors’ strategic actions and the actions of their opposing groups or advocacy networks affected each other and the structure of political opportunities in the governing institutions of the EU.

C. Research Perspective

In 2001, the European Commission (EC) published a report stating that “EU chemicals policy must ensure a high level of protection of human health and the environment as enshrined in the Treaty both for the present generation and future generations while also ensuring the efficient functioning of the internal market and the competitiveness of the chemical industry (Greenpeace 2001).” Headlines in the Belfast Newsletter read:

“The Green Party in Northern Island yesterday backed a call to the European Commission to respond to public demand for a “toxic free-future.” A coalition of Europe's largest environmental groups representing millions of members - European Environmental Bureau, European Public Health Alliance, Friends of the Earth, Greenpeace, Women in Europe for a Common Future, and WWF submitted their Declaration for a Toxics Free Future to the Commission to protect their health and the environment from hazardous chemicals” … (Belfast Newsletter 2003).

Collective actions by groups of people and coalitions have pressured policy changes since the rise of nation states. Supranational political opportunity structures, elite alliances and available resources influence the strategy choices social movement organizations consider in executing an array of tactics. Environmental groups engage in a variety of action repertoires as political
opportunities continually change. The research goal seeks to discover how the dynamics found in
REACH’s contentious politics compares to existing theoretical concepts of political opportunity
structures and the interactions which take place between institutions and social movements.

The basic principle of political opportunity structure suggests that exogenous factors enhance
or inhibit prospects for mobilization (Meyer and Minkoff 2004). Particular elements can
successfully advance certain claims while others constrain a movement’s ability to bring about
their policy preferences. Scholars promoting the political opportunity framework ensure the
conceptual model provides a useful tool to forecast organizational frames and differences across
institutional settings. Explanations underscore the interactions of activists’ efforts and their
relationship to mainstream politics. However, the challenge for researchers concerned with
political opportunity is the ability to explain which specific aspects of the external world affect
the development of social movements as well as how this development is affected (Meyer and
Minkoff 2004). The conceptual framework has become a catch all explanation for a full range of
factors, rendering it increasingly ambiguous and unable to predict the dynamics of future
mobilizations. It contains a structural bias. Even though interactions between a POS and social
movement organizations are considered, they have not been the focus of increased investigations,
where the dynamic aspects of political opportunities remain under researched. Although this
approach can surely explain a great deal, it is less important to run opportunity approaches
against alternatives (Van Dyke and Soule 2002) than to discover the relationships of particular
variables to the outcome examined (Meyer and Minkoff 2004). McAdam, Tarrow, and Tilly
(2001) argue that new research needs to move away from thinking of causes and effects as
determinant inputs and outputs, and toward identifying mechanisms and processes that occur
across many settings.
This research examines what factors promoted certain types of strategies versus others used by environmental social movement organizations and coalitions in mobilizing resources and issue framing to challenge powerful corporate opposition to the construction of a new paradigm to regulate chemicals. It investigates the calculated use of scientific expertise in particular as a useful and necessary instrument for accessing political opportunities.

The structural elements affecting social movement organizations and advocacy groups can be explored using a case study approach to examine how activists responded to and interacted with political opportunities and subsequent alterations. The activities of environmental organizations and institutions can be analyzed from multiple perspectives that occurred over time. In this regard, the research goals add to the literature on political opportunity structures by focusing on the interactions occurring between organizations and EU institutions. The research also adds to the literature on social movement organizational strategies and actions, especially in the context of new social movements and the expansion of EU institutions. Furthermore, it integrates theoretical concepts of static variables used to analyze opportunity structures with research on the mechanisms organizations employ during claims making activities at the supranational governance level.

The dissertation implements a specifically chosen in-depth case study of REACH legislation to examine when and why government state environmental leaders, environmental movement organizations, corporate organizations, and scientific experts chose one strategy and tactic over others. The key questions are:
1) What political opportunity factors affect how environmental organizations as civil society groups choose certain strategies and tactics over others, subsequently altering their organizational forms?

2) What institutional openings or closings are perceived by political actors and science experts who promote specific preferred policy agendas and employ strategic framing to promote particular policy outcomes over others?

3) Is it true that the more harmonized elite alignments are directly corresponds to openness in political opportunities? Weak elite alliances correspond to increased openness because the likelihood of finding new influential allies is greater.

4) How and why do epistemic communities who share normative and principled beliefs and who share causal beliefs or shared notions of validity act as single agents in framing discourses to penetrate EU political opportunity structures?

Environmental social movement organizations shift their framing, organizational features, and strategies to target organized lobbying efforts at certain political elites. Due to EU political opportunity changes the quantity of environmental groups at the supranational level has expanded, increasing their power and level of professionalism. Numerous organizations have assembled transnational advocacy networks as lobbying organizations at the supranational level. Information sharing is key; applying pressure from multiple dimensions, pushing EU government officials to address national and regional issues. The Commission in particular uses information collecting, data from scientific experts, and policy rationalizations as a successful method for acquiring legitimacy and gaining acceptance from European elites. Environmental movement organizations gain access to political dialogues by accepting the Commission’s
invitations to participate. They are asked to supply additional relevant scientific data during policy discussions. Historically, radical environmental nongovernmental organizations lose power and are apprehensive about implementing radical or direct action strategies and tactics, in fear of losing their political location in transnational advocacy networks or their existing access to EU policy making governance networks.

Environmental movement organizations and corporate actors frame their views strategically to influence policy discussions which also reflect the interests of the individual or group they represent. It is assumed that actors are rational and purposely act to influence how issues are understood and viewed by other actors in the debate. Actors construct master frames to encourage particular policy outcomes. Analytical framing approaches assume that collective action discourses are created by social movement actors so that they may mobilize resources. Issues do not contain frames, but political actors attach frames to issues. The new chemicals policy dialogue included framing of social and political issues in specific ways that were continually science based. The linking of effective framing processes with openness in the political opportunity structure attempts to connect positive policy outcomes with framing activities and levels of openness.

The configuration of political actors can partly explain the success of master frames during policy processes. A governance system is generally open for most citizens who are able to implement conventional participation strategies. However stronger elite alignments can either significantly increase access or considerably constrain participation. They are beneficial to environmental movement organizations when configurations of elites and their preferences match a group’s preferences, leading to more inclusive levels of participation, but they can also be significant obstacles when they do not. A split in elites represents key opportunities for social
movements. Unstable political alignments refer to changing political alliances. The potential for changing allegiances, even changes in governmental actors, can lead to greater access because volatile relationships can lead to a reconfiguration of elites. Elite fragmentation and weak consensus within their concentrated centers of power allow room for social movements to pit one faction against another. This elevates the level of mobilized resources of social movement organizations.

Professional and technical experts who promote a Precautionary Principle chemical risk management paradigm can act collectively as members of a particular epistemic community with specific policy preferences. The professional and technical expertise of the epistemic community is determined and recognized by other community members and those external to the group. Environmental organizations, corporate groups and Member State agencies incorporate science experts into political participation during government hearings, testimony, and other legislative meeting submissions because of changes in supranational political opportunity structures.

D. Theoretical Background

1. European Union Political Opportunity Structures

European integration has dramatically transformed the institutional configurations for the Member States (Imig and Tarrow 2001). It has experienced a significant political restructuring into a multi-level polity where political actors engage in a growing number of contentious dialogues. The Single European Act and the Maastricht Treaty created a new supra-national political opportunity structure within the European Commission, the European Parliament, and
movements can emerge and develop in reaction to such changes that render institutionalized
political systems increasingly vulnerable or receptive to challenge (McAdam 1982; Tilly 1978).
New transnational forms of governance such as the formation of the EU shift the structure and
geographic centers of institutional power and therefore affect national and multinational political
opportunity structures for collective action. The current process of forming the multi-level
governance system calls into question the shifting power of the nation-state and creates dynamic
relationships between social movements and an emerging new pattern of institutionalized
relationships. Political agendas and relations across levels of government as well as patterns of
decision making have already altered the political environment of most environmental social
movements and interest groups (Marks and McAdam 1996).

The literature on cleavages, political contestation, and policy making of the EU can be
drawn from two perspectives: intergovernmentalism and institutionalism. Intergovernmentalism
argues that EU integration came about due to the political outcomes of effective negotiations
among nation-states responding to political concerns over interdependence between nation-states
argues that the preferences of national governments are formed through iterative interactions
with powerful domestic economic interests. This perspective allows little conceptual space for
non-territorial factors that also definitely impact political actor preferences. Environmental
policies are first driven by individual state interests then negotiated at the supranational level to
construct a collective solution. In regulatory policy areas, such as environmental policies, it is
argued that governments seek a balance between commercial interests and environmental
protection.
A particular nuance is that national governments try to avoid European policies because of the higher costs imposed on their economies. Therefore, richer countries with higher regulatory standards defend their elevated levels of social protection in contrast to poorer countries with lower protections. Poorer countries fight against harmonization of environmental standards because of the added demands on their economies. Therefore a cleavage develops between rich and poorer countries. More wealthy countries seek to adopt higher environmental protection levels to correct market failures while poorer nations have lower environmental protection standards, particularly in enforcement, because they hope to evade high adaptation costs (Liefferink and Andersen 1998; Borzel 2003).

On the other hand, an institutional perspective suggests that EU institutions and nongovernmental organizations and state actors significantly influence the political processes inherent in European policy making. This approach takes on a functionalist argument, believing that policy developments in a particular policy domain will diffuse and also affect the political outcomes in other areas of political concern. In this way integration ties evolve and strengthen over time.

The EU as a regional governance system has significantly matured during the period from the 1990’s to early 2000’s. It is becoming more evident that the EU acts more like an intergovernmental institution rather than in the traditional sense of an emerging new nation-state. That is, it is evolving more like a regional union of nation-states continually constructing increased levels of commonness physically as well as in regards to ideational factors (Schmidt, 2004). A dynamic political process between Member States continues to undergo change where the institutional limits constantly transform. Although state distinctiveness stays intact,
European integration incrementally expands and multi-national governance extends across all levels undergoing incessant modification.

A wide variety of academic research has examined the Europeanization processes. The scholarly work contains a wide diversity of literature from many perspectives ranging from an elite top down process of an Europeanization project of policy diffusion to Member States (Schmidt 2004), to the never ending evolution of policy convergence as member states construct parallel environmental policies. The focus of this research takes the point of view that policies across Member States slowly become the same over time (Knill 2005). The objectives of policies, the use of various policy instruments, and the institutional policy settings gradually become alike despite differences in the political opportunity structures at the national and local levels.

The Europeanization of environmental policy making during the 1980’s and 1990’s mostly consisted of changes between different levels of governance where national and local political jurisdictions struggled to uphold sufficient competence and political influence to effectively implement European Union level policies (Jordan 2005). However, more recently political actors and groups of activists among many EU organizations, national governments, and nongovernmental organizations are either working together or are in conflict with each other while attempting to achieve specific policy outcomes and impact the policy-making processes (Borzel 2002).

Therefore, EU environmental policy making has more recently exhibited the actions and processes consistent with an institutional type of theoretical framework. Governments at the national level possess significant political weight in European environmental governance during the political conflict between various pillars of the European government structure. Social
movement organizations have targeted their efforts at not only the state level but also at the European Union level. They have set up offices in Brussels and are very effective lobbyists during policy processes and help support changes in constructing new policies. Many times the scientific expertise of experts in a nongovernmental organization exceeds the knowledge of directorate general representatives and other staff members from the other two institutions, particularly in the chemicals policy domain. However, that is not to say that collective action actors do not at the same time sustain their national level activities.

Political cleavages in the environmental policy domain demonstrated similar characteristics during state level political dialogues and European Union level discussions. Differences in the political left-right policy arguments remained the same at the EU and national levels. Furthermore, they both support supranational policies but from their traditional perspectives regarding economic regulation and the protection of the environment (Hooghe et al. 2002).

On the other hand, particularly regarding chemicals policy in the EU, traditional political differences do not correspond to the supra-national level. For example, at one point in time during the policy process, environmental policy political actors are in conflict with actors in the polluter industrial complex and with the competitiveness of European industry. Therefore, politically contentious chemicals policy can be better described as a conflict between groups of actors that have formed coalitions particularly as new chemical policy legislation has been introduced into the EU institutions by the Commission. That is, the public discourse and institutional arrangements are impacted by competing coalitions advocating for environmental protection and industrial interests. Environmental policy coalitions include environmental ministries in Member States like Germany, national government agencies of each side, the Commission’s Directorate General (DG) for Environment, and other EU-level organizations.
such as the European Environmental Bureau (EEB), social movement organizations, and several “Green” EU Member States (Lingren and Persson 2008). They share common interests in the political outcomes of environmental policies geared towards increasing the regulation of the industrial polluter complex. Conversely, industry representatives include European business associations, the Commission’s DG Enterprise, national economic affairs ministries, and EU Member States with large chemical companies such as Germany, France, Italy, the United Kingdom and Ireland. These political actors sharing a neo-liberal political perspective generally seek fewer restrictions on their industry. Political party members and European Parliament political groups have representatives in each coalition of organizations. Most of the time; however, European Parliament members are identified with EU Environmental Policy networks (Lenschow 2005).

2. European Environmental Movement and European POS

European integration has gradually shifted significant decision making power away from national institutions towards EU levels of governance. A select number of social movement organizations have the organizational resources and appropriate ideologies to support collective action at the supranational level. They may modify their operations towards a more professionalized type of environmental social movement organization characteristic of a shift of resources towards supporting elite alliances and interest group activity while attempting to equally sustain their grassroots and radical collective actions. Environmental movements and environmental movement organizations continue to be an integral part of contemporary politics, facilitating the transformation of Europe into a more environmental state.
The “greening” of European politics and the acceleration of European integration have been intricately intertwined (Bomberg 1998). The environmental movement specifically focuses a great number of their political strategies directly and indirectly on the policy making process occurring in multiple venues including Brussels. Their multifaceted flexible organizational structures and institutional links provide effectual resources for mobilizing. Social movement organizations can conduct activities such as lobbying and protest at the national level while also expanding their work to broader public spheres. They utilize similar channels, resources and tactics at local and national levels as they do at the supranational level through policy network interconnections (Rucht 2001).

However several researchers argue that as environmental social movement organizations demonstrate a degree of professionalization and perceived sophistication, protest activities lessen and lobbying resources increase. Subsequently, scholars have argued that particular ENGO’s should no longer be considered social movement organizations. Their strategies and tactics exemplify political interest group activity instead (Kitschelt 1989). The institutionalization of environmental social movement organizations has created potential conflicts between organizational ideologies and the available tactics used at the EU level. Key questions emerge in gaining complete understanding of how and why environmental social movement organizations use particular strategies at the supranational level over others and the impact they have on national and EU policy processes.

The institutionalization of environmentalism has taken on many forms. A general shift may have occurred in countries such as Italy away from massive protest and towards the public interest lobbies and professionalized protest organizations (Diani and Donati 1999). However, the growing significance of the EU Commission and other pillars directly impacts the
relationship between environmental movement organizations and the constraints and opportunities of supranational political opportunity structures. For example environmentalists have found that the Council of Environmental Ministers, the EU Commission’s DG Environment, and the European Parliament’s Committee on Environment, Public Health, and Consumer Policy have been the most effective institutional political spaces for fostering change because of their extensive support for environmental concerns (Wurzel 2002). In fact Marks and McAdam (1996) suggest environmental movement organizations influence EU policy just as much as EU institutions cause transformations in the organization of environmental movement organizations.

Environmentalists actively engage in national, subnational, and supranational activism, implementing a wide variety of strategies and tactics ranging from protest politics to conventional lobbying (Rucht 2001). Environmental social movement organizations operate through vertically and horizontally configured loosely coupled policy networks and advocacy coalitions that consist of an extensive array of environmental, social and economic interests (Perrucci and Potter 1989; Sabatier and Jenkins-Smith 1993). This structure provides strategic collective action advantages where multiple tactics can be implemented at each distinctive polity level independently or in concert with other mobilized resources (Diani and McAdam 2003).

The process of European integration has created a new supranational level of political opportunities reconstructing contentious politics in the European public sphere and in nation-state political spaces (Helfferich and Kolb 2001). The EU has become an increasingly important forum for environmental agenda-setting and policy-making (Bomberg 1998). The institutional and power reconfiguration process has thawed prevailing movement constraints, allowing for successful policy innovations to flourish within a distinctive time period of institutional
transformations. The fluidity of the political arrangements lessens the friction hindering social movement actions and provides advantageous gateways leading to reform.

E. Theoretical Political Opportunity Structures

This research draws upon the theoretical literature on social movements and focuses on how groups access and interact with opportunities at the supranational and national level. The guiding theory is founded upon a multi-dimensional conceptual framework for systematically assessing social movement organizational activity. Eisenger (1973) was the first to openly use the idea of a political opportunity paradigm to explain political cleavages and the activities of collective action activists. Other research followed, with subsequent cross national studies comparing variances across states and nations (Kitschelt 1986; Van Dyke and Soule 2002).

The most far-reaching examination of the complexities of political opportunity, by McAdam et al (1996), integrated three sociological research perspectives. Their scholarly work included structuralist, rationalist, and constructivist approaches but mostly concentrated on structuralist explanations. The political structuralist context assumes that political institutions constantly influence the manner in which people mobilize and organize. It also suggests that the structure establishes the contour of social movement and political outcomes resulting from a social movement’s mobilization efforts (Della Porta et al. 1999). “Opportunity structure” particularly applies to the institutional characteristics and elements that determine the collective action activities social movement actors or groups such as environmental groups decide to incorporate into their mobilization strategies (Van der Heiden 2006). A synthesized version offered by Tarrow (1994) considers the external parameters as constant institutional configurations but stresses the importance of dynamic institutional relationships that do not
necessarily remain formal or permanent. Kitshelt (1986) defines opportunity structures as filters between group mobilization and strategy choices and actions. The fundamental concept argues that a movement’s potential for mobilization is determined by the opportunities and constraints in a political-institutional setting (McAdam and Rucht 1993; Tarrow 1994; Kriesi et al 1995).

Past research suggested that the implementation of the POS framework should incorporate at least four sets of variables. These include: 1) the nature of existing cleavages in society; 2) the formal institutional structure of the state; 3) the information strategies of elites; and 4) the power relations within party systems (Kriesi et al. 1995). However, additional investigations suggest additional factors to incorporate into the model. These include: 1) the relative openness or closure of the institutionalized political system; 2) the stability and instability of the wide array of elite arrangements; 3) the presence of elite allies; and 4) the state’s capability and predilection for putting down a social movement (McAdam et al. 1996).

The majority of the scholarly work utilizes longitudinal case studies of individual movements that specifically analyze a movement’s trajectory (Costain 1992; Tarrow 1994; McAdam 1982; Meyer and Minkoff 2004). The test for researchers is to comprehensively explain which explicit aspects of the external environment of a social movement are responsible for affecting how and why a social movement develops and changes over time. Case studies have examined the development of one social movement in one country (Costain 1992; Tarrow 1994; McAdam 1982) while others examine the temporal aspects of one political entity while keeping the overall political opportunity structure constant. Yet still others use a comparative political analysis approach to examine cross-country similarities and differences to analyze the success and failure of contentious actions (Kitschelt 1986; Kriesi et al 1995, Zippel 2006).
The lack of precision in the model has various researchers picking and choosing the variables that they think best answer how and why social movements succeed or fail. Researchers investigating how and why similar movements differ concentrate on factors such as the political stability questions of states and societies while researchers examining the stages and cycles of protest ignore political institution constants and target more volatile aspects of political opportunity such as public policy continuities and elite alignments. A wide variety of approaches and variables to consider at the discrimination of the researchers has created conceptual problems with constructing a useful comprehensive model for explaining the impacts institutions have on political opportunities.

Furthermore additional questions arise over the ability to compare across case studies because it remains ambiguous how one researcher’s model can be applied to other circumstances. Investigators create systems of analysis using their own models, coding schemes, and variable definitions. For example, Rucht (1996) separates cultural, political, and social factors as part of his “context structure” while McAdam’s (1982) analysis of the policy process uses the economic conditions of the cotton industry and black migration, voting, electoral shifts and other factors as key ingredients needed to understand a movement. The lack of precision in research consistency increases criticism of the conceptual framework and many question its explanatory strength (Gamson and Meyer 1996; Goodwin and Jasper 2003). But strong believers in the applicability of the model are calling for increased clarification, challenging analysts to work toward constructing a broader understanding of the concept (Meyer and Minkoff 2004).

Furthermore, additional concerns have emerged. First, Jasper and Goodwin (2004) suggest the POS conceptual framework lacks a comprehensive determination of causality. The model cannot supply a universal theory of social movements because of its treatment of nonstructural
variables such as strategy, agency and cultural factors. A greater cognitive understanding of the differences between structural and nonstructural opportunities and constraints will provide an improved analysis tool to truly discover which factors are of greatest significance in influencing social movement actors. Therefore, a model which includes a constructivist analysis serves to lessen the bias toward structural aspects of POS and extend the analysis to include people’s intentions, choices, and discretion. Therefore, more consideration must be given to historical shifting and situational contingent combinations and sequences of processes, limiting the definition of political opportunities so that every environmental influence does not fall under this analytical perspective, and accepting the fact that social movements also affect political opportunity structures (Goodwin and Jasper 2004). That is; social movements in and among themselves have some bearing on the structure of political opportunities. Groups such environmental organizations can and do alter institutional configurations.

The cumulative scholarly work has provided significant insights into the dynamics of political opportunity structures. However, key conceptual challenges remain in order to build a more comprehensive and universal model. One issue that has not been studied in the expanding research agenda on political opportunity structures is the importance of general political opportunities in relation to particular policy domain or issue-specific factors. A collection of variables relevant to social protest varies across an issue network of policy actors, even though research assumes these variables can be generalized across political systems without consideration of the constituency involved in the policy dialogue (Rucht 1996; Tarrow 1989). For example, scientific expertise may play a much more important role in technology and environmental debates than with other issues. Thus, the institution arrangements between experts play a much more critical role.
A theoretically grounded research design is used to explore questions concerning the interactions between political actors and institutions to discern what impacts circumstances and organizations had on fostering a transformative politics in EU chemicals policy. The investigation asks what the dynamics and processes are that illustrate and clarify the political impact of environmental movement actors. It examines why some actors, such as the World Wildlife Federation, are more or less successful than other organizations. The research seeks to delineate the important variables that account for how social movements effectively navigate the EU multi-level system of governance in comparison to those that are not as effective.

A second imperative focuses on evaluating and explaining the nature of different outcomes when the same political opportunity structure causal independent variable is employed. Often, the factors leading to social mobilization are in common with those that create policy change (Meyer and Minkoff 2004). The aspects that motivate social mobilization must be separated from those leading to direct policy outcomes. This is an important factor when considering the tactics and level of professionalism found in some types of environmental organizations in contrast to the protest culture of others. All policy changes cannot be ascribed to movement activism. Broader influences and social changes can generate elite splits and other conditions which impact movements. Opposing actions by various social movement organizations can work against each other or in complimentary ways. This study seeks to fully delineate government policy changes due to mobilization in contrast to other factors such as, but not limited to, elite support factors, policy networks, and policy processes.

Policy processes are in themselves complex where the interactions between activism and policy outcomes occur in multi-dimensional public spaces. Each step along the policy process from agenda setting (Kingdon 1995; Baumgartner and Jones 2002) to appropriations to policy
implementation contains essential variables to be included in the political opportunity structure conceptual framework. However, they may function differently at each distinct step in the policy process. Key strategies of social movement organizations include a variety of tactics and framing activities particular to each phase of policy formation. Therefore, a key part of this research seeks to understand the mechanisms interacting with political opportunity structures that foster change in institutional arrangements. Changes in policy open up new opportunities for mobilization.

Political opportunity structures constantly change and do not remain static (Jasper and Goodwin 2004). It is not largely understood how the context of institutional configurations correlates with the action of social movements. A question of structure versus agency emerges as a point of extended research. Gamson and Meyer (1996) argue that social movement actors are overly optimistic about potential opportunities. The actions of activists may not actually reflect rational cognitive processes but instead their perceptions of potential institutional openings or “policy windows” (Kingdon 1984). The present study contributes to the literature by exploring in more depth how activists evaluate and persistently pay attention to the political environment and adjust their tactics based upon their perceptions of potential intervention points. Each institutional context produces a specific situation that activists can act upon. The actions of social movement actors are dependent upon historical shifts and contingent upon combinations of events that lead to a variety of social movement forms (Jasper and Goodwin 2004). The present research concentrates on a more in depth examination of the interactions between movements, other actors, and institutional elements which are strongly shaped by the expectations of activists. It seeks to contribute to current research by gaining a deeper understanding of the way institutional structures impact social movements but more importantly the way in which social movements transform institutions. It also focuses on an in depth examination of how political opportunities function
dependent upon the causal mechanism that directly corresponds to steps in the policy process. Policy outcomes directly resulting from the activities of social movements are molded by institutional factors but the actions of activists may be more closely linked to the specific conditions of political opportunities. The explanatory power of a political opportunity structure paradigm must be adjusted to incorporate cultural factors as well.

Environmental social movements must weigh the organizational alternatives balancing financial resources with attaining successful policy outcomes. Paying for inside information during EP negotiations may be worth the price of easy influence in contrast to the resources necessary to mobilize protest.

Actors in European environmental movements recognized that alternative organizational structures may function more effectively within the current mobilizing structure of competitive European institutions. Movement leaders responded by increasing the role of lobbyists, better suiting the federalist types of arrangement that have led to greater institutionalization and professionalization of movement organizations.

Concurrently, environmental movement leaders are recognizing EU funding sources for NGO’s have significantly increased. Environmental groups have rapidly responded to new EU funding opportunities, mostly in lieu of scarce mobilizing resources at national levels (Poloni-Staudinger 2008).

Political elites and alliances continue to multiply and dominate political dynamics at the EU level. Interest groups and elites, such as political elites, join forces in temporary coalitions. Environmental interest groups as NGO’s have entered the EU political opportunity structure and elite policy making sphere as invited guests in an effort to reduce democratic deficit complaints. ENGO’s have gained access to elites through committees, working groups, and public forums
because of the Commission’s focus on facilitating open political discourse with members of civil society. A variety of multiple stakeholder formats promote interest group participation with political and capital elites. These efforts however promote interest group organizational structures over new social movement democratic structures.

Despite the EU Commission’s extensive efforts to promote openness and direct engagement by civil society, questions remain whether or not the nature of the EU demonstrates a pluralistic versus corporatist nature. Kohler-Koch (1997) and Marks (1993) suggest a genuine pluralistic multi-level governance system has emerged while Falkner (1998) challenges their argument, submitting that strong interconnections between key political actors more accurately depicts the corporatist character of the EU’s multi-governance policy making structure. Social movement activists and green parties may have gained increased access to political deliberations and some elites but to what extent have they altered their mission, culture and tactics to successfully bring about radical chemical policy transformations?

Social movements acquired access to elites in part due to the corollary effects of an emerging polity. Nation-state institutional structures vary across Europe where diverse levels of access are evident and are hard to change in favor of social movement actors or Green parties. The evolution of the new multi-governance system created a critical moment for governments and collective actors as the new supranational structure was solidifying its institutional form based upon a strong foundation that relied on two principles: guaranteed openness to civil society and 2) the need for legitimacy.

Each institution works conscientiously to incorporate civil society participation in their policy making processes but in disparate ways. The European Parliament strives to interface with civil society and interest groups primarily by targeting significant effort towards legislative
lobbying (Mazey and Richardson 1999). A key structural context to EP links between ENGO’s and elites resides in sub-committees. The MEP’s often invite NGO’s to comment on proposed legislation. Interest groups primarily operate through forums and public hearings sponsored by EP Committees.

The European Commission’s principal function focuses on proposing legislation. They formally state their intention to construct specific legislation, where the EP subsequently establishes an internal standing committee to work cooperatively with the appropriate Directorate General (DG). The DG assembles a report or white paper to aid in the initial “first reading” of the proposed legislation. Social movement organizations and elites play the most important role during the pre-proposal stage as the policy network of experts and consultative committees is formed by the Commission. The expert committees include NGO’s, national officials linked to Member States, science experts, and capitalist elites. ENGO’s are considered a mandatory group for inclusion in the deliberative process not only for their scientific expertise but also for their information and views on proposed regulations.

The policy making structure forces groupings among preferred political actors and asks them to play more meaningful roles than individual citizens or social movement organizations. EU categorizes only two distinct types of stakeholders. They organize stakeholders into groups based on 1) territorial commonalities and 2) interests and groups founded upon coalitions of interest group associations from civil society to capital interests (Eising and Kohler-Koch 1999). Further delineations separate non-profit organizations from for-profit organizations.

Temporary advocacy coalitions and alliances form as well as policy communities. Several committees remain permanent and partnerships thicken resulting in strong networked interconnections among specific political actors. Stark delineations begin to emerge as
individual members of advocacy groups acting within a networked governance configuration may actually limit civil society participation when coalition advocacy members or policy community representatives disregard external voices. The networked interest groups and elites share similar superseding objectives and establish joint advocacy efforts while neglecting the concerns of their members or the rest of civil society. Key policy makers of leading environmental policy making organizations struggle to balance the EU’s bias towards interest group participation with their commitment to advocacy and protest.

The increased access of ENGO’s to formal policy making processes may in fact mask the true influence of capital elites. Although DG state officials take on more specific roles than the Commission, they are directed by the Commission to be open to civil society participation. However, particular elites versus other members of civil society may command more political power than network outsiders.

DG ministers continue to operate using advocacy coalitions and interconnected policy communities as their preferred method of interacting with members of civil society. The Commission separates stakeholders horizontally across supranational level institutions and vertically down to Member States and local authorities or advocacy groups. Capital elites are influential members of business policy communities and advocacy coalitions. Although the Commission and instructions to DG ministers promote broad participation within a multi-level governance system of networked governance, it is arguable whether or not each voice carries equal weight. The EU may function in a corporatist manner allowing networks to assert their interests in contrast to a pluralistic mode of operating. That is, members of the policy community remain tightly connected to state officials and capital elites because each group depends on the other. Advocacy groups gain access to political decision making while state
officials maintain a sense of legitimacy and capital interests can remain less noticed by the public or peripheral collective actors.

The new political space made available at the EU level generates multiple policy network or advocacy coalition intervention opportunities in the European Commission and the Parliament. It has fostered a tremendous increase in lobbying groups and grassroots coalitions. Although the intent may be to increase grassroots coalitions and increase the numbers of NGO’s participating, the real result is arguably towards civil society organizations that have set up political interest group types of structures. ENGO’s and Green Parties that modify their strategies and tactics to fit the model do well while those who do not may suffer marginalization and the overall result may be decreases in civil society engagement. A corporatist type of governance system may prevail in which specific groups gain advantages while others lose access and political power during policy processes. Strong interdependencies develop among insiders to the extent that their success relies on each other’s success (McCormick, 2001).

Questions remain, however, regarding the overall increase in citizen engagement. Further research is needed to accurately measure citizen involvement in policy development. The extensive participation strategies and procedures EU institutions have designed may in fact comprehensively incorporate the voices of EU citizens through multi-layered input opportunities. For example, the EU Consultative Forum, a permanent committee for environmental issues under Commission authority, successfully provides information and advice during policy discourses incorporating the information and advice from an inclusive and diverse group of political actors. The system and subsystems of committees and forums exemplifies a pluralistic system of governance where each stakeholder has equal political power during policy discourses.
Environmental groups have increased in power. Civil society organizations as international environmental movement groups including Greenpeace, World Wildlife Fund (WWF) and Friends of the Earth (FoE) have strengthened their network connections and working relationships with the governing body of the EU. Their lobbying, science advocacy and direct participation in committees and government sponsored forums have increased these organizations’ access to political decision making while strengthening their relations with government elites; however, this strength may come at the expense of compromising their role as a social movement.

The relationship between the European Commission and Environmental Movement Organizations can be assumed as one of reciprocity: environmental movement organizations influence policy, but the constraints and opportunities of EU structures increasingly shape and transform environmental movement organizations themselves (Marks and McAdam 1996).

Environmental movement organizations have demonstrated a gradual shift towards interest-group and party models of activism at national and the supranational level, veering away from radical strategies of protest. They have moved away from grassroots based strategies towards increased professional and parliament focused tactics. For example, groups such as Friends of the Earth (FoE) and Greenpeace in the past felt marginalized from political processes.

They have gained significant success in bringing about policy change based on their elevated levels of political access to the opportunity structure attained through acquired scientific knowledge and policy expertise pertaining to environmental cause and effect relationships. So much so, that they are now admitted into important policy-making discussions and environmental movement organizations are considered collaborators in environmental policy making (Rootes 1999). Public contestation is mollified and supporters are demobilized, replaced
by professionalized formal organizations in general. Exceptions do exist contrary to the overall trend.

F. Advocacy Coalitions

Advocacy coalition theoretical frameworks provide a useful approach to investigate EU environmental policy making. The advocacy coalition framework constructed by Sabatier and Jenkins-Smith (1993) facilitates an analysis of how coalitions or networks of public and private actors are assembled based on common interests and shared normative and causal beliefs. This theoretical approach also examines how competing coalitions interact with other coalitions during the policy process within a specific policy domain (Sabatier and Jenkins-Smith 1993). A similar approach is also used by other scholars, defining such group interactions as networked forms of governance and political process participation (Borzel 1998; Peterson 2003). In this perspective networks include commonly defined political actors from public, private, and civil society organizations working together to change policies (Keck and Sikkink 1998). A policy networks and advocacy coalitions approach helps to analyze how individual social movement actors perceive and act upon political opportunity structures. I intend to contribute to the existing research by examining how the interactions with these groups and the institutional configurations of the EU lead to new policy outcomes and the key factors that contribute to successful social movement goals.

Groups of individual environmental European policy actors are assembled due to a shared interest in developing and extending EU environmental policy, both to Member States and internationally, to a more restrictive level. In contrast, contentious coalitions support less restrictive environmental policies. The competing groups participate in the public sphere
through informal and formal political discourses in EU environmental political discussions and policy making efforts. The strength of the relations between these groups varies and often informal communication ties bind the actors together rather than formal advocacy oriented arrangements. Groups such as this can include public and private individuals, science experts, and a range of people from a variety of political interests.

The interactions between EU supranational institutions’ activities may illustrate a networked type of governance system where coalition politics and policy networks interact with EU organizations and Member States as groups of individuals rather than single political actors. Coalition building represents the main focus of different organizations and national governments including environmental ministers from northern member states, DG Environmental officials within the Commission, Green MEP’s, member states, and representatives of environmental and public health NGO’s. On the other side, individuals against REACH policies, for example, consist of representatives of multinational chemical industries, many conservative and social MEP’s.

G.Framing Theory

Framing processes are essential for understanding the structure of communicative methods in determining the context of meaning during contentious political discourses. They also provide an interpretive conceptual model in helping to analyze the manner in which political discourse takes place in a deliberative democracy. Strategic framing practices focus on defining and constructing the political and social issue, such as REACH, and are formal rather than informal methods of presenting a particular political point of view (Kahneman and Tversky 2000). Framing thus plays a crucial role in policy development and is an important part of my
research. Public policy is both a dependent variable, as a measure of movement success, and a
compponent of political opportunity that movements address (Meyer 1999).

The study of "frames" originates with Goffman (1974) who defines it in the context that
movement actors construct and give meaning to their actions (Benford 1993; Snow and Benford
1988). Social movements produce collective action frames by diagnosing problems, proposing
solutions, and motivating collective action (Silver 1997). Framing research represents a
paradigm shift divergent from resource mobilization theory which focuses on the structural
factors that supply energy to movement formation (Gamson 1975; McCarth and Zald 1977).
Framing analysis is additionally guided by a social constructionist's perspective that examines
the interests of movement participants in particular identity building concepts as part of "new
social movement" theory (Gamson 1992; Melucci 1994; Taylor and Whittier 1992; Friedman
and McAdam 1992).

Past framing research originates from two disparate streams of research. Collective
action, social movements, and the policy process have been extensively studied by sociologists
and to a much lesser extent by policy analysts. Prior to 1970 social change was studied at a
micro-level, developing theories at the level of the individual in relation to the social psychology
of collective action. After 1970, sociologists examining social change broadened their
perspective to a macro-level supported by a political sociology and economics reference point.
A theoretical bridge between micro and macro level framing processes is needed to fully
comprehend the interaction of social movement organizations with agenda setting and framing
activities. One research strategy to link the scales is called "frame alignment" activity. Frame
alignment was derived from Goffman's (1974) frame analysis. It allows the researcher to locate,
perceive, identify and label concrete events in political processes. Snow and Benford (1988) use
frame analysis as a bridge between micro and macro level social movement theory by exploring the use of movement frames as way to provide meaning and to interpret significant milestones that mobilize participants, change public opinion, produce new meanings, and transform old meanings. Frame alignment can be applied to a study of the emergence of a public problem and policy processes by analyzing documents related to the four central elements and the core activities of framing. The concepts can be operationalized using Gamson and Modigliani’s (1988) and Johnston (1995) in their analysis of media discourse and other forms of documentation. In this study, a special emphasis is placed on EU documentation of the three pillars of governance, activist publications, and corporate material focused on the adoption of the “Precautionary Principle” and REACH ideologies.

The manner in which issues are framed at the EU level is just as important as understanding which issues are placed on the agenda at the beginning of the policy process. REACH for example demonstrates how shifting paradigms if epistemic beliefs and perceptions on the legislative policy allowed actors in supranational polities to acquire support and successfully counter the political strength of multinational corporations. The framing of REACH systematically has an effect on how the complex and fragmented EU political decision making process tends to include and purposely exclude certain networks of actors and advocacy coalitions from the diverse variety of civil society organizations attempting to participate in EU policy processes.

Framing decisions within the Commission in the DG Environment and DG Enterprise units, for example, are many times highly controversial. Framing strategies have systematic causal effects on the policy dynamics that occurs following white paper submissions. REACH
negotiations illustrate how the Commission’s attempt to frame and reframe chemical policies significantly influenced political interest patterns at the EU level.

The continued framing and reframing by the Commission and others leads to elevated politicization of EU decision making where scientific expertise, thought of as independent of policy making, can get entangled in the democratic politics. Framing is hardly ever uncontested. It is possible the Commission could lose control over the policy dynamics as revisions of EU regulatory frameworks work themselves through the policy process. Strategic framing choices and preferred narratives affect political contention and mediate competing interests in the EU. The process of continued reframing can lead to constant controversies over a desired policy outcome.

H.Policy Process

A primary objective of environmental activists is participation in a representative democracy, more specifically striving for an active voice in the policy process. For example, a level of success is measured by the degree of inclusion attained during incremental and evolutionary government priority setting activities. Policy making is how the government decides what will be done about issues. It entails a process of interaction among many governmental and NGO actors (Ripley and Franklin 1991; Baumgartner and Jones 1993; Kingdon 1984; Sabatier and Jenkins-Smith 1993; and McAdam 1982.)

Precedence plays an important role as policy progress depends on socioeconomic forces, shifting political opportunities, social significance, the level of social control, and movement organizational strength. Policy is the outcome of the interaction whereas framing and agenda setting represent the initial stages of problem resolution. Policies and programs are formulated
then legitimized, leading to implemented actions that are assessed and reassessed for future direction (Jones 1984). Policy change may evolve in a linear fashion, chaotically adapt slowly over time, or stream out of a repository of nascent policy ideas.

One way policies are determined occurs as one idea or a cluster of ideas emerges out of a pool of nascent policy alternatives. Many ideas compete for attention, but then something happens to make one more applicable than the others at a particular point in time (Kingdon 1995). Social learning and political diffusion, for example, cause particular schemes to gain momentum ahead of others. Actors sharing common policy-oriented beliefs and value priorities employ social learning strategies to insert their principles into public policy. Policy-oriented learning involves dynamic internal feed-back loops between external actors, the policy subsystem, external events, and constraints on the advocacy coalition.

The policy process can also be viewed as repeated iterations of decision making taking place in a historical context. Environmental coalitions, for example, illustrate how issue networks and collective actors are crucial to the movement’s impact on government priority setting. They represent a network of political actors often forming coalitions to advance collective consciousness in people who suffer from political deficiencies like those caused by socio-economic inequalities and adverse environmental health conditions. They help aggregate individual citizens into a unified voice of common identity striving for political leverage by interacting at each level of government. Evolving issue networks, communal advocacy groups, public opinion and state relationships constantly modify potential solutions amidst irregular velocities of democratic interactions.

Coalitions across multiple geographic and political scales utilize an abundance of political resources to mobilize rapidly and efficiently without substantial investment of the time
and energy that is usually necessary initially to build a movement's infrastructure and communications network.

Environmental advocacy coalitions respond to disruptive external factors by dissolving or by changing the framing of policy preferences in the wake of political transformations (Jones 1998). The core actors of coalitions represent important experts in the policy subsystem who constantly reorganize partnerships to increase their opportunities for access into political discourses in hopes of weaving their policies into prevalence. They are knowledgeable advocates who possess a deep understanding of the specific policy domain. They include a wider range of participants beyond government officials from different organizations and institutions who follow and seek to influence government decision making in a policy area (Sabatier 1993).

The networked groups are formally organized through a national centralized structure. However, they remain sufficiently flexible with local groups to rapidly and collaboratively interact with any scale of political process. Many members of the organizations are trained managers and consultants (Rios 2000). Most of the efforts of paid staff members are focused on facilitating research, educating, organizing, continual networking, and additional training rather than participating in insurgent activities such as protest actions.

Advocacy coalitions are constrained by a variety of dynamic social, legal, and resource external factors affecting policy change (Sabatier 1993). Perceptions of external conditions and increased knowledge of problem parameters and the factors affecting them help actors adjust frames for relevancy under new social conditions. For example, new scientific knowledge plays an important part in dramatically reframing controversial environmental health political rhetoric.
I. Epistemic Communities

An epistemic communities approach matches well with the focus of the proposed research. This perspective helps to explain the role of technical expertise in the formation of policy preferences. The key aspect of this theoretical perspective focuses on the “shared beliefs in cause and effect relationships, validity tests, and underlying principled values” (Haas 1992). This conceptual model assumes that scientists participating in the policy process are responsible for converting complex technical language into usable policy information. Thus, these scientific experts hold important social locations in the strategic use of framing as a tool for defining issues and directing the political dialogue regarding how best to solve the problem in light of social preferences. The strategic use of framing as a tactic by involved actors helps build support for specific and desirable preferences while deemphasizing others considered less desirable by actors in the policy network or organization (Druckman and Nelson 2003). Activist scientists or scientists representing private interests can advocate for certain policy solutions while coordinating advocacy activities in an epistemic community or policy network. The added political power of the coordinated efforts of an epistemic community or policy network builds strength when involved in policy debates. A key aspect of the research proposal explores the formation and interactions between one or more policy networks.

A key assumption in the literature about the role given to science in the decision making process suggests the information provided to governmental officials is objective, neutral information and that the science expertise is politically independent and objective. This study will examine the role strategic issue framing takes on in policy discourses and how science experts exploit the assumed weight of expert evidence to promote specific political goals. In EU
bureaucratic decision making technical knowledge possesses significantly more political influence than other forms of knowledge.

J. Science and Risk Governance of EU Chemicals Policy

Chemical toxins in the European environment adversely affect human health and the health of functioning ecosystems. Complex chemical compounds cause significant adverse effects on people and animals. Better regulation of toxic releases of chemicals that could cause high levels of health problems necessitates an acute understanding of the complicated nature of chemical compounds and their properties in the environment. Chemical regulations, due to the technical complexity of the environmental problem, demand guidance from scientific experts. Policymakers must call on scientists with expertise in relevant fields to help guide them through risk assessment and management data. For example, scientists are needed to facilitate policy makers’ understanding of the public dangers to society associated with nanoparticles governed under REACH emission standards. Scientists are necessary to provide the technical support needed to make predictions about the potential risks of particular chemicals introduced into society. Regulatory policies intended to reduce harm and constrain economic revenues require a variety of scientific expertise.

Conflicts between scientists can emerge when economic and social interests challenge the scientific recommendations and are also difficult to resolve. REACH negotiations came under tremendous scrutiny from both environmental and corporate advocacy coalitions. Policy makers without scientific backgrounds must rely on scientists for pertinent information. However, the boundaries between science and politics remains obscure as dense conflicts erupt due to
considerable economic, political and social pressures concerning which regulatory action should be implemented.

Scientists and policymakers attempt to maintain distinct control over their specific institutions; at the same time the technical complexity of chemical regulations and environmental hazards alters the function of both the expert and the policy maker during the policy process. This research seeks to uncover the complex web of interactions between policy network or advocacy coalition actors whether they are political actors, bureaucrats, corporate representatives or civil society activists. The primary objective is to explore the process by which the precautionary principle and specific regulations became part of REACH. A more specific analysis seeks to examine the tactical use of strategic issue framing as an effective technique to promote particular policy preferences during the policy process.

This research project proposes to analyze the political interests of key participants in the highly controversial REACH deliberations and the strategies groups and individuals utilized to influence the final regulatory outcome. The political actors include corporate actors from chemical companies, civil society actors such as those working for Greenpeace and the World Wildlife Fund (WWF), government officials from the EU commission and national agencies, and political representatives in each of the EU institutions. It also investigates the interrelationships between relevant actors during the policy debates.

K. Methodology

The methodology employed in this research assumes the European Union is characteristic of multi-level network interactions where civil society organizations and other political interests
seek consensus through a system of coalitions where many groups and individuals participate harmoniously towards particular policy outcomes. The EU has extended its institutional branches to both elite and non-elites, seeking the support of national governments and political actors in recognizing EU institutions as important political action spaces for transforming, modifying, and integrating the preferences of interest groups into the formation of European public policies.

The research takes an "interpretive research approach" (Yanow 2000) within a "grounded theory analysis" of documents, the media, and public testimony along with interviews with leaders and key staff of social movement organizations (Burawoy 1991; Charmaz 2001; Glaser and Strauss 1967; Strauss 1987). Interpretive research strategies are founded on the presupposition that the social world is characterized by a wide variety of potential outcomes with multiple interpretations (Yanow 2000). This method targets the policies by which those meanings are communicated to and socially constructed by the receivers of the message. It facilitates the identification of the issue's architecture and the communities of discourse involved in constructing symbols and meaning related to the social dilemma.

A modified grounded theory analysis of archival sources and interviews with transnational environmental network actors (DG public officials, MEP’s) provides a useful research strategy to discover the power and influence between private interests, extended coalitions, activists and political agendas. The grounded theory method stresses discovery and theory development rather than logical deductive reasoning which relies on prior theoretical frameworks (Charmaz 2001). This methodology parallels Glaser's and Strauss' (Glaser and Strauss 1967, Strauss 1987) grounded theory, but makes use of a more integrative and iterative approach. It utilizes induction processes and iterative loops to leap from the literature to actual
case studies (Burawoy 1991). A key underlying aspect of this approach focuses on shaping the
data collection based upon the analytical interpretations and discoveries. The configuration of
the data processes and products of research are determined from the data rather than from
deduced theoretical frameworks. Grounded theory is best at studying process and making sense
of social relations, in this case the policy making and agenda setting processes.

Coding represents the initial phase of this method in order to categorize and sort data.
These organizational techniques help to separate and compile data from documents, media
transcripts, public hearing documents, interviews and other collected materials. They serve to
summarize and sort observations made from the data. They also help to make connections
between discourses and behaviors. Most importantly the codes are determined in order to
discover processes where the codes fit the data, rather than forcing the data into codes (Charmaz
2001).

Semi-structured interviews are a major part of this research agenda. They consist of an
interview guide that includes a consistent set of questions or topics. However, the interviewer
can incorporate a degree of flexibility in digressing to investigate an issue in more depth. It also
allows the interviewer leeway to probe in more depth based on interactions with the interviewee
during the interview process (Blee and Talyor 2002).

Semi-structured interviews are specifically useful for understanding social movement
mobilization from the context of individual actors or audiences. Data can be collected in more
depth and extended across a large array of parameters. It especially provides a greater ability to
interpret people's ideas, thoughts, and memories in their own words or discourse rather than the
researcher's. Semi-structuring interview processes focus on exploration, discovery, and
interpretation of complex social events and processes when combined with participant observation and/or documentary methods (McAdam 1988; Whittier 1995).

Key informant interviews are planned that question well-placed informants to obtain descriptive information that may be time consuming to acquire through other types of data gathering techniques. Johnston and Klandermas (1995) in particular find this approach useful to examine the evolution of a movement's collective action frame or the organization's strategies (Johnston and Klandermas 1995).

L. Validity and Generalizability

Concerns about the validity (measurement validity and causal validity) and generalizability of conclusions are often raised particularly in respect to qualitative research. Measurement validity occurs when the researchers measure what they think they are measuring (Schutt 2004). That is, utilizing a method that allows the researchers to measure what the research actually represents rather than that which the researchers claim they are evaluating. Generalizability exists when a conclusion holds true for the population, group, setting, or event that the researcher says it does, provided conditions that are specified (Schutt 2004). The goal of qualitative research is not necessarily quantifiable generalizations but analytical generalizations. The results are generalized to a broader theory through a detailed understanding of the event. My research positions the concept of generalizability in the context of the EU and members-state policy development where the processes result in specific EU chemicals policy and “Precautionary Principle” policy instruments. The processes involved in the constructed policy would occur in similar policies in other cases even though the particular policy instrument may be entirely different. This issue has been addressed in this study by choosing events that provide
a wealth of understanding of the transnational political mechanisms and courses of action taken by actors and institutions.

Validity has been addressed through triangulation, the use of various types of methods and data. Triangulation is the use of multiple methods to study one research question (Schutt 2004.) In this research data triangulation is accomplished by employing a number of data collection methods and types of documentation. Interdisciplinary triangulation occurs by examining the policy process from social movement, science and technology, and policy process conceptual frameworks.

M. Introducing the Chapters

Chapter 2 provides an overview of the multilevel governance system of the European Union. It provides a description of the institutional structures and key decision making body within the system. The European Council (EC), The European Parliament, and the European Commission have distinctive responsibilities but in some cases overlap. The policy process within the EU institutions can be complicated depending on the level of controversy expected. Usually, environmental matters follow a path more complicated than other pieces of legislation. EU chemicals policy was one of the most controversial pieces of legislation in EU history. It was one of the EU proposals that was debated for the longest time.

Chapter 3 examines the pro-REACH coalition and the political opportunity structures environmental movement organizations interacted with during the highly contested negotiations of the new chemicals policy. Leaders of Member States played important roles in guiding the proposal through the EU political process.
Chapter 4 investigates the consolidated opposition to REACH, otherwise called the “Business” coalition. REACH foes, including the United States, worked hard to lobby against the EU proposal to reform current chemicals policies. Private corporations and the United States were key actors in weakening REACH. The chapter examines their strategies and tactics as part of a consolidated effort to stop change in the EU political opportunity structure.

Chapter 5 first outlines the contrasts between risk management and a Precautionary approach. Epistemic communities are used as a way of investigating the process by which the Science community of a Member State of the EU incorporates the Precautionary Principle into their regulatory approach to managing chemicals.

Chapter 6 provides a summary and conclusion. It then broadens the perspective and examines extensions of the research as it applies to globalization and other environmental policies.
CHAPTER 2 EUROPEAN UNION INSTITUTIONS

A. EU Political System and Institutions

The EU emerged as a response to wars that have continually erupted across the continent. Years of destruction which peaked during World War II made it clear to elites that division and conflict had devastated Europe throughout its history, and a solution was necessary to guarantee peace and prosperity. European institutions slowly emerged out of the first post-war treaty, the Treaty of Paris, signed in 1951 by France, Germany, Italy and the Benelux countries that together formed the European Coal and Steel Community (ECSC). It was a tangible step towards establishing supranational structures (Mahoney 2008). Monnet envisioned a federalist style of governance rather than an intergovernmental design for the integration of the European nations (Dinan 1999 24).

Subsequent treaties such as the Treaty of Rome, signed in March 25, 1957, extended legal cooperation requirements of the common market. The European Economic Community (EEC) and the European Atomic Energy Community (Euratom) institutionalized later, in 1958. The Treaty on the European Union (TEU), signed in Maastricht in 1992, established the European Union (McAllister 1997). In the following two decades, the EU significantly enlarged; more Member States joined, and thousands of regulations, directives, and other forms of legislation were passed by the three institutions making up the EU. The supranational system expanded as specific agencies were created to oversee administrative responsibilities and a common currency was introduced.

Social movement organizations and corporate advocacy groups seek influence over European politics at the EU level. This is of particular interest for European scholars because the EU
constitutes a promising political opportunity structure for organized interests (Richardson 2000). The multiple layers of government combined with a high degree of fragmentation among the European institutions creates an overabundance of access points to the policy making process. The institutional rules targeting increased transparency and a reduced democratic deficit facilitate organizational entry into deliberative processes (Kluver 2013).

The primary EU institutions setting policy, enacting legislation and interpreting law are the European Council of Ministers, the European Commission (EC), European Parliament (EP), European Council (EC), and the European Court of Justice (ECJ). The Commission constitutes the first half, the Council the second, of the executive institutions of the EU (Mahoney 2008).

B. The Commission

The Commission is the bureaucracy, but it also has the right to propose legislation in areas of policy where the EU has scientific competence and is capable of evaluating implementation of primary treaty articles. It can also issue regulations and directives. It manages the EU budget and represents the EU as its voice in trade negotiations (Hix 2005). The Commission’s mission centers on promoting the welfare of the EU and not the interests of nation states. The college of Commissioners consists of one commissioner from each Member State and each Commissioner has equal weight with the others. Commissioners are appointed by their member governments for five-year terms with no term limits (Mahoney 2008). The President of the Commission is nominated at the beginning of the Commission’s term in office and approved with the rest of the commission-designate by the EP (Dinan 1999). The Commission’s organizational structure
contains Directorate Generals (DG’s) and services in parallel with national level agencies (Hix 1999).

The Council of Ministers or “Council of the European Union” can be easily confused with the European Council. The Council of Ministers’ membership consists of the heads of state and government of the Member States, while the EP represents the interests of the voters of the European Union. The Commission is responsible for resolving all the technical issues of environmental law. It encourages comments from both the European Parliament and the Council of Ministers along with environmental movement organizations. After the policy formulation stage is completed the Commission submits the legislation to the Council of Ministers. Officially, only one overall Council exists; however, as will be seen in chemicals policy creation, certain sets of ministers meet in various configurations. During the initial stages of REACH, Environmental Ministers met in the UK in 1998 to discuss potential Commission proposals to reform three ineffective chemicals policy Directives. The political discussions that take place in the European Council of Ministers remain inaccessible to environmental movement organizations. The European Council participates in the most contentious issues; heads of state and government of the Member States meet at regularly scheduled times throughout the year.

Working groups and committees are set up to facilitate a timely process where attaches to permanent representatives help the institution function. An Environmental Working Group sometimes invites experts from national ministries to help work on legislative proposals. Wallstrom was known for bringing Swedish scientific experts to work on REACH’s policy language and standards. This institution of the EU remains closed to environmental movement strategies.
C. The Council

The Council represents national interests. Each Member State has their own nation’s interests in mind. In some cases technical experts are invited to further provide understanding of the technical ramifications of a policy once it is passed.

The European Council consists of the chief political executives of Member States and the President of the European Commission. Until 2009, the chair of the Council was the chief political executive of the member’s state that held the EU Presidency at the time, which rotates among states every 6 months. The Council has a role in policy implementation through the comitology process. However, it is a co-legislator with the EP (Mahoney 2008) and more importantly it is a more powerful institution than the EP (Hix 1999).

The Commission remains connected to other institutions and does not operate autonomously; it is not free from the oversight of the Council and EP. The Council has constructed a procedure labeled “comitology” as a mechanism for overseeing executive proposals. Three types of committees make up the “comitology procedure.” They include advisory, management, and regulatory committees. Each of these is led by Commission officials who are civil servants, not political representatives.

Although the Commission has the right to propose legislation, such as REACH, the Council shares the power to enact legislation with the EP. In the past laws passed by the Council required a unanimous vote, now it follows a qualified-majority voting (QMV) process. According to this system, each state has a set number of votes. Passage of a law requires approximately seventy percent of the votes.
Ideally, if an environmental movement organization seeks change, the Council of Ministers should be the target of collective action and lobbying. However, in reality it is the least preferred body, unless informal connections are available.

The Council’s research and other investigative responsibilities are carried out by a Committee of Permanent Representatives (COREPER). Committee members are key officials in the EU institutional system because of their long term, consistent presence in legislative debates. They are highly influential because they make up the highest level senior civil servants (Mahoney 2008). The COREPER members are ambassadors to the EU and have substantial influence in the Council. They are the target of constant lobbying by corporate interests and national associations.

The European Council is very powerful in the context of the other institutions. It determines broad EU policy directions and resolves disputes that are not resolved at the lower levels (Wallace 2005). The European Council is considered the most democratically accountable body in the EU and has the ability to discuss the most politically controversial proposed legislative efforts.

D. The European Parliament

Traditionally, the European Parliament (EP) was the least powerful of the three policy making EU institutions since it was founded originally by the treaties of the European Coal and Steel Community. The EP shares legislative authority with the Commission. The members of the EP are directly elected by the citizens of the EU through national elections held every five
years and are opened to registered voters. The function of the EP is to give citizens a voice in all discussions with other EU institutions.

The number of Members per Member State determines the quantity of representatives each nation state receives. In 1998, 626 members were elected to the EP where as in 2009 there were 736 (European Parliament 2015). The seats in the EP are allocated in proportion to the Member State populations. Revisions to EU treaties over time have incrementally given the EP more power. Elections for EP representatives and their terms parallel the appointment and term of office of the Commission. One predominant political culture in the EP is that building coalitions is how works gets done.

The Parliament can ask the Commission to submit a proposal which is customarily directed to one of its standing committees. The EP can also ask the Commission to initiate policies when it deems it necessary. Once the Commission starts writing the legislation, it asks stakeholders, including the EP, for their comments regarding the proposal. Once the first draft is completed it is submitted to the Commission, to the EP and to the Council. The EP Committee follows up by writing a report and when necessary communicates the EP’s opinion back to the Commission in the form of amendments.

The written report is available for opinions and amendments by the MEP’s and their respective committees, who express their opinions and write formal amendments. MEP’s discuss the report and vote on it during one of the Parliament’s plenary sessions. The voting structure follows simple majority on the proposal. If the proposal is agreed upon, then the EP adopts the proposal’s opinion in what is considered the “first reading.”

Plenary sessions occur one week a month in Strasbourg and MEP’s spend the remaining three weeks meeting with standing committees and subcommittees in Brussels (Mahoney 2008).
The leadership of the EP consists of the Bureau of the Parliament, the Conference of Presidents (CoP), and the Conference of Committee Chairs. The Bureau comprises the EP president, the vice-president, and the quaestors. Quaestors are MEP’s who make the rudimentary administrative decisions. The CoP is made up of the EP president and the presidents of all the party groups. MEP’s affiliate with the party groups according to their political ideology. During the period when REACH was initially discussed until near its final adoption, the “Green Party” gained sufficient seats in European Union elections to gain group representation. Greens work through compromise, their small numbers prohibit independent policy strategies. As a result, Greens find it difficult to adopt “extreme” positions on proposed legislation because of the need to operate within coalitions (Jordan 2005). Joining larger political groups requires accepting a broad spectrum of positions where it is difficult to determine which ones were originally yours (Bomberg 1998).

In the past, environmental policy proposals were usually initiated by the Parliament submitting a question to the Commission or the Council of Ministers. The question demanded written and oral responses; however, the EP did not have the power to demand alterations to the proposal. After the Maastricht Treaty, Parliament was given new powers relative to the Council of Ministers. Through co-decision procedures both EU institutions could propose legislation. The EP’s power grew and it played especially important roles regarding environmental issues.

The role of the EP is to assist the Commission with the initial drafting of proposals; to question and submit amendments to proposals, and to approve of the final directive along with the Council of Ministers. EP’s are the most accessible political actors among the EU institutions. Environmental movement organizations have a strong presence in the EP. It has emerged as the preferred target of lobbying activity by interest groups. Their increased power is reflected in the
number of interest groups that attempt to influence MEP’s. Business advocates, such as Cefic (European Chemical Industry Council) realized this and assigned a permanent full-time lobbyist to the EP.

The EP usually does not invite groups to attend policy making committee meetings. Nor do they have environmental movement organizations sit with them on standing committees. Interest groups and activists are allowed to present their viewpoints through forums held by a committee. Direct lobbying occurs at high levels outside committee hearings. They also encourage NGO’s to comment on proposals. MEP Schorling (Greens) in particular sought out comments by outside groups. Environmental movement organization participation takes place in forums and public hearings sponsored by the Environment, Public Health and Food Safety Committee (ENVI).

The ENVI has oversight responsibilities for the European Medicines Agency (EMEA), the European Environmental Agency (EEA), the European Safety Authority (EFSA), the Food and Veterinary Office (FVO) and the European Centre for Disease Prevention and Control (ECDC). More recently, the European Chemicals Agency is also under their oversight authority.

The EP has more sensitivity toward environmental issues than other EU institutions. MEP’s sincerely work with and listen to environmental movement organizations. For example, when the newly proposed approach for regulating chemicals reached the EP and the Council of Ministers, the EP set up many working groups with the ENVI and ITRE (Committee on Industry, Research and Energy) committees and the IMCO (Committee on Internal Market and Consumer Protection). During one of the debate sessions, actors from Greenpeace and Friends of the Earth received informal Commission documents in the form of room papers. These documents outlined a Commission strategy to weaken safety data regulation within REACH. In response to receiving the documents, MEP’s took action and strengthened their position.
Committee structures play an important role in organizing the steps proposed legislation follows and defining key access points where social movement organization can participate. The Committee for the Environment, Public Health and Food Safety is responsible for drafting reports on environmental legislation (Jordan, 2005). They had 63 members in 2005, the second largest number of committee members in the EP. It is one of the most powerful committees because it discusses more co-decision legislation than any other committee. The EPHFS committee leadership is supplied by its bureau. The European Environmental Bureau consists of a chair and three deputies who are responsible for running meetings and representing the Committee inside the EP and across institutional boundaries. The Environmental Committee has policy domain over health, consumer protection and food safety (Jordan 2005). MEP representation on the Committee stayed consistent while REACH negotiations occurred. Collins, a Party of European Socialists member, chaired the committee in 1999. The chair from 2004 to the final negotiations of REACH was Karl Heinz-Florenze, a German European People’s Party – European Democrats representative. Like his predecessor, he was a long-standing member of the committee with extensive institutional history. The committee continued to stay fervent regarding the protection of the environment but in terms of chemicals maintained an atmosphere of compromise with the economic interests of the Single Market.

The EP has grown in power since its beginning. In the early stages of the EU the other institutions, namely the Commission, determined how legislation reached the EP. Throughout the development of the Environment Committee they have gained power and experience by adapting to power changes between institutions. Prior to 1995, much of the EP’s power was bypassed (Jordan 2005). Often the EP could not react to legislation prior to when it was officially proposed. They took on a reactive political strategy. MEP’s were skilled in using
administrative procures to their best advantage. They gained more autonomy and constructed their own legislation, for example directives centered at industrial hazards like Seveso.

MEP’s of the Environment Committee have evolved into skilled politicians utilizing informal and formal tactics to influence the power of the EP and the committee. This gain in power resulted in the inclusion of more environmental aspects into existing treaties. The Treaties of 1986 illustrated their new found powers in facilitating future legislation through EU institutions. The treaty established the environment as an area of EU policy competence and provided the Commission with a scope of environmental measures to address. The Treaty also gave the EP co-operative legislative power, allowing them a conditional right to veto. They had gained considerable power in the agenda setting stage of the environmental policy process by the time REACH was introduced.

The Environment Committee and its gain in power helped to build allies across institutional boundaries with the Commission’s ENV DG. Often Commission legislative ideas originated from within the Environment Committee proposal and their amendments were passed more easily (Jordan 2005). The addition of two more legislative processes, the co-decision and consultation procedures, further expanded the power of the EP.

E.Procedures: Co-decision, Co-operation, and Conciliation

EU policies similar to REACH that share a high level of controversy are more likely to develop through intergovernmental interactions and intense negotiations rather than by a supranational form of governance. The majority of community policy making activities follow a federalist type of policy process (Mahoney 2008). Legislative proposals get submitted by the
Commission to the Council and the EP. However, three distinct types of legislative policy procedures can be followed depending on the type of legislation. The three types are consultation, cooperation, and codecision. Issues of high concern and intense political disagreement follow the codecision path.

The EP has a range of different responsibilities depending on the procedure that is chosen. Consultation procedures require EP votes; however the vote represents a simple declaration of their political position. A cooperative procedural choice necessitates that the EP form the basis of the decision making by the other two institutional actors.

The EP holds the most power through the codecision political process. REACH followed a codecision legislative procedure. Codecision procedural steps contain multiple levels. Initially, the Commission issues a proposal followed by an extensive consultation process that can take up to several years of deliberation. The Committee of Regions is then given an opportunity to comment on the proposal. The Committee of Regions is a legislative entity representing the social, political and economic interests of particular regions that comprise the Member States and the Economic and Social Committee. The Economic and Social Committee has an important place in the codecision process because it represents EU civil society as part of the policy process. Subsequent to each institution providing their comments on a specific proposal, the suggested legislation is introduced to the EP as a first reading. A particular rapporteur of the EP is given the task of piloting the legislation through the EP political process. The rapporteur is assigned the proposal’s dossier and is expected to facilitate the political dialogue so the EP can deliver an opinion at first reading. This opinion, prepared by the rapporteur, is discussed and amended following input from the pertinent parliamentary committee(s) that has or have interests in the subject matter proposed. The new chemicals policy was led by the Committee on the

The opinion delivered through committee is subsequently debated in plenary session where it can be adopted by a simple majority (Mahoney 2008). The proposed legislation follows a corresponding process in the Council where this institution also prepares preliminary arguments for its first reading on the policy. The Council finalizes its position regarding the proposed law that includes their suggested revisions to the revisions that the Commission may have made during their response to the EP’s first reading. The procedures conclude if the Council finally approves of the Commission’s proposal as amended by the Parliament. The proposal is then adopted. On the other hand, if the Council does not approve the proposal, it goes to a second reading.

During the second reading in the EP, the legislative proposal is revised and the Council’s common position is reviewed. The only allowable revisions must address the concerns that arose in the first reading and issues addressed in the common position. New provisions are forbidden. The EP can approve or reject the proposal. An EP decision to pass the proposed legislation as revised by the Council leads to the proposal being passed in to law. Conversely, a negative opinion by the EP on the Council’s common position ends the legislative process. They can also choose to amend the common position whereby the amended document returns to the Commission and the Council for its second reading. The Council can then accept the amended common position or reject it. If the Council does not accept the EP amendments to the common position then the proposal goes to a conciliation committee. The Commissioner in charge of the dossier of the “The Conciliation Committee” brings together the delegations of the EP and the
Council to work toward a compromise. The Conciliation Committee is chaired jointly by the chairpersons of the delegations from the two legislative institutions. They lead a consolidated effort to bring about positive resolutions to the members’ concerns (Mahoney 2008).

In the case of REACH, the Council reached a Common position in the December of 2005 and the Environmental Council formally adopted the Common Position in June of 2006. It served as the basis for the second reading in the EP, which started in September of 2006. A Common Position was adopted in July of 2006 and submitted to the EP and Council at this time. A final agreement was reached by the EP representatives and the Council in December of 2006; it was then endorsed at a second reading in the EP and was finally adopted by the Environmental Council on December 18, 2006 (European Commission 2015).

A tremendous amount of energy and resources is dedicated to developing proposals during the codecision process. A full range of documents are reviewed ranging from green papers, consultations, and revisions to white papers. Science and risk management experts submitted a large number of white papers as part the legislation process involving REACH. Usually, due to the extensive preparatory work, most legislative proposals make it out of the codecision process successfully and become law, although there are some exceptions. It is a complicated process that at the time of REACH felt daunting and endless (Lind 2004).

F. European Court of Justice

The ECJ is responsible for adjudicating disputes originating from varied opinions regarding EU law. EU law is different from international law and national laws, in that EU laws come from three origins. Laws originate in the treaties themselves and other higher-level
unilateral or multilateral agreements between Member States. Furthermore, laws are situated in a more complex rules structure of executive and legislative actions. Regulations are different from directives, and decisions, recommendations, and opinions each have their own specific institutional purposes. General legal principles are the foundation for ECJ judicial decisions based upon EU treaties and the current judicial philosophy at the time. The founding Judicial philosophies include: free movement of goods, persons, services, and capital across national borders; each person’s fundamental human right; the political rights of each individual, and the right to a fair hearing (Hix 2005).

This research focuses on four of the five institutions that play a significant role in constructing legislation for the Common Market. The ECJ is excluded because it does not directly participate in the critical role of developing laws. The court has undoubtedly been an active institution in policy development and has facilitated European integration of Member States. However, the focus of this research targets individual organizations and actors that could not bring an issue before the Court during the time in which REACH legislation was part of the EU political process. Individuals must either work through their national courts or start legal actions through the EC infringement processes against a Member State (Bomberg et al 2003).

G. The Environment Directorate General (DG ENV)

The Environment Director General (DG ENV) is a branch of the ministry within the Commission. It has the responsibility of acting in the EU’s best interests. Policy making activities are organized around functional sectors. They represent dense corporate organizational blocs called Directorate Generals (DG). The Environment DG is one of 28 DG’s who provide
specialized services for the Commission. Its main role is to initiate and define new environmental legislation and to ensure that measures which have been agreed upon are actually enacted in the Member States. During the period of REACH development, the Commission for the Environment DG was Margot Wallstrom at the beginning and Stavros Dimas closer to the end of the legislative process.

The Environmental DG is more accessible to lobbyists and position papers than other places in the EU structure. Commissioner Wallstrom strongly committed herself to being accessible. Often it takes several years to write one policy, but that was certainly not the case for REACH. It is important to realize that once a directive or policy is proposed, the same DG’s will not be in office throughout the legislative process. Wallstrom played an important role in elevating group accessibility to the Commission’s decision making processes. The way the DG works parallels how the Commission operates in communicating with outside groups. Dialogues occur through ad hoc committees and by direct lobbying. The DG ENV holds its own discussions more often than not, particularly with corporate interest groups and other Brussels located industrial federations. Environmental organizations and environmental lobbying groups depend on these openings in the political opportunity structure to actively participate in direct discussions with policy makers about detailed parts of new legislation. The EEB and other environmental organizations continually lobby and engage in political dialogues with the DG’s through discussion forums. They also submit white or green papers to help the Commission draw up amendments or changes in proposed legislation. Often they include political strategies in their submissions to help facilitate official agenda items being suggested to the DG ENV.

The DG ENV has the responsibility of drafting environmental proposals; therefore the staff plays an important role in assembling the information required to create a policy. REACH
serves as a prime example of how DG ENV, interest group, and environmental interactions
served the public and facilitated an effective legislative process.

Environmental movement organizations monitor more than single DG ENV’s. Environmental policies can cover a wide range of issues beyond the jurisdiction of environmental regulators, therefore environmental organizations spend large amounts of their efforts following and observing many DG’s.

All environmental movement organizations do not have equal ability to access the EU institutional structure. The leading groups, namely Greenpeace, WWF, and FoE, have sufficient resources and funds to carry out these important tasks. They play a more significant role in building coalitions to oppose corporate interests. “Green” coalitions emerge as useful methods for assembling greater resources, sharing the burden of advocating for policies, and using a variety of tactics.

A further mechanism available to environmental movement organizations for interacting with Commission officials is participation in DG ENV and NGO dialogues. During the REACH period, these types of political discussions were reserved for official meetings but with smaller numbers of people participating. These dialogues provide additional opportunities for cross organizational conversations, facilitating quicker decision making.

The DG ENV operates in similar ways to the Commission. The DG officials serve to link outside groups like WWF, FoE, and Greenpeace to the inner working of the Commission. Due to the nature of chemical issues and the extent of the chemicals industry in Europe, DG ENV officials worked closely with other units in developing effective environmental policy. DG ENV interacted with DG IV (Competition), DG XXII (Enterprise and SME), DG XII (Science, Research, and Development), and DG V (Employment and Industrial Relations).
**H.EU Directives**

Laws of the EU pass down to the Member States through different methods. Intergovernmental treaties represent the highest level followed by regulations, directives, decisions, recommendations, and then opinions. Regulations directly apply to Member States and are not dependent on the capabilities of each Member State to implement them or adapt or integrate them into national laws. Directives provide more flexibility in that they are performance based. Member States are expected to transpose the law into their own systems within a certain time period of implementation. Decisions, on the other hand, are similar to regulations. They are binding legal requirements Member States must adhere to in their laws and they can address individuals or specific organizations. Recommendations and opinions represent less stringent requirements and may address any entity; however, they are not binding (Hix 2005).

The directives in REACH provide specific technical and quantitative requirements such as tonnage amounts of certain types of risky chemicals that directly apply to state regulations. The “Precautionary Principle” (PP) legal approach incorporated into the new chemicals policy supports the EU’s progressive approach to regulating hazardous substances that pose high risks to society and animals. The Maastricht Treaty of 1992 explicitly incorporated the precautionary principle into its language and continues to be referred to in subsequent reports and EP resolutions regarding environmental policy [Title XVI, Article 130 r(2)] (European Community, July 29, 1992).
I. Monitoring and Implementation

Policy implementation of Directives is accomplished by many actors across DG authorities. DG ENV technocrats depend on the data collected by the national governments. Member States are left to implement directives using their best approaches where data incompatibilities may emerge. The European Commission established an autonomous agency to record, collate, and assess data, to draw up reports on the environment, and to produce timely, objective information on the quality of the environment, the pressures to which it is subject and its sensitivity (Council Regulation EEC 1210/90:1, article iii).

The main goal of the EEA is to evaluate all the alternatives available to policy makers using the State of the Union Reports. These scientific reports examine social and economic trends and their relevance to environmental data.

J. Forms of Interactions within the EU - Inter and Intra interactions between Commission, Parliament and the Council

During the REACH policy process, co-decision, co-operation, and Consultation procedures increased the power of the EP and forged strong ties between the Environment Committee and the ENV DG. Formal links as well as informal communication channels thickened. Direct methods of sharing information and ideas developed out of the co-decision process, for example. Again, the co-decision step demands that the EP co-legislate with the Council. That is, both institutions must agree for the legislation to be adopted. The REACH policy process involved two rounds of co-decision reviews (Lind 2004). In addition, these
mandatory institutional links have secondary implications. Direct unofficial meetings occurred between the Council and EP members, helping to build coalitions and create new openings in the political opportunity structure. At the same time, the necessity of working with a growing number of people in committees made it increasingly difficult to reach consensus. Small functional groups emerged who played an important role in guiding legislation through the EP and Commission.

The increased cross functional talks between the EC and EP positively affected the power of the Environment Committee and it became one of the leading institutional locations for introducing pro-environmental legislative proposals (Jordan 2005). The Parliament forced the Council to conciliation on many environmental issues (Jordan 2005; European Parliament 2004).

The new powers of the EP significantly impacted the inclusion of external stakeholders. New institutional access points emerged, allowing environmental movement organizations greater access to the legislative process. The importance of lobbying dramatically increased (Jordan 2005). MEP’s found themselves the targets of well-funded business interests, and WWF, Greenpeace, and FoE lobbyists realigned their efforts towards the EP. Simultaneously the number of Green Party MEP’s continued to climb. A close relationship existed between Green Party members and environmental movement organizations, facilitating the effectiveness of “green” coalitions. The “Green” group within Parliament particularly benefitted from the increased work load impacting the EP. Key MEP’s were able to act as rapporteurs, taking on the responsibility of preparing the high-profile reports and expert information used in debates. Inga Schorling accepted the rapporteur responsibilities for REACH (Lind 2004).

The lack of available science experts in the Commission and EP required external reports by outside consultants, business and environmental alike. The Parliament set up many hearings;
stakeholder groups and forums focused on using the expert advice to shape policy preferences. The Environmental Committee created many types of functional mechanisms to increase the amount of information used in drafting legislation (Jordan 2005).

The EU categorizes different types of stakeholders. One classification is territorial based stakeholders at both the national and regional levels and a second classification is coalitions of interest group associations, from civil society to business (Kohler-Koch 1999). Environmental organizations are interest groups and fall under the second category.

The Commission also distinguishes between two categories of nongovernmental organizations (NGO’s). One classification is non-profit organizations including national, European, and international associations and federations. The second category is profit making organizations such as public relations firms and consultants. Environmental organizations such as Friends of the Earth (FoE), Greenpeace, and the World Wildlife Fund (WWF) are considered non-profit related. Profit making organizations are treated as individuals who act on the instructions of others.

New proposals are not necessarily connected to a new group because many existing EU committees can assume jurisdiction. Some environmental organizations such as the European Environmental Board (EEB) or the coalition of environmental ngo’s (Green 10) maintain a permanent presence at the EU level.

In the EC, three types of dialogue groups are possible. A consultative forum can be established comprised of representatives from regional and local authorities. A forum can also consist of consumer and environmental organizations, trade unions, and industry federations. These types of groups provide a sounding board which helps the EC to remain aware of issues surrounding an EU environmental policy and its impacts on the economy.
A second type of interaction is the *implementation network*. This type of network includes Commission officials and representatives for pertinent national authorities actively participating in the execution of EU policy.

The final type of interaction involves a *policy review group*, which consists of the DG Environment in the Member States and Commission officials. It focuses on developing a mutual, cross national understanding of the policy and provides a platform for exchanging points of view and information regarding both the environmental policy under review and the standards for measuring outcomes.

The EU purpose for broadening participation in policy development through these mechanisms was to bring in external stakeholders to address the problems that may arise from implementation of a certain policy. The Commission thought it better and more effective to use a sub-system structure such as committees and forums as a means for including a wide variety of stakeholders in decision making. The EC contains multiple entry points for interested groups.

Environmental movement organizations do not interact with the EC solely through committees, forums or conferences. Groups maintain protest tactics and educational activities as external pressures on decision makers. The EU strives for inclusion and participation at most levels in response to public skepticism. A strong push for accountability and legitimacy directly influenced REACH negotiations. In particular, the EC maintains a firm commitment to openness in organizations and participation by interest groups.

The EC has also constructed a useful and effective website devoted to communication with the public and stakeholders. It reflects the Commission’s dedication to encouraging government officials to promote participation.
The Commission also has established particular conditions for allowing some Commission meetings to be conducted behind closed doors. There are exclusion regulations for both MEP’s and ngo’s. The Commission completely understands the value of privacy when administered appropriately. During the REACH process the Commission also recognized the importance of not relying exclusively on information from channels sponsored by industry. This would have drastic effects on communication channels and the distribution of power for citizens and groups.

The Commission seeks out input and attempts to get input from all sources. They also understand the limitations some organizations, such as regional and local groups, have in participating in policy discussions. For that reason, the Commission has sought out potential organizations and partially funded their involvement in EC political discourses. Environmental organizations such as the EEB, FoE, WWF and Greenpeace are regularly invited to consultations and information platforms. It is important to note that Greenpeace refuses any government funding on order to maintain an independent voice in political dialogues. Environmental movement participation within the EU policy-making structure is welcomed where open dialogue is encouraged. This political culture has created new places for environmental movement involvement. The EC stands separate from the Council of Ministers. It determines policy through internal working group arrangements. These groups have special standing under COREPER. The Commission’s committees are considered ad hoc and standing. The groups under COREPER administrative control are strictly for the political elite; the membership changes very little and environmental organizations are not allowed access. Special committee representatives of the Commission act as liaisons between the Council of Ministers and their nation-state government offices.
The countries pressing for stronger environmental policies can be forceful allies in supporting policy developments through the EU political opportunity structure. They have strong domestic rules and regulations which they promote at the supranational level for different reasons. The actors of “leader” or “pioneer” states (Anderson and Liefferenk 1997) have two objectives in mind. They first respond to growing harmonization efforts pushing for increased reduction in the transboundary effects of pollution. Water and air pollution are not restricted to political jurisdictions and can travel far distances. These national governments are very concerned about the flow of environmental hazards and want countries to work together in achieving national based standards.

Secondly, domestic actors are concerned about potential losses through strategic competitive advantages for industry. The economic gains of “leader” countries could decrease if the other nations are forced to invest in raising their levels of implementing harmonized standards (Haas 1993).

The political context has changed regarding the countries that usually take on “leader” characteristics versus those that remain less active. Until recently, Germany, Denmark, and The Netherlands were the most aggressive environmentally forward Member States. In 1995, a new dynamic occurred when Sweden, Finland and Austria joined the Union. Their environmental standards are some of the highest in the world, much higher than those of the earlier leaders. It was speculated that these countries would promote strengthening EU environmental standards (Jordan 2005).
The “leader” states typically employ political strategies at the supranational level in the context of their political cultures, environmental concerns and domestic laws. In reality, national regulatory experts and political actors realize that their efforts to influence environmental policies at the EU levels can result in reciprocities by other countries affecting national level regulations (Anderson and Liefferink 1997). However, domestic actors in EU institutions feel that negotiations taking place in Brussels are primarily determined by the involvement of Member States. Also policy processes and outcomes at the supranational level subsequently have an impact on the nations. Anderson and Liefferink (1995) characterize the political action of states into categories to help clarify their actions.

REACH emerged from “leader” states such as Sweden, Denmark, the Netherlands, and Austria. Sweden’s higher standards were key to their joining the EU. Stringent national policies that are strictly domestic can effect national interactions at the EU level. The ascension of Sweden sparked immediate concerns over Sweden’s ability to limit market access to chemicals not meeting their standards even though they were not in a common market (Jordan 2005). The political dynamics between the “leader” states can subsequently include “pushing” or indirect market interferences. Andersen and Liefferink (1997) argue that two types of political interaction with the EU political opportunity structure can take place. Either a country assumes the role of “forerunner” and encourages new policies or it assumes the “role model” or “push-by-example” strategy (Andersen and Lieferink 1997).

A “leader” Member State gradually promotes stronger environmental policies while not necessarily in direct interactions with EU political actors. They may build their political base first by initiated contacts with other potential constituents through coalition building actions.
Wallstrom and Meacher linked with other environmental ministers reflects this type of interaction between Sweden and EU.

Another possible type of strategy employed by a Member State could be characterized as a “forerunner context.” This tactic occurs when a Member State has been adopted deliberately. Member States can construct treaties between individual states as an option, choosing not to broaden their policies. “Defensive” Member State strategies focus on tactics that protect their interests from the internal market policy. Leaders of countries are more defensive about environmental policies than the whole of Europe.

Lastly, Member States can use indirect methods as tactical choices. They may have national laws in direct conflict with supranational laws. A nation state can try to opt out or act independently of a regulation claiming they prefer to maintain the higher standard. In this case, the question of pre-emption surfaces, as this strategy could bring about trade barrier concerns that contradict the objectives of a single market. Sweden had higher standards than the EU upon joining. They were given several years to bring their rules into congruence with EU regulations. The archetypical strategies can be used independently or in tandem with other tactics during contested environmental policy negotiations as policies make their way through the EU institutional policy process.

**L. Indirect Pushing**

EU law includes space for introducing or maintaining strict national legislation, but it is constrained by the effects the standards can have on the functioning of the Single Market. Article 36 of the Treaty states that this principle in its general aspects applies to situations
where no specific EU legislation exists or where measures have been taken under the Treaty’s environmental section (Article 130r-t) (Jordan 2005). However, the Article is implemented on a case by case basis to balance environmental concerns with market interests. A Danish bottle bill case heard in the EU Court of Justice created a precedence called the “environmental guarantee” (Koppen 1993). The court decided that some trade barriers may be allowed for pressing environmental reasons. Article 100a(4) of the Treaty stated that when harmonization measures already exist at the EU level, member states can be permitted to apply stricter national provisions under certain conditions. Denmark and Sweden use this precedence as a “environmental guarantee.”

This strategy was used in negotiating the Single European Act of 1986. The Member States made a concession to allow Denmark higher standards. It was later used by the Danish authorities as justification for their opposition to the introduction of QMV, expressing their grave concerns over losing national control and autonomy, especially in environmental matters which they prioritized.

An indirect strategy between Member States and the EU political opportunity structure is defensively minded. The country uses the “environmental guarantee” tactic to protect its national interests.

*Pushing by example*

Sweden usually follows a “pushing by example” (Andersen and Liefferink 1995) strategy. The public has strong political and cultural beliefs in protecting the environment and ecosystems, especially in relation to pollution in the Baltic Sea. Swedish environmental ministers and leaders

104
were very concerned about the ways membership in the EU would impact Sweden’s firmly held environmental protection beliefs. During the accession discussions they strongly argued for an environmental guarantee. It was framed as:

“More than anything, business and political elites are concerned that Sweden not be sidelined in EC deliberations. In the accession talks, the government emphasizes environmental protection, agriculture and regional policy.” (Aspinwall 1993).

The Swedish government and Swedish environmental movement organizations wanted to upload their national environmental policies as examples for other countries to follow (Neilson, 1994). Governmental leaders strongly stated the necessity for Sweden to personify an example as well as act as instigator in improving EU environmental policies. Producer liability, in particular, is an example (Jordan, 2005). The accession agreement already allowed for Sweden to be in the forefront. (EU, EES och miljon 1994). Chemicals policies were of particular interest to Sweden. The Member State was granted a four-year transition period to harmonize chemical standards while the EU committed itself to review of its own legislation regarding chemicals (Jordan 2005).

Austria, Finland, Germany, and the Netherlands use the argument of national experience when addressing proposed environmental law at the EU (Jordan 2005). Science experts and regulatory officials can present strong political frames for choosing one form of environmental policy over another. The information from experts has added political weight to EU political discourses. Member State authorities can infuse their epistemic beliefs into discussions about regulatory frameworks in terms of practicality, effectiveness, and feasibility. According to Jordan (2005) other states do not find this tactic useful in penetrating EU political openings.
N. Pushing from inside Brussels

Another Member State strategy available to domestic interests can be found in taking part in the EU policy process. Member States can directly participate in the other EU institutions and the bureaucratic entities within them. Using this tactic allows Member State actors to engage in coalition strategies focused on assembling sufficient influence in the Commission and EP to foster change.

Agendas for meetings of the Council of Ministers are set by the Member State holding the Presidency of the Council. The agenda is also set by the previous Presidential term’s agenda that has already been predetermined by legislation in discussion in the EU institutions, which sometimes lasts at least ten years. REACH lasted through several Presidencies. The country holding the Presidency during particular points in the chemicals policy negotiations demonstrated some influence in the final policy preferences. For example, during the Finnish Presidency as REACH was finally agreed upon, the European Chemical Agency (ECHA) was placed in Helsinki, Finland.

The rotating Presidencies occurred year by year as below.
Table 2.1. Rotating presidencies from January 1995 to July 2006

<table>
<thead>
<tr>
<th>Year</th>
<th>January</th>
<th>July</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>France</td>
<td>Spain</td>
</tr>
<tr>
<td>1996</td>
<td>Italy</td>
<td>Ireland</td>
</tr>
<tr>
<td>1997</td>
<td>the Netherlands</td>
<td>Luxembourg</td>
</tr>
<tr>
<td>1998</td>
<td>UK (Chester Meetings)</td>
<td>Austria</td>
</tr>
<tr>
<td>1999</td>
<td>Germany</td>
<td>Finland</td>
</tr>
<tr>
<td>2000</td>
<td>Portugal</td>
<td>France</td>
</tr>
<tr>
<td>2001</td>
<td>Sweden (REACH White Paper)</td>
<td>Belgium</td>
</tr>
<tr>
<td>2002</td>
<td>Spain</td>
<td>Denmark</td>
</tr>
<tr>
<td>2003</td>
<td>Greece</td>
<td>Italy</td>
</tr>
<tr>
<td>2004</td>
<td>Ireland</td>
<td>the Netherlands</td>
</tr>
<tr>
<td>2005</td>
<td>Luxembourg</td>
<td>UK</td>
</tr>
<tr>
<td>2006</td>
<td>Austria</td>
<td>Finland</td>
</tr>
</tbody>
</table>

The political leaders and ministers of Member States can organize their strategies and tactics using this model, as Sweden did during the REACH process. The next chapter provides detailed information on Sweden’s successful implementation of the Member State options available to challenge existing chemical laws in the EU political opportunity structure.

Denmark chose to take up defensive posturing in interacting with EU level political opportunities as one type of Member State strategy. However, later they altered their tactics to incorporate a “lead by example” strategy, emphasizing their higher concern for their
environment in transnational market interactions and environmental negotiations. Finally, Sweden directed a “pushing” strategy for fostering a new approach to regulating hazardous chemicals. Coalitions among Member States, specifically the Nordic states, Austria, and the UK, exploited opportunities in the EU institutions alongside social movement organizations, interest groups and Political Parties to successfully enact REACH.
A. Setting the Context

The objectives of this chapter reveal the mechanisms responsible for entering REACH onto the European Union’s political agenda and to examine the favorable factors in the European Union institutional structure leading to its enactment. It investigates the importance of configuration of elites and “green” Member States during Europeanization processes in advancing the new approach for regulating chemicals into law. It examines the interactions between a proREACH advocacy coalition and the Commission, Parliament and Council.

The REACH political process began with informal meetings initiated by environmental ministers and regulatory experts from the five “green” states of the European Union in early 1998. A configuration of political elites uploaded their regulations from “green” Member States to the supranational level while maintaining their strict environmental standards. A proREACH advocacy coalition helped negotiate REACH through the EU institutions by supplying external support through information campaigns, media events and engaging in science-based stakeholder forums and working groups coordinated by the European Commission. The European Union environmental movement played an important role in getting REACH on the political agenda. They reoriented their social movement resources towards technical knowledge and conducting scientific and economic studies in exchange for gaining access to political decision making. Their strategies and windows of opportunity focused on informally and formally lobbying Commission administrators for greater influence in framing the REACH debate. The research demonstrated that key political elites in the Commission and Parliament provided additional
driving forces through their institutional support driving REACH forward. In 1998, Environmental ministers of the New Member States put REACH onto the European Union agenda through a combined effort as a minority block in the Council of Ministers. They submitted a request to the Commission asking for a review of the current chemicals regulations initiating the co-decision process. The pro-REACH advocacy coalition continued expanding their membership and tactics relying on scientific arguments. This particularly reflected the Commission’s increased pluralistic goals of transparency, accountability, and legitimacy. The proREACH strategies and tactics included building cooperative information campaigns with downstream users, particularly those from Sweden. The variety of groups extended to animal rights groups, consumer groups, health groups, and other NGO’s. The primary focus of this research is the core groups of environmental movement organizations including WWF, Greenpeace, FoE, and the EEB. The Commission was crucial in the decision making process especially as the DG ENV gained authority overseeing the REACH political process. DG ENV government officials built strong connections with the proREACH advocacy coalition but also included broad participation and therefore sought to include Business coalition members as well.

Lastly, this chapter reveals that the proREACH coalition’s strategies and tactics in and around the European institutions led to the successful passage of a new approach for regulating chemicals. Although the European Union environmental movement faced fierce confrontation from the chemicals industry, they REACH passed with the precautionary principle and reversal of the burden of proof as a founding force in the legislation.
The policy agenda setting stage began with informal meetings initiated by environmental ministers and regulatory experts from the five “green” states of the EU in early 1998. They began the incremental and complicated policy co-decision process for enacting a new strategy for regulating chemicals in the EU. In that year informal discussions between regulatory specialists and government officials from Austria, Denmark, Finland, the Netherlands, and Sweden led to a proposal suggesting that a chemicals policy be introduced in the EU identifying key aspects of concern. The areas of concern were: 1) new regulatory operational goals were needed based on principles such as the “zero toxics” policy; 2) the burden of proof should lie with producers and importers; 3) the precautionary principle should be applied; 4) substances with irreversible consequences should be banned; 5) industry should cover the costs of risk assessment.

Later that year, The UK environmental minister, Michael Meacher, invited other environmental ministers and groups to help begin formulating arguments for reviewing current regulations and constructing viable solutions for governing hazardous chemicals. The UK and Germany had particular interests in monitoring the discussion focused on improving the EU’s chemical legislation. Their governments had strong corporatist ties to the chemical industry. The German chemical’s industry was the strongest in Europe and intimately intertwined into their economy. These meetings modified the groups’ previous concerns and broadened them to include: 1) a need to protect human health and the environment; 2) the need to incorporate sustainable development goals; 3) chemical economic and social benefits; 4) the importance of
Finally, the work of the Environmental Ministers came to fruition as the Commission initiated a review of the current chemical regulations. It took almost a decade before it was eventually enacted. The REACH policy outcome resulted from highly controversial debates and years of formidable negotiations among scientists, politicians, activists, corporate advocates and government officials beginning in March 1998. The new strategy for regulating chemicals withstood the Commission’s fact finding evaluations and the EU’s co-decision political process as it incrementally transferred from one institution to the next. The political opportunity structures continued to change during each step. Environmental movement organizations constantly adjusted their tactics to reflect the dynamic nature of shifting political opportunities. The agenda setting stage leading to and including the Commission’s White Paper offered the most responsive windows of opportunity for the proREACH advocacy coalition. The Business coalition had more influence during the policy formation phase. A short summary of the REACH policy process timeline is below to help connect strategies and tactical choices with the steps in the policy process and favorable elements in the EU political opportunity structure.

**Table 3.1 Key Events in REACH through the EU Policy Process**

- April 1998: Informal Environment Council in Chester, UK, expresses concerns about the chemical regulatory system.

- November 1998: Commission publishes a report on the functioning of the four main chemicals regulatory instruments.

-26th June 1999: Environment Council concludes that there is a need for a new approach to chemicals regulation, and calls on the Commission “to submit the policy document outlining a new chemicals strategy at the latest by the end of the year 2000”.

-13th February 2001: Commission publishes the White Paper which first outlines the REACH system.

-2nd April 2001: Commission holds a stakeholder debate on the White Paper, and publishes a report of the debate.

-7th June 2001: Council backs the REACH proposal at Environment Council.


-Winter 2001/02: Technical working groups on REACH organized by the Commission with contributions from stakeholders

-21st May 2002: Commission holds a stakeholder debate on the Business Impact of REACH [16], at which a draft business impact assessment is presented and discussed – this impact assessment is then published in June.

-May-July 2003: Internet consultation on the full draft REACH text. DG ENV and DG ENTI redraft the REACH proposal.


-21st November 2003: Commission workshop on impact assessment of REACH.


-October 2005 The Parliament’s Environment Committee votes on REACH with eight other committees giving opinion

-November 2005 The Parliament adopts amended REACH proposals and supports Environment Committee proposal

-13 December 2005: The Council agrees on Common Position that differs from Parliament’s, calling for continued negotiations

-December 2006: Representatives of the European Parliament and the Council find a negotiated agreement on the final version of REACH, subsequently endorsed at second reading 13 December 2006 and adopted 18 December 2006

-1 June 2007: new European chemical Regulation REACH enacted.

*C.Growing Political Will - Informal Environmental Council Meeting*

A Greenpeace, International report stated: “Although the European Community remains one of the largest chemical producing regions of the world, we still know remarkably little about the hazards posed by the vast majority of chemicals currently being manufactured and marketed…they are without adequate evaluation of the hazards they may pose” (Santillo 1999). Beginning in the 1960’s concerns over chemicals policies and industrial pollution linked to chemical plants emerged on the European political agenda, resulting in demands for increased controls and regulatory frameworks. Several types of environmental organizations and interest groups successfully influenced the Commission during the REACH policy process. Greenpeace and other public interest organizations had been calling for new legislation on chemicals for years. The newly proposed legislation did not originate out of the blue.

The adverse consequences of increased industrial development throughout Europe from World War II onward continued to energize political action by politicians and environmental organizations due to the negative impacts of chemicals on the environment and human health. The 1970’s demonstrated a growing adversarial relationship between the chemical industry, government and the citizenry. Environmental and quality of life concerns moved to the forefront of policy agendas in several EU countries. However, new protection oriented regulations continued to be measured against economic rationalities for their impact on industry, rather than their level of protection for human health. The public’s demand for health and environmental
protection combined with improved regulatory science sparked major environmental governance changes dramatically affecting the chemical industry.

In 1976, the Seveso dioxin disaster became a culminating event for raising public concern about chemical safety. The explosion of a chemicals plant on the outskirts of Meda, a small town north of Milan, Italy, released a toxic cloud containing hazardous chemicals into the atmosphere. The dioxin cloud contaminated a densely populated area located downwind from the area. The neighboring town of Seveso was mostly affected (Pocchiari, Silano, and Zapponi 1987). The chemical company managers did not immediately disclose the release of dioxin for fear of public chaos. Later as news of the accident spread, industry representatives contacted government officials who then executed preventative measures. Company experts assured the public and regulatory officials that the public was “safe” from the risks of operating the plant and exposure to dioxin. They were uncertain of the effects of dioxin on a human population and could not quantify what health responses might occur. They did not feel the urgency to promptly inform people or the government about potential dioxin exposures.

The tragedy caused over 600 people to evacuate their homes and at least 2000 were treated for chemical poisoning. Animals were piled up and burned in fear of dioxin poisoning. It directly forced EU political leaders to take immediate actions for reviewing existing industrial chemical manufacturing legislation and for adopting one of the first EU based chemical Directives, the Seveso II Directive (European Commission 2015).

An epistemic belief of “safe” does not mean zero-risk as part of risk management calculations. Risk assessment scientific theories define “safe” when the chance of risk may be negligible or acceptable in accordance with a government’s regulatory standard, especially when uncertainty prevails. This allows corporate entities to avoid legal culpability for an accident
because it could have been caused by circumstances beyond their control or insufficient
information was available for them to take alternative action. One philosophy of risk accepts
that technology may fail beyond human control but the chances may be so slim that an accident
may never occur. On the other hand a false sense of security can lead to significant human
tragedy. The regulatory epistemic belief before Seveso reflected an ideology that assumed a
condition of safety is obtainable by simply making a due diligent effort to prevent an accident.

The Seveso dioxin accident caused government regulators to review their assumptions
about the chemicals industry independence and what is meant by “safe.” The Seveso Directive is
designed to prevent accidents at hazardous chemical manufacturing plants. It requires industrial
facilities to evaluate the risk of an accident. It further increases transparency by demanding more
strict reporting obligations and the development of contingency plans. It also requires them to
conduct public information campaigns and increases their cooperation with government
authorities.

Restrictions and bans on dumping and incineration of wastes in the North Sea further
instigated people’s concerns over chemicals. This can be seen in the Esbjerg Declaration as part
of the Oslo and Paris Conventions regarding hazardous chemical dumping in the North Sea
(OSPAR, 2014). Greenpeace’s campaign against ocean dumping played a successful role in
changing the mind-sets of most governments and industries (Parmentier 1999) towards
skepticism and the need for precaution. Spillover effects impacted hazardous chemical and
labeling laws as targets for change (Selin 2007).

Major regulatory failures in public health and food protection during the 1990’s led to
heightened public concern over environmental matters and a major re-consideration of the role of
government services in protecting health (Geiser and Tickner 2003). Mad Cow Disease (bovine
spongiform encephalopathy) broke out in the UK and chicken feed containing high levels of dioxin undermined people’s confidence in the state’s ability to protect their health.

Social forces external to the industry radically influenced the advocacy coalitions and the culture of industrial organizations and their comfortable links to government officials and political parties. The Chemicals Law of 1980 materialized as a key piece of legislation resulting predominantly from a transformed political climate in favor of pro-environmental regulation. Life-threatening chemical disasters in Italy and other parts of Europe, Member State activism, a growing environmental movement, the rise of the German Green Party, a change in regulatory science and increasing numbers of environmental groups seeking justice helped to transform government power and to construct a new chemicals policy - REACH. The Green Party went from zero Members of Parliament (MEP’s) from 1979-1984 to 23 Vert (Green Party) MEP’s from 1994-1999 (European Parliament 2015).

In the early 1980’s most environmental movement organizations targeted their resources at the domestic level. Organizations such as Greenpeace, World Wildlife Fund (WWF), Friends of the Earth (FoE), and the European Environmental Board (EEB) perceived greater opportunities were available by challenging national governments for change. At the same time, the European Union began extending its sphere of influence and its power, permitting increased numbers of environmental organizations to participate in political discussions. European Union institutional relationships were also changing as the EP was gaining power comparable to the Council of Ministers and the Commission. The co-decision process for example, provided the Parliament with legislative create power comparable to the Council. The comitology system increased access for citizens and NGO’s and allowed the Commission to be assisted by representative of the Member States and public in accordance with the comitilogy procedures.
The committees act as forums for discussions and are chaired by Commission staff. Committees can function as advisory groups, management committees, regulatory committees, with the power to review legislation.

EP members were able to increase their presence in the system of comitology discussions. Environmental movement organizations soon gained access to the structure of decision making through various mechanisms and by assisting in the planning and review of legislative proposals. The White Paper includes legislative direction and specifics but is not ready to go directly to the Council of Ministers for ratification. First it must be reviewed and discussed by science experts such as academics, government specialists and nongovernment representatives with thorough knowledge in the policy area.

Public and scientific concerns regarding the harmful effects of chemical substances gained traction in political discourses and became politically salient (Vogel 2012) during the late 1990’s. Environmental organizations integrated science experts and science-based evidence into their advocacy efforts, political discourses, and framing strategies.

Advocacy campaigns by Member State environmental groups such as the Bundesverband Burgerinitiativen Umweltschultz (BBU) in Germany and EU groups like Friends of the Earth performed valuable roles in cultivating and raising the public’s collective consciousness about the potential harm from chemical hazards. They also played leading roles in framing public discourses focused on promoting changes in existing chemical policies. The 2000 Eurobarometer 58.0 report, for instance, ranked “disasters caused by industrial activities” as the second highest concern in the EU15 states behind “concerns for nuclear power and radioactive waste” (Eurobaramter 2000). Environmental attitudes and post-materialist values continually
strengthened, opening up new opportunities for environmental movement organizations and Green Party members.

The growing public concern over chemical hazards coincided with the expansion and intensification of European political and economic integration. Environmental concerns emerged in new legislation during the 1990’s (Selin 2007). The initial wave of unification Treaties of Rome did not see environmental concerns as part of the agreements. Not until the second wave of intensified European integration did environmental issues become more prominent.

International harmonization pressures from above by the Organization of Economic Cooperation and Development (OECD) added additional political force pushing for chemicals policy convergence at the supranational level. Past EU directives were created in reaction to the United States’ Toxic Substances Control Act (TSCA) that harmonized notification requirements for new chemicals among developed countries. TSCA alarmed European legislators for fear the new American chemical requirements would be more rigorous in controlling hazardous chemicals than the EU’s efforts, giving the United States a competitive advantage. Risk management government experts in Member State chemical agencies, such as Finland’s TUKES and Sweden’s KEMI, successfully worked with their trade representatives to negotiate agreements for science protocols including common test guidelines, standards of laboratory practice, the mutual acceptance of data, and a set of mutual understandings regarding notification requirements of chemical data (Vogel 2012).

Other international pressures, mainly from northern European treaties, helped establish precedence for more stringent regulation of hazardous chemicals. The Stockholm Convention on Persistent Organic Pollutants and the North Sea Conferences applied addition pressure on
Member States pushing them in the direction of REACH (Selin 2007). United Nations programs such as the Intergovernmental Forum on Chemical Safety (IFCS) consisted of 120 country signatories and NGO’s agreeing to take a broad approach towards managing chemicals. A main result was the establishment of the “Strategic Approach to International Chemicals Management” that supported an international approach to standardizing government procedures and an integrating chemical regulatory framework (Geiser and Tickner 2003).

D. Environmental Ministers as Environmental Council Access Points

The development of a new system for regulating hazardous chemicals began in 1998 with informal meetings between the political elite environmental ministers of several Member States. Elites within the EU political opportunity structure began the driving force behind REACH. The Environmental Council continued their push for a reformed chemical policy by expanding their political discourse with the Commission and by constantly posing focused policy questions on important elements they felt were necessary to the proposed legislation. During this policy construction phase in the EU policy process, the Commission conducted stakeholder review processes as part of their pluralist goals of transparency, accountability and legitimacy. Chemical industry, environmental movement organizations and science specialists seized the opportunity and fully participated in the chemicals policy review forums leading up to the White Paper in 2001 advocating for the policy preferences. They continued their participation once the White Paper was published but significantly broadened their lobbying strategies and tactics as REACH advanced through the co-decision process.
Regulatory review of existing chemical policies was subject to intense discussions led by the Council beginning in 1998 into 2001. EU chemicals policy reform began in 1998 when the UK Environmental Minister, Michael Meacher, invited other Environmental Ministers of the EU Member States and their risk management experts to an informal meeting in Chester, UK during April of 1998. Many of them expressed their concerns about the lack of action taken on out-dated risk management regulations on hazardous substances. In March members of the environmental council met with representatives from UK, Germany, Austria, Denmark, Finland, the Netherlands, and Sweden to discuss problems with existing regulations and potential solutions. It is important to note that the five Nordic countries had just become members of the EU in 1995. These countries had strong environmental protection cultures, policies and regulations. Sweden was a pioneer in pursuing a “non-toxic” environment. Together, as a “green” Member State coalition, they represented a minority block in the Council of Ministers.

Meacher’s strategies were well timed. The UK was about to take over the EU presidency of the Council of Ministers, adding support to his efforts to develop a comprehensive approach to regulating chemicals. It also provided the newly formed “green” Member State coalition with the EU President’s backing. The window of opportunity was about to open, facilitating the placement of a new strategy for regulating chemicals onto the EU agenda. The subject of chemicals in the environment was also identified as one of the key Presidential themes to be addressed during the UK turn as President of the Council.

During this time, numerous reports such as the UK Royal Commission for Environmental Pollution (RCEP) report were published outlining the current regulatory demands on environmental agencies. They particularly addressed the need for increased transparency in the regulatory process between chemical companies, government regulators and the public (Royal
Commission for Environmental Pollution 1998). It paralleled important issues administrators in the EU had been advocating for years.

Member State risk professionals felt pressures from the international level to harmonize government risk procedures. For example, the EU was an important actor in progressing international action on chemicals through the Organization of Economic Co-operation and Development. The push for an international standard of harmonized chemical regulations coincided with national demands. Regulatory officials from the Member States were finding it unmanageable to meet the risk assessment regulatory demands of their home countries. They could not effectively conduct thorough toxicological and risk analyses in a timely manner. Manufacturers and importers were frustrated by the delay while government regulators were burdened with a complex web of regulations hampering their efficiency.

Michael Meacher was from the Labour party, appointed Minister of State for the Environment, first at the Department of the Environment, Transport and the Regions (1997-2001) then at the Department for Environment, Food and Rural Affairs (2001-2003). He called the meeting to discuss shared concerns over the burden current risk regulations hampered their agency’s efforts in balancing effective implementation of three existing, patchy chemical directives (Ekman, 2014). They emphasized the need for a new comprehensive approach to manage chemicals. Past lenient and inconsistent legislation needed to transform into a comprehensive and scientifically sound method for taking precautions against hazardous chemicals.

European chemicals law was divided up into a hodge-podge of guidelines and directives that have multiplied over time. The four directives leading to REACH were:
1) The Dangerous Substances Directive 67/548/EEC. This directive was amended as Council Directive 79/83/EEC of 18 September 1979. It requires pre-market notification for “new chemicals”. That is, chemicals not on the market at the 18 September date;

2) The Existing Substances Regulation 793/93/EEC. This directive organizes the risk assessment of prioritized chemicals already on the market at the 18 September 1981 deadline and which are listed in an inventory called the EINECS;

3) The Dangerous Preparations Directive 88/379/EEC. The law subjects dangerous preparations to harmonized labeling and packaging rules; and lastly,

4) The Marketing and Use Directive 76/769/EEC. This directive enables the adoption of Community-wide restrictions and prohibitions concerning the use of certain chemicals.

These directives emerged from past sporadic legislation starting with the 6th amendment in 1979 (Directive 79/831/EEC) introduced the principle of “the protection of the environment from the dangerous effects of substances”. This directive further established a notification procedure for “new substances” and required all “existing substances” to be listed in the European Inventory of Existing Commercial Chemical Substances (EINECS) (Burns, et. al 2010). The 7th amendment of the Directive (92/32/EEC) occurring in 1992 set the requirements of “risk assessment” that Member State government official needed to follow. Prior to this time chemicals were not assessed of their potential harm to the public. A system of risk assessment of existing hazardous substances was introduced by the 1993 Regulation (793/93) (Burns, et al. 2010). These directives put the burden on risk assessment on regulatory authorities. A lack of
data was of particular concern. Government officials, faced with a lack of information about a chemical, still did not require producers to conduct further tests on the potential harms posed by chemicals. Member State risk management officials emphasized the need for the burden of proof is placed onto industry’s risk management under its own responsibility (Schapiro 2007). A redirection of the risk assessment responsibility could be a method of shifting the burden of proof on to corporations (Von Holleben 2003).

The past four pieces of legislation that environmental ministers were concerned about contained several troubling aspects. First, the old Directives required manufacturers and importers of new chemicals since 1981 to notify Member State authorities of their basic toxicological properties and risk data. Older chemicals did not have to follow the same procedures. Secondly, the directives required manufactures, importers, and distributors of chemicals to assess whether a hazard criteria was met. If so then, labeling was necessary to provide the public with information about the toxic nature of the products. Thirdly, the old directives required regulatory authorities to collect the extensive data required to make a rational decision on the scientific evidence presented on the old substances marketed before 1981. And finally, the environmental ministers, especially from the Nordic states wanted to establish marketing restrictions or bans on chemicals that had substantial risks to consumer health and the environment.

All of the four directives have regulatory guidelines linked to chemical risk assessment testing and labeling in common. They share common goals of protecting human health and the environment while balancing economic interests. Although these chemical controls are focused on chemicals, they do have wider impacts on other regulations such as the electronic waste, Cosmetic Products Directives, and occupational health regulations, for example.
Institutionally, the four pieces of legislation could be combined into a new approach cutting across DG competent authorities, DG ENV and DG ENTI. This later set up opportunities for the opposing Business coalition to pit environmental concerns against economic interests. The four directives of the past represent a patchwork of confusing and conflicting directives making it difficult for corporations to follow and Member State regulators to implement. Furthermore, two of the directives, one concerned with Dangerous Preparations and the other regulating the type of Restrictions allowed were implemented under the competencies of the DG ENTI. These directives relate more to the marketing of products. The other directives focus on assessing chemical hazards. The overlapping objective of REACH seeks to combine four directives into one comprehensive approach infusing market approaches with risk management approaches. The attempted legislative integration constantly led to windows of opportunity for the Business coalitions as they tried to steer REACH away from DG ENV oversight which will be described later.

In December of 1998, the Environmental Ministers through the Council of the EU supported the work of the Commission in its proposal to prepare a new chemicals law. The Chester group worked on and negotiated a joint position paper for discussion during the informal Council meeting. The major frame presented to the Council of Ministers stated that “the lack of a comprehensive chemicals policy was the major problem.” Political discourses among the European Ministers led to action where the Council proposed that a concept of a framework directive be eventually considered.

Building on Meacher’s meetings with the other environmental ministers and regulatory specialists of the Member State’s Chemical Units, the Commission initiated an analysis of the regulations concerning chemicals and the four directives (Lind 2004). Their investigation
demonstrated numerous weaknesses in all of the four directives and the need to develop a more effective regulatory solution and implement and enforce the precautionary principle. The Commission officials specifically mentioned the need to use hazard identification as the initial step in identifying dangerous chemicals. It also suggested reversing the “burden of proof,” saying that producers should be responsible for collecting and submitting risk information. It directed the Commission to analyze the shifting of the main responsibility for generating risk assessments to corporations. In 1999, the Commission organized a stakeholder Brainstorming Conference where most of the key stakeholders attended the sessions. Environmental movement organizations and corporate advocates exploited the opportunity, realizing that their resources would be focused on engaging in scientific and political debates regarding the most effective way to manage chemicals. Lastly, the Commission stated the need to create a clear strategy for assessing the harmful effects of exposures to existing substances. The policy outcome from the subsequent meetings resulted in the commissioning of a White Paper or EU sponsored policy analysis to investigate the “shifting of the burden of proof” onto corporations.

The Environmental Council reviewed and adopted the Commission’s analysis and approved the next steps of the policy process. They directed the Commission to carry out extensive stakeholder conferences and workgroup meetings throughout 1999, with the objective of gathering as much feedback as possible to inform the development of REACH. Environmental movement organizations and industry representatives participated in the extensive policy discourse. During that time, the Council reinforced their resolution urging the new chemicals policy be guided by the precautionary principle and reversing the burden of proof unto manufacturers and importers. Scientific evidence and epistemic arguments continued to
play key roles in the stakeholder forums while proREACH and Business REACH advocacy coalitions formed.

“Shifting the Burden of Proof” on to corporations was the source of contentious debate in the informal meetings. As outsiders, Greenpeace and the WWF publicized their own scientific analysis and review of the past Directives suggesting potential solutions to bring about change. They felt that what was lacking most in existing legislation was the inability and restrictions on government to base comprehensive governmental risk assessments on the existing EU directives. Greenpeace and WWF continued to argue that corporations could continue production of hazardous chemicals until proof of an unacceptable risk was scientifically proven by government officials. They called for a complete structure overhaul of EU chemicals legislation would be essential. Currently, ‘ignorance was rewarded’.

The ‘burden of proof” should be reversed, such that all chemicals are assumed hazardous, and regulated accordingly, until such time as sufficient evidence becomes available that the chemical presents no potential for hazards to ecosystems or human health” (Greenpeace 1999).

The epistemic shift meant altering the main responsibility for constructing risk assessment for hazardous chemicals onto corporations. They had the money so why weren’t they the ones responsible for conducting the risk assessments (Schapiro, 2007). The resulting language stated:

“Place the main responsibility on manufacturers, importers, formulators and Industrial users for generating and assessing data and preparing risk assessment Reports for substances, as well as for providing adequate information to users and the public safety of their products for the part of the life cycle to which they contribute (shifting the burden of proof).” (Greenpeace 1999).
A second key epistemic shift was the use of the Precautionary Principle. It was at the heart of the intense debate as part of the emerging REACH Directive. At each level of the EU institutions, constant debates centered on the interpretation and expanded application of the Precautionary Principle in actual implementation of Directives. Sweden, as a new Member State in 1995, maintained a strong anti-toxic political stance and was the leading proponent for transforming EU environmental policy (particularly as REACH was moving through the policy process).


“In order to protect the environment, the precautionary approach shall be widely applied by Member States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation (UNCED 1993).”

The actual initial legal application of the Precautionary Principle took place in 1969 when the Swedish Environmental Protection Act introduced the “reversed burden of proof”. It required corporations to demonstrate the safety of their products to regulators (Swedish Government 1969; Sand 2000).

At the EU level the Precautionary Principal has expanded and been incorporated into other regulatory frameworks as a founding principle. After the language was adopted in the Maastricht Treaty and the Amsterdam Treaty it has been applied to controlling the use of beef hormones, genetically modified organisms and climate change. Although the philosophical approach originated from Swedish origins, many other political jurisdictions have incorporated it
into their regulatory frameworks. Many United States laws and state laws promote precautionary approaches.

The Precautionary Principle was one of the most highly contested aspects of REACH. Very few environmental policies for risk management versus risk assessment have created as much controversy as the Precautionary Principle during the contentious REACH policy discussion (Kallenberg 2009). In Sweden, the principle is widely accepted with some skepticism of its applicability. Corporate advocates have argued against it in some Swedish political contests stating Swedish environmental policy strayed away from science and fact-based regulation by taking a precautionary approach. They stated:

“Every serious actor ought to agree upon a couple of fundamental principles for an effective environmental and chemicals policy. Decisions must be based on sound and scientific grounds. The actions that are taken must be proportionate to the expected benefits…We are seriously concerned about the government’s lack of a long-term strategy regarding this matter (Fredholm, Bjorling-Hambraeus and Navinger 2006).

The proposed application of the Precautionary Principle includes many fundamental changes to the management of chemical manufacture, use and exposure at the supranational level. The 2000 Communication on Precaution of the European Commission (European Commission 2000 1) highlights the general relevance of the precautionary principle for EU policy areas beyond chemicals such as in consumer and health protection. The importance of the principle can be seen in the beginning framing of the policy.

“Applying the precautionary principle is a key tenet of the EU policy, and the choices it makes to this end will continue to affect the views it defends internationally, on how this principle should be applied (European Commission, 2000, 3).
Further conditions concerning the issues of an appropriate scientific based approach were specified. “The measures, although provisional, shall be maintained as long as the scientific data remain incomplete, imprecise, or inconclusive and as long as the risk is considered too high to be imposed on society (European Commission 2000). The requirement of a response in “Proportionality” to the risk is also included as one of the major requirements of applying the principle (Renn and Elliot 2011). DG Environmental official, Jean Francois Verstrynge stated:

“What is very important to note is that there can be no question of inconsistency between the need for a scientific basis and the use of the precautionary principle. The implementation starts with as complete a scientific evaluation as possible.” (Verstrynge 2001).

At first, the European Chemical Industry Council (Cefic) expressed positive responses to the proposed new chemical approach and promised increased funding for hazardous chemical risk assessments. At this time little opposition surfaced advocating against putting forth a new chemicals policy. The public’s negative outlook and apprehension towards multinational chemical corporations led Cefic’s president, Jean Pierre Tirouflet, to first implement a public relations strategy focused on raising the public’s opinion of the chemical industry. The Commission proposed a new chemical strategy for regulating chemicals by the end of 2000.

Cefic also took independent action and initiated their own program arguing for a more positive and creative approach to chemicals management. They argued in favor of a self-regulation and voluntary measures regulatory framework. Cefic and other industry lobbyists demanded the existing rules and regulations be simplified in order to make it easier for them to comply. They insisted the epistemic ideologies of risk assessment remain the basis for decision making (Pesendorfer 2006).

The Commission continued its progress towards developing a final proposal for a new regulatory strategy with strong support from the Environment Council and environmental
movement organizations that would further develop into proREACH advocacy coalition participating in the Commission consultation process. The chemical industry and Business Coalition soon began to realize the influence of the Environmental Council and that the European Union environmental movement was winning the political battle. They started organizing conferences with industry officials, trade unions, representatives of Member States with large chemical industries, and DG ENTI officials in 2000, to discuss opposition strategies and tactics. They established a common political position that the current review of a new regulatory framework must be based on science expertise and maintain the objectives of the Single Market.

The pluralistic nature of the Commission opened access in the political opportunity structure for environmental movement organization participation. WWF, FoE, Greenpeace and the EEB, for instance, needed to adjust their resources to match the character of the window of opportunity. The organizational resource demanded shifts from protest and grassroots lobbying to information campaigns, science expertise and lobbying.

E.White Paper

The informal meetings held in Chester, UK expressed the need to reform the existing patchwork of chemical directives into a comprehensive approach to managing chemical risks in the EU. Environmental Ministers put chemicals reform onto the EU political agenda. A series of position papers were used as the mechanism for accessing the Commission’s political agenda, demonstrating growing political will to resolve the patchwork of Directives and Regulations.

The Precautionary Principle was fundamental to the regulation. It stated that when reliable scientific evidence is available that suggests a substance may have negative impacts on human health and the environment, scientific uncertainty also still exists. In these situations decisions must be made based on precaution. A second objective was to promote substitutions of less dangerous chemicals if they were available.

Despite the important environmental principles, the White paper also included economic principles. The new strategy had to consider the efficient functioning of the internal market and the competitiveness of the chemicals industry. The new strategy for chemicals should contain provisions for encouraging innovation and the development of safer chemicals. Lastly, the White Paper proposed a new arrangement founded on a single system that addressed new and old chemical substances in the same way.

It sketched out the chief disadvantages of the current directives and made suggestions for a more effective supranational approach. In the White Paper “Strategy for a future Chemicals Policy” (COM (2001) 88 final), the White Paper on Environmental Liability (COM (2000) 66 final), and the Communication from the Commission on the Precautionary Principle (COM
(2000) 1) started setting the stage for a new EU approach to regulating chemical substances at the EU level (Burns, et. al 2010). The changes also signaled a change in the way chemical risk experts conducted scientific assessments to evaluate chemicals substances. The new framework integrated directives in a coherent manner, set up to protect humans and the environment, based on principles of sustainability and also as important, founded upon the principle of precaution.

The political objectives of the proposed new strategy focused on providing protection of human health and the environment. It also supported economic competitiveness and the single market. It increased scientific risk information and corporate decision making. It integrated international efforts and especially promoted non-animal testing. The proposed new strategy conforms to EU international obligations under the World Trade Organization’s rules.

F.REACH moves on – Co-decision, Conciliation - EU Council and Parliament

The “Strategy for a future Chemicals Policy” moved to the next step in the EU policy process and was sent to the Council and European Parliament (EP) for consideration. The procedures are set up such that The Council reacts to proposed legislation by adopting conclusions while the EP adopts resolutions. The conclusions and resolutions were sent back to the Commission for the redrafting of the legislative proposal in response to the proposed changes submitted by the Council and Parliament.

Both the Council and Parliament adopted changes to REACH 2001 and both were positive changes towards REACH. However, they also asked for amendments. The environmental movement organizations continued applying pressure and fully engaged in public information campaigns, science advisory actions, and lobbying with Commission officials. This
resulted in several amendments focused on making the new framework stronger in protecting the environment and human health, protecting animals from more testing, increasing consumer protection, and attempting to make the process more simple (Lind, 2004).

From 2001 to 2003, the Commission began conducting conferences and stakeholder meetings. It also organized working groups made up of science experts who provided their technical advice on the legislative proposals. The Commission continued their pursuit of pluralistic involvement where environmental movement organizations established permanent connections to Commission staff, received research funding for developing position papers, and organized advocacy coalitions strategies and tactics. Environmental movement organizations and corporate advocates developed sophisticated media and lobbying campaigns. The chemicals industry, labor unions, environmental movement organizations, consumer groups, animal protection organizations, and downstream users started mobilizing their lobbying resources.

Drafting and redrafting REACH legislation in the Commission came under the authority of both the DG ENV and the DG ENTI because of the number of issues impacted by the proposed chemicals policy. However, due the Environmental Council’s framing of the original question to the Commission in terms of human health and environmental protection, subsequent final drafting came under the responsibility of the DG ENV. The chemical industry continued to employ competitiveness framing throughout the policy process, seeking to weaken REACH.

Clear divisions began to emerge including within the Commission in response to the strategies pursued by advocacy coalitions. The DG ENV reflected the interests of health and the environment while the DG ENTI represented the interests of the chemical industry.

The co-decision process opened up new political opportunities for organizations. For example, the Parliament was more open to lobbyists and direct action based upon their
in institutional mission and structure. The Council was more closed to direct organizational pressure from environmental organizations and more open to chemical industry informal contacts based on the industry’s importance to Member State economies.

The Parliament considered the White Paper through the Committee on the Environment, Public Health, and Consumer Policy or the Environment Committee. Green MEP, Inger Schorling’s was the Rapporteur responsible for preparing the initial scoping analysis to the Committee. The European Parliament step of the co-decision process provided increased opportunities for organizations to access decision makers. The Environment Committee presented several amendments including ones presenting arguments over the costs and economic implications REACH would impose on society. A slowdown in the European economy at that time added external pressures on proposing a stronger chemicals policy limiting the potential choice of salient frames.

The co-decision process involved large number of stakeholders more specifically geared towards the technical aspects of the legislation. They met in working groups issuing economic analysis and scientific precautionary principle evaluations. Finally, in April 2003 the collaborated input from the Council, EP, the working groups, the stakeholders, and particularly, the leaders of Member States, the DG Environment, and the DG Enterprise developed the legislative packet for implementing REACH. It was presented to other Directorate Generals for Interservice Consultation. Other European Council’s internal DG’s discussed the contents and submitted comments for a workable REACH proposal (Schaprio, 2007).

The co-decision process and the Commission’s commitment to stakeholder forums and working groups resulted in the highest level of lobbying the EU has ever seen. Advocacy coalitions stepped up there media campaigns and informal and formal lobbying strategies. Major
political, media, and lobbying confrontations took place in the EU over the features of the chemical regulation. BASF and other individual corporations joined the lobbying efforts in 2002 elevating the aggressive nature of the industry’s advocacy even further (Lind, 2014). Corporate interests mobilized all of their resources and directed them towards weakening REACH. Their strategy included pressuring the DG ENTI to combat REACH and involving Heads of State from the Member States where the chemical industry had strong ties to the economy and government. They even mounted campaigns geared towards animal welfare groups seeking to split up the environmental movement coalition. The United States also became involved during this stage in the policy process. The US chemicals lobby, including the American Chemical Council and the US government, employed their own lobbying campaign against REACH.

Throughout the entire process the Green Group of 9, including the World Wildlife Fund, Greenpeace, Friends of the Earth Europe, European Environmental Bureau, European Consumers Association, European Public Health Association, European Federation for Transport and Environment, Birdlife International, Climate Action Network, and Friends of Nature sent representatives to meetings and stakeholder groups. A smaller group of environmental movement actors (the World Wild Life Fund, Greenpeace, Friends of the Earth, and the European Environmental Board) represented the organizing core group coordinating strategies and tactics. They later formed ChemTrust to maintain a watchful eye over REACH’s implementation.

REACH endured two co-decision readings and the conciliation process. It was weakened each time it went through the process by the intense lobbying efforts and political strategies of the chemicals industry. For example, in the summer of 2003, following the adoption of the Lisbon Treaty a super Council was created to have oversight over concerns of European
economic competitiveness. The new Competitiveness Council consisted of mainly the Ministers of Industry and Energy (Lind 2004) and predominately reflected the interests of industry. The European Council proposed changing the competent authority of REACH from the Commission DG ENV to the Competitiveness Council. Eventually, the Competitive Council became leading oversight authority on REACH where Ministers of the Environment had to discuss REACH at the Competitiveness Council meetings.

Similarly in the Parliament, the chemicals industry attempted to transfer the authority away from the Committee on the Environment and to the Committee on Industry, and the Committee on Legislative Affairs. The political strength of the Environment Committee members was able to ward off this challenge.

The development of REACH legislation from initial conceptions until final implementation as a policy outcome took nine years of complicated and contentious debates and political discussions among EC technocrats and Member State representatives at the European Council and Council of Ministers levels. The legislative proposal maintained the precautionary principle and reverses the burden of proof onto manufacturers despite being watered down throughout the policy process. REACH was the focus of hostile lobbying and media attacks by the chemicals industry and was criticized by the Member State presidents whose economies depend upon chemical industries.

However, the advocates for REACH successfully opposed the chemical lobby during the agenda setting stage of the policy process and were able to combat the chemical industry using their science expertise in the Commission’s stakeholder meetings and forums. A coalition of organizations also executed effective media and lobbying campaigns successfully challenging corporate interests.
In the next sections a deeper analysis investigates the contributing factors leading to the environmental movement’s success as a proREACH coalition with other groups. It also examines the important role political elites and “green” Member State played in putting REACH on the agenda and advancing it through the initial policy formation stages of the EU political opportunity structure.

G.Selected Key Actors, Member States, Institutions, Issues and Mobilizing Strategies

1.Margo Wallstrom

Political elites played central roles in opening political opportunities for environmental movements through their decision making power. They were crucial actors in the institutional political system whose political influence determined success (Sabatier and Jenkins-Smith 1993). EU environmental policy making became more complex and complicated because of the growing range of actors attempting to assert their influence (Hallstrom 2004). The EU lacks stringent controls on political participation allowing for informal and formal types of interaction. Regulatory procedures may provide a formal structure and a hierarchy for decision making, but the important political discussion and decisions take place around the structures through informal dialogues between Commission bureaucrats or MEP’s. Groups seeking particular policy outcomes develop informal contacts with desk officers and officials of the Commission. The Commission may have increased its legitimacy and accountability through increased access to groups, but some are favored over others. For example, Greenpeace advocates communicate directly with Commission DG desk officers.
Professional lobbyists gain considerable benefits by maintaining a permanent office in Brussels and attempt to gain insider status. This requires more financial resources, however, thus taking away from other tactics such as grassroots efforts and protest actions. Several environmental groups like World Wild Fund and Chemtrust maintain consistent contacts with MEP and Commission representatives. DG representatives understand how environmental organizations must work harder to counter balance economic interest groups working through multi-tiered informal and formal coalitions. Commission technocrats view environmental activists as poorly trained and organized compared to business advocates (Schapiro, 2007).

Key actors in prominent political positions were able to use informal communications and formal decision making responsibilities to their advantage. Also, configurations of political elites in EU institutions supplied a lattice of support for collective actions in favor of REACH. Margo Wallstrom was a key force, steering and continually driving the proposed chemicals legislation through the Council, the DG’s and the EP. The early policy process involved in Chester integrated the new Member States into the discussions, with Meacher taking an active role in facilitating the negotiations in the UK. Meanwhile, the newly appointed Environmental Commissioner, Margot Wallstrom, from Sweden, complemented Meacher’s efforts in the Commission. Sweden joined the EU just as the beginning stakeholder group meetings were taking place. Sweden’s environmental policies are at the forefront of environmental protection especially in promoting an anti-toxic Union. Although Wallstrom’s responsibilities and duties were to focus on Union issues, it was informally accepted that politicians sometimes interject their own country’s interests and opinions into other affairs. She was a television personality who had taken up politics as a profession. In December 2006, Wallstrom was voted the most popular woman in Sweden. She was a dynamic leader, strong willed and charismatic, with
fervent negotiation skills, skillful communication abilities and a talent for thinking on her feet (Lind 2004).

Wallstrom’s political preferences grew out of an environmentally conscious Social Democrat perspective benefitting Sweden’s political interests as more stringent chemical policies were being developed. She represented a key access point for leaders of the environmental movement as the Environmental Commissioner for the entire Commission. Her administrative power and budgetary authority over the technocratic core of the people working in the DG could provide her with direct influence over key decision makers. She also stimulated increased pluralistic and inclusion principles into the Commission’s culture (Schapiro 2007). Although a Commissioner does not have direct voting privileges, they do possess substantial power in influencing the debate. Wallstrom played a key role in putting the White Paper on REACH on the EU political agenda and guiding it through the lengthy co-decision process as one of the most controversial pieces of EU legislation.

Wallstrom, upon her appointment as the Environmental Minister of the EU, established a five point political agenda focused on Health and the Environment, Water, Chemicals, Enlargement and Climate. Chemicals remained one of the most important issues reflecting Swedish Chemicals policy and her personal agenda. She built strong personal connections and relationships with other actors in the EU institutions providing links for environmental movement organizations to develop. Commissioner Wallstrom brought with her Eva Hellsten, the Head of Sweden’s (KemI) Chemical Unit. She was appointed Head of the DG ENV chemicals unit with expertise in toxic chemicals. Wallstrom and Hellsten established links with Inger Schorling, the Swedish Green MEP in the European Parliament. Schorling became the Rapporteur for the Parliament’s Environment Committee taking a leadership role in facilitating
the movement of REACH through the European political opportunity structure. The chemicals
industry portrayed them as the trio trying to demolish the chemical industry. They were called
the “Swedish Witches” in Germany (Lind 2004).

Wallstrom had the DG Environment administrators work closely with Swedish public
officials. She also utilized her influence in the Council to work with other Member State
representatives in proposing amendments to REACH as changers were submitted by the
Parliament and Council members. Her interest in REACH demonstrates her Swedish
environmental preferences. At the culmination of negotiations taking place in 2003 after the
White Paper negotiations she stated:

“The new policy introduces a radical paradigm shift, which breaks with the past.
In the future; the chemicals industry will be responsible for generating and
providing the necessary information about their own products in line with corporate
responsibility. Not -- as it is today -- the public authorities having to prove that a
chemical is indispensable if we are serious about protecting human health and the
environment.” (Wallstrom, 2003).

Wallstrom was also a Social Democrat, one of the largest political parties in the EP. Her
political affiliations provided her with added network connections among MEP’s. Her position as
one of the Council of Minister, further contributed towards her level of political influence.
Wallstrom, presence at the Council level may have occurred by happenstance but she was at the
right place at the right time (Lind 2004).

In 2000, DG ENV and DG ENTI shared a common interest in seeing REACH advance.
Erkki Liikanen, a Finnish Social Democrat, was the DG Enterprise commissioner. He had much
more of a finance background and was appointed Governor of the International Monetary Fund
and for the Bank of Finland. He was the first Finnish representative onto the Commission and
did not command the same political clout as Wallstrom. This helped lessen the resistance against REAH during the agenda setting stage of the EU policy process. In 2001, Commissioners Wallstrom and Liikanen launched several workshops focusing on addressing the REACH process and the most effective way to implement the new policy in a cost-effective way. Key stakeholders worked together to find useful strategies for balancing both objectives.

2. “Green” States – Sweden

Member States can often work together as a minority coalition in the Council to effect EU policies. Haverland and Liefferink (2012) and Borzel (2002) suggest “green” Member State position themselves as page setters or pioneers at the supranational level. They seek to elevate the EU standards to their level. Sweden and the Nordic block countries constantly act as leaders of environmental policy.

REACH emerged on the EU agenda in large part because Sweden continues to be a pioneer in environmental concerns. They played the key role in integrating the precautionary principle into REACH. They had already incorporated the principle into several of their environmental laws and treaties. As a result, Sweden had developed a highly sophisticated national environmental policy versus the other Member States that was incorporated into EU law. Sweden’s politicians and scientists continue to take leading roles in initiating international agreements promoting and negotiating environmental important environmental issues. Sweden political representatives feel strong pressures to sponsor progressive environmental protection legislation, and serve as an example for others. The Stockholm conference in 1972 serves as a prime example. Their efforts to be an anti-toxic country serve as another. In the early days of
REACH, Sweden administered the highest level of environmental standards promoting the Precautionary Principle. Their entry into the EU in 1995 brought with it a drive for raising EU standards.

The predominance of the Social Democratic party in the EP supplies Swedish leaders with a strong base to maneuver legislation through the EU institutional political opportunity structure. Swedish expertise and strong science base of experts adds an additional links to the Commission’s needs when forming conferences, stakeholder workshops, and scientific analysis.

During the 1980’s more stringent environment, health, and safety regulations were being developed in some Member States more than others. Germany, the Netherlands, and Denmark preferred higher level standards and more risk averse regulations in comparison to the UK, France and Italy. Most of the “green” Member States have benefitted over the years from a growing number of people concerned with the environment. The Green Party membership has increased and the membership in environmental movement organizations has risen. The larger constituency base and MEP representation provides greater resources to mobilize in during contentious policy debates. For example, the Green Party has been active in Germany beginning in the early 1980’s. The social democrats in Sweden have a strong environmental foundation.

The Precautionary Principle as the foundation for REACH stems from the importance Swedish residents feel they need to protect humans and animals from chemicals found in the environment. Even though the Precautionary Principle is incorporated into some of US laws, it has been a powerful law in Germany and Sweden for a long time. Swedish leaders used the Precautionary Principle in the new chemicals policy as a mechanism to build their power in the EU political opportunity structure and EU policy making. They have employed the strategy as a mechanism to acquire strategic advantage over other Members states regarding chemical exports.
Sweden intended to be a forerunner (Liefferink and Andersen 1998) type of country in regards to EU environmental policies by pushing the EU level of environmental protection by example. Under EU law, the ability for introducing or continuing stricter national legislation than that of the Union is constrained by markets. Harmonization strategies already exist at the EU and OECD level but certain treaties can more specifically contain conditions that allow enforcement at higher national standards. Sweden has acquired significant political influence by guaranteeing higher standards even though they remain a Member State of the EU. It is an “environmental guarantee” in their treaty with the EU.

Also, a second strategy Sweden employs can be characterized as a “good example” strategy in EU policy making. Although they take pride in their superior environmental standard, they also have apprehensions regarding the consequences that may result from their membership in the EU (Lind 2004). EU environmental standards can also reflect back on Member States causing them to lower their standards as a compromise for being accepted into the common market. The Swedish government and environmental movement organizations connected the space for national policy infusion into EU standards as a political advantage in their favor. They wanted to make a mark in the EU, as new members in 1995, to bring forth exemplary environmental policies that everyone else should follow. Their political culture, citizen environmental preferences, and strong environmental movement allowed Sweden to push for higher standard within the EU political institutions. They particularly pushed for “a reversal of the burden of proof” and the Precautionary Principle in REACH.

Sweden was granted a four year transition period regarding their chemical standards. In exchange the EU committed itself to examining its own legislation as part of Meacher’s efforts. Sweden’s stricter policies usually give way to EU standards because they are apprehensive of
independent actions apart from the EU. They prefer a strategy founded upon co-operation rather than controversy.

Another strategy Member States use is a tactic of pushing from within the political opportunity structure of the EU. The Council is a main target. The political agenda of the Council is arranged by the Member State holding the Presidency of the Council. It is a rotating Presidency where the number of Member States has dramatically increased from the EU-15 that existed when REACH was first discussed. The Presidency is also limited, however, by the proposals from prior years that were already in the policy process. Also, external factors, such as Treaty cycles and international negotiations have their own time table. The EU acts as an independent body as a whole regarding international trade negotiations. It is a process of continue political maneuvering over high political issues.

The qualified majority voting or QMV in the Council also has significance. Due the fact that agenda items and decision are made by consensus Member States usually work as coalition partners in working as a “green” bloc coalition. Policy makers in the Council realize the strength of the “green” voting block particularly when adopting environmental legislation.

Environmental perspective gain better access to the agenda and are respected because of the political weight held by the “green” coalition in the Council.

Lower levels of the EU institutional structure also provide potential openings for advocating particular environmental policies. The Committee of Permanent Representatives (COREPER) and Environmental Group are prime examples. The Environment Group consists of all the environmental ambassadors of the Member States as Permanent Representation in the EU. Experts supply scientific expertise to political issues from their capitals. Often, the COREPER asks Members state scientists for their insights regarding proposed legislation
This gives domestic officials more power in guiding their preferred policy outcome. COREPER operates in the boundary of political and technical knowledge.

Environmental legislation, and even more so in REACH, technical information and scientific knowledge plays a prominent role in informing the direction of the preferred policy. REACH negotiations pitted Precautionary Principle experts against cost-benefit epistemic scientific communities in determining the best approach to regulate hazardous chemicals. Sweden in particular has a strong cadre of expertise at the domestic level where they often construct sound and coherent arguments for selected policy approaches. Each of the experts who are assembling the policy rationale bring with them their own scientific culture and method to address policy issues. This is seen as a major way to exert significant influence in Brussels.

Alliance building between countries is a priority for national representatives. Alliances between “green” Member States are not permanent for every issue. They form on an issue by issue basis where long term commitments cannot be counted upon. There is an overall feeling of camaraderie and shared interests but it can never be guaranteed. Member States look for allies in and out of their own previous coalitions. The establishment of long term policy networks is less in demand because Member States wan to guarantee flexibility. Sweden realizes that a Nordic coalition has certain advantages sometimes but it can also work against you at other times. Therefore, in general they employ strategy based on a case by case evaluation of the political opportunities available as a coalition versus taking action as independent actor.

New policies were initiated by The Commission at the EU level. The Commission cannot be avoided or circumvented during the policy process. Therefore, leaders of Member States understood the value of maintaining strong relationships with desk officers and other officials of the Commission. The DG’s were crucial in moving legislation through the process. For
example, the DG Environment, Nuclear Safety, and Civil Protection (DG XI) had administrative control over matters of environmental policy. Swedish representatives more than often tried to support the DG Environment government officials rather than trying to influence or lobby them. Tactics took on more of a communication between experts helping them prepare policy proposals and position White Papers. Often employees from Member State administrative units moved up to comparable EU administrative units. They also communicated quite frequently to discuss technical matters.

Scientific experts at the Member State level met in Brussels for two main reasons. One is through meetings or workshops to share knowledge. Specialized civil servants convened to discuss alternatives during the construction of a Commission’s efforts in preparing legislation. The system of comitology facilitated open discussions regarding the feasibility and approaches to take in new constructed legislation. Policy makers who work in the ministries were directly involved and were key access points in the political opportunity structure to affect change. “Green” Member States took advantage of these positions because of their strength in scientific expertise but also in realizing the importance these bureaucratic positions play in the policy process. The Environmental Policy Review Group (EPRG) for example was a formal group created to facilitate communications between Member States and the Commission. It assembled the DG’s of the Environment from each of the Member States and the EU to talk about important issues.

Experts are distinct from political actors in that their technical knowledge brings a different perspective over questions of power. The political influence of experts lies in their science background and expertise. Scientific knowledge provides a rational explanation for choosing one approach over another thereby increasing its legitimacy in policy discourses. The
area of expertise is crucial as it is applied to specific policy debates. Science expertise is also influential in the policy process, particularly in environmental legislation because legislation contains a high level of technical language describing the problem and in offering solutions. Policy options must be evaluated on a wide variety of scales from cost-benefit analyses to indexes of environmental quality. Political actors search for data and concrete evidence to support their arguments.

National experts played important roles in the development of REACH. The intricacy of technical chemical data is a mandatory condition of chemical approval. Complicated risk assessments of chemical substances include toxic data situated against economic analyses. REACH, although highly controversial politically, depends upon expertise for implementing an effective EU policy. Swedish technocrats with chemistry expertise influenced REACH and the assessment approach needed to accurately measure risks.

Member States with the expertise influenced the policy process in their favor. Swedish, Dutch, and Danish scientists and professional regulators took part in conferences and workshops aimed at constructing the best methods to foster a new comprehensive approach to manage chemicals. They gained access by their shared knowledge interest and specialty. This gave Member State or social movement organizations with the expertise great access to the political opportunity structure especially in accessing the policy development in the early stages of formulation.

REACH is a paragon example of setting the political agenda from the inside. One reason chemicals policies continued to be part of the political agenda was because of a constant lobbying by Member State, EU, and corporate experts demanding a change to the system. A science network of experts linked with some leading Environmental Ministers in pushing for a
comprehensive chemicals policy separating risk assessment from risk management. Chester came about from the growing concern of science experts realizing the current system failed in regulating chemical. Experts, as members of a professional network, combined their talents to influence the shape of REACH. Experts of epistemic communities were influential in integrating the Precautionary Principle in the new chemicals policy, particularly in the role science plays in regulation and how uncertainty should be addressed. Experts as part of Ad Hoc groups and other organizational forms directly impacted not only the framework but worked on the specific details found in the rules and standards. Their role cannot be understated. Experts from outside EU institutions gained access to the political process by bringing their expertise into highly contested debates during the REACH policy process. Environmental movement organization used experts to interact within the EU political opportunity structure to achieve favorable policy outcomes.

Member States realized getting their people into strategic positions in the Commission was probably the most effectual tactic to attain the maximum influence in the Commission’s policy process. Often, Member States loaned their technical experts to DG’s temporarily as a strategy to influence policies. National informal networks also emerged in the Commission where their national interests can be targets for direct lobbying activity.

Member States looked to the EP as a partner for support regarding environmental policies. For example, MEP Schorling, as a Green Party member, played a crucial role as a member of the MEP’s Environment Committee. She was able to control the agenda or open up to wider participation than might have been otherwise (Lind 2004). MEP’s were unpredictable in nature because they have to continually think about upcoming elections and the electoral ramifications of their decisions. Political parties were a vital resource among the MEP’s. Their sheer numbers represent important voting blocks on important legislation. In directly, European
parties transcended Member State boundaries therefore, links are maintained between MEP and Member State officials but in a lesser degree than between the Commission and the Council.

EU chemicals policy was full of complex technical definitions and rules and important environmental protections citizens were calling for in their government representatives. Industrial pollution, dioxin scare in Seveso and chemical substance found in people’s blood elevates the political resonance of environmental issues.

Member States reacted to the preferences of their national constituents while attempting to match environmental protection with their economics needs based on maintaining competitiveness. Germany was usually considered a Green state but the chemicals industry is a large part of their economy, such as BASF. Initially, they supported REACH but as BASF and CEFIC adjusted their advocacy campaigns by 2001, their monetary resources and lobbying efforts were able to shift the debate toward economic issues. Industry lobbyists targeted social-democrats in particular and slowly German policies changed. The head of CEFIC at that time was E. Voscherau from BASF (Fuchs 2009).

3. Coalition Politics

The development of REACH brought a new comprehensive approach to managing chemicals within open and closed opportunity structures. Alliances were powerful influences on the final outcome but particularly important in accessing cleavages at the right time and in the right way. It is the product of years of intense negotiations among politicians, policy leaders, commissioners and science experts. It occurred in a time where growing skepticism in European Union institutions called for increased accountability and legitimacy. Commission members
looked to expand the role of nongovernment organizations in policy processes and provide more access to more groups across Europe. During the REACH policy process the number of interest groups in Brussels grew to 3000 interest groups and 10,000 people (Europa, 2015). Rationality in public decision making was emphasized so that questions of insider status could be addressed. Success in REACH could be seen as a metaphor for the success of the EU supranational system of governance.

The formation of coalitions was a main reason REACH acquired success. Members of “green” versus “Business” groups facilitated its development and ability to access various EU political opportunity structures while maintaining the support of the public. In simplistic terms a green coalition opposed a business or corporate coalition. Coalitions varied across Member State jurisdictions, science content areas, political parties, and DG’s. Although the political inertia seemed daunting REACH was created despite intense resistance from powerful forces of well-organized corporate interests, vociferous European politicians, and US trade ministers. Initially, a small coalition of Member State officials, national environmental ministers, DG representatives, officials within the Commission, MEP’s, and several environmental and animal rights organizations convened discussion groups to work out a new approach (Selin 2007).

The strongest supporters for a new chemicals approach to chemicals consisted of four main environmental groups: Greenpeace, World Wildlife Fund, and Friends of the Earth, and the European Environmental Bureau participated. They favored the new strong REACH policy that protects human health and the environment. Greenpeace representatives stated:

“the chemical industry nowadays is releasing thousands of new and old chemicals without testing and without any form of control over the chemicals.” (Riss 2006)
The small alliance of shared interests strategically mobilized resources of the EU political opportunity structure at crucial times and critical places to bring about a new chemical policy approach. The temporary advocacy coalitions (Sabatier 1998; Sabatier and Jenkins-Smith, 1993) differed in their normative and causal beliefs about the hazardous chemicals and the best way to protect the health of human and animals from toxic exposures. The antagonistic coalitions battled over specific aspects of chemical regulatory schemes.

A green EU chemicals policy formed due to common EU policy interests. It initially formed as a rather stable network of policy specialists (Sabatier and Jenkins-Smith 1999). It continued to expand from Meacher’s initial meetings to much larger groups as the REACH neared final approval. The coalition organization form represented an informal network of people with similar knowledge and policy interests forming around their common political interest of creating a comprehensive chemicals policy founded upon the Precautionary Principle and a reversal of the burden of proof onto corporations. The EU institutional system itself consists of networks of actors who shared many levels of commonalities with others ranging from national links to scientific content professional organizations.

The pro-REACH coalition grew beyond the initial set of government actors. It expanded to consist of environmental ministers like Margo Wallstrom from northern Member States, DG Environment officials within the Commission like DG ENVI administrator Robert Donkers, Green MEP’s such Inga Schorling, and representatives of environmental social movement organizations like Karl Wagner from WWF. Greenpeace preferred an independent strategy apart from coalitions but recognized the need to strengthen their position regarding REACH by forming alliances with other environmental movement organizations.
Other important European level organizations included the European Consumer’s Union (BEUC) and the European Health Association (EPHA). Other groups joined but at much lower levels of involvement. These included animal rights activists, women’s associations, and trade unions. Trade unions switched alliances as the European economic conditions started declining while REACH was being adopted. They were forced to lobby for improved working conditions and competitiveness and unemployment political concerns.

Conversely, an opposing “business” coalition emerged in response to the chemicals policy review debate and pro-REACH’s activities.

Table 3.2. “Business” coalition versus “Green” coalition.

<table>
<thead>
<tr>
<th>Business coalition</th>
<th>Green coalition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key actors</td>
<td></td>
</tr>
<tr>
<td>CEFIC, FECC, DG Enterprise, National economic affairs ministries, Business-friendly MEP’s, Member State leaders and ministries of France, Germany, Italy, UK and Ireland</td>
<td>EEB, Greenpeace, FoE, WWF DG Environment, green MEPs Environment Commissioner Environmental ministries and agencies from leader states Animal protection organizations Consumer Associations</td>
</tr>
<tr>
<td>Supportive actors</td>
<td></td>
</tr>
<tr>
<td>Commission President, Internal Market, Industry, laggard Member States, trade unions, some scientists</td>
<td>Scandinavian, countries, Austria, Netherlands, EEA, critical scientists Green newspapers and journals</td>
</tr>
<tr>
<td>Core belief</td>
<td></td>
</tr>
<tr>
<td>Globalization, competitiveness, jobs</td>
<td>Higher priority of ecological and Human health</td>
</tr>
<tr>
<td>Core policy belief</td>
<td></td>
</tr>
<tr>
<td>Hazardous substance paradigm where technical solution provide adequate protection</td>
<td>No data – no market way to look at chemicals, protection and reputable scientific evidence Precautionary principle (Pesendorf, 2006).</td>
</tr>
</tbody>
</table>

The opposing “Business” coalition included members from major chemical companies like BASF, high level politicians from countries with large chemical industries, DG Enterprise
representatives and many conservative MEPS’. The chemical industry in Europe consisted of
the most powerful actors in chemicals policy. They had strong influence on decision makers and
were very involved in policy making. One main source of their power resided in their scientific
knowledge and the structural power in state economies. They also had natural links with other
industrial sectors particularly strong connection with the energy sector (Pesendorf 2006). They
were of great importance for a Member State’s economic growth policies.

The strongest supporters of a pro-REACH coalition were primarily environmental
movement organizations. The primary role of the coalition was one of agenda setting. Other
organizations at the Member State level and EU level consisted of consumer organizations which
played an important opposing role from a business perspective for business associations and the
chemical industry. Animal rights and health organizations also shared common beliefs and
policy preferences.

Greenpeace initiated new campaigns such as the Vigitox campaign. The produced several
science studies and organized workshops for education decision makers and the public.
Environmental movement organizations also had influence in the policy formation. They had
competent scientists and policy professional on staff to generate green strategies supported by
scientific rational. The tactical choice of using scientific facts in their advocacy efforts was a
successful one. The rhetoric resonated with EC officials and MEP’s especially in part because of
the EC’s commitment to raise the level of competence in European governance through scientific
rationales rather than through informal relationships. At the EU level the main organizations
were the, European Environmental Bureau (EEB), Greenpeace, WWF, and FoE. They were not
members of the EEB but had strong powers in their ability to access the EU political opportunity
structure through scientific studies and grassroots or media campaigns. They played leading roles
in supporting a new approach to chemical regulation. They also had the financial and organizational resources to influence policy makers.

4. REACH Initially on EU Political Agenda

The main issues were concerns about the legitimacy and accountability of EU institutional reforms and strengthening the political power of the Commission, the Council, and the Parliament especially in regards to environmental policy. EU institutions, particularly the Commission, felt strong pressures from the public to increase their level of governance. Leader states or green states and social movement organizations utilized this political opportunity to construct a comprehensive chemicals policy reflecting newly entered Member States.

In additional new political opportunities came about with the development of institutional changes. Due to the Maastrict Treaty signing in 1993, EU environmental policy issues were now a fist pillar issue where policy discussion needed to occurs among each of the EU political institutions. EU organizations and individual actors like Margot Wallstrom and Meacher had their own motivations and agendas but sought out coalition partners in support of their ideas. The support of officials in an EU organization can apply vital political support on legislative efforts at several available cleavage points.

Meacher’s initial efforts emerged at a time when OECD harmonization pressures from above impact Member State governments at the EU level particularly in relation to regulating chemical substances. Environmental issues became part of the political agenda extending beyond economic concerns. Qualified majority voting in the Council significantly changed the power dynamics between Member States and the Commission’s competence and capabilities in
managing chemicals expanded altering the structure of opportunities at the EU level. For example, the DG Environment took on much more proactive and leadership actions on environmental issues.

The DG Environment under Commissioners Bjerregaard and Wallstrom concentrated their attention on chemicals. They took on leadership positions bringing in other interest groups and organizations with shared interests. The initial EU government coalition comprised members of DG Environment and Environmental Ministers of several “green” leader states (Denmark, Finland, Germany, the Netherlands, Sweden, and the United Kingdom). This smaller group was made up of a mix of politicians, science experts and chemical regulators motivated to reform existing chemical policies. The growing power and common market force of the EU drove environmental ministers towards a movement to create common legislation across EU Member States in line with international standards. Leader or “green” states as part of the coalition’s efforts, initiated a joint effort among some northern Member States who shared common interests in reinforcing REACH and harmonizing chemical regulations. Member States, in particular Sweden, advocated for an uploading of their regulatory framework.

The chemical industry developed strong ties with the Commission over the year due to the corporatist nature of government business relations before REACH emerged as an important issue. The initial discussions presented to the Commission caused intense controversies between the DG Environment and DG Enterprise. Although some Directives were under the administrative control of DG Enterprise, this administrative unit also provided corporate interests with more of an opening to oppose new chemical legislation. Each fought for jurisdiction over the new chemicals law where the DG Environment sought to preserve high standards while the DG Enterprise unit viewed their potential control as a strategy to weaken the law.
Modification in the role of the EP in EU decision making provided more power to the MEP’s increasing the importance of MEP in the policy process with the design of new joint procedures. New co-decision procedures added significantly greater challenges in passing legislation once the sole responsibility of the Commission. The added consultation steps invited more controversy and allowed proponents and opponents increased opportunities to contest the legislation.

Initially, the “green” coalition experience favorable circumstances in creating REACH. Public attitudes towards the chemical industry were unfavorably low and powerful ministers were at the helm guiding the legislation through EU institutions.

At the EP, the Environment, Public Health, and Consumer Policy committee continued to be a vanguard for strengthening the EU’s environmental standards (Burns 2005). The Committee continued to aggregate support for REACH and assistance the coalition’s advocacy activities. Numerous MEP’s established political allegiances with pro-REACH coalition members and strongly advocated for REACH in committee and the whole Parliament political discussions during the Parliament’s reviews of the Commission’s proposal and during the extended co-decision procedure (Lind 2004).

Social movement organizations were ever-present throughout the entire REACH process (Hallstrom 2005). Friends of the Earth and World Wildlife fun actually received funds from the EC to conduct pertinent studies on environmental legislation. Greenpeace declined financial resources to participate claiming their need to remain independent advocates. Funding from the EC also provided them with the resources for travel so that more of the constituents and members could participate in EC political discussions and policy making activities such conferences and workshops. The EC allocated sufficient funds for facilitating an increased
presence of environmental groups to engage in the policy process. The European Environmental
Bureau, over 140 national consumer groups, and the big three environmental groups were
allocated funding.

In the early stages of setting the EU’s agenda a small coalition of Environmental
Ministers, EU DG’s representatives and Member State environmental specialists dominated the
work of the group. The legislation went through the co-decision process and as it progressed the
membership in the-REACH coalition continued to enlarge. Green MEP’s, in particular
immediately joined the pro-REACH coalition and promoted the REACH proposal (Lind 2004).
They issued a committee report coordinate by Inga Schorling and set a tone of inclusiveness in
their style of policy dialogue. That is, they openly welcomed most of the specific proposals by
the Commission and comment by social movement organizations. The full Parliament
Resolution on the EP’s White Paper, submitted from 2001 demonstrated a more cautious EP.
Many MEP’s in the coalition experience back lash that the committee’s report over advocated for
the environment. However, this was the intent of the pro-REACH coalition’s strategy (Schapiro
2007). A key part of the pro-REACH coalition’s strategy planned to push the boundaries because
they knew later in the process compromises would be sought and compromises would be made
weakening the policy outcome (Schapiro 2007). Furthermore, at this point in time the coalition
maintained an open, democratic style of organizational governance where all voices were heard.
The pro-REACH coalition could match resources and react quickly. They could quickly
implement protest tactics, media campaigns and lobbying efforts faster than the Business
coalition. They conducted research and published science based reports and distributed poignant
literature to a variety of audiences.
One of the most important media events involved taking blood samples of the Council Ministers and the public to measure the amounts of toxins prevalent in their bodies. In 2004, the WWF took blood samples from Wallstrom and other European ministers and volunteers. Toxic chemicals levels were then measured and published in a report entitled “Bad Blood” A Survey of Chemicals in the Blood of European Ministers” substantiating the hidden toxic chemicals adversely effecting people’s health. It gained wide popularity and strengthened the pro-REACH coalition’s efforts because the public reacted strongly to WWF’s efforts. They witnessed people willing to endure the pain of a needle to raise people’s awareness of toxic chemicals in their environment. It was one of their most successful events.

WWF, Greenpeace and Friends of the Earth became vocal members of the pro-REACH coalition. These groups along with lesser known environmental organizations elevated their advocacy work on the proposed European chemicals strategy to manage chemicals. The release of the 2001 White Paper energized the environmental social movement’s activity which was often coordinated by the European Environmental Bureau or EEB. In 2002, more Member State organizations added their support to the coalition’s efforts especially as the legislation began to be watered down during the co-decision process by the chemical industry’s opposing coalition and DG Enterprise unit. The International Chemical Secretariat, a Swedish environmental movement organization founded in 2002 and supported by the Swedish Environmental Ministry and the Swedish Chemicals Agency, added their support to the coalition’s activities.

The Business coalition, run by the European Chemical Industry Council or Cefic, represented 27,000 chemical companies across Europe began aggressively disparaging the Commission proposal. The REACH legislative proposal received more resentment than any other EU environmental legislation in 30 years (Monfort 2003). Leading corporation such
BASF, Bayer, and Shell chemicals straightforwardly refused the concept of REACH. They believed the burden industry would be too much for the economy to withstand and would threaten their strategic advantage and competitiveness in the international market (Petry, Knowles, and Meads 2006). The Business Coalition is discussed more in the next chapter.

The WWF, Greenpeace, and Friend of the Earth continued to publish reports and participate in stakeholder conferences and workshops while implementing protest tactics and public relations campaigns. During the redrafting period of the first co-decision process, the Commission organized large internet consultations, in June of 2003, to solicit greater stakeholder involvement. Over 6,000 comments were received. The pro-REACH coalition needed to elevate their rhetoric and activities during the re-drafting process to combat the increased level of successful corporate lobbying by CEFIC and the Business Lobby had on altering the legislative language. Corporate interest groups stepped up their advocacy efforts through direct lobbying efforts by all the members CEFIC and the FECC. The pro-REACH coalition started losing ground to business interests when economic rational arguments acquired more salience. Access to EU institutions remained available but the frame resonance shifted in favor of the chemical’s industry competitiveness on a global scale.

German elections in 2004 took place near the final years of the lengthy legislative stages of REACH negotiations in particular, played a crucial role in German Green politics. German conservative MEP’s acquired substantial electoral power as a result of the national elections increasing the opposition against the pro-REACH coalition. The newly elected MEP’s attacked earlier pro-green versions of REACH during energized debates in the EP. Tactically the EP no longer was as an effectual target as was the Environmental Council. The political opportunity structure closed in response to a loss of MEP supporters.
The pro-REACH coalition also adjusted their tactics towards the Competitive Council. Although negotiations among Member States paralleled the rhetoric in the EP, green Member States continued to push for a tough REACH. The Competitive Council wanted to hear from both sides and took a position searching for compromise. Unfortunately, due to the co-decision process the emerging Competitive Council’s agreed upon version remained sufficiently different calling for the legislation to move into the next co-decision process, leading to more debate.

Chemicals regulations are usually discussed through the co-decision process in the Committee on Environment, Public Health and Consumer Affairs. It has developed into one of the most powerful committees in the EP institution. Trade union groups played a lesser role than the environmental movement organizations but still an important one. The European Trade Union Confederation, the Mine, Chemicals and Energy Workers Federation (ECMCEF) was the main actor in chemicals policy. They advocated for better working conditions and improved national regulations on environmental protection. They also demanded better safety standards be followed in the chemical industry. However, they needed to balance competitiveness and employment with environmental and safety concern.

5.G9 and EEB, Friends of the Earth, WWF, and Greenpeace

REACH represented an excellent example of how lobbying works at the European level according to Riss, the Director of Greenpeace (Greenpeace 2015). While the Commission was drafting REACH through competing DG’s (DG ENVI and DG ENTI) industry began advocating with more spirit utilizing science experts and economic research reports to weaken REACH. The year the Environmental Ministers called for a reform of the European chemicals industries
Greenpeace published a proposal called “The way forward out of the Chemical Crisis” (Santillo et al 1999). It proposed key principles needed to reform EU chemicals policies. They were up against financially powerful corporations and the German lobby connected to the Big 3, BASF, Hoechst, and Bayer who had strong corporatist ties with German officials. Environmental movement organizations concentrated their organized lobbying efforts on political elites. New opportunity structures within the EU’s pluralistic multi-level system resulted in more environmental groups concentrating their advocacy effort at the EU level. They had recognized the potential power available in EU institutions and have adjusted their organizational structures to accommodate their shift in strategies.

A record number of interest groups shifted their resources towards Brussels. Competition for acquiring the attention and influence of political elite’s mobilized competing organizations to join advocate coalitions and organize as lobbyist (Kirchner 1980). This occurred in part because of a shared fear of not conforming along with other groups. In the European Public Affairs Directory during the initial stages of REACH, the directory contained:

- 828 listing of Euro-groups,
- 320 representations of corporations
- 131 national interest groups
- 107 liaison offices of the European and non-European regions
- 142 consultants and
- 160 lawyers specializing in EU affairs.
Environmental movement organizations became more professionalized and more like interest groups. They also gained political influence through the power of information gathering and distribution. More and more scientific data was available digitally but not in a form understandable by the public. Information strategies were a powerful tactic to raise the public’s awareness and affect the political climate in the organization’s favor. WWF strongly supports this strategy.

Social movement organizations took on more interest group activities as the EU continued to evolve opening more access points to everyone. The number of interest groups in Brussels more than doubled and adapted to the multi-level form of governance characteristic of the EU. Environmental organizations often took a two-prong attack by lobbying supranational and national interests who have representation in Brussels.

The most powerful lobbying and successful groups at the EU level were coalitions that have resources, advanced information, strong connections between other groups and EU institutions and political actors, and in the case of REACH, the capabilities of providing sound science expertise, information and advice (Jordan 2005). They needed groups and sound research to be responsible which meant environmental groups were willing to participate in the policy process. The strategies of social movement organizations changed as they recognized openings to participate through science expertise avenues and stakeholder meetings. Environmental groups reoriented their efforts and elevated their group’s professionalism.

The Commission’s expanded interest in increasing the level of transparency and accountability led the Commission to begin new mechanisms for group participation in the policy process. They created a mixed style of consultation opening the process to everyone for any group to contact Commission officials (Jordan 2005). The multiplicity of opportunity
structures for environmental social movement organizations was available for everyone because the degree of openness permitted. No one had exclusivity to a committee or DG. Groups used multiple access points to access the EU political opportunity structure because EU policy making occurred in intergovernmental and intra-governmental ways, across institutions and within units of institutions. For example DG’s authority often overlaped and EP committees shared oversight of chemical directives.

The increased access to MEP’s and Commission representatives dramatically effected organizations that now felt direct lobbying Brussels was the most effective strategy. European and national environmental organizations reorganized their efforts toward the EU and lobbying tactics.

One of the Commission’s main goals was to efficiently include all European based groups in a pluralistic from of representation and expertise. Commission administrators made every effort to reach out to all groups for information and their perspectives. Unfortunately, this led to very large working groups and forums where long meetings resulted in small conclusions.

Environmental groups came into the EU policy process with three advantages over other lobbying organizations. Environmental movement organizations of who adjusted their tactics to lobbying were more successful in assembling coalitions. Historical networks helped establish temporary coalitions through umbrella groups as the prime coordinators (Jordan 2005). They were also strongly connected to Member States and EU integration, for example Sweden.

Environmental groups shared a goal of a unified Europe beyond national political jurisdictions. An underlying feature was linked to the characteristic nature of the issues. The environment as a concept extends beyond political jurisdictions. National policies were less effective than
addressing problems through regional solutions. European wide laws more effectively addressed the nature of environmental issues.

However, they were weak in several other aspects. Environmental movement organizations cannot match the resources of corporations. The financial resources to produce reports and hire consultants remained significantly lower than private companies and Federations like Cefic. Environmental coalitions were competing with a greater number of groups in Brussels. The greater emphasis on inclusion opened up access for many types of organizations significantly elevating the number of lobbying groups. Lastly, environmental groups, such as Greenpeace still maintained protest and autonomy as part of the strategy and tactics. EU Commission officials and MEP’s attempted to accommodate all groups aspiring for open discussions. Groups favoring protest as a movement tactic might lose the support, informally, of Commission members because of their perceived method for disrupting cooperation and political discourse. However, as a coalition they implemented an array of strategies and tactics involving many different groups to attain the same policy preference. A range of tactics were used by different groups individually, but as a coalition they combine for a consolidated diverse strategy. Environmental movement organizations depended on the DG ENV for support and access. The built a strong relationship with the unit at the expense of other units.

Environmental groups helped mobilize large number of people across Member States which make them very influential. They had the resources and membership to access thousands of environmental and scientists supplied expertise on a full range of issues. Environmental movement organizations were particularly adept in lobbying individual domestic administrations which indirectly influenced the Council of Ministers. Greenpeace conducted an effective campaign of downstream users located in Member States to weaken the single voice corporations
were presenting. Downstream users may have not participated in lobbying efforts but Greenpeace was able to show how these companies benefitted from REACH.

Environmental organizations, especially the main three, WWF, FoE and Greenpeace are committed to stay the course until the legislation was enacted. They continued to have campaigns directed toward lobbying for their preferred outcome of the proposed legislation.

The G9 group of environmental organizations consisted of four principle environmental movement leader organizations, the European Environmental Bureau (EEB), Friends of the Earth (FoE), World Wildlife Fund (WWF), and Greenpeace. The EEB was a much larger networked groups consisting of 120 organizations. Greenpeace began as a protest organization in Alaska. It evolved into a global organization with more than two million members. Green International claimed to have supporters all over the world in 101 countries. It had offices in 40 of those countries. The EEB is organized like a federation with environmental groups located in Member States and neighboring countries. They include local organizations, national groups, and international representatives. They have consultation status at the Council of Europe, the strongest institution in the EU. The EEB played an important role throughout the process as a critique. For example in December of 2003, they published a review of the proposal. The report expressed their disappointment with how the White Paper was weakened (Lind 2004).

Greenpeace Europe is based in Brussels monitoring and analyzing EU institutional processes and policy outcomes. It focused on revealing the flaws in policies and legislation. It employed protest tactics and lobbied EU policy makers. Greenpeace favored an independent financial relationship where all of their funds come from individual donations. They did not accept corporate or government funding. Chemicals policies were of particular concern. It is a nonprofit organization implementing independent campaigns. It employed nonviolent protest
activities and public event tactics to educate the public about environmental problems. Greenpeace had a strong presence in Brussels actively engaging with each of the EU institutions and specifically used public education as an effective tool for challenging legislators and politicians.

FoE was the largest grassroots environmental network representing a wide range of support for protecting the environment. It was founded as a professional protest organization in 1969 in San Francisco by activist David Brower. In 1970, Friends of the Earth International was founded and Les Amis de le Terre was their first affiliate organization. FoE was comprised of an influential network of grassroots environmental organizations in 70 nations with a strong focus on efforts in the United States and Europe. FoE formed a federation of national bodies, one of the largest international environmental organizations crossing national borders. FoE continued to have a political approach focused on protecting the environment and has European units in Brussels (FoE). That office coordinated and provided administrative support for campaigns and projects that address a variety of concerns. European chemicals policy was a main issue they worked on. They had a broader approach that included EU-enlargement, EU structural funds and toxins. FoE focused on awareness strategies and influencing politicians. It participated in an advisory capacity to EU policy processes and advises EU government agencies. It worked hard to coordinate EU policy-making through the sharing of scientific and political knowledge. It constantly helped build skills for other organizations and provides tools and resources for partners. The national affiliates were responsible for their own funding but make annual contributions to the FoE International group. The main financial revenues originated from fees and donations. FoE accepted EU funding as part of the Commissions inclusion programs.
The WWF was an independent foundation receiving funding from both businesses and government. It was founded in Morges, Switzerland in 1961. The organization focused on conserving the earth’s natural resources and protecting endangered species. It specialized in education people about wildlife. It also had information campaigns targeted towards government officials. The WWF European Policy office was established in 1989 for addressing European and EU issues. It operated by forming working groups of specialists on particular subjects including chemicals. WWF primarily concentrated on information campaigns and prefers to form coalitions with protest groups rather than protest independently. It was a leader in organizing information campaign and in lobbying. WWF led a coalition of groups focused on influencing EU legislation in particular.

Birdlife International was a worldwide partnership of conservation organizations. Their main goal was to conserve birds, their habitats and global biodiversity. They worked towards sustainable development of the Earth’s natural resources. They were the world’s authority on birds and related conservation problems.

The Climate Action Network Europe was a nonprofit organization which takes on the role of coordinating the work of other environmental groups as an umbrella organization. It supported organizations through information channels to help them develop effective long term global strategies. They were a lobbying group out of Brussels and specialize in informational tactics and acquiring science expertise. The CAN held forums and working groups to exchange ideas and expertise.

International Friends of Nature was a nonprofit organization as an umbrella group bringing together 50 national groups as an extensive network of regional and local groups. They
focused on sustainable development. Their work targets landscape protection and ecotourism and chose lobbying strategies as their method of activism.

The European Federation for Transport and Environment was another umbrella organization of nongovernmental organization focused on promoting sustainable mobility. The group was founded in 1989 and includes 40 organizational members in 20 countries.

The European Health Alliance – Environmental Network was organized as an international nongovernment organization which advocated for improving people’s health and well-being. Their science expertise is in public health and networking professional associations of health care workers.

6. Animal Rights Organizations

One of the controversial issues regarding the REACH system was the vast amount of untested chemicals being produced and used. They affected animals and wildlife due to chemicals exposures in the environmental. However, anti-testing organizations and animal rights organizations campaigned against more testing (Lind 2004). The animal rights movement organizations consisted of a wider variety of diverse groups ranging from radical extremists to more mainstream groups. A key issue in REACH emerged in that it called for more testing as part of the Precautionary Principle. More testing meant more animals were needed to meet the testing requirements. They were very successful in raising the level of concern for animals testing as an obstacle in passing a stronger REACH. Neil Parish stated that:

“Animal rights campaigners and West politicians last night raised fears that stringent new EU tests for household chemicals will lead to a dramatic rise in
animal testing. Under the plans, which are due to be voted on next month, more than 30,000 chemicals will have to undergo rigorous tests to prove their safety. "I believe that a lot of these tests are unnecessary. The data we have on these chemicals already should be sufficient." The new legislation, known as Reach (Registration, Evaluation and Authorization of Chemicals), has been called the most important regulation in 20 years. Chemical companies will now have to subject each substance to official screening before it can be licensed for use" (Western Daily Press, 2005).

They initially were an integral part of the pro-REACH coalition participating in stakeholder meetings and forums. They assisted in information campaigns, protest events, contacting legislators another needs of the coalition. The movement was particularly strong in raising the awareness of animal rights to a prominent position on the political agenda in the UK and Germany. The movement took a non-negotiable stance on demanding no animals be used in testing. They were proponents of REACH but argued that the testing on chemicals had not provided useful data or are accurate.

The British Union for the Abolition of Vivisection (BUAV) was one of the most active groups in the coalition working towards a new approach to deal with hazardous chemicals. They linked with People for the Ethical Treatment of Animals (PETA) on several campaigns at the EU level targeting chemical policies as a priority to protect the public and environment from hazardous chemicals without subjecting animals to suffering in laboratories. Their advocacy campaign supported the elimination of harmful chemicals from the environment and off the market, but held strong beliefs that it can be achieved where animals are not used in the testing laboratories. New testing techniques and existing chemical information was sufficient to move away from the use of animals. They thought REACH remained too vague on the issue.

They remained part of the coalition but maintained a guarded respectfulness. Historical ties were the foundation of their participation. In the past, the European environmental
movement developed from founding activists from the animals’ rights movement, particularly in the UK. The UK Green Party keeps close ties with animal rights organizations. Animal rights groups were completely cognizant of the fact that Europe regulatory officials base their decisions on science based risk assessments. Unfortunately, the risk exposure experimental process incorporated animals in their testing. However, new methods were being developed so that the number of animals needed could be reduced.

The shared history between the animal rights and the environmental movement in Europe facilitated joint efforts around the common goal of promoting REACH. During REACH political discourses, industry representatives continually framed part of their opposition in terms of the impact it would have on animals. Environmental movement organizations continued to counter their arguments by stating industry’s estimates are overblown and the animal testing required in REACH would not cause a substantial increase in the number of animals needed to perform risk assessments.

Overtime, even though environmental movement organizations shared common goals, significant differences emerged between the two groups. Both organizations supported REACH based on the need for effective chemicals evaluation and scientific information but animal rights organizations separated from the coalition.

7. Organized Labor

Lastly, organized labor joined the pro-REACH coalition but only in a small way at the EU and Member State level. Trade Unions had sincere concerns about the chemicals industry competitiveness versus worker safety. Concerns for chemicals varied widely based on country
preferences. They initially joined the efforts of the environmental movement organizations but changed their coalition ties as the macro-effect of economic conditions in Europe forced them to reevaluate their position.

In contrast to industry and business actors, environmental movement organizations strongly supported the Commission’s push to reform chemicals regulations and strengthen the precautionary principle as a guiding standard underpinning chemicals policy. The governments and environmental ministers of the “leader” Member States continued their support and environmental movement organizations maintained their public awareness campaigns, lobbying efforts, and protest tactics. A new approach for regulating chemicals emerged as REACH. It takes into account how risks are defined even though some levels of uncertainty may prevail. The burden of proof rests upon industrial producers.

The “green’ coalition was successful in supporting the new chemicals regulation through the EU political opportunity structure using a full array of tactics and strategies. However, corporate interests and the use of scare tactics regarding job loss and international competition was able to significantly weaken REACH. Industry exaggerated the costs of implementation during EP negotiations as an effective tactic to change MEP’s vote.

Environmental movement organizations interacted within EU institutions and participated in the EU opportunity structure at multiple levels. The Commission supported environmental movement organizations and the role they played in the policy making process in support of their fundamental mission to increase transparency and legitimacy in EU governance. The EC directly funded organizations through structural funds and other funding sources. The EU Directive (97/872/EC) established in 1997 ear marks substantial levels of funding for environmental
organizations. The European Commissioner funded these groups for scientific research and other projects.

Environmental organizations actively involved in REACH penetrated the political opportunity structure through technical expertise avenues. The important function of distributing scientific and technical information, especially regarding the technical aspects of chemicals policies helped increase the influence of environmental movement organizations. They did not rely on corporate data filtered through the industries marketing team. MEP’s gave higher levels of importance to all scientists and experts. The emphasis on technical expertise originated from the technical character of environmental policy and the Commission’s dependence on various sources of information. Expert committees and technical working groups prepared extensive reports used in stakeholder meetings, forums, conferences and White Papers.

Environmental movement organizations used several lobbying tools for voicing their concerns. WWF’s DETOX campaign which included the blood testing of 39 MEP and 14 ministers was extremely effective in raising the public’s concern for REACH. They also used formal and informal meetings with Commission officials, MEP’s, DG ENTI, and DG ENV as a strategy to maintain lines of communication and influence. They met on a routine basis as permanent part of the policy making process. The environmental groups used coalitions and large umbrella groups as networks of communication and external pressure points by arguing their extensive member list touched millions of constituents. The WWF, Greenpeace, and FoE suggested they had access to millions of people willing to call legislators as an argument substantiating their potential influence on political actors. The groups commissioned research studies as a method to counter corporate research. The coalition had access to thousands of science experts willing to testify on their behalf.
Other public events included collecting dust from people’s houses. The coalition members vacuumed up the indoor particles from carpets to demonstrate that the amount of toxic chemicals in their indoor environment was equally as dangerous. The results indicated high levels of toxin such as poisonous flame retardants.

The pro-REACH coalition triumphed in establishing a reformed regulatory approach to govern chemicals in Europe. Environmental movement organizations along with DG ENV, Green MEP’s and other organizations endured at least ten years of work to enact REACH through the cooperative efforts of a diverse set of organizations.

8.Inside the EP - Environmental MEP’s

The initial calls for a new strategy for governing chemicals in the EU reached it finals stages in the EC. The DG’s in the Commission conducted stakeholder meetings and working groups consuming thousands of hours of time due to the inclusive atmosphere promoted by the Commission. In the EP the lead committee on REACH was the Environment Committee. Coalitions again emerged on both sides as a necessary method to mobilize resources in challenging corporate claims and consolidate MEP’s as either pro-environmental or business allies.

The first tactic industry tried was to argue for a change of competency. This translates into attempting to have the lead committee switched from Environment to the Competitiveness Council because it would be more in line with corporate interests. The Competitiveness Council is a function of the Council set up to evaluate the impact of legislation in regards to international competitiveness. European Council members, the most powerful EU institution, were successful
in urging Prodi to transfer the lead committee (Lind 2004). The Competitiveness Council gained control of REACH negotiations.

In the Parliament similar changes of power occurred. Corporate interests used their influence to weaken REACH in the EP. The Committee on Environment was initially allocated the White Paper coming from the Commission by the President of the Parliament. But, the Committee on Industry and the Committee on Legal Affairs sought control in support of corporate strategies. The Committee on Environment was able to maintain oversight.

MEP’s with Business interests further used delay tactics by holding back from submitting their opinions on the Commission proposal. This blocked progress and allowed increased lobbying by Cefic and others. Initially, MEP Guido Secondi was appointed Rapporteur (Lind 2004). His report as part of his responsibilities attempted to cut off outside amendments as a tactic. It was his ideas to reach a compromise. His proposal met with disagreement from both sides. Further delays resulted from heated debates within the Environment Committee. Working groups were set up to infuse scientific expertise and consultant’s analysis into the discussion. But, intense difference among scientists led to a stale mate of no consensus.

The REACH proposal presented by the Commission created balancing free trade and international competitiveness while increasing the protection on the environment. Unfortunately, industry intensified their efforts as one of the most important sectors in the EU economy to force the Commission to relent. The Business coalition lobbying group successfully manipulated the EU political opportunity structure in their favor.

However, the “green” coalition of politicians, agencies, environmental movement organizations, downstream users and Nordic governments were able to establish the foundation
of a new strategy to regulate chemicals that reversed the burden of proof on to manufacturers and incorporated the Precautionary Principle into its founding legislations.

The EP negotiations can take on a two-layered appearance where MEP organized themselves into coalitions in the same way as in the Commission. A “green” coalition versus “business” or “industry” coalition emerged. Previously in the paper it was discussed how the EP gained significant power through three new procedures one of which was conciliation and that the institution opened up its access on the basis of increasing plurality. The EP must also act as a unified institution in some cases where all MEP’s have to agree or co-decision procedure began. The EP governing system leads to the formation of coalitions among parties and supports cooperation by the largest political groups. Legislation must get support from the Party of European Socialists (PES) and the European People Party – European Democratic Group (EPP-ED) to be successful. They have much more power than the smaller groups such as the Greens/European Free Alliance group.

During REACH negotiations the PES and EPP-ED with support from Alliance of Liberals and Democrats for Europe (ALDE) cooperated on REACH. This was against the advice of members of the Committee Environment (Lennartsson 2005; Lind 2004). The joint three party positions overpowered the smaller party coalition in the Committee resulting in a compromise weakening the environmental integrity of REACH.

H. One example of EP dynamics

REACH was also under consideration in the Council due to conciliation procedures in its second reading. The Council is required to implement QMV decision making processes. This
meant the Nordic bloc would have more strength in comparison to the pro-REACH MEP’s in the Parliament. Therefore they perceived greater political opportunity could be gained in the Council. The common norms of environmental friendly Ministers allowed for a stronger coalition to form in the Council. The opposing coalition force in the Council was the Member States of Germany, Ireland, and Poland. The chemical industry was much more important and powerful in those countries. Also, the Council has strong foundation and culture for promoting consensus or at least presenting the appearance of consensus. Council members were able to work out a consensus with the skill help of the UK Presidency at the time. However, Germany engaged in stall tactics particularly in light of their recent elections where dramatic political shifts reorganized German politics. The vote on REACH was postponed at the dismay of the “green” coalition.

Actors in EU institutions state have strong beliefs in demonstrating to the public they are an effective governance system. They promise that once legislative proposal is successfully drafted they will work until it is enacted. REACH had been so long in the process that there was mounting pressure to agree on a final version.

The urgency acted to the advantage of the “green” coalition and against the “Business” coalition. Industry kept engaging in stall tactics hoping the legislation would drown in the EU bureaucracy. All the political actors involved in the EP and Ministers felt strongly that the “green” coalition and the “Business” coalition must find common ground.

The fear of further conciliation energized coalition activities towards final enactment. The European United Left / Nordic Green Left (GUE/NGL) and the Greens applied pressure for REACH to go into conciliation because the Nordic bloc was proportionally stronger and pro environmental compromises would result. On the other hand the PES, EPP-ED and ALDE
worked together to counter the other coalition’s efforts. They did not want to restart the conciliation process again in fear of losing ground on REACH (Lennartson, 2005).

Elites in leadership positions during the negotiations played an important role. The lead mediator in the EP was MEP Sacconi. He was one of the longest running MEP’s with vast institutional knowledge and support. The Council’s mediator was the Presidency. Finland had the Presidency at this time as REACH finally came into law. The Finnish President had strong feelings for ending the longest policy process in EU history by declaring an all or nothing REACH compromise. The final legislation was approved by the Parliament and REACH was put into effect.

9. Conclusions

Behind the scenes during the informal negotiations taking place within the European institutional political opportunity structure a reasonable balance could be created leading to a new and effective chemicals regulation that would benefit industry and environmental interests. However, opposing coalitions and powerful corporate interests promoted deadlock and worked toward watering down a proactive way to protect human and environmental health. The REACH proposal was watered down because of corporate interests (Lind 2004).
CHAPTER 4 REACH OPPOSITION AND MEMBER STATES

A. Political Economic Context

1. Growth of Corporate Power

Chemical companies have long been in Europe and around the world have been dominant political actors closely intertwined with government officials such as Prime ministers, ministry heads and government regulatory experts. Government sponsored production increases of fertilizers and dyestuffs combined with significant advances in scientific research and expertise stimulated the formation of political interests and the structural of advocacy organizations among industry leaders since beginning in 1918 and World War I and II. Technical and scientific research links between government and industry strengthened epistemic communities between expert networks and specific industrial associations. Furthermore, key political appointments to chemical regulatory agencies were dominated by executives or scientists who had worked for chemical companies leading to a revolving door system of support for the industry. Firms in Germany such as Bayer, Hoechst, and BASF (The Big Three) coordinated economic and political strategies to serve their best interest over environmental considerations, health and international trading policies with key advocates selected to important agency positions. The annual world production of synthetic organic chemicals climbed sharply from 1 million tons in 1930 to 7 million tons in 1950 to 63 million tons in 1970 to 500 million tons in 1990 (Karliner 1997).

By 1981, multinational companies such as Shell Chemicals, BP Chemicals and Esso Chemicals accounted for over 25 percent of petrochemical production. British governmental officials openly consulted and worked with individuals in the private sector through chemical industry associations (Coleman and Grant 1984). These multinational companies dominated
political interests and regulatory strategies (Grant et al 1998). The dense relationships between
government and industry were especially driven by the company’s importance in steering
economic development strategies governments initiated for instance in Germany and Great
Britain. In Scotland and Great Britain, the chemical industry profited from direct government
payments and financial assistance for developing new areas of production (Grant et al 1988).

The evolution of the chemicals industry in Europe integrated innovation with the
expansion of centralized and powerful industrial political interests. These interests are what
helped provide the foundation for the industry we see today (Grant et al 1988). Generally
speaking, the chemical industry benefitted from harmonious relationships with government
authorities isolating themselves from public disclosures while controlling regulatory processes as
part of a corporatist type of governance approach. The industry had been able to sustain a high
level of self-regulation and autonomy from government regulation up to the 1970s and 1980s at
the nation-state level.

The 1970s demonstrated a growing adversarial change in the relationship the chemical
industry enjoyed with government and the citizenry. Environmental and quality of life concerns
moved to the forefront of policy agendas. However, new protective oriented regulations
continued to be measured against economic rationalities in terms of their impact on industry
rather than levels of protection for human health. The public’s demand for health and
environmental protection standards policy changes dramatically affecting the chemical industry.
The German Chemicals Law of 1980, for instance, materialized as a key piece of legislation
resulting predominantly from a transformed political climate in favor pro-environmental
regulation. Life-threatening chemical disasters, a growing environmental movement, the rise of
the Green Party, a change in regulatory science epistemic communities and the increase in
environmental groups seeking justice helped to transform government power and a construct a new chemicals policy – Registration, Evaluation, Authorization of Chemicals.

United States industrial concentration further contributed to the power and influence of chemical companies worldwide. Although, chemical production in America remained far less than what had developed in Europe before the war, rapid development of the chemical industry grew very quickly after WWII. The demand for DDT, Polyethylene and other chemicals supported the growth of American capitalism (Grant et al 1988). The Big Three chemical companies of Germany aggressively established industrial production facilities across the Atlantic. These companies successfully acquired lucrative government contracts and political linkages with US corporations. The government’s cold war inspired demand for maximum production outweighed regulatory concerns around pollution although growing concerns over stream pollution gradually emerged during the 1970’s.

Du Pont, under the leadership of Chairman, Lammot du Pont, recognized the growing problem of water pollution and the intensifying anti-pollution concerns of the public. He took proactive action conducting scientific evaluations and built water pollution control technologies. Although, public opinion polls conducted for the chemical industry in the 1960’s by Opinion Research Corporation indicated Americans were not very concerned about pollution, in just ten short years, the American public became deeply concerned about the chemical industry (Grant et al 1988).

The growth of the United States environmental movement helped to elevate the public’s concerns for the harmful impacts of old and new chemical products. Books such as Rachel Carson’s (1962) *Silent Spring* in 1962 combined with people’s concerns over the use of napalm and Agent Orange in Vietnam helped provide the necessary openings in the existing political
opportunities structures to promote change in the 1960s and 1970s. The passing of the Toxic Substances Control Act (TSCA) took place in 1976. The surge in chemicals legislation was further supported by an activist federal government. However, the legislation that was passed at the state and federal levels contained considerable inconsistencies. It overlapped regulatory responsibilities, contained duplicated approaches with inconsistent guidelines, conflicted across multi-governance levels, and included ambiguities for delineating between new and old chemical substances. The escalating political will found in the US inspired Europeans to take action. Political pressure for chemical regulation strengthened in Europe, coinciding with technological advances in carrying out regulatory and risk evaluations. Regulators were able to more effectively test chemical substances for their danger to human health and the environment. The passing of TSCA prompted the European Community to follow suit.

2. The Push for REACH

Leading up to REACH, the chemical industry associations continually advocated against environmental regulations. Pro-industry organizations underscored the economic importance of the chemical industry to society and emphasized the negative effects increased regulation would have on employment. Their frames lost traction during periods of high economic growth but gain considerable success during recession years.

Industry associations also benefitted from a readily supply of professional scientists and highly respected research practitioners. Today, members of a chemical regulatory epistemic community, have contributed to government decision making and built strong network ties between the public sector and regulatory officials. The pro-industry groups argue for self-
regulation. They gain key access points in the political opportunity structure for influencing legislation and exchanging insider information, following the strategies of the Chemical Manufacturers’ Association of the United States for ideas (Grant et al 1988).

A significant advantage for the chemical industry to resist proposed environmental regulation stems from its close ties with specific agencies that have regulatory authority over chemicals. IG Chemie in Germany, for example, coordinates advocacy efforts through producer alliances (Grant et al 1988). They are able to harmonize strategic efforts between employers and unions in order to resist the political pressures from environmentalists.

The creation and passing of REACH has triggered a lobbying and advocacy battle between two coalitions—“Business” versus “Greens” (Fuchs 2009). The REACH directive has instigated one of the biggest industry lobby campaigns seen at the EU level. The chemical industry’s lobbying groups advocate a weaker form of REACH shifting environmental and health protection of hazardous chemicals in favor of competitiveness concerns. It uses scare tactics to suggesting REACH threatens employment and the future of the chemicals industry in the EU. National governments, even from outside of the EU joined in the assault. They constructed appealing campaigns grabbing the attention of EU citizens and undermining the strength of the legislation.

REACH developed during a period of EU enlargement and expansion of environmental policies from Member states to the supranational level. A new EU wide system of chemical management was proposed as a paradigm shift. The “Business” coalition emerged as skeptics to the new legislation. The coalition consisted of representatives of major chemical companies such as the Big Three (BASF, Bayer, and Hoechst), high level politicians from countries with
extensive chemical industries, and conservative and socialist MEP’s who on occasion were supported by DG Enterprise officials in the EC.

In the Commission, environmental issues initially come under the authority of the DG Environment. Margot Wallstrom of Sweden was the Environmental Minister throughout the crucial time when REACH legislation was being proposed. As mentioned earlier, a small “Green” coalition of environmental ministers from northern European states (Denmark, Finland, Germany, the Netherlands, and the United Kingdom) initiated the action to propose a new type of chemicals regulatory framework on to the EU agenda. It was a strong group of environmental professionals from within the European political opportunity that opened up opportunities for change.

Later in the EU policy process intense negotiations occurred between the DG Environment and the DG Enterprise for control over REACH legislation as it progressed along the co-decision process. The DG Environment continued to be influential in the contentious debates and remained the governing authority. Concurrently the power of the EP regarding environmental issues also increased (Lind 2014). The EP is the strongest supporter of environmental legislation among the EU institutions. The Environment Committee and many MEP’s are advocates for the environment and pro-REACH.

The REACH legislation also created a new bureaucratic agency, ECHA, as a key element in the operationalization of REACH (Selin 2007). Despite the fact that the offices are located in Helsinki, Finland, quite a distance from Brussels, the newly formed agency provides important administrative support for the Commission and works closely with EC technocrats and Member state regulatory agencies.
Corporate opposition was initially hampered by the pessimistic nature of the public’s perception toward the industry. Toxic industrial accidents creating dioxin scares and other incidents raised the level of the public’s doubt the chemical industry could regulate itself.

Under the leadership of Margo Wallstrom, with support by the small “Green” coalition of pro-REACH advocates, the Commission drafted REACH and started to guide it through the EU institutions. The newly proposed legislation was met with an aggressive industry lobbying effort criticizing the Commission’s proposal. Cefic voiced powerful disapproval with the proposal. REACH drew more attention and hostility than any other piece of EU legislation in the history of the Commission. The “Business” coalition, led by Cefic and the BASF, BAYER, Hoescht totally disregarded it and rejected the proposal. They framed their opposition in terms of rhetoric focused on the damaging economic effects REACH would likely bring. They fervently believed the new approach for regulating chemicals would be too burdensome on industry and threaten their international competitiveness. Several media outlets reported:

“Many companies fear that some of the proposals due to be presented by the European Commission to the Parliament in Strasbourg later this year could have damaging Long term effects in the industry (Grimsby Evening Telegraph, March 9, 2004)”

“There is no doubt that REACH is causing concern among UK chemical manufacturers.” (Grimsby Evening Telegraph, March 9, 2004)

The Commission’s DG Enterprise and Parliamentary Committee on Industry, Research and Energy and the Committee on Internal Market and Consumer Protection sympathized with Cefic’s concerns. The chemical industry and “Business” coalition seemed to disregard REACH’s inertia through the EU co-decision. Robert Donkers (Schapiro 2007) thought the industry felt it would be too complicated to ever get passed. Additionally, Cefic is an organization of 27,000 members. Their organizational dynamics are such that they work to construct a common
position of all its members. It takes time for Cefic to create oppositional language further creating lags in their timely response (Lind 2014).

Cefic and the “Business” coalition soon realize the futility for advocating against the entire bill. The altered their strategy during the re-drafting phase of the Commission’s policy process to focus continual weakening of the legislation. The “Business” coalition engaged in all out expensive lobbying war against REACH. They sought to weaken its requirements as much as possible because it became increasingly apparent that the legislation would move forward. British Prime Minister Tony Blair, French President Chirac, and Germany’s Chancellor Gerhard Schroder issued a joint letter to EC President Romano Prodi articulating their concerns that a new EU chemical policy could endanger the competitiveness of the European chemicals industry (Selin 2007).

The “Business” coalition maximized increased its lobbying efforts during the Commission’s legislative process resulting in significant alterations in the policy. The coalition was successful in weakening the requirements of REACH and called it a triumph for industrial lobbyists over environmental movement organizational efforts.

The legislation continued to the next step in the Competitiveness Council stage where political opportunities remained closed for environmental groups (but provided useful opening for industry lobbyists). Conservative MEP’s and Cefic again framed their hostility toward REACH in terms of the burden it would put on corporations. It was a more salient frame in line with the political and economic culture of the Competitiveness Council.

The United States government stepped into the political frey by lobbying against REACH on behalf of the American Chemistry Council. ACC lobbyists and the US Chamber of Commerce sent United States House of Representatives (2004). The US engaged in lobbying activity but
did join the “Business” coalition in opposition of the legislation. The US framed their challenges in international trade terms.

For example:

“The legislation has caused such concern in the United States that, in April 2004, the secretary of state then, Colin Powell, sent out a seven-page cable to U.S. Embassies in all of the EU’s 25 Member states questioning the legislation’s overly cautious approach and warning that it “could present obstacles to trade and innovation” (Bilefksy, The International Trade Tribune, October 11, 2006).”

Even though the Commission discounted US claims, the “Business” coalition employed the rhetoric late in the process. White Papers were submitted that focused on the economic costs of REACH. That is not to say that the “Business” coalition did not exploit the political opportunity to exaggerate their claims of the likely burden on the industry. However, the US tactics in lobbying the EU institution were excessive and blatantly insulting to European law makers (Lind 2014) US lobbyists were abrasive and bullied their way through EU institutions. It might have even helped the “Green” coalition. Identical briefing papers from varied paid lobbyist groups landed on MEP’s and EC administrator’s desks without consideration.

The co-decision policy process offered the “Business” coalition more opportunities to weaken REACH, especially in more receptive committees that shared their concerns. At the outset corporate lobbyist pushed MEP’s to debate which Parliamentary should have authority over the new chemicals proposal. Many German Conservative MEP’s took leadership roles in mobilizing their resources against REACH legislation. They were partially successful in weakening the proposal.
The final stages of the REACH policy process significantly altered the opportunity structural dynamics of the situation because the new Italian EU President Silvio Berlusconi, engaged in the debate. They were opposed to REACH. The “Business” coalition continued to press to Competitiveness Council to review REACH and had the support of the EU President. This resulted in further weakening of REACH. Finally, REACH became law after going through the co-decision process again where some “Green” coalition members felt it was too weak. The “Business” coalition also did not like the final version because of the burden it put on corporations but they could live with the diminished law. Guido Sacconi, rapporteur of the Parliament’s Environment Committee, hailed the final compromise as resulting in the “most ambitious chemicals legislation in the world” (Selin 2007).

The strongest opposition to REACH originated from chemical corporations and downstream users. They were a powerful force shaping the policy outcome using key access points in the political opportunity structure to effect change. Cefic has 37,000 corporate members where it is difficult to specifically discern the role of each and every business. Local businesses can contact their local MEP and lobby for specific laws. Every industry also has even more small and large businesses linked to them through supply chain connections are impacted by REACH proposals. The organization Cefic, operates from a consolidated approach. That is, they take pain staking efforts to gather the preferences of all its members, and then consolidate the members’ choices into a unitary opinion that is subsequently distributed back to its members. This strategy is political powerful because it consolidates the framing into common specific language.

Industry participation at the supranational level was controlled by the Cefic. Chemical industry trade organizations and manufacturers in Member states followed Cefic’s lead. For example, the Chemical Industry Association in the UK communicated regularly with Cefic
public relations representatives in sharing information and helping direct their efforts. In general most downstream users and retailers especially did not participate in the intense negotiations.

The chemical industry felt like an undeserved target by REACH. However, corporate representatives understood that the loss of the public’s confidence in protecting them from toxic exposures cost them political power. Their lack of testing and the amount of chemical accidents occurring prior to the initial submission of a new approach for regulating chemicals pushed legislators to take action. Environmental movement organizations like Greenpeace have been calling for reform for quite some time. Their message helped voice the public’s apprehension.

They worked hard during the REACH policy process to take the advantage and reorient their political strategy towards proactive tactics. At the beginning, with Meacher’s small coalition efforts, the chemical industry was continually reacting to the “Green” coalition’s activities. Although Cefic was the main actor, they coordinated efforts with the International Council of Chemical Associations (ICCA). They tried to have a proactive self-regulating approach called “Responsible Care,” take the place of REACH. ICCA is a large umbrella group of chemical industry associations worldwide. ICCA also promoted a Global Strategy on Chemicals Management to actively participate in efforts to categorize chemicals based upon their end use and their route of chemical exposure. They established volunteer reduction policies and provided information to downstream users (ICCA 2015). They promoted many volunteer programs and option risk management regulations that are currently being used by the industry.

Leaders in the chemical industry prefer voluntary strategies for chemical protection rather than follow REACH. They stated that the existing approach to chemical safety could be modified and improved rather than creating a whole new regulatory framework. Based on historical events, however, the chemical industry does not have good track record.
apparent during the REACH debates that Cefic and others accepted the publics’ skepticism in regards to their ability to effectively protect human and environmental health from toxic exposures.

The chemical industry chose a strategy that assumed defeat and acknowledge the legitimate need for REACH. They preferred to follow the OECD’s harmonized global system of regulations especially when it might have lower standards than REACH. Cefic representatives knew an innovative system of testing and accountability was coming. However, they questioned if the new system would be repressive or in line with what the industry thought appropriate.

The chemical industry preferred specifics and a clear and uniform system that lessened the chance of unpredictability. They wanted to lower the costs of gathering chemical information especially for lower risk chemicals. They understood the need for classifying dangerous substances. The also proposed that REACH contain flexible measures so that industry would not have to spend additional costs adjusting to new rules. In short, REACH was a major challenge to Europe’s politically powerful chemical industry.

The chemical’s industry lobbying strategy systematically aimed at undermining REACH and forestalling its implementation. The initial strategy by chemical corporations focused on denying a problem existed and the need for REACH. Cefic argued that there was little direct evidence of widespread ill health or ecosystem damage being caused by the use of man-made chemicals. Cefic abandoned this approach once a preponderance of scientific evidence suggested otherwise. In fact, extensive health and environmental concerns were linked to chemical exposures (Peroy 2001).

Cefic and other chemical lobbyists also employed fear tactics focused on quantifying unemployment and high economic costs linked to REACH’s implementation. Consultancy firms
were hired to estimate the regulatory financial burdens that the industry would endure. The German Industry Confederation (BDI) estimated that REACH would eliminate 2.35 million jobs in Germany (Contiero 2005). They used research studies as a tactic to influence decision makers. They continually sponsored and produced new reports conducted primarily by consulting firms, such as the Arthur D. Little, to claim REACH was a bad idea. For example, the Mercer Management Consulting Company conducted a study for the French chemical industry association (UIC). The report suggested that the French GDP would drop 1.6 % (or 28 billion euros) in the first ten years of REACH’s implementation. However, independent economists found fatal flaws in this particular report (Contiero 2005). Cefic also lobbied national small and medium companies for their assistance in opposing REACH. The large companies disguised their efforts by using the other local company’s name on lobbying efforts in the media.

The chemicals industry also used bureaucratic strategies to stall the REACH legislative processes. Corporate lobbyists would have legislators put forward several amendments and counter proposals in the legislation designed to release chemical producers from their regulatory responsibilities. They used unofficial outside discussions prior to meetings of the Council of Ministers and the EP to negotiate their efforts to weaken REACH.

Room papers were also a usual practice where advocates would distribute informal position papers to members of the EC.

Another strategy the chemical industry used was a revolving door tactic. Public authorities and industry lobbyists traded working places amongst themselves. Former senior officials of the EU institutions would move to work for chemical industry lobbying firms after leaving their public positions. They would lobby the same institution and colleagues with whom they used to work (Contiero 2005). BASF and Cefic were the worst offenders.
The Big Three chemical companies are multinational corporations operating at the international level. They can influence decision makers in their subsidiary locations when production facilities impact the local economies. In 2002, the BASF vice chairman Eggert Voscherau became the new president of Cefic. He started building networks across other organizations and national borders to influence EU politicians. He connected with Member state level lobbying organizations as a strategy to influence national officials holding office at the supranational level. He further encouraged the United State lobbying organization known as American Chemistry Council, to get involved for helping obstruct the REACH policy process. Many German politicians are on the payrolls of the major chemical companies.

Multinational corporations and lobbying groups pressure Member state governments directly against REACH (Contiero 2006). The influence of the German chemical industry has proven to be very effective with the EP as well. German MEP’s take on added responsibilities and are appointed to key positions in the EP. They were in leadership positions during REACH debates and demonstrated preferences in line with BASF interests.

B. The United States Government and REACH

The United States is one of the world’s largest chemical producer and Europe’s biggest trading partner. US government officials reacted harshly to REACH. The US conducted an intense lobbying effort targeting the EC and Member State governments. Trade representatives and the US Chamber of Commerce engaged in an especially intense lobbying campaign in Brussels. In 2002, the US government issued a “United States nonpaper on EU Chemicals Policy.” The document was submitted anonymously without an author or agency identification.
US government officials from the Environmental Protection Agency (EPA) and US Trade Representative’s Office travelled to the EU as an unofficial representation of the US’ position concerning REACH. They outlined the concerns of the US government regarding the EU White Paper. The Nonpaper was personally hand delivered by high level US representatives to EU and Member state officials. The document outlined the concerns of the US about REACH legislation that may present trade barriers to the international trade of chemicals.

The US Chamber of Commerce lobbied EU institutions sometimes “bulldozing” in their way around the EP and DG offices. In 2000, the US Chamber of Commerce in Brussels changed their name to AmCham EU and expanded its staff to reflect the new realities of the single European market. AmCham EU lobbies the EP and EC on behalf of its 140 members, US companies including Boeing, Dow, DuPont, Apple, General Motors American Express and Cargill (Schapiro 2007). “These US lobbyists were knocking down doors to get meeting with us.” (Schapiro 2007). She was an Italian Socialist MEP on the Environment Committee. She was overwhelmed with visits by US lobbyists.

Under President Bush, US lobbying amounted to a historic intrusion into European Affairs (Schapiro 2007). President Bush appointed C. Boyden Gray, an heir to the RJ Reynolds tobacco fortune as the Ambassador to the EU. His soul purpose was to kill REACH. He was a key figure in the Reagan administration in lowering regulatory standards during that time period. He worked closely with AmCham EU, informally using the Ambassador’s office as a platform for lobbying the EU on behalf of corporate interests. He mounted a full out attack on proREACH EU officials causing a backlash of hostility towards the US. The US lobbying activities were a failure because of such actions, including emails sent to the EC by Gray stating you should do like the US does. The incident closed any political opportunities that were
available through the Ambassador’s office and infuriated the Europeans. It may have brought MEP’s closer in a unified position.

US manufacturers were particularly alarmed with the authorization process because they felt this part of REACH would impact them the most. They incorporated research conducted by the ACC in their position paper. They also used the argument that REACH moved away from the OECD country harmonization efforts. In this way, REACH would have an unfair strategic advantage by applying higher import standards.

The US government’s international trade delegation coordinated with the US Commerce Department, Trade Representative’s office and the State Department. These agencies directly criticized REACH and regularly met with European officials to outline US concerns (Geiser and Tickner 2003). These representatives also met with industry staff to better understand the concerns of the European chemicals industry. They participated in dialogues centered on constructing a political strategy. They conducted their efforts as official business of the US Mission to the European Union. This agency sponsored several informal roundtable forums focused on chemical’s legislation. Industry officials and consultants were the primary participants.

US tactics continue to oppose REACH by exploiting opportunities at the international level through the Transatlantic Trade and Investment Partnership (or TTIP) negotiations (European Commission 2015). US and EU international trade representatives are engaged in political discussion focused on making EU and US regulations more compatible. Pro-business actors see it as a potential for job creation and a way to weaken REACH. Current EU and US regulations on chemicals differs significantly so neither harmonization nor mutual recognition is feasible. As a result the US views TTIP as another political opportunity to remove the
precautionary principle and reversal of the burden of proof from the EU regulatory framework. The perceptions may be misleading. The strength of these two foundation elements of REACH and the political tenacity of the Nordic countries has resulted in closed political opportunities. The growing precedence of precautionary provisions in international environmental treaties provides a firm and immoveable force that the US cannot reverse. Procedures for evaluating chemicals would not change but the regulators could assess the same substances at the same time and exchange information (European Commission 2015). Key to their argument is remembering who conducts the assessments. In the EU, the corporation conducts the risk assessment and provides the data to the regulator for review.

C. European Influence on REACH: The Role of European Member States

The Member States of the EU must directly implement or translate legislation passed at the European Union level into national policy. They can also play critical roles in influencing European-wide legislation. The REACH proposal worked towards integrating EU chemicals policy. It was heavily influenced by Sweden, Denmark, the Netherlands, the United Kingdom and Germany. Each of these countries developed their own chemicals policy initiatives in the past decade. A main goal of the common market was to harmonize regulations across member states. Since chemical commerce is international in nature, restrictions in one Member State could have ramifications on other Member states. The EU’s Maastricht Treaty contains two types of legislation for addressing environmental concerns:
• Legislation regulated by Article 95 of the Maastricht Treaty, covering “things that move.”

This is the internal market regulation – in this case, countries can only go beyond European Union regulation if they can demonstrate the need with the European Commission. To achieve derogations (exemptions) from European-wide policy, countries have to prove local conditions that warrant extra protection, such as a sensitive aquifer.

• Legislation regulated by Article 175 of the Maastricht Treaty covering environmental protection. While this article includes all environmental protection policies, it generally covers things that are fixed, such as production facilities. In this case countries can go beyond EU law – i.e., in banning emissions of a chemical, permitting, etc – but must respect the internal market.

• Chemicals policies usually are governed by Article 95. When member states join the Union their regulations are reviewed and the EC determines decides whether or not to accept them. Sweden, was given five years to reduce their high environmental standards to come in line with the EU’s policies.

The Member State/EU relationship is vitally important especially for REACH political discussions. Member state government officials lobby the EU from outside the institutional structure as well from the inside in attempts influence policy decisions. Some countries like Italy have many small and medium-sized chemical producers. Their advocacy strategies are mixed depending on the issue. European Member States with large chemical industries such as the United Kingdom, Germany, and the Netherlands developed strong chemical policies in the 1990’s. Sweden, Denmark and the Netherland are considered “leader states” with the highest
chemical regulations. These Nordic Member states advocated for fervent EU chemicals policy similar to their own.

1. **The Nordic Block**

Denmark, Sweden, and Norway are referred to as the Nordic block countries. They have passed legislation focused on innovative chemicals management. They share a common view that government policies must stimulate industry while fostering safer chemicals. Several main drivers affect their chemicals policies. They shared several concerns related to REACH and their political dynamics. They were concerned about the lack of information about chemicals. The public concern for the environment was high and they have social democratic political structures. The people from Denmark have a strong ecological consciousness and all of the countries have social democratic political structures that strongly support environment and health policies (Geiser and Tickner 2003).

2. **Denmark**

The Danish Chemicals strategy advocacy efforts dates back to 1996 when they published two reports about chemicals. The reports were debated in the Danish Parliament and followed by a 1997 Danish EPA Action Plan for the Danish EPA’s Chemical Inspection Service, 1997-2001 (COWI, 2001). These discussions led to the 1999 “Strategy for Intensified Efforts in the Field of Chemicals in Denmark, in the EU and globally,” and a strong public awareness and discussion on chemicals problems. Several factors drove the Danish national chemicals policy. Because of
concerns over groundwater quality (the country obtains most of its drinking water from a single aquifer under the country), the government has, for many years, been engaged in pesticide use reduction programs. Emerging data on declining human sperm counts and endocrine disruption have been heavily covered in the media, prompting even more government attention and interest in reducing and preventing exposures. Finally, to influence the European policy development, the Danish government wanted to parallel the development of EU chemicals policy with its own vision. The Danish government took its own action in regulating chemicals while trying to influence EU policy (Geiser and Tickner 2003).

The Danish efforts on chemicals policy have been somewhat modified by the election of a conservative government in 2001. The new government has stated its commitment to making the national chemical strategy a priority and in policy statements has maintained the same goals and policy directions as previous governments. At a September 2002 conference on chemicals, sponsored in part by the Danish government, the Danish Minister of Environment noted his strong support for implementation of REACH. However, the budget for the government’s clean production and clean products initiatives, important to the Danish approach to chemicals management, have been cut substantially, and the state funding for the largest Danish NGO working on chemicals was completely eliminated as of 2002 (Geiser and Tickner 2003).

3. **Sweden**

The Swedish government has played a leading role in international chemicals policy debates since hosting the 1972 United Nations Conference on the Human Environment. The 1972 “Act on Articles Hazardous to Health and the Environment” endorsed precautionary action on
problem chemicals by stating “good scientific grounds for suspicions about risks to health and the environment will be sufficient for the applicability of the Act” (KemI 2014). The 1985 Swedish Chemicals Products Act established the principle of substitution to guide decision-making on hazardous chemicals. This includes avoiding chemical products for which less hazardous substitutes are available. In that same year, the government established the National Chemicals Inspectorate (KemI) to oversee scientific research and to develop action plans on chemicals and pesticides. Over the following ten years, KemI initiated several programs including the Swedish Sunset Project. The goals of this project were to develop a procedure for the systematic selection of hazardous substances as candidates for phaseouts and to use this system to identify multi-problem chemicals as candidates for risk reduction (Geiser and Tickner 2003).

When Sweden joined the European Union in the 1995, it was offered derogations on environmental policies that might affect the internal market. Sweden had issued bans on several chemicals including cadmium, trichloroethylene, pentachlorophenol, arsenic in treated wood, and tributyl tin. These derogations have either been extended for additional periods of time or policies have been passed in the European Union implementing the Swedish policies (Geiser and Tickner 2003).

Since 1984, the Swedish government has established various chemicals commissions to study the status of chemicals management efforts in Sweden and recommend risk reduction and broad chemical policy measures. The 1996 Chemicals Commission, consisting of government representatives, academics, various stakeholders, and international observers, issued a 1997 report entitled “A Sustainable Chemicals Policy,” outlining a long-term approach to chemicals management (Raffensberger and Tickner 1999). The commission solidified several goals of
chemicals control in Sweden: (1) knowledge on the risks of chemical substances and products; (2) available information to those who use such products; (3) the least hazardous products possible should be chosen and to the degree possible harmful substances should be substituted with less harmful ones; and (4) health and safety risks should be minimized by safe use and handling of chemical substances and products.

In 1999, the Swedish Parliament enacted a law called the “Swedish Environmental Quality Objectives,” which outlines fifteen environmental quality objectives to be achieved by 2020. One of the environmental quality objectives is “A non-toxic environment.” This is defined in the act as “the environment must be free from man-made substances and metals that represent a threat to health or biological diversity. This means that: the levels of substances that occur naturally in the environment must be close to background levels; and the levels of man-made substances in the environment must be close to zero.” (Geiser and Tickner 2003).

The government then commissioned KemI to develop sub-goals and propose action strategies to achieve these goals. One sub-goal seeks to address the lack of the lack of information on dangerous properties of chemicals. Minimum hazard data should now be available for chemical substances on the market. Through years of risk assessment research, the government has determined that chemical-by-chemical assessments of risk are too resource- and time- consuming and, as a result, few have been done during the last 20 years. However, it is possible to identify inherent characteristics in chemicals that give rise to risks. The information collected on hazards will be used to prioritize chemicals for further testing, substitution, and to develop lists of chemicals of concern. More intensive testing requirements should be based on production volumes, known toxicity, and exposure (Geiser and Tickner 2003).
A second sub-goal addresses the lack of knowledge about what chemicals are in products. By 2010, they want to have adequate information on the health and environmental risks of chemicals used in finished products and how the chemicals flow through the economy and into the environment.

They want to have phase outs of the most harmful substances next. The health and environmental risks associated with chemical substances in products and processes should decrease along with the use of chemicals that impede the recycling of materials. Through years of research the KemI scientists have determined that persistence and bioaccumulation are sufficient sources of concern. Historically, substances that are environmentally persistent and bioaccumulative have turned out to be problematic. Also, even if a full toxicological profile is available for a substance, there may still be gaps in toxicity information. Additionally, heavy metals and chemicals that are known or highly suspect carcinogens, reproductive toxicants or mutagens should be phased out (KemI, 2015).

The Swedes also plan to implement risk reduction and substitution for potentially harmful chemicals not covered by the previous sub-goal (phase outs). Substitution is a centerpiece of the Swedish chemicals policy, established in the 1985 chemicals act and reestablished in the 1999 environmental code. The responsibility for substitution applies not only to producers and manufacturers but also to retailers and consumers. The government administers many more chemical programs seeking to achieve a zero toxic nation (Geiser and Tickner 2003).

The main goal of the Swedish chemicals policy was to influence and promote strong European Union chemicals policies. The government funds substantial resources into the EU process. Even though Denmark and the Netherlands have remained strong on chemicals policy, despite political changes, Sweden has the strongest voice in influencing the EU process. The
country was well-situated to exercise influence when Margot Wallstrom was the Swedish European Environment Commissioner and then was a Swedish head of the chemicals unit in the Directorate General Environment. A Swede was also a Director General in the European Council Secretariat. The head of the chemicals division of the Swedish Ministry of Environment was also placed on assignment in Brussels to assist in the development of the REACH legislation (Geiser and Tickner 2003).

4. Norway

Norway has a unique and important role in the development of European and international chemicals policies. Norway has a relatively high per capita income and provides the largest per capita development support of any nation in the world. While not a primary chemical producing country per se, Norway does have a large industrial sector dependent on chemicals including petroleum, metals, pulp and paper, and energy intensive processing. The country also has many chemical formulators (Geiser and Tickner 2003).

While not a European Community Member State, Norway is a member of the European Economic Area and a signatory of the European Free Trade Agreement. This means that as a general rule, Norway must follow European Commission regulations and directives on chemicals. Norway participates in working groups developing chemicals legislation. To a certain degree Norway has the ability to go beyond European regulations on chemicals or modify Commission regulations and directives, thus serving as a driver for European regulations. Norway places emphasis on the cooperative work under the Nordic Council of Ministers, the North Sea Conference, and the Oslo and Paris (OSPAR) Convention. Norway’s central role in
these two efforts provides authorities an important opportunity to place pressures on the EU for a more ambitious chemicals policy and to motivate international policy efforts. While the Nordic Council (consisting of the Ministers of Environment of the Nordic countries) is primarily a consultative body, it does formulate common policies on chemicals and other issues through its working groups (Miljøverndepartementet 1999).

Norway’s concerns about chemical contamination date back more than 30 years. Runoff from land contaminated by oil wells flowed into Norwegian fjords and rivers. It affected important fish and shellfish stocks. Furthermore, heavy metal contaminants and persistent organic pollutants have contaminated soils, waterways, and vegetation. The contamination has been reduced in recent decades due to legislation addressing emissions from industrial facilities. Norway’s authorities realized the importance of addressing diffuse sources of contamination from products (Miljøverndepartementet 1999; Geiser and Tickner 2003).

Norway has had since the 1970s two major acts regulating chemicals in production systems and products: the Pollution Control Act and the Product Control Act. The Pollution Control Act addresses emissions to the outdoor environment with a goal of preventing pollution. The act sets up a permitting system for those activities that might pollute the environment. The Product Control Act is intended to prevent injury to health or the environment caused by products. It allows for approval of potentially harmful products, and establishes a duty of care and information on manufacturers and importers, as well a process for setting up criminal liability and enforcement (Geiser and Tickner 2003).

In the late 1990s, as a result of its participation in the Nordic Council and other international efforts and its interest in influencing a more ambitious European Union policy, the Norwegian Minister of Environment developed an Action Plan for Hazardous Substances. A 1996
government white paper to the Norwegian Parliament on future environmental policy identified the need for more elaboration on a future chemicals strategy. The factors influencing the development of the new policy were the lack of information on most chemicals, the need for a more general approach to chemicals that is more efficient than the current chemical-by-chemical approach, and the Esbjerg Declaration goal of reducing emissions of chemicals which pose a threat to health within one generation. The Action Plan is a political document that lays out a vision for Norwegian chemicals control efforts. While never approved by the Norwegian Parliament or officially adopted by subsequent ministers of environment (the current Environment Minister’s focus is on cleanup of contaminated soils and fjords), the Action Plan is still used as a “blueprint” to guide Norway’s chemicals efforts (Geiser and Tickner 2003).

The 1996 white paper and updates since set the goals of Norwegian chemicals policy as the following: 1) Eliminate or reduce of releases, by certain deadlines, of dangerous substances on a national priority list. The latest 2003 white paper on environmental policy proposes that the list is supplemented by criteria on health and environmental hazards, ensuring that all of the most dangerous substances are encompassed by the national goals. The list included emissions to be reduced and possibly eliminated were chlorinated short chained paraffins, PCBs, pentachlorophenol, nonylphenol, and octylphenol. It also included emissions to be substantially reduced that inlcuded lead, cadmium, copper, mercury, chromium, brominated flame retardants, 1,2 dichloroethane, dioxins and furans, hexachlorobenzene, chlorinated alkyl benzenes, musk xylene, tetrachloroethene, trichlorobenzene, trichloroethane, tributyl tin compounds, tryphenyltin compounds, and polycyclic aromatic hydrocarbons. To achieve these phase out goals, the Norwegian government uses different measures for particular chemicals, including taxes,
research, destruction of unused stocks of prohibited chemicals, measurement, and enforcement (Geiser and Tickner 2003).

The White Paper set out to achieve the generational goal. Norway has adopted the one generation target as a national target for reduction in hazardous substances. Finally, they have a goal for the “Reduction of Risk” for all substances. Two centerpieces of risk reduction are the substitution principle and protection of children’s health. Norwegian policy provides a key role for industry in studying risks and developing less hazardous products. It lays out a number of policy tools to facilitate risk reduction, including research on alternative technologies, procurement, taxes, emissions limits, information, and enforcement. Provision of information on hazardous properties of substances and alternatives is critical to reducing risks from hazardous chemicals. This includes information on chemicals in products, information on least hazardous products, and a responsibility on manufacturers and importers to develop and provide information, along with a responsibility on authorities to provide information in a publicly accessible manner (Geiser and Tickner 2003). An amendment to the Product Control Act went into force on January 1, 2000, institutionalizing the substitution principle in Norwegian chemicals policy. The Norwegian policy mirrored Sweden’s, Denmark’s and Sweden’s by having a Product Register. Observation List, Criteria listing of undesirable substances, and several of the same tools.

5. The Netherlands

The Dutch government initiated its “Strategy on Management of Substances” (SOMS) process in 1998. The goal was to ensure that the potential risks and hazards with the use of
substances in each stage of their lifecycle are controlled so as to remove, or to reduce to negligible level, any harmful effects caused by substances on man or the environment. The SOMS process consists of the development of an initial policy document (published in March 2001), an interim report (published in December, 2001), a second interim report (published in October, 2002) and a final memorandum of implementation to be published in the autumn of 2003 (Geiser and Tickner 2003).

In late 1998 the Dutch government hosted a multi-stakeholder workshop to examine the problems with chemicals management. Following the workshop the government set up a two year process to develop a long-term chemicals policy, with a leadership team composed of one government representative, one chemical industry representative, and one environmental advocacy representative. The Dutch have a strong tradition of consensus-based policies, and this structure allowed the problem definition, key areas of focus for the policy, and solutions to be developed in as non-confrontational manner as possible. While there were differences between the stakeholders on how to address the chemicals problem, in general most agreed that the process was critical to build consensus for broad change (Geiser and Tickner 2003).

The Dutch government presented its first SOMS document to Parliament in March 2001, outlining the policy and steps towards its implementation. The policy covers all industrial chemicals—new and existing—and may be expanded to include pesticides and veterinary medicines. In April 2001 the Confederation of the Netherlands Industry and Employers issued a “letter of intent” announcing how the industry would implement elements of the new chemical policy (Geiser and Tickner 2003).

6. The United Kingdom
The United Kingdom UK is Europe’s third largest chemical producing country. The chemical industry is one of the leading industries in the country. Environmental awareness is high, especially around pollution in urban areas. The UK has traditionally had a very active environmental movement and concern for chemicals. Michael Meacher played a leading role in assembling Member state ministers in the very beginning stages of REACH. The Labour government came into power in the mid-1990s, and the environment was one of its top priorities. The nation was suffering from a lack of confidence in government due to its mishandling of Mad Cow Disease and many consumer products were found to contain toxic chemicals. Several UK environmental studies found feminized fish in the water and raised government concerns about endocrine disrupting chemicals. In 1997, the Department for Environment, Food and Rural Affairs, (Defra), initiated policies on chemicals. A 1998 consultation paper on “Sustainable Production and Use of Chemicals” was and pushed the UK to address chemicals. As a result in December 1999, the government published “Sustainable Production and Use of Chemicals: A Strategic Approach – the Government’s Chemicals Strategy” (Defra 1999).

The report outlined policies and goals for chemicals for the next twenty years. This report outlined a long-term chemicals strategy focused on concerns over a lack of information on chemicals, a lack of understanding on risks, a need to improve understanding on health and ecosystem effects of chemicals and the need for rapid precautionary actions on problematic chemicals. The overall goal of the UK Strategy was similar to REACH. It focused on avoiding harm to the environment and human health through environmental exposure to chemicals. It outlined a non-legislative approach to advance progress on chemicals management and had three primary objectives: (1) make full information about the environmental risks of chemicals
publicly available; (2) continue reduction of the risks presented by chemicals to the environment and human health while maintaining the competitiveness of industry; and (3) phase-out early those chemicals identified as representing an unacceptable risk to the environment and human health. The UK government officials set up a Stakeholder forum. Its goal of the Forum was to promote a better understanding between stakeholders and government officials about the chemical toxic concerns. It was set up to allow citizens and environmental movement organizations to discuss issues with government officials. It also helped government leaders build community support for their chemicals strategy. The Forum was supported by a government Secretariat. The first priority for the Forum was to develop a set of criteria that created a rapid identification of chemicals of concern. It led to development of risk management strategies proposed by industry. The Forum also worked to update information for the EU’s technical guidance criteria and it published a list of over 100 chemicals which meet its criteria.

The Forum also constructed comments for the UK government on the EU’s White Paper. The Forum participated in discussions to increase the public’s participation in advising the UK government on chemicals policy. Defra (1999) focused much of its efforts on pressing for the rapid introduction of an EU chemicals strategy and integrating UK concerns into the White Paper’s process. In the absence of the White Paper legislation that did not move forward. Defra chose a strategy focused on education, information dissemination and setting up voluntary agreements with industry sectors. The government particularly expanded chemicals management to downstream users.

The UK House of Lords published several reports including a key document by the UK House of Lords and the Royal Commission on Environment and Pollution. The UK House of Lords (Parliament) Select Committee on the European Union began analyzing and issuing non-
binding recommendations on European Union documents and other EU related issues for the UK government. In February 2002, the Committee issued a report entitled “Reducing the Risk: Regulating Industrial Chemicals”, which outlines numerous questions with regards to implementation of the EU White Paper. The Committee expressed particular concern as to resources for the EU and Member States to implement the program, and the rapid development of alternatives to animal testing. The Royal Commission is the equivalent of a national academy of sciences, charged with investigating and providing advice on complex environmental and pollution related issues. In 2001, RECP initiated a study into the long-term effects of chemicals and options for controlling them. The goal of this expert-based, multi-disciplinary and consultative process that goes beyond REACH was to make recommendations to reduce the chance that chemical use will cause long-term damage to the natural environment or human health (Defra 2003). The study was published in late June 2003 and recommended a more integrated approach to chemicals management, including monitoring, more effective and rapid screening of chemicals and a greater focus on tools for substitutions (Geiser and Tickner 2003).

Despite such progress, however, the UK has traditionally been viewed as a laggard Member state in European environmental policy since the 1990’s. The government has steadily focused on voluntary agreements rather than regulations. The Forum was used as vehicle to access EU political discussions.

7. Germany

German national law on the management of chemicals is generally congruent with the policies laid out by the European Union. While other European nations such as Sweden,
Denmark and the Netherlands have proposed and adopted new policies that go beyond the general policies of the European Union, the German chemicals policies are generally compatible with the European Union policies. This is not particularly surprising, as German industry and government officials have been dominant forces over the years in developing European Union environmental policy, and chemical policies (Grant 1998).

The significant role Germany plays in shaping European Union environmental policy is largely due to the scale and composition of its national economy and the environmental activism of its citizenry. The German chemical industry is the largest in Europe. Therefore, Germany has a strong interest in European chemicals policy and a willingness to monitor, guide, and intervene in those policy initiatives that might directly affect its industrial interests (Grant et al 1998). In addition, public awareness and interest in environmental issues in Germany is relatively high. Over the past several decades this has resulted in well-organized and articulate German environmental organizations, and in particular, the development of the German Green Party. Germany is often thought of as one of the leaders of environmental policy in Europe, initiating regulations that eventually become European-wide policies. For example, Germany was a leader in advocating for restrictions on certain types of tin and for greater oversight and regulation of endocrine disrupting chemicals. Germany was also an important advocate for strong chemicals policies in the North Sea region (Geiser and Tickner 2003).

The German chemical industry is a large and diverse industry with products ranging from bulk to specialty chemicals and from industrial intermediates to finished commodity products. The largest three German chemical corporations, BASF, Bayer, and Hoechst, rank among the largest in the world. They are highly diversified multinationals, with a broad range of innovative products produced in facilities around the globe.
Both the management side and the labor side of the chemical industry play a significant role in national environmental and occupational health policy making with strong influences often coordinated among the Chemical Industry Association (VCI), the Federal Association of German Industry (BDI), and the Industrial Trade Union for the Mining, Chemicals and Energy Industries (IG BCE) (Grant 1988). Given increasing unemployment in Germany (and in chemical industry sectors) in recent years, the strength of the labor-industry alliance has greatly increased.

The relationship between the industry and the federal government regulatory bodies tends to be rather formal and cooperative. This has resulted in rules that are precisely formulated and implemented with little flexibility or agency discretion. Environmental advocates have been less active players in this cooperative approach.

Yet, Germany has a long tradition of environmental and public health activism. The German Green Party is the oldest, largest, and most effective of the European national green parties. Since its founding, the Green Party has maintained a steady interest in national and European chemicals policy as a means of protecting the German and European environment and public health. German trade unions are also well organized and politically influential. They have a long history of promoting occupational safety and health. In addition, environmental advocacy organizations such as Bund für Umwelt, Naturschutz Deutschland and Greenpeace have a broad membership base and are able to mobilize effective political support throughout much of the country. Of particular note is the popular support given to the German animal rights advocacy movement, which has long opposed the use of animal testing in assessing the effects of chemicals and pharmaceuticals. It is because of these influences that the German federal government has thus been particularly active in European Union policies on chemicals (Geiser
The basic structure of German environmental policy is laid out in Article 20a of the German Constitution; however environmental legislation is integrated into a wide array of federal statutes (Andersen and Liefferink 1997). Implementation of the statutory regulations and regulatory enforcement and compliance are exclusively the responsibility of the sixteen federated states, the Lander, even where legislative authority belongs to the federal government. In order to coordinate information management on chemicals, the Lander maintains a Joint Lander Database on Hazardous Substances (GDL) which contains substance specific data on over 24,000 chemical entries (Andersen and Liefferink 1997). Because resources, traditions, and commitments vary significantly among the Lander, this delegated authority results in a somewhat varied pattern of regulatory compliance – for example, one Lander might regulate a substance much more stringently than another (Andersen and Liefferink 1997).

The primary federal agencies responsible for implementing environmental policy include the Federal Ministry of Environment, the Federal Environmental Agency (UBA), the Federal Institute for Health Protection for Consumers and Veterinary Medicine (BgVV), and the Federal Institute for Occupational Safety and Health (BAuA). The Federal Environmental Agency was created during the 1970s but its powers are actually quite limited. Although, the UBA does participate in international negotiations it has neither domestic regulatory responsibilities nor in-house research capacities. Nonetheless, there is a detailed process for assessment and regulation of chemicals between several ministries and agencies (Andersen and Liefferink 1997).

The regulation of workplace conditions is divided between the Federal Ministry for Labor and Social Affairs (BMAS) and various sector-specific workplace insurance institutes (Berufsgenossenschaft, BG). The labor ministry, with advice from the BAuA, is responsible for setting general regulations, including workplace exposure standards for hazardous chemicals,
while the BGs set specific plant requirements, conduct inspections, maintain records, provide trainings and administer insurance claims (Geiser and Tickner 2003).

The basis of German chemicals policy is laid out under the German Chemicals Act of 1980 (ChemG) which authorizes regulatory action where there is “substantial hazard to human life or health or the environment” (Andersen and Liefferink 1997). The Chemicals Act lays out by regulation both the various duties regarding new and existing chemicals and the control of toxic substances in the workplace. This includes the requirements for pre-market testing, notification, and, if necessary, the labeling of new chemical substances. Notification on new substances must be made to the special Notification Unit (Amst ChemG), which was established under the Chemicals Act as a subdivision of the Federal Institute for Occupational Safety and Health (BAuA) (Stirba, Kowalski and Schlottman 1999).

Regulations on new and existing chemicals are authorized under the Chemicals Act and closely parallel, but do not go beyond, the European Union directives (described in Section 5). However, Germany is strongly committed to full implementation of European Union requirements. Compared with government activity on new chemicals, which is quite extensive, the initiatives on existing chemicals have been more limited. Germany participates in the OECD high production volume chemicals program and has conducted systematic risk assessments on several of the high priority existing chemicals under the EU’s existing chemicals regulation (Stirba, Kowalski and Schlottman 1999).

The responsibility for implementing these risk assessments is regulated by the Administrative Provision for Existing Commercial Chemical Substances (ChemVwV-Altstoffe) and is the responsibility of the UBA, BgVV or BAuA with advice from the Notification Unit and the Advisory Committee on Existing Chemicals of Environmental Relevance (Stirba, Kowalski
This Advisory Committee is comprised of experts from the scientific fields, industry, and the authorities.

While any chemical testing is harmonized with the OECD SIDS (Screening Information Data Set) protocol, in order to minimize the use of animal testing, all testing protocols create a Prior Inquiry Duty to determine whether existing test data will suffice and animal testing is, therefore, unnecessary. Germany has been a leader in Europe in requiring test data and cost sharing among manufacturers.

Because the German chemical industry carries so much political influence, German authorities often rely on cooperative and voluntary agreements with industry to achieve environmental objectives, rather than confront the industry directly with aggressive regulations that phase out the use of chemicals of concern. In many cases these cooperative agreements have been followed up with more formal government rules after several years of voluntary performance.

Both the VCI and BDI have been avid proponents of various voluntary agreements negotiated between industry and government on a substance-by-substance basis where particular chemicals have been found to be particularly concerning. Over the years various voluntary approaches have been used to reduce the use of the chlorofluorocarbons in aerosols, asbestos in construction applications, alkyl phenol ethoxylates, several solvents in paints and lacquers, wood preservatives, and the use of leaded gasoline. For example, the 1986 agreement on alkyl phenol ethoxylates resulted in commitments to reduce their use in textiles and leather, cleaners, and anti-freezing agents, though there are several exemptions such as pesticides and cutting fluid additives (Geiser and Tickner 2003).
Another case of German voluntary approaches to regulation is the work of the Advisory Committee on Existing Chemicals (GDCh). During the 1980s and 1990s the Committee collected and evaluated data about existing chemicals and wrote more than 200 reports about chemicals of concern, including levels of risk concern and risk reduction measures. Some observers have noted that these publicly available reports did have an influence on risk reduction efforts and regulation. The impacts were studied in a 2000 report available only in German. They also reviewed the precautionary principle in risk assessments as part of the risk management of chemicals (Umweltbundesamt 2001).

The German use of precautionary risk assessment and substitution of chemicals represents the initial incorporation of precaution into rules and regulations. German environmental law is acknowledged as the point of origin for the precautionary principle, or “Vorsorgeprinzip”. Roughly translated as the “foresight” principle, the idea first emerged during the 1970’s development of water protection law as a means to forestall damage to environmental resources by “forward-looking” planning. Since those early days the precautionary principle has been elaborated to focus on protective actions that can be taken in the face of the uncertainty of potential risks and to place the burden of demonstrating the absence of potential harm on those who propose new developments or technologies. The Vorsorgeprinzip has been invoked to justify the implementation of vigorous policies to tackle river contamination, acid rain, global climate change and North Sea pollution (Geiser and Tickner 2003).

More recently, the UBA, in a far reaching proposal on “Precautionary Risk Assessment and Risk Management of Chemicals” has laid out an ambitious process for integrating the precautionary approach into chemical hazard assessments. This process is driven by five “substance related environmental action targets”. These include:
1. The irreversible damage of persistent and bioaccumulating or persistent and highly mobile, xenobiotics into the environment is to be avoided completely, irrespective of their toxicity.

2. The irreversible discharge of xenobiotics with carcinogenic, mutagenic, or reproductive effects (CMR substances) into the environment is to be completely avoided.

3. The anthropogenic release of persistent and bioaccumulating, persistent and highly mobile, carcinogenic, mutagenic or reproductive toxic natural substances into the environment must not lead to an increase in geogenic or biogenic background concentrations.

4. The anthropogenic release of other (eco-) toxic substances (including naturally occurring substances) which do not fall into the above categories into the environment is to be reduced to the technically unavoidable level.

5. An increase in chemical discharges into environmental media is to be avoided, regardless of the effects known so far and other intrinsic properties, where high distribution and/or low exchangeability make recovery practically impossible (Geiser and Tickner 2003).

Based on these five targets, the process includes a broad array of risk assessing and risk managing instruments that permit groups of chemicals to be managed or discouraged according
to their intrinsic properties. Although work has proceeded on refining and preparing this proposal for adoption, the process has been slow and no date has been set for formal proceedings.

However, German government agencies have used their regulatory authorities to actively promote the substitution of dangerous substances. The legal basis for determining substance hazards and finding substitutes is provided in the Hazardous Substances Ordinance of 1999 (Gefahrstoffverordnung). This legislation provides embodiment for the commonly accepted “substitution principle” that requires that if a safer substitute to a hazardous substance exists at comparable cost and performance it should be used. Under the statute it is the responsibility of the BAuA to draw upon the chemical notification documents to periodically develop lists of safer substitutes by use category. Of particular note has been the BAuA success in promoting various chemical substitutions through the publication of a “positive list” of safer dyes and colorants (i.e., a list of safer substitutes). This commitment to substitution is credited with encouraging the development of a wave of safer chemistries and various changes in production that reduce chemical exposure and hazards (Geiser and Tickner 2003).

The focus on substitution has encouraged university and technical assistance centers to develop protocols for substitution decision making with government funding. For instance, the Berufsgenossenschaftliches Institut für Arbeitssicherheit has developed a matrix model for rating chemicals as safer substitutes and the Institut für Okologie und Politik (Okopol) of Hamburg has developed a five-phased assessment strategy for assisting in chemical substitutions. These procedures, like the precautionary risk assessment program, remain in development, but all of them suggest that Germany continues to seek more far-reaching and systematic procedures for managing industrial chemicals. It also suggests that the German approach is to encourage
development and integration of safer substitutes for problematic chemicals in industry, which is a less confrontational approach than that of restricting chemicals (Geiser and Tickner 2003).

Part of the substitution approach of the German government has been to sponsor research on the impacts of regulation in stimulating innovation in the chemical industry, as well as strategies for encouraging innovation. A 2002 report by the UFZ Centre for Environmental Research on innovation impacts of REACH has played an important role in debates over the impacts of the proposed European policy (Geiser and Tickner 2003).

Germany has maintained a dominant role in shaping European Union chemicals policy. For instance, Germany was a principal proponent of a common Europe-wide approach to pre-market notification procedures during the negotiations over the European Commission’s Sixth Amendment to the Dangerous Substances Directive. And it was the German government (along with the UK Government) that initiated a discussion about the lack of effective chemical testing at an informal meeting of European Environmental Ministers in 1998. This was the discussion that led the European Council of Ministers in 1999 to call for a new European chemicals policy. This is not particularly surprising. The German chemical industry has long held a deep concern about the effects of government policies on innovation and product marketing. Of particular concern has been the proliferation of incompatible national chemical management policies. With large international chemicals markets and subsidiary firms throughout the world, the German chemicals industry has been a strong supporter of cross-national policy harmonization. Recognizing that over 50 percent of the domestic chemical industry’s foreign chemical sales goes to European countries German government authorities have taken a major role in pressing for policy coordination within the European common market (Geiser and Tickner 2003).
The result has been that Germany’s national chemical laws and the directives and regulations of the European Union are quite similar. Only on occasion do European Commission initiatives on chemicals directly confront Germany’s well-integrated policies. Instead, where other member countries seek to advance European Union chemicals policies, they work hard to coordinate with and respect the powerful interests of Germany and its chemical industry.


While praising the objectives of the White Paper, the statement called for a more simplified and less burdensome approach stressing an increased focus on chemical exposure rather than inherent properties of chemicals, an exemption for intermediates used in contained applications, a phased transition to the new system for smaller volume chemicals and small and medium-sized enterprises, and more European Commission responsibility for chemical testing. However, the statement did suggest some recommendations for strengthening the White Paper, such as including additional substances under the authorization process. Although this joint position was presented as a caution about Germany’s enthusiasm for the proposed REACH system, it was not presented as an opposition to the White Paper (Geiser and Tickner 2003).

 Officials from the Federal Ministry for Environment, including Uwe Lahl, a Ministry General Director, consider that the willingness of the industry to critique features of the White Paper without opposing the broad concepts to represent a quiet endorsement and a willingness to
go along with the prospects of European Union legislation. While the joint statement was criticized by NGOs for being too weak and conciliatory to industry, the German government believed that this was the only approach to diffuse the opposition of the powerful chemical industry and its unions, allowing the government to support the REACH program. The German government believed it was successful in convincing industry that the government would be unable to stop the White Paper legislation. Therefore, the most industry and unions hoped for would be to present concerns about the proposal and try to influence its details. The success of the statement, according to Ministry of Environment officials was that they were able to survive both the intragovernmental political battle on REACH (for example between the trade, economic affairs, and environmental ministries) and the complicated political problem of industry and labor opposition. With the relative success in calming down industry, officials in Brussels moved forward to achieve their goals (Geiser and Tickner 2003).

Despite this agreement, the German chemical industry and its trade unions maintained a critical stance towards the REACH proposal and have offered separate statements. A more critical German industry response came from the German industry association Bundesverband der Deutschen Industrie (BDI). In a 2002 position paper, the BDI offered a defense of existing chemicals regulations and a strong critique of the REACH system. In addition, the BDI presented an economic analysis prepared by the consultancy company, Arthur D. Little (ADL). The report stated that potentially massive economic and job loss effects could come about by implementing the REACH system. This meant a value added job loss of 6.4% to the German Economy and 2.4 million jobs. A meeting of leading economists hosted by the German government to review the ADL study found it not credible and economically sound. It drastically overstated the costs.
It is interesting to note that small and medium sized companies as well as downstream users of chemicals and retailers in Germany were absent in chemicals policy discussions despite their influence and efforts already underway in other sectors. Further the German environmental movement was relatively quiet in responding to domestic industry opposition to REACH, as compared to advocacy groups in other countries (Geiser and Tickner 2003).

The German Ministry of Environment played a central role in advocating for its adoption nationally, within Europe, and internationally. The German government found a consensus between industry and trade unions so that Germany put forth a supportive position on EU-wide chemicals legislation. For example, in September, 2003, the German government, industry, and trade unions issued a consensus statement on the May, 2003 draft REACH legislation that supports most of its components. German trade unions, other than the chemical workers union, have also issued statements of support for the REACH legislation.

The Nordic States took on a “Pioneer” role in pushing REACH in the Council while Germany, at first supported a stronger chemicals policy, ended up reversing it support for REACH. The governmental officials back the Chemical industry and gained support from trade unions to substantially weaken REACH.
“Environmental policy must evolve on the basis of sound science, informed by debate, foresight, and a proper balance between development and conservation. We accept the precautionary principle.”

(The Minister of State for the Environment, Lord Caitness, speaking in Parliament, 13 January 1988.)

In the March of 1998, informal policy discussions took place in Sweden just prior to Meacher’s meeting with the European Ministers in April to discuss 1995 enlargement issues as Austria, Finland, and Sweden prepared to join the European Union (EU). Chemical regulatory experts from Austria, Finland, and Sweden met unofficially in Sweden to review their country’s current chemical laws in contrast to EU regulations and OECD Harmonization Efforts. The Swedish official former Director-General Arne Kardell was appointed on 18 December 1998 as the special investigator to conduct the review. In that report they framed the Precautionary Principle as:

“Precautionary Principle: Principle entailing that preventive measures should be adopted as soon as there is reason to believe that a given measure or activity could harm human health or the environment.”

The subsequent report called the “five country paper,” emphasized the importance of the precautionary principle but emphasized it was subordinate to a risk assessment concept (KEMI, 1998). The five country paper framed four issues as having particular significance necessary for the future of EU chemical policy. They were:

(1) Operative goals should be adapted

(2) The responsibility of different stakeholders should be clearly defined
General guidelines on precaution and safe management of chemicals should be adopted.

The speed of marketing new products and procedures for risk assessment should be adapted to each other.

The frame integrated human safety with the interests of corporations in getting their products to market. There were four other concerns mentioned that focused on responsibility. The members of the Commission wanted to clarify the roles of industry versus government officials, particularly in who should carry out risk assessment data collection and dissemination. The four issues were framed:

1. The industry, limiting the freedom to produce and use chemicals, by reversing the burden of proof that a substance was “harmless”, from the present status where the authorities must prove that substance poses a risk, before invoking restrictions.

2. The industry, requiring the industry to be both responsible for assessment and risk reduction measures, and restrictive when using and placing products on the market.

3. The European Commission, calling for a clear distribution of responsibilities, clarifying how risk assessment gives rise to risk reduction measures.

4. The industry, calling for the consumers’ right to know with respect to possible impacts on humans and the environment.
The precautionary principle was framed clearly as a leading factor for safeguarding humans and the environment from potential negative consequences of increasing the rate of chemical assessments. They did not want to forsake human health for faster market accessibility.

In May of 1999, Greenpeace publically framed their own solutions for reforming EU chemicals policy in their paper entitled “The Way Forward Out of the Chemical Crisis” An Alternative, Precautionary Approach to the Regulation of the Manufacturing, Marketing and Use of Chemicals in Europe” (Greenpeace 1999). Framing of the guiding principle promoted a paradigm to guide decision making even in the absence of certainty regarding the potential impact of a chemical. Implementing the precautionary principle was framed in four ways.

(1) Action must be taken to avoid harm, or threat of harm, before it occurs,

When firm evidence of cause-effect relationships is unavailable;

(2) The “burden of proof” is reversed, such that all chemicals are assumed hazardous, and regulated accordingly, until such time as sufficient evidence becomes available that the chemical presents no potential for hazards to ecosystems or human health.

(3) High quality scientific information should form a central component of mechanisms for early detection of threats.

(4) All future technical, social and economic developments implement a progressive reduction in environmental burden.
The final points suggest a need for overall reduction in the use and release of chemicals. Lower use and emissions would lead to lower exposures (Santillo, et. al. 1999).

Meacher brought the EU environmental ministers together in Chester and the newly joined Member states to discuss the Community’s approach to the managing chemicals in a safe way. They welcomed the five country paper specifically noting:

“The weight given of the “importance of guiding principles” of “the economic and social benefits that the use of chemicals brings to society and to the quality of life, and of “maintaining an effective single market for chemicals.”” (UK Presidency 1998).

The precautionary principle was highlighted as an important and necessary element with:

“a soundly based scientific assessment of the risks to health and the environment.”

The policy outcome from Chester suggests the combination of two disparate but complimentary components in managing chemical risks – one precautionary and the other base on risk assessment. International pressure from the European Environmental Agency and the United Nations underlined the need to incorporate sustainable development into chemicals management in their Chemicals in the European Environment: Low Doses, High Stakes?” They used the framing from the Rio Declaration on Environment and Development to put forth their ideology of precaution.

“The precautionary principle – with reference to the Rio Declaration on Environment and Development…is a prudent response to potential chemical
hazards.” Limited data on chemicals actually used, and with an increasing awareness of the scientific complexity and uncertainty associated with the assessment of chemicals’ impacts (EEA & UNEP 1998).

A. Science and Politics in Policy Making Theoretical Background

Two policy frames guiding a new mode of governance over chemicals in the EU (Hey et al. 2007) emerged as chemical experts and regulatory specialist designed a new approach to control chemicals in the EU. Ericksson et al. (2010) argued that the “Market frame” versus the “Green Frame” in European Union chemical regulation demonstrated how scientific expertise and policy interact and are interconnected at the European level.

Science shares a strong dynamic relationship with politics because expertise and belief structures for specific fields are a foundation for analyzing cause and effect connection in nature. Rachel Carson, for example made science accessible to readers in building the environment movement. Science is affected by interests and ideologies that prevail at the time. What scientists accept as truths may be so strong that new evidence is immediately disregarded and contradictory. The use of science in politics ranges from providing evidence that shapes policies to regulatory implementation measurements. It can act in a symbolic way to provide a function of legitimacy for existing ways of looking at issues to evidence of a problem that creates opening in political opportunity structures (Radaelli 1999).

Erikson et al. (2010) argue that three possible scenarios emerge as ideal types in describing how science and politics interacting in regulatory activities and policy making. They suggest the different types of interaction are 1) a technocratic type of interactions; 2) a politicization of the expertise type of interaction; and 3) a noninvolvement type of interactions. The technological mode is when science experts significantly impact the framing of cause and
effect relationships. They provide sound explanations of the problem and proscribe appropriate solutions. They procedures and requirements in the policy making process necessitate their participation. A pertinent example can be found science advisory boards, stakeholder groups, and science review organizations. Activities that take place as politicized types describe scientific experts that are mobilized advocating for particular positions. They can act alone as a group or connect to social movement organizations. They participate in collective action protests or other types of tactical strategies as actors mobilizing resources. They are activists advocating certain political interests and ideologies. The may challenge existing government science-policy relationships or existing beliefs to promote change. They use scientific reports and technical information as tactics to engage in controversial framing battles and contentious debates (Radaelli 1999).

The third category of science expert activity is defined as noninvolvement. This occurs when the political influence or participation in the policy process does not exist or is minimal. The government or bureaucratic process remains routine where rules and procedures dominate the science decision making rather than contentious political discourse. Once rules and protocols are established regulatory specialist in Member states follow them without arguments to their validity or application. EU and Member state risk assessment procedures in identifying hazardous chemical fits into this category especially of low volume substances (substances produced at levels of 1 tonne / year and less). Another pertinent example is the OECD’s harmonization system of chemical risk assessment rules and regulations. It attempting to have consistent regulations across countries to facilitate international trade, regulatory frameworks may come top down asking countries to conform. Many country government officials simply comply because they are dependent on the foreign market.
The categories are relative because some Member states or science based social movement organizations and strategies exhibit traits of all three types. A combination of strategies and tactics may change along steps in the policy process where nascent actions may be explained by the actors perceiving closings in the political opportunity structure at one particular time versus another. Delineating between technocratic types and political action orientations may be difficult and contain overlapping kinds of activities. The strategies and tactics employed by the science experts determine the type of science – policy interaction in the context of the contentious actions. The difficulty is separating out emotional types of agency or other types of action compared to one driven by demands for a scientific paradigm shift.

As in social movement research scientific expert activism can be evaluated by analyzing policy frames. Issues and prescriptive solutions are framed particular ways to resonate with target stakeholders or other audiences. For example, science activists in the REACH’s policy process targeted MEP’s, environmental ministers, and the Council of Ministers calling for new paradigm in regulating chemical at the EU level. Policy frames of social movement containing scientific expert activism express ideologically shared beliefs and potential solutions. The frames are expressed through scientific reports and evidence based opinion statements as technical documents rather than incorporating emotional and symbolic rhetoric.

In the environmental and more specifically the chemicals policy domain two distinct policy frames generally compete for particular policy outcomes. Market or international competition rhetoric competes against environmental or green rhetoric during contentious political debates. Science activists use strategies they believe will be successful for influencing towards their preferred policy outcome. In terms of REACH, activists and science experts in
regulatory agencies argued for a precautionary principle regulatory frameworks versus risk assessment protocols.

Social movement organizations link with other with shared interests as advocacy coalitions that are temporary organizational types focused on shared political interests. Actors in the coalition construct policy frames hoping to exploit political opportunities to their advantage. Members of the coalition advocate their policy preferences and develop cooperative tactics to affect political deliberations during particular access point in the policy process. REACH’s advocacy coalition was made up many groups including science experts from government agencies and social movement organizations who share common interests in the precautionary principle and a reversal of the burden of proof. Selin (2007) and Fuchs (2007) use an advocacy framework to describe the structure of interests that played important roles in bring about a new chemicals approach to regulating chemicals in the EU.

Master frames were constructed and used to target particular institutions during key parts of the decade long debate. The rhetoric was scientifically based arguments often targeting the supranational governance structure of the EU and all of its institutional dynamics. Opposing scientific research reports characterize a large part of the contestation between environmental social movement organizations and corporate interests.

Member state positions and science based arguments also reflect the epistemic beliefs of science expert in Member state institutions. Particular national regulatory science experts shared common ideologies that differed from others experts from opposing countries. Advancement in risk assessment ideologies and a greater acceptance of the precautionary principle helped build integrated regulatory frameworks that illustrated compromise between two epistemic beliefs were incorporated into the final policy outcome. Actors of government agencies and social
movement organizations engaged in the most controversial legislation in the history of the EU. It contained a battle between epistemic beliefs of the precautionary principle and risk assessments in rhetoric characterized green frames versus market or business frames.

B. Social Movement Framing and Epistemic Communities

Advocacy coalitions emerge based on shared political interest among a diversity of organizations. Keck and Sikkink (2008) talked about transnational advocacy coalitions while Haas (1992; 2007) examined specific forms of transnational communities – epistemic communities involved in environmental activism. The social movement literature (Tarrow, 1998; Tilly, 2004) focuses on describing and analyzing specific forms of advocacy coalitions but do not examine how various types of these organizations interact with multi-level governance. Advocacy coalitions perform important parts in developing regulations and rule making within common issue domains. Few study research the function epistemic communities perform in providing ideologies and conceptual frameworks during the agenda setting step on the policy process. Chemical regulatory advocacy coalitions purposely engaged in dialogues to shift the paradigm of regulatory activities performed by the EU. New standards were set based upon an innovative and integrative chemical regulatory system. Social movement, corporate, Member state and EU formal organizations created a whole new EU chemicals organization to implement a new epistemic approach to chemicals directives.

The nature of the organizations engaged in the REACH debate varied widely but the shared particular interests in challenging the current way the EU controlled chemicals into society. Environmental ministers of the Nordic states and UK worked together to re-
institutionalize a new approach to govern hazardous chemicals in way that support epistemic
belys in sustainable development and maintain economic competitiveness of Member state
economies. The initial coalition of environmental specialist from Denmark, Finland, Sweden, the
Netherlands and UK had a commission around a science and chemicals regulatory objective.
Scientific activism co-evolved and interacted with social movement resource mobilization
activities. Epistemic communities consisting of networks of knowledge-based experts provided
rhetoric for action frames. They formulated effective frames linking cause and effect
relationships with problem solving using science language and science based tactics. They were
able to propose policy directions by constructing salient points common among Member state
politicians and EU officials.

C. Epistemic Communities

An epistemic perspective helps to explain the role of technical expertise in the formation
of policy preferences. The key aspect of this theoretical perspective focuses on the “shared
beliefs in cause and effect relationships, validity tests, and underlying principled values (Haas
1992).” This conceptual model assumes that scientists participating in the policy process are
responsible for converting complex technical language into usable policy information. Thus,
these scientific experts hold important social locations in the strategic use of framing as tool for
defining issues and directing the political dialogue regarding how best to solve the problem in
light of social preferences. The strategic use of framing as a tactic by involved actors helps build
support for specific and desirable preferences while deemphasizing others less desirable by
actors in the policy network or organization (Druckman and Nelson 2003). Activist scientists or
scientists representing private interests can advocate for certain policy solution while coordinating advocacy activities in an epistemic community or policy network. The added political power of the coordinated efforts of an epistemic community or policy network builds strength when involved in policy debates. A key aspect of the research proposal explores the formation and interactions between one or more policy networks.

A key assumption in the literature about the role given to science in the decision making process suggests the information provided to governmental officials is objective, neutral information and that the science expertise given is politically independent and objective. In EU bureaucratic decision making technical knowledge possess significantly more political influence than other forms of knowledge. Members of the epistemic community bring a predetermined perspective to political dialogues based upon rationalized scientific evidence. They inform the coalition and help construct salient frames used in contentious battle over paradigm shifts in the way to regulate chemicals.

Brooks (1965) suggested that technical experts play an increasingly important role in the complex machinery of government where scientific knowledge better informs policy decisions. Many different types of actors use network forms of organization; while networks are the organizational vehicle of choice for nonstate actors (Sikkink 2009). Epistemic communities are professional networks longer lasting than coalitions. Advocacy coalitions are temporary in the sense they coalesce around key issues. As the policy outcome is determined the coalition dissolves or creates a new independent organization to oversee the new policy implementation. A large green coalition formed during the REACH policy process. REACH was enacted in 2007 where Greenpeace closed out its Toxics campaign and set up Chemtrust to monitor the effectiveness of the new regulatory framework.
Scientists and experts, both inside and outside governments, play vital roles in accessing open and closed governmental policy processes and in framing cause and effect relationships. They can provide rationalizations in favor of desired policy outcomes that accommodate the political culture of governmental institutions that may have an overreliance on rationalization during policy discourses.

According to Haas (1990) epistemic communities contain five characteristics. They are a network of professionals sharing a set of normative and principle beliefs but also most importantly causal beliefs. The have common notions of what represents valid and acceptable scientific data while sharing a set of common scientific practices associated with a set of problems such as concerns for human health and the risk of hazardous chemicals.

Questions emerge regarding which organizations represent the best agents for infusing knowledge and scientific evidence into policy dialogues. Mazey and Richardson (1992) contend that environmental groups are essential transfers of scientific information to the public. In their view environmental organizations are the links in modern society between science and politics. Toke (1999), on the other hand, argues that Haas’ (1990) conceptual framework claims that epistemic communities are superior to social movements. Social movements lack shared beliefs and a consensus regarding pertinent knowledge in Haas’ view. Toke (1999) suggests that Haas’ (1990) research implies that epistemic communities are in a better position to judge environmental policy than environmental groups. Dunlop (2000), conversely, contests the understanding of Haas’ (1990) epistemic community conceptual framework proposed by Toke (1999). He suggests Haas (1990) intended to identify the research gap existing in the research literature pertaining to the importance of the role of experts in international policy making. The existing structure/agency arguments of epistemic communities are important to delineate because
experts do have a role in framing collective debates and in fostering policy conditions when knowledge deficits and uncertainty persist.

The coalition of green environmental social movement actors coevolved with the green epistemic community of regulatory specialists. The specialist helped mobilize resource by producing research studies, salient frames and important roles in stakeholder conferences and workshops. Most important they could counter industry experts with equally waited legitimacy inherent in published reports.

Social movement literature identifies the advantage of expert input and usefulness in framing. It also acknowledges that professional groups are significant allies in mobilizing resources. Social movements and epistemic communities share several common features. They operate in the context of a common political grievance that is challenged and seek to address the issue through collective action. Interests merge founded upon common belief or ideologies or knowledge base.

The strategic use of framing as a tactic by involved actors helps build support for specific and desirable preferences while deemphasizing others less desirable by actors in the policy network or organization (Druckman and Nelson 2003). Activist scientists or scientists representing private interests can advocate for certain policy solution while coordinating advocacy activities in an epistemic community or policy network. The added political power of the coordinated efforts of an epistemic community or policy network builds strength when involved in policy debates. A key aspect of the research proposal explores the formation and interactions between one or more policy networks and uncovering the agency links between social movements and experts.
A key assumption in the literature about the role given to science in the decision making process suggests the information provided to governmental officials is objective, neutral information and that the science expertise given is politically independent and objective. This study will examine the role strategic issue framing takes on in policy discourses and how science experts exploit the assumed weight of expert evidence to promote specific political goals. In EU bureaucratic decision making technical knowledge possess significantly more political influence than other forms of knowledge.

_D.EU – Frames and POS Interactions Coevolution Following Technocracy and Politicization Strategies_

Science expertise is heavily embedded into the European chemicals policy process. Corporate interests published countless economic impact studies estimating the burden REACH would damage international competitiveness. Green coalition counter studies helped question the accuracy of exaggerated studies by industry. Yet, stakeholder in industry and in the environmental social movement commissioned research studies in their own interest. The Commission expanded the access to expert committee in their efforts to build a pluralist type of governance system founded upon accountability, transparency and legitimacy.

In 2001, the EU submitted a new approach for regulating chemicals as a sweeping reform for chemical regulatory policy. The new chemical regulation targeted specific chemicals demonstrating the influence of the science expert meeting held over a two year process. Extremely long meetings among toxicologists to risk manager eventually designed an integrated EU chemicals policy balancing risk assessment epistemic beliefs with the precautionary
principle. The proposed legislation required chemical manufacturers to prepare a dossier of used and existing substances detailing their scientific properties, production levels, and use volumes and usage areas so that a risk assessment could be conducted. Chemicals of high concern needed to go through an additional process known as authorization. The company needed specific permission from ECHA before it could go onto the EU market. The chemical had to be proven safe or that there were no viable alternatives for particular use before the product could be marketed in the EU. Two epistemic paradigms, risk assessment and the precautionary principle, integrated into a new chemical regulatory approach.

REACH required chemical manufacturers to provide safety information about chemicals before they are introduced onto the market. It proposed a method for restricting use of the most dangerous chemicals to protect human health, animals, and the environment. REACH was designed to address a previous European regulatory system that left the majority of chemicals out of the obligations of preparing hazard and safety data. This system is in operation today in the US where over 60% percent of the chemicals in use today lack basic safety data about possible hazards to human health and the environment.

Unlike current U.S. chemical regulations found in TSCA, the underlying basis of REACH is the Precautionary Principle. This principle advocates taking precautionary action when chemicals pose possible threats to human health and the environment, rather than waiting for complete scientific proof of cause and effect. The U.S. government does not agree that the Precautionary Principle is the most appropriate regulatory tool for the basis of a chemicals policy. As one U.S. government official told the New York Times, "We consider it to be a mythical concept, perhaps like a unicorn." REACH is no myth. Chemical producers and their
political allies in Washington reacted aggressively to subvert the European proposal to avail although it has been weakened.

The development of a new chemicals strategy in the EU constructed a new framework using the Precautionary Principle as the basis for future regulation. The priority given to precaution was one of the prime issues of disagreement over REACH between the EU and the US, where the precautionary principle does not have the equal legal standing. The precautionary principle is not a relatively new approach. It has been cited in 14 multilateral agreements over the past 15 years and was officially adopted by the EU in 2000. The Precautionary was mostly broadly defined at the UNCED in Rio de Janario in 1992. It stated:

“In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation (UNCED, 1992).”

REACH’s impacts affect the following areas the most. REACH:

(1)Shifted responsibility for chemical risk assessment from government to industry
(2)Focused on the reduction of chemical risk, rather than simply identifying hazards
(3)Addressed chemical risks throughout the supply chain
(4)Tested chemical on animals
(5)Globalized the REACH model.
Since the 1980’s and more extensively so during the 1990’s, regulations, risk assessments and the management of chemical had been targets for the EU, EU member states, industry, environmental groups, environmental social movement organizations and academia. This is due in part from a non-regulatory approach that was taken in the past by national government and the EU. The industry in Europe changed in the context of prerequisites for chemical management. Many factors changed that increased the regulatory burden in part due to REACH and also due to the emergence of many sustainable development activities in the EU and elsewhere. A change in the public’s perception of environmental risks, a stronger environmental movement watchful eye on the industry elevated consumer demands for safer products. It also increased potential negative media coverage and financial companies. Accounting firms and insurance companies increased the business strategies to focus on operational risks.

Issues surrounding hazardous chemicals in various commodities further heightened the number of incidences of poisonous chemical found in products. Phthalates and plastics have been found in baby bottles, nano-particles were discovered in cosmetics and other products. Dioxin was mixing with animal feed and benzene was found in Perrier water. Hazardous levels of lead can be found in paint and children’s toys from China while brominated flame retardants have been revealed in electronics and textiles. These findings acquire negative media attention and anger from citizens and governments.

Industry was forced to take an increased focus on chemical risk management and consumer safety to protect them from liability and to take a proactive stance against potential new regulations constraining their operations. The mismanagement of chemical risks adversely effects consumer confidence. Incidences of chemicals additionally push governments to introduce more new types of regulations to protect the public. Regulators feel pressured to
increase the burden of proof for the industry leading to losses in corporate revenues and lower stock prices.

A more competitive strategy suggests going beyond chemicals risk management and focusing more on an epistemic belief change in the way a company deals with scientific risk management. Risk assessment and risk management practices in a corporation relate to the business culture rather than from a financial perspective. A more precautionary approach and value system regarding how to approach a scientific analysis of chemical risks calls for a major philosophical shift in how a company thinks and functions.

E. Science and Risk Governance of EU Chemicals Policy

Chemical toxins in the European environment adversely affect human health and the health of functioning ecosystems. Complex chemical compounds cause significant adverse effects on people and animals. Attempts to better regulate toxic releases of chemicals that could cause high levels of health problems necessitates an acute understanding of the complicated nature of chemical compounds and their properties in the environment. Chemical regulations, due to the technical complexity of the environmental problem demand guidance from scientific experts. Policymakers must call on scientists with expertise in relevant fields to help guide policy makers through risk assessment and management data. For example, scientists are needed to facilitate the understanding of the public dangers nanoparticles present to society governed under REACH emission standards to policymakers. Scientists are necessary to provide the technical support needed to make predictions about the potential risks of particular chemical
introduced into society. Regulatory policies intended to reduce harm and constrain economic revenues requires a variety of scientific expertise.

Conflicts between scientists can emerge where economic and social interests challenge the scientific recommendations and are also difficult to resolve. REACH negotiations came under tremendous scrutiny from both environmental and corporate advocacy coalitions. Policy makers without scientific backgrounds must rely on scientists for pertinent information. However, the boundaries between science and politics remains obscure as dense conflicts erupt due to considerable economic, political and social pressures of which regulatory action should be implemented.

1. Contested Science

Uncertainties regarding problem definition and policy responses, however, are a prevalent part of environmental decision making (Arentsen et al. 2000). A certain level of uncertainty is normal in public policy making but the fundamental aspects of environmental issues particularly accentuate its larger role.

Uncertainty is inevitable in environmental decision-making. Complex, unpredictable, and uncertain systems may produce consequences that are unpredictable, irreversible, and very costly (Perrow 1984; Shrader- Frechette, 1996.) Due to the complicated nature in quantifying risk, decision makers generally diminish or ignore its relevance. In public policy making uncertainties allow for both proponents and opponents of regulation to interpret the scientific basis for regulations in ways to advance their own policy preferences. Environmental decision-making can hardly ever be based purely on objective science, probabilities, and certainty: such
certainty is nearly impossible to achieve, and the quest for it may result in harm to human health and the environment.

A concern over democratic openness surfaces because debates of this sort usually restrict the public sphere debate to only those actors with relevant expertise. The knowledge and experience of citizens is accepted to a significantly lesser degree than experts in the field. The degree of openness comes into question as access to important information and negotiations remains in the hands of just a few. Also, scientific information is often embedded in economic institutional forces that control the availability of necessary data to make accurate social decisions. Private interests are very reluctant to publicly distribute or even gather scientific data that could impact their economic interests. Civil society structures play a crucial role in the character of negotiations. Pluralistic societies operate significantly differently than consensus-oriented political cultures.

2. Integrating Epistemic Differences in Risk Strategies and Chemicals Policy Innovation

The United States was an environmental leader enacting forefront consumer and environmental protection standards from the 1960’s to the 1980’s. They were much more stringent than European regulations (Vogel 2002). For example, the US was the first country to take significant restrictive action on suspected or confirmed human carcinogens (Brickman, et al. 1985). The 1976 American Toxic Substances Control Act (TSCA) established regulations procedures for approving new and existing chemicals while the EU’s 6th Amendment only established a regulatory framework for approving new chemicals. Member state laws in
Germany, Great Britain, and France did consist of a review of existing chemical, but only in high risk exceptional conditions (Vogel 2002; Grant 1998).

The precautionary principle was adopted in the US but it had been defined in a variety of ways and had no legal status in the US and little direct role in US political debates (Cameron, 1999).

The precautionary principle did underlie the US Food Safety Regulations that require public approval of the safety of food, color additives and veterinary drugs before they can be marketed. TSCA also had precautionary provisions for new chemicals. Although, many US policies contain precautionary aspects chemical statutes contain balancing provisions. They require the Environmental Protection Agency to balance the costs and benefits of protecting the public from unreasonable risks, an epistemic guiding principle founded in risk assessment.

Risk assessment is the predominant epistemic approach based on scientific decision making. Currently, it is the preferred method in the United States for integrating basic and applied scientific research with the political priority setting. Risk assessment is a method for collecting and evaluating scientific data to find out the potential harm the environment or humans may experience (NRC 1983). It includes several steps such as hazard identification, dose-response assessment, exposure assessment, and risk characterization. The weight of science in policy making remains ambiguous because it is not directly apparent if there is balance between decision makers and scientists. Scientific assessments have more weight than discussions between regulatory specialists.

The 6th Amendment was the most important and successful initiatives of the EU regarding hazardous chemicals next to REACH. Industry leaders of most European countries felt confident that their independence from agency oversight, greater scientific expertise and economic importance would override the need to evaluate chemical substances as they were
ready to be placed into the market. The thought that an official regulation could influence a chemical’s entry into the market was significantly diminished by the passing of TSCA. The German three especially took the passing of the US legislation as an alarm signal of further regulations to come including more restrictive controls over their chemical exports (Grant et al., 1998).

At that time TSCA passed a coalition of chemical industry representatives, CEFIC (the chemical industry’s business association) and public officials from various member states chose an EU wide advocacy strategy to harmonize a common position for dealing with US foreign trade negotiations at the OECD level. However, disagreement among member state officials caused negotiations to fail and they did not initiate chemical reform policies.

During the late 1990’s, the years immediately prior to the initial stages of REACH, brought about dramatic changes. On the one hand, the US administration political culture and epistemic beliefs dramatically altered its regulatory course as the Reagan years promoted decentralization and regulatory obstacles. It also provided stronger networked connections and political access for American chemical industry actors. On the other, the member state countries in Europe agreed upon a common position adding to their weight during trade negotiations.

During the 1970’s up to the 1980’s European environmental policies were strongly influenced by US epistemic risk assessment approaches. But, starting the 1990’s the EU began leading the way. The new risk strategies emerging out the EU originated from previous regulatory failures and major crises, increased political support for more risk-averse policies, and the increased legitimacy and competence of the EU Commission (Vogel 2002).

Nordic countries and UK responded to growing chemicals concerns. Dead seals in the North Sea, the Seveso incident, food related issues, and Chernobyl, soon rocketed the protection
of the environment and the fight against pollution as an “immediate and urgent problem” in the view of 85% of the EU citizens in 1992 (Bomberg 1998). Inchoate discussion among country regulatory officials also began at the same time as the public’s concern elevated to historical levels. The member state chemical divisions began deriving a new and novel approach to chemical regulations.

However, the political support for stricter environmental, health, and safety regulations varied across member states. Although the external public pressure helped to open up political opportunities in governance structures, Britain, France and Italy opposed more risk averse regulatory strategies. “Greener” member states on the other hand possessed even higher levels of the public’s political support due to the important role Green Parties played in galvanizing political power.

The dynamics of the chemicals regulatory policy-making in Europe can also be traced to the success of the EU single market economy. The political pressure to make the EU function effectively and harmoniously called for increased pressure on higher level supranational standards and a legitimate technocratic authority able to construct regulations based on stakeholders input. A system of European regulatory federalism broadened the participation of nongovernment organization into the policy process (Vogel 2001). The development of a new chemicals policy needed to embody increased environmental protections while also playing an important role in legitimizing the EU Commission’s leadership role in constructing effectual European wide regulatory strategies developed from a fully democratic policy making process.

An epistemic focus supporting the “Precautionary Principled” style of regulatory governance was a founding standard in the development of a new chemicals approach for warding off imminent hazards and on eliminating the environmental and human health damage
resulting from exposures to hazardous chemicals (Jordan and O’Riordan 1995). Originating out of a German regulatory policy epistemic foundation, the concept of precaution gained increased support during Germany’s 1990’s period of economic growth. It applied a technology-based standard to assess environmental damage. German precautionary principled policies shaped European wide approaches considerably. It was officially introduced into EU environmental policy as part of Article 130 of the 1993 Treaty of the European Union (Maastricht).

Currently, EU regulations have emerged as more stringent, innovative and comprehensive than those adopted by the US (Vogel 1997). The “Precautionary Principle” and the shift in the “burden of proof” onto producers have turned out to be critical points of contention between the US and Europe. The new approach to risk regulations is framed:

“incorporating a strong reliance on scientific expertise that takes into account the uncertain impact chemical substances can have on human and ecosystem health.”

3. Competing Epistemic Beliefs in Risk Assessment vs Precautionary Principle

Forums, such as the technical working groups on REACH organized the Commission with additional contributions from stakeholders occur to give scientific assessments broader legitimacy and policy salience. However, sometimes the work of epistemic communities is opposed by the intervention of political factors that are often necessary to give scientific assessments broader legitimacy (Peel 2010).

One epistemic approach for regulating chemicals involves using a risk analysis framework. It covers many different types of risk-related science specialties grouped into one
field. Models of risk assessment and risk management had its origins in insurance and financial areas. They are used in the health and environmental fields mostly. Risk assessment became prominent in the US as a mechanism for identifying and evaluating health and environmental hazards to meet health protections policies (Peel 2010).

The approach combined a science with policy with questionable assumptions from the research that were used for policy purposes rather than in resolving adverse health effects from chemical hazards. EPA director Ruckelshaus framed the use of risk assessment as:

“a kind of presence; to avoid the paralysis of protective action that would result from waiting for definitive data, we assume that we have greater knowledge than scientists actually possess and make decisions based on those assumptions (Ruckelshaus 1985).”

A major shift in its underlying epistemic foundation occurred when the NRC published it report entitled “Risk Assessment in the Federal Government: Managing the Process (Jasanoff 2005). Around the same time a parallel report was published by the UK’s national academy of science, the Royal Academy (Royal Society, 1983). These had a significant impact in setting the standard for executing risk and risk assessments. It separated out the steps into independent protocols. They were the following:

- Hazard Identification – the determination of whether a particular is or is not causally linked to particular health or environmental effects;

- Dose-response evaluation – the determination of the relation between the magnitude of exposure and the probability of occurrence of the health or environmental effects in question;
-Exposure assessment – the determination of the extent of human or
  
  Exposure before or after the application of regulatory controls; and,

- Risk characterization – the description of the nature and magnitude of risk,

  Including any attendant uncertainty (National Research Council, Risk
  Washington, D.C.).

Risk assessment is a technical approach using scientific observations to make predictions about what we know and what we don’t know in order to set standards. It incorporates a method regarding how to control for certain risks. Risk assessment relies on the scientific method and procedures. Science and judgment are what matters to effectively identify hazards (Weiner et al 2011). Then identifying the likelihood the exposure from the hazard leads to a problem is analyzed. In other words a dose response relationship is found.

Both documents made the boundaries between science and policy clear. A pertinent example is how the Royal Society defines the difference between objective risk (expert determined) and perceived risk (non-expert or lay people’s perceptions). It may have gained scientific integrity because of the epistemic separation of assesses risk versus politically informed risk management decision-making but it lost flexibility particularly when larger amounts of uncertainty existed.

REACH integrates the precautionary principle with risk assessment however other examples, such as the European Food Safety Agency, strongly depends on independent scientific risk assessments for the political institutions of the EU that conduct risk management (Peel 2010).
The risk management step is the most important for policy governing the protections of people’s health from exposure to toxic chemicals. Regulators often attempt to separate risk assessment from risk management goals. Risk management objectives should direct the nature and level of risk assessment. The problems with both scientific approaches come into play when conditions are not easily characterized by the science methods in the risk assessment.

The idea of science based assessment was initially applied to environmental issues because ocean data was sparse. It was difficult to gather data on the chemical movement in the ocean because of their complexity and lack of new technology. Its use has expanded to protection against health risks, for which extensive toxicological and epidemiological data are frequently available even though gaps exist. The question props up regarding how to reconcile the principle with the weight of the evidence analysis typically used by scientists and health agencies. Recent precautionary policies regulating human exposure to radio frequencies showed that there is a no need for a conflict to reside between them, they are not contradictory.

An epistemic belief system founded upon science-based risk assessment has come under scrutiny. The rising social concerns and political culture of the northern states have lost faith in the ability of science and engineering to protect them from hazardous exposures due to accidents like Chernobyl, Seveso, Bhopal, and mad cow disease incidents. REACH emerged in a large part due to people’s skepticism that potential hazards could be adequately controlled (Peel 2010).

Risk assessment is a process for incorporating science in decisions to ask what amount of risks can be endured before health and safety are impacted by exposure (Weiner et al 2011). Uncertainty in science represents a challenge for risk assessment approaches. At issue is the reliability and credibility of scientific knowledge. Concern regarding the likelihood for scientific uncertainty that undermines a risk assessment’s legitimacy supports the need for a supplemental...
epistemic set of value founded in the precautionary principle. Unfortunately levels of uncertainty are always present. Usually scientists and regulators are limited by the information they have regarding the toxicological characteristics a certain substance may contain. In the event exposure takes place might be different for each individual. Risks have three types of uncertainty which are:

(1) uncertainty about the effect
(2) uncertainty regarding the cause; and,
(3) uncertainty about the relationship between the potential hazard, and
(4) the amount of harm that could occur (Peel, 2010).

The last type of uncertainty develops when insufficient knowledge about a hazardous chemical is known. A term for the last type of uncertainty is “epistemic” uncertainty because it has specific relevance to precaution and the precautionary principle.

Government regulators it is important to know about the toxicological properties and interactions of a likely hazard. Scientifically the assumption about how dangerous a chemical is should be treated from a precautionary course of action. Different actions can be taken when more evidence is collected to provide more details about the level of danger that exists. More data leads to increased knowledge about what actions to take in preventing damage. The U.S. National Academy of Sciences report on Science and Judgment in Risk Assessment frames it in the following way:

“The overall accuracy of a risk assessment hinges on the validity of the various Methods and models chosen, which in turn are governed by the scope and Quantity of data. The degree of confidence that one can place in a risk assessment
Depends on the reliability of the models chosen and their input parameters (i.e. variables) and how well the boundaries of uncertainty have been quantified for the input parameters for the models as a whole, and for the entire risk assessment process (U.S. National Academy of Sciences 1994).

The European Commission instituted a program to harmonize procedures for risk assessments in human health and environmental protection. The First Report from this program of work (EC 2000a) recognizes that the association between a hazard and the harm that may occur has four steps. They are: hazard identification, hazard characterization, exposure assessment, and risk characterization. This method is founded upon Risk Assessment in the Federal Government: Managing the Process or commonly referred to as the “red book”. It is published by the National Academy of Sciences. Identification of a hazard might or might not have consequences related to the risk unless exposure to the hazard results in a degree of injury.

Recently, the European Food Safety Authority (EFSA) issued a report on the risk assessment of genetically modified organisms which framed risk assessment as:

“a process of evaluation including the identification of the attendant uncertainties, of the likelihood and severity of an adverse effect(s)/event(s) occurring to man or the environment following exposure under defined conditions to a risk source(s)” (EC 2000a). A risk assessment comprises hazard identification, hazard characterization, exposure assessment and risk characterization… The sequential steps in risk assessment of GMO identify characteristics which may cause adverse effects, evaluate their potential consequence, assess the likelihood of occurrence and estimate the risk posed by each identified characteristic of the GMOs (EC 2000a).”

The intent is to set limits on exposure to a hazard so that the likelihood of the resultant harm is acceptable in a regulatory context. When small amounts of uncertainty are present then the data is can be used. Conversely, the cultural belief in the science suggests that a regulatory official should take precautions.
4. Risk Management

Risk management can be defined as the process of determining what appropriate actions need taking to avoid, lower, or eliminate a risk when there is a risk is present. The outcomes of a Risk Assessment supply qualitative and quantitative data regarding the nature and extent of the chance there is a risk. The risk assessment could provide information about a risk. But it is important to remember that it does not govern the appropriate steps to take in order to reduce or eliminate the risk. It is necessary to consider broader factors such as the social, economic, legal, and other aspects. The risk assessment is necessary but may not require regulatory action.

The purpose of risk assessment focuses on enhancing practical understanding and to present facts so that people can get the facts to solve problems. It provides information so that problems can be solved by risk managers. When a risk assessment does not supply the necessary levels of information a risk manager then they can say very little about what best remedies should be put in place.

Regulatory standards may have in them limits of exposure such what are the limited amounts that can be experience. The purpose of regulatory standards targets protection of human health and the environment from a specific known hazard. A government or scientifically agreed upon level of safety is determined by a government regulator with the input form the risk assessment. Regulation can be established when the likelihood of potential harm increases (Weiner et al 2011).

The choice of action depends upon the scientific knowledge or the belief system underlying the options. Scientific measurements determine the relationship between the hazard exposure and the harm that is experience. The problem comes into play when the causal links are
not known even though a scientific process was followed. Statistical standards have been
developed to quantify levels of certainty versus uncertainty. A 50% confidence level based on
statistical mathematical models of probability must be addressed with precautionary activities.
These courses of action are defined as prospective steps to take before a potential risk actually
occurs.

Few policies for risk management have created as much controversy as the precautionary
principle especially during the highly contested REACH debates. The principle has
incrementally changed since the 70’s and still creates high levels of controversy. Despite it
seemingly widespread across EU institutions it continues to cause intense disagreements because
in part critics have interpreted “precautionary” decisions as attempting to hide strategic
advantages as part of international trade negotiations. Recent illustrations resulting from
precautionary decisions include the ban on beef because of the use of hormones.

In 2014 and 2015, international trade negotiations took place between Europe and the
United States as part of The Transatlantic Trade Investment Partnership or TTIP. The United
States has used this opportunity to push for lower chemical standard in the EU. They argue that
the higher REACH standards, namely the burden of proof aspects and the epistemic foundations
built on the precautionary principle unfairly set up trade barriers.

The largest obstacle facing a more infused precautionary principle in EU politics is the
variability in contextual purpose. One legal context identifies fourteen different formulations of
the principle in treaties and non-treaty declarations. The Treaty on European Union merely
refers to the principle without more explicitly framing the intent. Despite a growing body of law,
including landmark decisions about the meaning in the European Court of Justice, the legal
community remains divided about the meaning and applicability of the principle.
Its most important formulation is evident when the principle is interpreted as calling for absolutism. That is, it requires complete evidence of safety before permitting the new technology to be adopted. Where there is potential for adverse effects that are not fully understood precautionary action should be the driving force.

Other formulations create opening for diverse approaches to precaution where cost-benefit analysis are integrated into the process where discretionary judgment is take over by calculations. The 1990 declaration on protection of the North Sea calls for no action to be taken even if no scientific information can prove a causal link between emissions of waste onto ocean water and the environmental quality of the North Sea.

F. The EU Approach

The precautionary principle was incorporate into European Law in 1992, when the Maastrict Treaty was signed. At that time Article 130r of the treaty that established the European Economic Community included a Community Policy on the environment (Peel 2010). It stated that environmental policies must be based on the precautionary principle. But, Article 174 does not frame a definition for the precautionary principle. It is left without clarification. To remedy the problem the EC issued a communication attempting to clarify when action should be taken. The rule stated that in order to get permission to take action matches Principle 15 of the Rio Declaration from the 1992 UN Conference on the Environment and Development. The Declaration frames when it is alright to take action. The precautionary principle gives regulators the right to act under scientific uncertainty, the consent “to act or not to act”. Protecting the environment must be done in a way that adheres to the precautionary principle. When there is a
threat of real damage the lack of full scientific certainty shall not be used as a reason for no action or a delay response that is intended to prevent environmental degradation.

The EU acts in line with the precautionary principle because it presupposes dangerous effects are being generated by the hazard, for example a commodity or process. Actions can be taken when the hazard has been defined and that the scientific evaluation doesn’t allow the risk. The EU’s communication also included the five criteria by which the resulting precautionary actions should be judged once the precautionary principle is invoked. The five criteria are:

(1) The precautionary actions should be proportional to the chosen level of protection;
(2) The precautionary actions should be nondiscriminatory in their application.
(3) They should be consistent with similar measures that have been previously taken.
(4) The precautionary actions should be based on an examination of the potential benefits and costs of action or lack of action (including, where the appropriate and feasible, an economic cost-benefit analysis).
(5) They should be subject to review, in light of new scientific data. Furthermore, the precautionary action may include assigning responsibility for producing the scientific evidence necessary for a more comprehensive risk assessment.

The last criterion demonstrates the only criterion that directly applies to the precautionary principle. It guarantees that measures based on the precautionary principle are maintained only
as long as the scientific information is incomplete or inconclusive. This refers to when the risk remains too high to be imposed on society (Peel 2010).

The precautionary principle has been explicitly integrated into EU secondary laws in a number of directives and regulations. It is the main element of the EU’s General Food Law (Regulation 178/2002) and in REACH and of the EU’s GMO law (Directive 2001/18) (Peel 2010). Most technical experts accept that even the best risk assessments and risk management models are only approximations for guaranteeing protection from chemical risks. Epistemic scientific beliefs in resilience and flexibility need are intended to match precautions to ensure control. Risks can be evaluated and managed on three major strategies:

1) Risk based approaches which entail conducting mathematical top levels,

2) Reduction strategies founded upon precautionary principles; and,

3) Setting standards derived from discursive processes such as roundtables, workshops and stakeholder meetings.

Precaution has many meanings in a variety of forms throughout EU law. It is now the underlying principle in EU policy making. Past human health controversies involving chemicals and mad cow disease has helped precaution frames become salient with people and within many scientists fields. Unfortunately, despite the increased policy attention and popularity, precaution remains riddled with ambiguity and questions regarding its real characteristics and the nature of its call for action. Directives also do not directly provide guidance in determining which appropriate function of governance should have in the authority to act (Peel 2010). Chemical
industry officials dislike the Directive because it constrains their ability to plan when to act and not to act based on a certain level of scientific evidence.

G.Market Frames versus Green Frames in European Union Epistemic debates of precautionary principle.

The meaning of the principle remains highly debated between chemical regulators and corporate specialists. Three attitudes towards risk analysis play important roles in setting the stage for controversies on what regulators promulgate. Regulatory science experts have the option of designing a “classic risk assessment” approach or market frame. It is based on risk assessment stating risk management should depend on scientific estimates and probabilities of potential damages and expected values as the primary sources to evaluate the ability to tolerate a risk. The scientific estimates generate quantifiable ways to reduce the risk and value harm. Precaution is interpreted as having a conservative nature when making risk evaluations.

A second master frame describing precaution takes on a “Precaution Approach” where the language “precaution” refers to a continued uncertainty and potential harm even when a lack of awareness about the risk exists. Precaution risk management is defined as guaranteeing sensible handling of choices depending upon the situation of high uncertainty about cause and effect relationships. This is especially applicable when there is a high vulnerability of the population might be susceptible.

A green frame is a deliberative approach to precaution as third frame. This type of action centers on discursive politics as an alternative or supplemental approach to using mathematical models. The difficulty lies in risk management and deciding when is the right time to organize a
systematized response to the potential risk. It could consist of a broad spectrum of stakeholders and interested environmental movement organizations brought together for generating appropriate risk management strategies (Weiner et al 2011). Science and policy dialogues take place among experts and politicians working together. The deliberative method parallels epistemic communities and value systems. It is flexible enough to supplement a risk analysis and a precautionary approach. However, it has not been advocated as an approach that could stand alone when managing risks.

H. Precaution in REACH

In REACH negotiations during stakeholder meetings and expert forums supporters of the classic risk assessment approach voiced their concerns in opposition to the deliberative methods and attacked the legitimacy of the third type of precautionary method. They argued that the discursive precautionary approach ignores scientific results and uses what may seem as arbitrary regulatory decisions. A strict interpretation of the frame states that “a person should always err on the safe side”. It may be interpreted as a command to ban everything which might lead to adverse effects on people’s health in the extreme. A precautionary rule may be relevant for restricting any substance.

The ambiguity can make it incomprehensible in terms of trying to implement regulatory policies. It could hold scientific rationality hostage to interest groups and politics. Policy makers could take advantage of this frame and construct a Directive strategy to protect their own interests and to slow down chemical manufacturing.
The precautionary approach can be accomplished in a reasonable manner if stakeholder and policy makers are willing to compromise. It works by using an incremental set of stages to diffuse risk activities. Risky chemicals could be classified at lower levels and then slowly jumped up to another level when more information is available regarding the chemical’s safety.

WWF, FoE, and Greenpeace framed their positions using the third type precautionary rhetoric promoting the up most precaution and democratic decision making processes. Cefic and BASF preferred a policy of risk assessment elements in precautionary language. They preferred concrete measurement strategies because it contains simple results that are clear and immediate. A deliberative approach takes longer and people are unsure of the final decision until the decision is finally made by group processes. The US executes a regulatory process based on risk assessment methods overall even though in some cases precaution is the rule for example FDA statutes.

REACH actually incorporates a hybrid approach. The current system of European chemical regulations targets the production of information about the effects of chemicals on human health and the environment (Hey et al. 2007). Risks are identified using several steps ranging from labeling to actual restrictions on chemicals. It integrates a market episteme frame with a green frame. Prohibited uses may occur when the risk to society is at dangerous levels.

The most important feature of the regulatory framework is the distinction between “old” and “new” chemical substances. “Old” chemicals are those substances that have been marketed in the EU before 1981 when the EC Regulation for chemicals control began and was enforced. The “old” chemicals number about 100,000. They represent about all but 1% of all chemicals marketed in the EU. “New” chemicals have to be notified and tested first before they are allowed on the market. Substances that have high production volumes, above 1 ton/year, come
under this rule of the Directive. A few provision and exceptions for testing exist for “old”
chemicals. Information is required on high volume existing substances but the regulatory
authorities would have to ask for them. It is the regulatory body that decides which substances
must be tested. The manufacture is responsible for the testing. Previously it was a duty
performed or commissioned by chemical regulatory Member state agencies like Tukas, in
Finland and KEMI in Sweden.

A new epistemic approach was integrated into REACH as the Commission and Council
of Ministers finally approved a new strategy for European Chemicals control. A compromise
was necessary because a no vote was not acceptable (Hey et al. 2007). Although the intended
objectives have been weakened by corporate interests it remains far-reaching in particular
because a new precautionary epistemic approach is at its core. The market frame weakened the
discursive precaution frame but not over overall. Reversing the burden of proof onto
manufacturers is a significant step. A reversal the burden of proof scientific approach assumes a
chemical is guilt or potentially harmful on the health of humans and the environment. It implies
the use of chemical substances is a risk to the environment. Chemical manufacturers now must
demonstrate that a chemical will not pose any major risks for high-volume chemicals (Hey et al.
2007). A corporation failing to produce the information will not be allowed access to the EU
market. The reform aims to accelerate risk management and phase out substances of special
concern with REACH’s new Directive that requires a new authorization process. It is the
authorization process which upsets corporate interests the most. The changed process further
levies an obligatory system of chemical safety management over the whole production process
including downstream users. The broadened requirements for testing and registration of
chemicals, increases the cost of chemical product which is exaggerated most of the time by industry sponsored research.

The new strategy consists of three main phases: Registration, Evaluation, and Authorization of Chemicals (REACH). Registration is the first phase where manufacturers and importers must assemble information on the properties of substances and submit registration dossiers to a central database located in Helsinki, Finland. This process applies to all substances marketed above a certain threshold – 1 tonne / year. Thousands of substances are required to follow this procedure. Only those substances that are registered may be marketed in the common market. It also depends upon the volume and on the intrinsic chemical properties of the substance. Different testing requirements are imposed on those cases. If there is “no data then there is no market” (No Data - No Market). When no data is received on a chemical product that means the substance will be prohibited for the EU market. The database is managed by the new European Chemicals Agency located in Helsinki, Finland, sufficiently far from Brussels and environmental movement organization protest actions. The requirements for registering include that the applicants must deliver information on the intrinsic properties and hazards of the chemical substances. It must include all ecotoxicological and toxicological information. Data must also be provided for other purposes such in downstream uses. In cases of those types of uses that may alter the chemical substance to a different form, they must be additional testing. That is to make sure all possible exposures may be accounted for in the data. Substances that are produced above 10 tonnes / year a chemical safety data sheet is demanded. For volumes below 10 tonnes / year chemical safety data sheets will also be required. Registration continues down a track of a phased out approach. The registration deadlines are set based upon volumes that the substance will be marketed in the EU.
The evaluation process is the next step where environmental commissioners in Member States evaluate the data submitted to them regarding the necessity of animal testing. REACH is designed with the imperative to reduce animal testing as much as possible. Animal testing occurs when regulatory authorities believe a reasonable risk to the environment or human health may be in jeopardy. This required for chemicals which are produced or imported in large quantities over 100 tonnes/year. It also applies when a substance may have certain dangerous properties. Chemicals that may have a propensity to cause mutations or cancer and are extremely toxic and may stay or persist in the environment for a long time come under this regulation. Also a highly bioaccumulative chemical must follow this process (i.e. dioxin). Also substances that have molecular structures that give reason for concern must follow these steps. Evaluation might require applicants to provide additional data (Hey et al 2007).

Authorization is an important stage of the process. An authorization procedure pertinent to the chemical substance is introduced for a particularly hazardous chemical that specifically could have the capability of “giving rise to very concern” regarding the public’s and environment’s health. An authorization of use will be granted by authorities only if it can be demonstrated by the producer or importer that the risks of use can be “adequately” controlled or socio-economically it has benefits in the market that overshadow the health concerns. Authorization is required for cancer causing and mutagenic or reprotoxic substances. Substances that persist in the environment and bioaccumulate or are toxic are also included. Substances that also must follow the authorization process include very persistent or very bioaccumulative types of substances. Endocrine disruptor must follow the process.

Chemicals imported and products that contain a considerable amount of chemicals, similar testing requirements apply. The planned regulation will have impacts on the chemical
industry especially in countries where risk management strategies are founded upon liability. Producers could be accountable for damage because the information is available.

Through constant negotiations the chemical industry was able to weaken REACH substantially and consists of expensive requirement put on producers. The strategy expedites risk assessments and creates a more effective method to control and regulate hazardous substances.

The foundation of REACH is the precautionary principle, as a new mode of governance for regulating chemicals. Although it functions extensively and reverses the burden of proof onto the chemical manufacturer it consists of delegation or federalist type of structure with typical rules and protocols. It also encourages a fervent need for stakeholder participation and implementation of the strategy.

I. Epistemic Perspective

REACH merges two types of epistemic regulatory value systems together (Hey et al 2007). It provides some flexibility while expediting the review process. The whole system of regulation consists of methods for controlling the public’s risk communication. That is, chemical information provides customers with risk information for them to make their individual choices. It also has strict requirements on producers to guarantee adequate protection of human health and for the environment. A traditional risk assessment process is incorporate into the system. Finally it involves stakeholders through joint procedures that are decentralized among the Member states. The amount of stake holder involvement is limiting. Environmental
organizations would like to participate in higher amounts but are constrained by the resource demands.

The precautionary principle is not fully embraced. Registration requirements keep the information inside ECHA. A digital database is maintained and in some cases is available or review and comment. Most chemical portfolios and cases are closed to the public. ECHA is administered tightly from a top-down structure. Information is not readily shared within or outside the organization. DG ENV has oversight capabilities and links with constituents to some degree but the information is not shared extensively as expected of a precautionary epistemic approach.

The strict control of mechanisms for chemicals of high concern is much more restrictive perhaps than how it should be in protecting humans. The historical problem with managing chemicals in the EU was one of insufficient data or vital information to start controlling substances without dramatically impacting economic interests. REACH strikes a useful balance between environmental protection and the economy.

REACH supplies a guiding framework with flexibility to adjust regulatory approvals relative to volume sizes. It forces producers to follow agreed upon principles and rules for increasing the rate at which products are approved. The procedures follow harmonized standards with international directive. Regulatory science experts share mutual information with Member state chemical authorities. Costs are kept to a minimum for producers or importers but actual testing still relies on the manufacturer of the chemical. Tradition risk management and risk assessment procedures are integrated into the system and may overshadow the precautionary epistemic intent.
A strong precautionary principle approach supports legitimacy through stakeholder discussions and open dialogue across stakeholder groups. The expertise of the REACH strategy requires that experts be part of the process to facilitate technical discussions and not have a total reliance on their evaluation without some oversight beyond the Commission or Parliament (Hey et al 2007).

The REACH system of regulator control lacks a key component to the precautionary principle framework. It is missing an opportunity to openly discuss what should be considered a risk. In the current set up risk is still decided mainly by mathematical probability by technical expertise. Specialized technocrats facilitate and review portfolios in isolation. An important aspect of the new REACH system is the governance of a complex system of risk decisions. Regulators of ECHA are reluctant to recommend specific levels of acceptable risk. This usually is accomplished with common language understandable to the general public. Risk management decisions are not integrated into society. Uncertainty is expected of precautionary approaches where systems are set up with procedures to facilitate discussions in meaningful and manageable ways. Legitimacy comes with transparency which also a driving forces of the EC.

The wider public remains removed from the broader political dialogues about risky chemicals that may directly or indirectly affect their health. A pluralistic approach supports a precautionary based system. A society interacting with the complicated nature of endocrine disruptors should be able to have opportunities to participate in the political dialogues that directly affect their lives as an epistemic requirement. Risk knowledge is controversial where social concerns should be evaluated with science data that is not found in the current chemical regulatory system of the EU.
REACH however blends in part of a precautionary principle by integrating economic and environmental concerns externally to ECHA. Both the DG ENV and the DG ENTI share joint oversight with ECHA. A single and consistent system operates successfully. Cooperative discussions are theoretically part other oversight process. DG personnel suggest it is largely procedural where risk decisions are evaluated by ECHA technocrats based on chemical risk models.

At the center of REACH in the institutional design is ECHA. Its role is to furnish Member states, the institutions and firms with the best possible scientific and technical advice on questions related to REACH and chemicals more generally. To meet these objectives ECHA has established a central online resource with new and information for industry, policy makers, and the general public. ECHA is also responsible for managing all registration dossiers, and executes dossier evaluations procedures. In addition it assigns particular Member states regulatory specialists with the responsibility to undertake substance evaluations.

The institutional design of ECHA more specifically is managed by an Executive Director and Constitutes a Management Board, a committee for Risk Assessment (CRA), a Committee for Socio-Economic Analyses (CSEA), a Member State Committee (MSC), a Forum, and a Board of Appeal. The CRA is involved in ECHA opinions on evaluations, applications for authorization, proposals for restrictions and proposals for classification and labeling, and other questions relating to risks to human health or the environment. The CSEA participates in ECHA opinions on application for authorization, proposals for restrictions and any other questions that relate to the socio-economic impacts of possible legislative action on substances. The MSC resolves potential divergences of opinions on draft decision proposed by ECHA or the Member states on evaluation and proposals for identification of SVHC (substances of very high concern) that are
subject to the authorization procedures. The committees work independently from national authorities. In putting together opinions, the committees aspire to reach consensus, but if this is not possible the grounds for the majority opinion as well as the minority positions are published.

Decisions taken by ECHA or its committees can be brought before the Board of Appeal, but may simultaneously be the subject of a complaint to the European Commission pursuant of Article 263 TFEU. The EC Regulation regarding public access to documents also applies to ECHA.

Manufacturers and importers of SVHC must submit applications to ECHA for authorization of the continued use of these substances. ECHA, through its specialized committees, issues an opinion on the safety of the substance and the Commission subsequently formulates a proposal on the basis of the opinion by ECHA. The importance of ECHA is thus paramount in relation to authorization. Even though Member states have an opportunity to get involved in the identification of substances for evaluation, as well, the task of substance evaluation is with ECHA, in particular through the MSC.

ECHA’s work is to ensure consistency among Member states with regard to the implementation of REACH. ECHA issues numerous Guidance Documents concerning registration, data sharing, classification of chemicals, and preparation of chemical safety reports. REACH is more like a framework rather than a very strict procedural institution that fits a precautionary principled approach. ECHA is not only the main administrator of REACH; it also represents a new central regulatory authority with real executive and implementation powers (Fleurke and Sossen, 2011).

The Forum is the platform for Member States to exchange information and to coordinate activities related to the implementation and enforcement of chemicals legislation. The role of the
Forum remains advisory, because in formal terms implementation of the Regulation proceeds in accordance with the regulatory procedure with scrutiny under the comitology process. The rationale behind the establishment of the Forum was that the current informal cooperation between Member States benefits from a more formal scheme. The reason is that active participation of competent national authorities is useful and productive since the close proximity to stakeholders in the Member States can play role in the sharing of information on the risk of substances and on the obligations of natural and legal person under the authority of the chemicals legislation.

The forum will play an important role in realizing the shift REACH seeks to bring about away from substantive EU control of all chemicals towards a more responsive approach. It is a model based on routine procedures and information. It is a decentralized approach that will come to apply to the vast majority of substances. ECHA scientists can stay more focused on the main things and keep centralized control of much smaller issues of the substances that are market at levels of less than 1 tonne / year.

**J. How to Deal with Uncertainty/Precaution as an Epistemology without Reverting to Traditional Risk Assessment**

The central assumption of REACH is that scientific and technical knowledge should underpin the regulation of chemicals but not as risk assessment but also through precaution. The ideas is that science based environmental risk assessment becomes tenuous, when both probability and impact of potential change are highly uncertain. Scientists who have more of a postmodern approach to scientific knowledge confront scientists who rely more heavily on
scientific knowledge. Annex I contains general provisions for assessing substances and preparing chemical safety reports. It reflects the precautionary principle. It believes information gaps must be acknowledged. In addition to risks that are scientifically established, there can be potential effects of substances that must be taken into account.

In the context of potential effects, it is important to realize that REACH represents a major shift in focus from hazard assessment to exposure assessment. It also means risk management rather than risk assessment. Chemical substances for SVHC and exposure assessment are conducted by examining relevant routes of exposure that leads to a focus on a broad range of exposure estimations. Different vulnerable population groups and environments are considered in comparison to time scales and geographic scales when analyzing the variations in the exposure pattern. The chemical risk assessment includes hazards assessment for toxicity and carcinogens for example. The quantitative mathematical dose – response curves between the levels of exposure and occurrences of such hazards are determined.

Generally speaking, scientific uncertainty makes the causal relationship between dose and response more difficult to find. But, a long term effect usually cannot be accurately determined anyway immediately because predicting effects of low exposures over long periods is made ambiguous by uncertainty. The collected and produced data on risks for human health and the environment are usually highly uncertain. Uncertainty is made worse by the impossibility of adequately being able to account for multiple effect and interactions of different substances mixed together.

Toxic uncertainties will always be a part of the regulation of chemical. REACH deals with uncertainty taking into consideration the importance of the information burden and setting up group dialogues of scientists and policy makers. The problem is that applicants seeking
authorization of a substance must show the safety of that chemical. This implies that, consistent with the precautionary principle regulation, measures can be executed even in the absence of conclusive scientific evidence establishing the existence of risk. In the same way, REACH requires registrants to draw up guidance notes and safety data sheets for downstream users and uses for substances greater than 10 tonnes/year. Risk assessments are done. The risk assessment is called the safety chemical report. It states that safety has to be established before the chemical can enter into the market.

Risk assessments under REACH may appear to acknowledge different types of uncertainties that get in the way of science based regulations of chemicals. This approach does not affect the point that for the majority of chemicals, no real risk assessment is required. The effectiveness of the authorization process ultimately depends upon the number of substances that have been added to the list subject to authorization. The willingness of the EU institutions to put suspicious substances on that list is at their discretion (Fleurke and Somsen, 2011). Furthermore, risk assessments are dynamic concepts such as adequate control as a regulatory category.

REACH gives the identification and recognition of scientific uncertainty to industry. This goes beyond anticipating industry will identify and address known risks. In the end the importance of uncertainty analysis for each individual chemical safety report will depend on the specific circumstances and cannot be just a matter of the reviewer’s judgment.

The precautionary principle also calls for transparency and access to information. Stakeholders and the public are represented in decision making pursuant to REACH. For example, they can submit comments on a proposal to restrict the manufacture, marketing or use of a particular chemical. ECHA has to consider this information when checking and selecting dossiers. REACH facilitates stakeholder participation by the general rule that all information
assembled is publicly available on an internet database hosted by ECHA. Safety information is also available for review as part of the registration process and it cannot be excluded,

Transparency includes allowing people to participate in the process and have significant levels of involvement in chemical risk regulation. This supports the legitimacy of REACH.
CHAPTER 6 CONCLUSIONS

The findings show that alternative mechanisms for challenging policies can be found through open or closed opportunity structures available in democratic post-industrial countries. The EU political opportunity structure provided the environmental movement’s proREACH advocacy coalition with an initial advantage. The EU Commission was the most receptive to environmental concerns. It provided the environmental lobby with greater access and inclusion around science-based decision-making objectives. National positions and intergovernmentalism reflected how the Council worked. Member States asserted their position through bargaining strategies with other Member States. My research demonstrates how the European Union’s environmental movement employed advocacy coalitions as the preferred method for challenging environmental policies. Several key factors such as the configuration of political elites and the use of scientific experts in the agenda setting and policy processes were crucial for maintaining the strength of REACH. Leading Member States helped drive a new strategy of regulating chemicals up to the supranational level based on their own interests, while the environmental movement and chemical industry epistemic communities battled over inclusion of the precautionary principle in risk assessment and regulatory procedures. The growing influence of professionalized environment organizations is significant, as they mobilized sufficient resources to match those of the private sector.

In conclusion, it is now clear that the EU is becoming a global leader in international environmental politics, spurring other parts of the world to raise their standards in response to EU market demands. Member State epistemic ideologies may drive higher supranational chemicals policy that link with harmonization forces to bring about global change. The United
States continually resists these standards and has taken the REACH controversy to the Transatlantic Trade and Investment Partnership (TTIP) negotiations in hopes of resisting change. The European Union continues to maintain its higher environmental standards that materialized from the environmental movement’s success during the agenda setting stage of REACH.

The European Union’s environmental movement reformed existing chemical regulations to bring about the Registration, Evaluation, Authorization, Chemicals legislation by mobilizing resources directly challenging the powerful chemicals industry. The movement chose specific targets in the European Union political opportunity structure (Kitshelt, 1986) as an advocacy coalition in conjunction with political elites (Kriesi, 1996).

New political opportunities presented themselves through the Europeanization process. The European Union functions through an ad hoc basis, where each institution operates unique to the others. Member States negotiate through intergovernmental processes in the Council of Ministers while the pluralistic nature of the Commission invites a wide assortment of stakeholders. The impact of the European Union’s political opportunity structure on a social movement remained highly variable (Marks and McAdam, 1996). European environmentalists took advantage of several openings and processes in the Union’s opportunity structure to bring about a new strategy for regulating chemicals Registration, Evaluation, and Authorization of Chemicals (REACH). It reverses the burden of proof on to corporations for proving a chemical is safe and incorporates the precautionary principle. This means a manufacturer or importer of chemicals has the responsibility of showing that a chemical is safe before it can be marketed (no data, no market).

Several types of organizations engaged in the REACH contentious public discourses (Bomberg, 1998). The European Union environmental movement executed successful strategies
and tactics to maneuver REACH through the institutional framework. The relative success of the European environmental movement depended on the structure of the decision-making system they chose to access based on their available resources (McAdam, McCarthy and Zald, 1996).

Several favorable strategies and tactics determined the movement’s success against the chemical industry. REACH became law because (1) favorable political elite alliances between Member States; (2) a set of political elite alliances with the environmental movement within the European Union; (3) advocacy coalitions taking advantage of the Commission’s pluralistic objectives; (4) the rise of a powerful environmental epistemic community; and (5) pioneering Member States.

Sweden and the Nordic Member States exploited the expansion of the Single Market to upload their environmental standards to the EU level while maintaining their own stringent standards (Andersen and Liefferink, 1997). Michael Meacher and other Council Ministers started the political strategies for REACH during informal meeting in Chester, UK. A configuration of political elites formed in the Council of Ministers with the expansion of the Nordic block. They had sufficient votes to influence policy outputs. Pollack (2005) suggests that the Council of Ministers demonstrated a type of intergovernmentalism specific to European integration. Member States voice their national political preferences and then negotiated or bargained over the adoption of new policies (Pollack, 2005).

McAdam (1996) and others suggest the presence of elite allies as one of the key variables providing wider access for social movements. Shared interests among influential decision makers provided valuable resources for taking advantage of political opportunities. The power dynamics within the formal institutional structure of the EU were about to change with the accession of Sweden and the Nordic States. These states already had strong environmental and
science expertise in their own countries to support the development of a new chemicals policy. Sweden and the Nordic States requested the Commission’s review of existing chemicals policies in efforts to construct a new strategy (McAdam et al, 1996). REACH became part of the EU political agenda. The Commission initiated their review of the regulations concerning chemicals in 1998.

Another set of elites operated within the European Union institutions to maneuver inside and out of the formal structure. Newly appointed Environmental Commissioner, Margo Wallstrom, a Green Member of European Parliament named Inger Schorling, and the Swedish Directorate General Chemicals Head of Unit, Eva Hellsten provided inside support for a proREACH coalition determined to get REACH passed. The Swedish environmental activists and the proREACH coalition targeted the European Union political opportunity structure using an interest group strategy (Kriesi, 1986; Kitschelt 1986; Rohrschneider, 1993).

A third and crucial force was the proREACH coalition. The advocacy alliance of environmentalists, health care groups, animal welfare organizations, and consumer groups started working together as an advocacy coalition (Sabatier and Jenkins-Smith, 1993) searching for political opportunities and sharing resources. They engaged in EU political dialogues and organized informational campaigns and lobbying strategies. The used formal and informal lobbying tactics for influencing Commission officials; Members of the European Parliament; and the Council of Ministers. They also implemented effective public information and media campaigns. They also conducted important scientific studies of chemical exposures in toys and household dust as a key strategy to inform the public but also to strengthen the connections with Commission administrators. The European Union environmental movement hired professionalized lobbyists to run expert driven information programs. The environmental
movement had increasingly operated as interest groups than protest or grassroots organizations (Long and Lorinczi (2009). Environmentalists used multi-tiered information campaigns focused on the agenda-setting phase of the policy process. The proREACH coalition realigned their resources toward participation in Commission and Parliament stakeholder discussions, work groups, and complicated committee processes involving science-based decision-making.

Next, the Commissions emphasis on legitimacy, accountability, and science-based decision-making significantly expanded the Commission’s interactions with non-governmental organizations (NGOs). Although the institutional structure remained intact, the priority towards a pluralistic mode of governance significantly expanded openings for members of the proREACH coalition. ProREACH coalition members gained greater informal and formal access to Commission staff and acquired an insider status with Directorate General administrators, but not to the extent that Imig and Tarrow (2001) would argue. The Environmental movement instead shared information and conducted its own scientific analyses (McAdam et. al. 1996). They still targeted state authorities, as Rucht (2002) suggests, but more in cooperation than protest. The Commission even distributed funds to environmental movement groups for research activities related to informing policy decisions (Greenpeace denied the funding).

Lastly, environmental epistemic communities (Haas, 1992) were instrumental in making sure REACH contained the precautionary principle and a reversal of the burden of proof onto corporations. Haas (1992) defined epistemic communities as networks of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy relevant knowledge within that domain.

The proREACH epistemic community constantly engaged in contentious battles with chemical industry science experts in Commission meetings and Parliamentary hearings. Outside
political support through the proREACH advocacy coalition bolstered the scientists push for more stringent chemical policies. Two policy frames, a “market” frame and a “Green” frame emerged pitting risk management against precautionary actions. Activist scientists were important in translating the complex language action into practical policy prescriptions.

The research results show that corporate actors executed similar tactics as environmental organizations at the EU level. They operated within the same formal institutional characteristics and competitive elements that influence a movement’s activities (Van der Heiden, 2006). The EU political opportunity structure influenced their choice of actions. The corporatist nature of the industry’s relationship with regulatory officials at the Member States did not directly transfer to the EU level (especially in the Commission) as expected in a multi-leveled governance system (Jordan, 2005). The Directorate General Environment administrators weighted their political influence at equal levels with environmental organizations. In the Council, Sweden and the Nordic block supplied sufficient political force to influence the political decision-making process. Their voting alliance as a minority voting block had sufficient force to block legislative proposals. Although Germany initially supported chemicals reform, their position changed due to their national elections when Schroder became chancellor. A more conservative government came into power.

The findings demonstrate corporate interests started with medium influence in the EU institutions, especially since public sentiments towards multinational chemical corporations were low. They slowly gained more power as the economy slowed, elite arrangements shifted (Kriesi at al, 1994) and their strategies intensified (Kitschelt, 1986; della Porta and Tarrow, 2005). Corporate leaders reoriented their public image tactics towards aggressive direct and indirect lobbying and heavily financed media campaigns. They sought out other interest groups and
allies outside the EU as a strategy to assert political pressure on EU institutions. They began a strategy at the OECD level to lower the level of harmonization standards.

In 1998, Cefic, the chemicals manufacturer’s biggest lobbying federation, chose poorly in a public relations strategy attempting to raise the chemical industry’s public’s image. The Business REACH coalition utilized a multi-tiered lobbying approach. It focused on media campaigns, direct and indirect lobbying tactics of Member States and in Brussels. Cefic, the European Association of Chemical Distributers (FECC), and the Big Three chemical company giants (BASF, Bayer, and Hoechst), were core members of the Business REACH coalition. They worked closely with the Directorate General Enterprise, national economic affairs ministries, conservative Members of the European Parliament, and Member State leaders from countries with well-established chemical industries (Sabatier and Jenkins-Smith, 1993; Diani and McAdam, 2003; Borzel, 1998; Peterson, 2003).

Big business directly lobbied DG units who shared similar political positions as the chemical industry and participated in the DG ENV’s expanded participatory decision-making processes, including stakeholder forums and working groups (Kluver, 2013). They utilized their vast resources to conduct scientific studies for the Commission and had their scientific experts provide technical information for Directorate General regulatory officials in committees. They worked to build informal and formal ties to Commission administrators. Cefic and ad hoc expert groups also utilized existing lobbying networks to gain insider status to EU institutions. They exploited elite access and informal networks with lobbying tactics, media events and coalition building strategies (Kluver, 2013; Sabatier and Jenkins-Smith, 1993).

During REACH’s agenda setting stage the chemical industry coalition lacked sufficient political influence to derail the White Paper process. They could not match the political influence
of the proREACH coalition (Sabatier and Jenkins-Smith, 1993) and its configuration of pro-environment political elites in the Commission and Parliament.

They eventually weakened many of the aspects of the chemicals legislation during subsequent steps of the policy process. From 2003-2006 due to constant lobbying, shifts in elite alliances, and political elite configuration changes. One key strategy targeted animal welfare groups. They published several scientific studies arguing that a greater number of animals were needed to meet the testing requirements outlined in the proposed REACH legislation. This caused a splinter in the movement as part of a counter-offensive. Animal welfare groups reconsidered their position and left the proREACH coalition. Also downstream users were important. They particularly were able to mobilize all the users along the supply chain to assemble enough resistance to weaken REACH. They used frames characterizing environmental protection versus competitiveness and job growth.

The German chemicals industry in particular strengthened their lobbying efforts and directed their campaign on parliamentarians that included workshops, meetings, lunches, and dinners. The Business coalition used information tactics by distributing letters, mailings, and media releases to MEP’s representing France, Germany, the UK, and Italy. They framed REACH as anti-industry. They expanded the Business coalition to include trade unions and the Labour party. BASF chairman Eggert Voscherau further stepped up the assault especially during times of recession in the early 2000’s.

The enactment of REACH was a breakthrough in the way governments regulate chemicals. It had paramount implications demonstrating the central importance of the European chemicals industry and the environmental and health risks of EU citizens. The incorporation of discursive procedures to deal with the complexities of hazardous chemicals as part of a
precautionary focused regulation are workable and practical for ECHA specialists. The initial
efforts in 1998 by Michael Meacher and the environmental ministers finally reached fruition in
2007 with the enactment of a new approach to regulate chemicals. Although elements of
REACH contain precautionary principled epistemic beliefs other aspects remain ambiguous. For
example, a specific definition of the precautionary principle does not exist in the legislation.

The research demonstrated that environmental movement organizations recognized
openings in the EU political opportunity structure and adjusted the strategies and tactics to
effectively engage in EU policy making through committees and forums. These organizations
were sophisticated organizations and were recognized by the Commission as important
stakeholders in the policy process. The actors actively participated in an array of tactics ranging
from media events to direct lobbying of DG officials and MEP’s. Once the White Paper was
introduced into the Commission by the environmental ministers of leader states they took
advantage of the Commissions pluralistic nature allowing them to include scientific reports,
expert testimony and position statements through informal and formal mechanisms. This also
occurred in the Parliament but not as much in the Council of Ministers. The environmental
ministers, as part of the proREACH coalition, had access. Each of the members of the coalition
played an important role independently but was able to consolidate their voice and strategies
through an advocacy coalition form of collective action. The proREACH coalition was most
effective in the agenda setting stage of the policy process. The opposing forces of the business
REACH coalition had long standing corporatist relationships with Member State government
officials and EU regulatory experts. Committee oversight and authority was important. The
proREACH coalition masterfully maneuvered the proposed legislation to remain under pro-
environmental committees. The chemical industry’s coalition mounted immense opposition to
REACH after the White Paper stage as Cefic, the Big 3, and other groups intensified their media campaign, exploited personal relationships with Member State presidents, and directly lobbied MEP’s and the Council of Ministers. The business REACH coalition was most effective in the policy discourse phase of the policy process and the policy implementation phase. The 1998-2000 political opportunities may never occur again as EU enlargement has reached its limit and economic constrains continue to raise people’s apprehensions of a Single Market.
NOTIFICATION OF IRB ACTION
RENEWAL APPROVAL

Date: March 26, 2015
IRB #: 14-03-09

Principal Investigators: Daniel Faber
Mark Hengen

Department: Sociology and Anthropology
College of Social Sciences and Humanities

Address: 500 Holmes Hall
Northeastern University

Title of Project: REACH: Political Parties, Policy Networks, Epistemic Communities, and Political Opportunities

Participating Project: N/A

Original Protocol Approved: April 8, 2014
DHHS Review Category: Expedited #7
Exempt #2, #4

Informed Consents: One (1) unsigned consent form for interviews

As per CFR 45 46.117(c)(2) Signed consent is being waived as the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required.

Monitoring Interval: 12 months

APPROVAL EXPIRATION DATE: MARCH 25, 2016

Investigator’s Responsibilities:
1. The informed consent form bearing the IRB approval stamp must be used when recruiting participants into the study.
2. The investigator must notify IRB immediately of unexpected adverse reactions, or new information that may alter our perception of the benefit-risk ratio.
3. Study procedures and files are subject to audit any time.
4. Any modifications of the protocol or the informed consent as the study progresses must be reviewed and approved by this committee prior to being instituted.
5. Continuing Review Approval for the proposal should be requested at least one month prior to the expiration date above.
6. This approval applies to the protection of human subjects only. It does not apply to any other university approvals that may be necessary.

C. Randall Colvin, Ph.D., Chair
Northeastern University Institutional Review Board

Dan C. Regina, Director
Human Subject Research Protection

Northeastern University FWA #4630
Informed Consent for a Research Study entitled:
“REACH: EU Chemicals Policy – Actors, Networks, Parties and Political Opportunities”

You are invited to participate in a research study to examine European Union chemical policies. A key objective aims to understand the strategies and tactics environmental organizations and political parties employed to gain access to EU policy processes. The study is being conducted by Mark Hengen a doctoral student in the Sociology Department at Northeastern University, under the direction of Dr. Danny Faber, Professor, Northeastern University and Director of the Northeast Environmental Justice Collaborative. You were selected as a possible participant because of your involvement in REACH. You must be at least 18 years old to participate.

If you decide to participate in this research study, you will be asked to answer interview questions. It should not take up too much of your time, not more than 45 minutes. The interview can be conducted in-person, via telephone or email correspondences.

There are no risks associated with participating in this study. By participating in the study you will be able to obtain the final results and recommendations to help improve your strategies and tactics if deemed relevant.

There are no costs for your participation and no compensation for your time.

Your participation is completely voluntary. You do not have to participate and you can refuse to answer any question. Even if you begin the study, you may withdraw at any time.

Your privacy will be protected. Any information obtained in connection with this study will remain confidential. Information obtained through your participation may be used to fulfill an educational requirement, published in a professional journal, or included in a presentation at a professional building, etc. Any reports or publications based on the information collected in the research interviews will use only group data and will not identify you as being of this project.

If you have any questions about this study please contact Mark Hengen at +1 (401) 261-2339, by email at mhengen2@gmail.com, and by Skype at mark.hengen. You can also contact Dr. Faber at dfaber@neu.edu, the Principal Investigator.

A copy of this document will be given to you to keep.

If you have questions about your rights as a research participant, you may contact the Northeastern University Office of Human Subjects Research or the Institutional Review Board by phone at 00 +1 + (617) 373-4588 or by email at n.regina@neu.edu. You may call anonymously if you wish.
Recruitment Letter/Email

Dear [Mr. / Ms. LAST NAME],

I write to ask whether you would be willing to participate in a research study focused on investigating European Union chemical policy dynamics, specifically REACH. The study is being conducted by Mark Hengen, a doctoral student under the direction of Professor Daniel Faber of Northeastern University, Boston, Massachusetts, U.S.A. The study hopes to provide insights into how organizations access multilevel governance systems and political opportunities.

Your work in the area and intimate knowledge of the policy process would be particularly useful for fully understanding the complexities involved. Your participation in the study would be completely voluntary and only involves answering a few questions as part of a short interview lasting approximately 30 – 45 minutes in person or via telephone or email correspondence. You may withdraw at any time during the study. The results of this study may be published in scientific research journal or presented at professional conferences but your name will not be used. You must be at least 18 years old to participate.

This study has been approved by the Northeastern University Institutional Review Board (# 14-03-09).

If you are interested in participating in an interview or have questions about this research study, you can call Mark Hengen at +1 (401) 261-2339 or by email mhengen2@gmail.com.

I would also appreciate if you could pass along this invitation to other colleagues whom you think may also be interested in learning about this research study.

Thank you for your time and consideration.

Sincerely,

Mark Hengen
Doctoral Student,
Sociology Department
Northeastern University
Hello, my name is Mark Hegen, a doctoral student at Northeastern University, Boston, Massachusetts, U.S.A. investigating European Union chemical policy dynamics, specifically REACH. I am working under the direction of Professor Daniel Faber of Northeastern University. The study hopes to provide insights into how organizations access multilevel governance systems and political opportunities.

I am recruiting subjects to interview especially those who have worked in the area and have intimate knowledge of the policy process. Your participation in the study would be completely voluntary and only involves answering a few questions as part of a short interview lasting approximately 30 – 45 minutes. The interview can be conducted in person or via telephone or email correspondences.

If you choose not to participate or to withdraw from the study at any time, there will be no penalty. The results of the research may be published, but your name will not be used. You must be at least 18 years old to participate.

APPROVED

[Signature]

VALID THROUGH 03/05/16

v. 2014-4-8
## Appendix I – Participant List

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annys, Erwin</td>
<td>Cefic - The European Chemical Industry Council, Belgium</td>
<td>32-2-676-72-4</td>
</tr>
<tr>
<td>Appelmlan, Leo</td>
<td>ReachCentrum</td>
<td></td>
</tr>
<tr>
<td>Austin, Andrew</td>
<td>Freshfields Bruckhaus Deringer, UK</td>
<td></td>
</tr>
<tr>
<td>Bianchini, Martina</td>
<td>Dow Chemicals</td>
<td></td>
</tr>
<tr>
<td>Blaude, Marie Noelle</td>
<td>UN</td>
<td></td>
</tr>
<tr>
<td>Bradley, Kevin</td>
<td>Nickel Institute</td>
<td></td>
</tr>
<tr>
<td>Brauks, Rhinehardt</td>
<td>European Commission DG General Enterprise</td>
<td>32-2-95-2258</td>
</tr>
<tr>
<td>Buonsante, Vito</td>
<td>ClientEarth</td>
<td></td>
</tr>
<tr>
<td>Burge, Nick</td>
<td>European Commission DG General Enterprise</td>
<td>32-2-95-2258</td>
</tr>
<tr>
<td>Cook, Ken</td>
<td>WWF</td>
<td>202-293-4800</td>
</tr>
<tr>
<td>Dancet, Geert</td>
<td>European Chemicals Agency</td>
<td>358-9-686180</td>
</tr>
<tr>
<td>Day, Catherine</td>
<td>European Commission DG General Enterprise</td>
<td>32-29-58312</td>
</tr>
<tr>
<td>Denison, Richard</td>
<td>EDF, US</td>
<td>202-387-3500</td>
</tr>
<tr>
<td>Dhein, Ellen</td>
<td>Bayer</td>
<td></td>
</tr>
<tr>
<td>Donkers, Robert</td>
<td>European Commission, DG Environment</td>
<td>32-29-58312</td>
</tr>
<tr>
<td>Ek, Lena</td>
<td>MEP</td>
<td></td>
</tr>
<tr>
<td>Ellerman, Karen</td>
<td>Minister of the Environment Denmark</td>
<td></td>
</tr>
<tr>
<td>Fasey, Andrew</td>
<td>ECHA</td>
<td></td>
</tr>
<tr>
<td>Fasey, Andrew</td>
<td>European Commission DG General Enterprise</td>
<td>32-2-95-2258</td>
</tr>
<tr>
<td>Friedrichs, Steffi</td>
<td>European Commission DG General Enterprise</td>
<td></td>
</tr>
<tr>
<td>Hargadon, Malachy</td>
<td>Delegation of the European Commission to the US</td>
<td></td>
</tr>
<tr>
<td>Harris, Tim</td>
<td>UK REACH Health and Safety Executive (HSE) UK</td>
<td></td>
</tr>
<tr>
<td>Holthius, Egbert</td>
<td>European Commission DG General Enterprise</td>
<td>32-2-95-2258</td>
</tr>
<tr>
<td>Iwaski-Riss</td>
<td>Greenpeace</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Organization</td>
<td>Phone</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------------------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Jenson-Korte, Uta</td>
<td>Cefic - The European Chemical Industry Council, Belgium</td>
<td>32-2-676-72-4</td>
</tr>
<tr>
<td>Jessen, Jacob</td>
<td>Danish Chemical Processing Industry</td>
<td></td>
</tr>
<tr>
<td>Kayser, Martin</td>
<td>BASF</td>
<td></td>
</tr>
<tr>
<td>Larsen, Henrik Soren</td>
<td>Danish EPA</td>
<td></td>
</tr>
<tr>
<td>Ligthart, Jerker</td>
<td>ChemSec</td>
<td></td>
</tr>
<tr>
<td>Maaskant, Katarina</td>
<td>IKEA</td>
<td></td>
</tr>
<tr>
<td>Malinverno, Giuseppe</td>
<td>European Regulatory Affairs Solvay SA, Italy</td>
<td></td>
</tr>
<tr>
<td>Mandery, Hubert</td>
<td>Cefic - The European Chemical Industry Council, Belgium</td>
<td></td>
</tr>
<tr>
<td>Massey, Rachel</td>
<td>TURI</td>
<td></td>
</tr>
<tr>
<td>Maurer, Silvie</td>
<td>BEUC</td>
<td></td>
</tr>
<tr>
<td>Murphy, Patrick</td>
<td>European Commission, DG Environment</td>
<td>32-29-58312</td>
</tr>
<tr>
<td>Musu, Tony</td>
<td>European Trade Confederation</td>
<td></td>
</tr>
<tr>
<td>Perenius, Lena</td>
<td>Cefic - The European Chemical Industry Council, Belgium</td>
<td>32-2-676-72-4</td>
</tr>
<tr>
<td>Podd, Barry</td>
<td>Kimberly Clark Europe, UK</td>
<td>1737736000</td>
</tr>
<tr>
<td>Potts, Michael</td>
<td>Chemicals Regulation, HSE UK</td>
<td></td>
</tr>
<tr>
<td>Rafaelli, Fulvia</td>
<td>Chemicals REACH European Commission</td>
<td>32-2-2959409</td>
</tr>
<tr>
<td>Ranggasami, Nirmala</td>
<td>The Weinberg Group LLC, Belgium</td>
<td></td>
</tr>
<tr>
<td>Roberts, Geraint</td>
<td>ChemicalWatch</td>
<td></td>
</tr>
<tr>
<td>Schaible, Christian</td>
<td>European Environment Bureau</td>
<td>32(0)223-520-10</td>
</tr>
<tr>
<td>Scheur, Stefan</td>
<td>European Environment Bureau</td>
<td>32(0)223-520-10</td>
</tr>
<tr>
<td>Schlyter, Carl</td>
<td>MEP</td>
<td></td>
</tr>
<tr>
<td>Shevchuk, Natalie</td>
<td>FMC Corporation</td>
<td>215-299-6000</td>
</tr>
<tr>
<td>Singhofen, Axel</td>
<td>European Parliament</td>
<td>32-2-284-2836</td>
</tr>
<tr>
<td>Name</td>
<td>Organization</td>
<td>Phone</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Tickner, Joel</td>
<td>UMASS Lowell</td>
<td></td>
</tr>
<tr>
<td>van der Wielen, Arnold</td>
<td>Ministry of the Environment Netherlands</td>
<td></td>
</tr>
<tr>
<td>van Keulen, Aad</td>
<td>Atrion International, EU Headquarters in the Netherlands</td>
<td></td>
</tr>
<tr>
<td>van Sloten, Rene</td>
<td>Cefic - The European Chemical Industry Council, Belgium</td>
<td>32-2-676-72-4</td>
</tr>
<tr>
<td>van Vliet, Lissette</td>
<td>Health and Environment Alliance</td>
<td></td>
</tr>
<tr>
<td>van Well, Dirk</td>
<td>Dutch Chemical Industry Association</td>
<td></td>
</tr>
<tr>
<td>Wagenknecht, Nils</td>
<td>FEU Forschungsstelle fur Europaisches Umweltrect</td>
<td></td>
</tr>
<tr>
<td>Warhurst, Michael</td>
<td>WWF</td>
<td>202-293-4800</td>
</tr>
<tr>
<td>Wengert, Steffen</td>
<td>Swiss Federal Office for Public Health</td>
<td></td>
</tr>
<tr>
<td>Wessels, Ralf</td>
<td>German Ministry of Environment</td>
<td></td>
</tr>
<tr>
<td>Wiandt, Suzanne</td>
<td>REACH BAuA</td>
<td>(49)2319071</td>
</tr>
<tr>
<td>Willmott, Graham</td>
<td>European Commission DG General Enterprise</td>
<td>32-2-2952056</td>
</tr>
<tr>
<td>Zourek, Heinz</td>
<td>European Commission DG General Enterprise</td>
<td>32-2-95-2258</td>
</tr>
</tbody>
</table>
Sources


Bilefsky, Dan. 2006. “EU sets stage for fight on chemicals; Firms fear that rules will slow business.” *The International Trade Tribune*, October 11, 2006.


European Commissin. 2015.  


European Union, EES och miljon, betankande av EG-konsekvensutredningen


McAdam, Doug, John D. McCarthy, and Mayer N. Zald (eds), *Comparative Perspectives on Social Movements: Political Opportunities, Mobilizing Structures, and Cultural Framings.* Cambridge: Cambridge University Press.


United States House of Representatives. 2004. A Special Interest Case Study: The Chemical Industry, the Bush Administration, and European Efforts to Regulate Chemicals. Washington, D.C., Committee on Government Reform – Minority Staff, Specialist Investigations Division, 1 April.


