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Developing Agroenvironmental Policies: Interactions Between Polish People and the State

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ABSTRACT OF THESIS submitted by:
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Agroenvironmental policies in new member states in CEE have been adopted to align with the EU *acquis*. As a result despite the lack of a negotiating role in the development of these policies different states have interpreted EU Directives differently as a result of domestic histories and preferences. This study examines the development of policies and activities of campaigns regarding the opposition to GMOs and conservation of agrobiodiversity in Poland. I argue that anti-GMO legislation has been developed from the bottom-up in response to public opposition while agrobiodiversity legislation results from top-down international and EU law. Although the legislation regarding the two issues has been developed in a contrasting manner, both the actual implementation of laws and values of the public reflect a resistance to change both policies and practices.

Keywords: GMOs, agrobiodiversity, Poland, multi-level governance, social capital, framing, political ecology, CEE

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1. Introduction

Poland's agroenvironmental legislation has been shaped both by a large rural population, a socialist past and recent accession to the European Union (EU). Poland has the largest rural population in the EU and a large number of small family farms that were retained throughout and following the socialist period. The political and economic transition to a democratic market economy in 1989, followed by EU accession in 2004 have interacted with the large rural population, Polish values, and perceptions of rural life to shape the development of agroenvironmental legislation.

By focusing on two specific issues – conservation of agrobiodiversity and genetically-modified organisms (GMOs) – I will examine the ways that the Polish people and state interact with each other and the world to develop and implement agroenvironmental policies. I will discuss how GMOs have been met with a high-level of resistance by society and how, as a result of bottom-up initiatives, Poland has passed some of the most progressive anti-GMO legislation in the world. I will then contrast this societal resistance toward GMOs and the progressive legislation that accompanies this with the issue of preserving agrobiodiversity. Unlike in Western Europe, where the rejection of GMOs and promotion of agrobiodiversity generally fall together under one banner of environmental progressiveness, the preservation of agrobiodiversity garners little public support in Poland. As such policy has developed in a top-down manner with a basis in international and European Union (EU) legislation.

Campaigns working to address these issues must interact with public opinion, beliefs, and the legacy of a socialist past as well as governmental institutions on both a national and supranational level. The local narratives of nation and nature come in contrast to wider global narratives, leading to incongruities in the development and implementation of policies. By examining the laws, public beliefs and the strategies of campaigns surrounding these issues I hope to reveal ways in which Poland is both similar to and different from other Central and Eastern European (CEE) countries and what this reveals about the difficulties and potential for developing agroenvironmental policy in the region.

To introduce the subject I will briefly describe the Polish agricultural sector, the concept of political ecology and the relevance of the agroenvironmental issues chosen for this study. I will then discuss the political, cultural and societal facets of these issues in more detail, elaborating on the ways these components interact in the discourse and policy regarding GMOs and the conservation of agrobiodiversity in Poland.

1.1 Background on Polish Agriculture

Poland is a unique case in the CEE region since it was the only state where the majority of agricultural land was not collectivized. This occurred as a result of the refusal of rural communities to give up their land, and a Polish socialist government that was resistant to Soviet policies (Hann 1985, Szurek 1987). Until 1989, the average farm size was only five hectares (ha), and inputs and outputs for Polish agriculture were largely controlled and subsidized by the state with the goal of food self-sufficiency (Zawojska 2010).

Since 1990 and the fall of socialism, these subsidies have been phased out, and Polish farmers have had to integrate into a market economy and adapt to the EU Common Agricultural Policy (CAP). Despite these huge structural changes and a decrease of 11% of the workforce employed in agriculture from 2000-2009, Poland still has the largest agricultural workforce in the EU (Eurostat 2010, Ministry of Agriculture and Rural Development 2009).

The average size of agricultural holdings today is 10 ha, with over half of the holdings functioning only or primarily for personal and family use, employing traditional production practices with limited inputs (Ministry of Agriculture and Rural Development 2009). Since 1989, there has been an increase in large landholdings (> 20 ha). At the same time, however, there has also been an increase in the number of small landholdings (1-7 ha). Meanwhile, the number of mid-sized farms has decreased due to an inability to compete in the market economy (Dannenburg and Kuemmerle 2010). Today, Poland has the largest agricultural population in the EU. The small landholdings and large population mean agroenvironmental policies have a large impact on rural life, and the size of its population makes changes to Poland's GMO and agrobiodiversity policies significant to the EU.

1.2 Significance of Agroenvironmental Issues

In recent decades an increasing number of agroenvironmental policies have come into effect worldwide. Greater public awareness of issues of resource scarcity, environmental degradation, and population growth have resulted in an increased interest in sustainable agriculture (Altieri 1989). The introduction of GMOs and the development of

agrobiodiversity conservation programs have raised questions about how to develop more sustainable agriculture, with GMO supporters presenting them as a way to decrease inputs while GMO opponents maintain that they pose a threat to biodiversity and are unsustainable (Levidow and Boschert 2008, McAfee 2003).

By choosing two topical issues in agroenvironmental policy I hope to illustrate the complexity of the relationship between these issues and show how in Poland a rift between Polish public opinion and the philosophy informing EU policy formation have lead opponents of GMOs and proponents of agrobiodiversity to adopt different advocacy strategies. Furthermore, I seek to demonstrate the ways in which these strategies are and are not effective in Poland.

1.2.1 GMOs as 'Objects of Contention'

I have chosen GMOs and agrobiodiversity as topical issues that have sparked interdisciplinary discussion and debate both globally and in the region (Veteto and Skabo 2009, Muller 2006). Concurrent with the transition in CEE from socialism to EU member states, both issues have been major areas of focus in the agroenvironmental discourse of the academic community, corporations, policy makers, non-state actors, the media and the public for the last twenty years

GMOs refer to organisms in which genetic material has been altered in some way that does not occur naturally and allows for selected individual genes to be transferred from one organism to another and also to a nonrelated species (WHO 2002). Genetic modification is also used for industrial and medical purposes, but in the context of this

paper I will be referring to "green" or agricultural GMOs. Most GMOs used in agriculture today have been developed to be resistant to pests and/or to increase yields.

GMOs were first introduced commercially in 1996 and have provoked controversy and debate worldwide. The debate surrounding GMOs involves many actors: scientists, multinational corporations, policy makers, social movements, the media and the public and highlights many societal and political controversies (Heller and Escobar 2003, Mueller 2006). Muller presents GMOs as a 'global object of contention,' provoking debates about risks to human health and the environment, globalization, the ethics of genetic engineering and the role of government in negotiating these conflicts. In this paper, I will not be discussing the scientific debates surrounding GMOs in detail but will be considering the discourse surrounding GMOs and the policies that have developed to regulate their use.

1.2.2 Conservation of Agrobiodiversity

Agrobiodiversity refers to "the genetic variation between the species, breeds cultivars and individuals of animal, plant and microbial species that have been domesticated, often including their immediate wild relatives" (Heywood 1995). Since the 1900s, 90 % of the worlds' crop species have been lost and half of the species of domestic animals have been lost as farmers shift to genetically uniform high-yielding varieties (FAO 2004). The acknowledgement of the rapid loss of agrobiodiversity has led to government programs and campaigns to protect the species that remain.

The conservation of agrobiodiversity is not as contentious as the issue of GMOs, but it remains a multi-faceted concept that uses traditional practices and local varieties to promote biodiversity (Altieri and Merrick 1987, Jarvis *et al.* 2000). As a valued aspect of biodiversity, international bodies and national governments have developed policies to conserve agrobiodiversity. Indeed, the global debate over agrobiodiversity has been focused less on whether or not agrobiodiversity should be preserved and more over what the most effective strategies are for doing this.

Agrobiodiversity can be conserved in two main ways – *ex-situ* (in gene banks) and *in-situ* (on-farm). While *ex-situ* conservation is important to prevent the permanent loss of species and to preserve genetic resources, *in-situ* conservation conserves processes of evolution and adaptation at all levels of biodiversity and maintains provisions for ecosystem services, making the practice incredibly valuable (Jarvis *et al.* 2000, Brush 2000, Maxsted, *et al.* 1997).

Through the use of traditional plant and animal varieties and sustainable methods of agriculture communities and ecosystems benefit through maximized production from marginal lands, managing levels of risk and uncertainty, and increased self-sufficiency of farmers without use of purchased inputs (Altieri 1987, Jarvis 1999).

At the same time, however, the conservation of agrobiodiversity is threatened by increased use of GMOs as they create monocultures and can lead to contamination

(Levidow and Boschert 2008), highlighting the complex interplay between the two issues.

1.3 Political Ecology

Political ecology serves as a broad interdisciplinary framework that is used to describe political, economic and social factors and their interaction with environmental issues. The variety of definitions and usages of the term reveals the complexities of the discipline as well as the situations to which political ecology is applied (Robbins 2004). Political ecology can be contrasted with 'apolitical ecology' as it regards 'science' in an environmental context as socially and politically situated rather than unambiguous or objective (Robbins 2004, Stott and Sullivan 2000).

Most of the work in this field has focused on developing countries, but there is a growing literature that focuses on CEE, as the countries in this region work to develop environmental narratives that resonate with populations that come from a legacy of occupation and communism and have now emerged into a world that is now dominated by Western aid and influence (Aistara 2009, Schwartz 2005, Mincyte 2011, Franklin 2002). By examining current debates surrounding agrobiodiversity and anti-GMO campaigns in Poland I will show how Western narratives have shaped legislation and perceptions. In doing so I will also reveal some of the ways that these imported perceptions are difficult to apply to the Polish context and CEE more broadly.

Since the end of communism in 1989, Eastern Europe has had an influx of Western aid

directed towards the environmental sector. With this aid come donors' narratives of nature and the role humans play within it (Stott and Sullivan 2000, Schwartz 2005). Stout and Sullivan address the ways that the "creation, legitimization and contestation of environmental narratives," and the control over those narratives translates into power over land and natural resources. Despite the incongruities of these narratives with local conceptions of nature, the acceptance of Western aid leads countries to adopt Western narratives and visions of how environmental protection and sustainability should become manifest (Gorton *et al.* 2005, Stott and Sullivan 2000).

Following the fall of socialism, Poland and its neighbors underwent a rapid series of political and economic transitions that changed the political landscape (Bruszt 2008, Verdery 1996). At the same time, they worked quickly to take advantage of an inflow of international aid and undertook ambitious environmental reforms. This led first to the adoption and ratification of a number of international treaties, complete with national strategies and action plans (e.g. the Convention on Biological Diversity, International Treaty on Plant Genetic Resources).

Following this came the prospect of EU accession, which required the rapid harmonization of national environmental law to meet the conditions of the *acquis communitaire* (the EU body of law). Nevertheless, swift formal adoption of new policies that comply with international and supranational legislation has not fully aligned Western and local narratives of how nature should be managed, and indeed, the implementation and interpretation of these laws continues to vary widely as a result of differences in

national history and politics (Bruszt 2008, Gorton, Lowe and Zellei, 2005, Jehliâka and Tickle, 2004). This is further complicated by the fact that these Western and international narratives, shaped by relationship with other actors and the development of further scientific research, are themselves continually evolving (Stogstad 2008, Vogler 1999). The nature of the relationship between the EU and member states reveals the power play between supranational and national government, especially in CEE where states did not play a negotiating role in the development of the *acquis* and are still not powerful members in developing policy. This is especially relevant when it is considered that Poland, with no little input the development of the current CAP has the largest rural population in the EU.

Strength of the political ecology framework lies in its ability to incorporate concepts from a wide range of disciplines, all using difficult approaches that when combined bring perspective and nuance to the complex reality of environmental issues. While working under the umbrella of political ecology, I will examine the political, cultural, and societal factors that are at play in the development of laws, public opinion and campaigns surrounding the issues of GMOs and agrobiodiversity.

After introducing my methods I will discuss the laws and campaigns to oppose GMOs and conserve agrobiodiversity in three sections. In Chapter 3, I introduce the laws regarding these issues and the way they have formed through negotiations between levels of government addressing the question: How do citizens, non-state actors, local, regional, national and supranational actors negotiate to shape policy on GMOs and

agrobiodiversity? Next, in Chapter 4 I examine the way that societal beliefs and values are mobilized by campaigns to shape policies asking: How do global narratives surrounding agrobiodiversity and GMO campaigns resonate differently with Polish peoples' understanding of the role of humans and nature in the environment? Then in Chapter 5, I discuss the concept of social capital and the way campaigns operate in the context of post-socialist Poland by asking: How have the social networks formed throughout and following socialism adapted throughout transition and how does this impact the effectiveness of current agroenvironmental campaigns? In the conclusion, I will highlight what strategies have been effective in opposing GMOs and conserving agrobiodiversity in Poland and what this indicates about the formation of agroenvironmental laws in Poland and the region.

2. Methodology

2.1 Motivation

Sustainable agriculture and CEE Europe are long held interests of mine and I came to Hungary for my graduate studies for this reason. My background in political science motivated by an interest in social issues led me to study environmental issues, especially those pertaining to agriculture, where I can explore my political, social and ecological interests.

I first visited Poland for four week in July 2010 as a volunteer in the Worldwide Workers on Organic Farms (WWOOF) program. During this time I learned about both the practical day-to-day lives of organic farmers and also about their interaction with each other, the government and their communities. This inspired me to further explore the history and culture that have resulted in such vibrant rural communities. I was curious to understand the strategies and motivations of campaigns opposing GMOs and promoting the conservation of agrobiodiversity, two issues that seemed linked in my mind but disjointed in Polish legislation and perception. I also wanted to explore the way these issues interact in a state with such a resilient history of small individual farms. My research was based on qualitative research, literature review, discourse analysis and my experience as an observer. The specific research methods chosen are elaborated below.

2.1.1 Literature Review

My theoretical framework is situated in political ecology, as described in the introduction, because this framework allows me to explore the interactions between political, social and environmental issues. By examining the issues of GMOs and

agrobiodiversity through the frameworks of multi-level governance, framing, and social capital, I was able to elaborate on the political, cultural and social aspects of these issues in the Polish context. Literature was consulted regarding these issues at global, regional and national levels when available.

2.1.2 Data Collection

In July 2010, as a volunteer in the WWOOF program, I carried out a preliminary research visit to Poland. During that time I lived and worked on two farms – Eco-Frontiers Ranch in southeast Poland (Czarny Gorna) and Grzybow Farm, headquarters of the Ziarno Association near Warsaw (Grzybow). During this time I learned about the day-to-day processes on a farm as well as some of the beliefs and values of organic farmers I met.

While I learned a lot during this visit I was left with questions of what the interaction of agroenvironmental campaigns with the government looked like, how farmers organized to facilitate change and what their motivations were, and how Polish people worked to preserve their unique culture and heritage while engaging in agroenvironmental discourses.

In March 2011, I returned to Poland hoping to answer some of these questions. Using the contacts established during my preliminary visit and my participation in the 'Let's Liberate Diversity' conference in Szeged, Hungary (February 24-26, 2011) I interviewed activists from the three primary organizations working on anti-GMO and conservation of agrobiodiversity campaigns as well as activists working on the same issues in other organizations and farmers both affiliated and unaffiliated with the campaigns.

The primary groups interviewed were the International Coalition to Protect the Polish Countryside (ICPCC), Dla Dawnych Odiman i Ras/Association for Old Varieties and Breeds (DDOiR), and Społeczny Instytut Ekologiczny/Social Ecological Institute (SIE). These groups were selected as primary actors in the campaigns discussed. ICPPC has been a galvanizing force in the campaign against GMOs, DDOiR is the only Polish group working specifically on agrobiodiversity and SIE has been involved in both campaigns. Representatives of Heifer International, Ziarno Association and EKOLAND, the Association of Organic Food Producers, were also interviewed on the basis of personal recommendation and for their work related to anti-GMO or conservation of agrobiodiversity campaigns. Farmers interviewed were determined through personal connections and introductions with the goal of representing a wide range of actors.

My diverse pool of interviewees were located throughout central and southern Poland with interviews taking place in Stryszow, Miechow, Grzybow, Male Lezno, Pokrzydowo, and Warsaw, Poland.

During this visit I was a participant observer in daily activities of farmers and activists spending time at three farms, interviewing members of six organizations that work on the issues and nine farmers, both affiliated and unaffiliated with the campaigns. Personal observations, experiences and reflection are also included.

2.1.3 Interviews

My primary method of data collection was through interviews with leaders of my three primary organizations, other activists working on rural issues, and farmers. Primary

interviewees were contacted through website contacts as well as through contacts established during my first trip to Poland (summer 2010) and people I met at the 'Let's Liberate Diversity' conference in Szeged, Hungary (February 24-26, 2011). Further interviewees were selected based on 'snowball sampling' (Marshall 1996) where established contacts introduced me to other actors and farmers. Most interviews were semi-structured and lasted between 30-90 minutes, while other interviews were informal conversations that took place for example while feeding goats or eating meals together.

Qualitative research and is valuable because it allows us to strive to understand the experience of others and the meaning they make of those experiences and because the social world doesn't exist independent of individual subjective understandings, (Seidman 1998, Ritchie and Lewis 2003). In researching the perceptions, campaigns, and strategies of agroenvironmental groups in Poland, it was necessary for me to use qualitative research to better understand personal experiences and motivations and how those shaped the interviewees' experiences.

Interviewees were asked for oral consent and given information sheets on the nature of the project. English speaking individuals who were involved with the campaigns or introduced to me by interviewees served as translators. All subjects have been given pseudonyms when quoted.

2.1.4 Discourse Analysis

The websites and publications produced by the organizations studied served as a source of detailed information on specific of campaigns. The qualitative analysis of this public information was especially useful in examining the discourse and strategies used to frame the issues for the public and was useful for me as official documents open up new sources of understanding while being subjective in nature (Taylor and Bogdan 1984).

Discourse analysis allows an elaboration of the ways that actions are socially constructed, assuming all objects and actions to be meaningful (Jorgenson and Phillips 2002, Hawarth and Stravrakakis 2000). Discourses, defined as a "series of meaningful practices that form the identities of subjects and objects" (Hawarth and Stravrakakis 2000) reveal the social consequences of different social actions (Burr 1995).

When examining objects such as GMOs or genetic resources (in agrobiodiversity) in a social context requires discourse analysis to discuss the significance of these objects. The actions of campaigns and their motivations also shape the discourse and define the meaning of the objects within society. By using history, laws, interviews, observations, websites, and publications I have examined the discourse surrounding these issues to discuss the way these issues are interpreted by Polish society.

2.2 Limitations

As is always the case, limitations were present in this study. The primary limitation was time as interviewees were located in villages throughout rural Poland. Accommodating

the schedules of interviewees within the research period limited the amount of people with whom I was able to speak as well as the amount of time spent with each organization or community. Another important limitation was language. While most of my interviewees were kind enough to accommodate my very limited knowledge of the Polish language, communication barriers prevented me from interviewing some people in-depth. Understanding the limitations of language, translators were used whenever possible, allwoing me to speak with farmers with whom I would not have been able to communicate otherwise.

2.3 Overview

Through research based on literature review, qualitative analysis of interviews, discourse analysis and my experience as an observer I will hope to add to an understanding of the subjective factors that influence and motivate campaign organization and effectiveness in anti-GMO and conservation of agrobiodiversity campaigns in Poland. I also hope to highlight similarities between these campaigns and other campaigns in the region while exploring the specific context that makes the Polish situation unique.

3 Deliberation in Formation of Agroenvironmental Policies

The process of EU enlargement has led to new forms of governance that require new frameworks for analysis. The concept of multi-level governance was originally described as a "system of continuous negotiation among nested governments at several territorial tiers-supranational, national, regional and local" but is now used to describe relations in the EU more generally with the term being used by EU decision makers and in official EU publications (Marks *et al.* 1996, Hooghe and Marks 2003.)

The EU is involved in an ongoing process of widening and deepening. Widening refers to the expansion to include new member states and deepening refers to the breadth of policies (such as the inclusion of social and environmental policy) governed by the EU instead of national governments. As the European Union deepens, individual states are forced to cede power to supranational authorities but also encouraged to increase the autonomy of regional authorities and participation of non-state actors (Bruszt 2008, Hooghe and Marks 2003). The study of interactions between these actors is new and constantly evolving, along with the EU itself. Enlargement has resulted in new discourses about the role of the EU, legitimacy of EU authority and autonomy of member states (Stogstad 2008, Bruszt 2008).

By examining the development of agroenvironmental legislation in Poland I hope to illustrate the interactions and conflicts that result from negotiations between levels in

multi-level governance by asking the following question:

How do citizens, non-state actors, local, regional, national and supranational actors negotiate to shape policy on GMOs and the conservation of agrobiodiversity? I will highlight differences in decision-making and implementation specific to two agro-environmental issues by examining the negotiations between levels of government, from the interaction between international bodies and the EU, through to national and local policies in Poland. I will argue that anti-GMO campaigns have used strong local support as a basis to pass strict regional and national bans but due to conflicts with the EU and difficulties establishing enforcement mechanisms these have not been implemented. In contrast, I will argue that policies promoting agrobiodiversity originate in international treaties and EU legislation and while these policies have been transposed nationally, implementation is difficult as environmental policy often conflicts with economic factors and is met with societal reluctance.

3.1. Multi-level Governance

The development of EU environmental policy has been examined using the framework of multi-level governance by a number of scholars (Kurzer and Cooper 2007, Jehlicka and Tickle, 2004, Falkner 2005). However, an understanding of environmental policy in the CEE countries as the EU widens requires a new approach (Jehlicka and Tickle, 2004). As a result, a new discourse is emerging to address the specific obstacles to governance present in post-socialist states (Sikor 2005, Gatzweiler 2005, Jehlicka and Tickle, 2004). This discourse is necessary as the decision-making process in these countries is

complicated by socialist histories and the speed with which they worked to adopt the *acquis communitaire* or EU body of law (Gorton, Lowe and Zellei 2005, Zellei 2001).

Instead of developing over time as a process of negotiation, CEE countries hastily adopted policies already established (Bruszt 2008, Zellei 2001). While the goal of legal harmonization was reached as a condition of accession, the forms of multi-level governance adopted and the laws themselves differ 'not in degree but kind' (Bruszt 2008). Despite commonalities between these states, such as a history of poor environmental policy and the desire to 'catch up' economically, the process occurs differently in different countries as the result of distinct national characteristics (Jehlicka and Tickle 2000, Gorton *et al.* 2005).

Through the use of incentives, the European Commission has tried to shape reforms in a uniform manner, but actual change has been influenced heavily by domestic histories and preferences, as well as by relations with neighboring states and other EU members (Bruszt 2008, Gorton *et al.* 2005).

The interaction of various levels of government will differ within each country, on a case-by-case basis. By discussing policies developed for two related agro-environmental issues in Poland, I will show how the interactions between different actors can lead to very different outcomes even in the context of one state. The processes of transposition, implementation, and enforcement of anti-GMO and agrobiodiversity legislation reflect resistance to change, varied interpretation of EU principles and the discrepancies between

the legal status and practical implementation of policies. I will introduce some of the primary laws in place and the manner in which they developed in the EU and Poland through a process of negotiation between levels.

3.2. GMO Legislation in the EU and Poland

GMO legislation has developed through a series of negotiations by local, regional, national and supranational bodies. Both the EU and Poland have constantly adapted policies over the course of time to respond to the interests of various parties. The EU has had to respond to the preferences of member states as well as international bodies, whereas the Polish government must respond to constituents and the developing legislation of the EU.

3.2.1. Development of GMO Regulation in the European Union

Since their conception, the EU has been developing policy to regulate the use of GMOs within member states. Within each member state, GMOs are received differently, with different actors - including citizens, non-governmental organizations (NGOs), corporations, and local, regional and national governments, taking part in the negotiation of policies.

These negotiations shape the specific position of each state regarding the issue of GMOs as well as the amount of regulatory authority members are willing to cede to supranational bodies (Kurzer and Cooper 2007, Stogstad 2008). Between the various

states, another process of negotiation must occur to develop EU policy, which must then be positioned globally to comply with international agreements such as obligations to the Convention on Biological Diversity (CBD) and the World Trade Organization (WTO). This has led to an evolving EU stance on GMOs that both determined and is determined by the preferences of individual states.

Since GMOs were introduced in the market in 1996, regulatory bodies have developed laws to manage their use. The United States (US) quickly embraced this new technology, regulating GMOs in the same manner as other conventional seeds employing the concept of "substantial equivalence" based on the concept that if a food is substantially equivalent in composition and nutritional value then it can be regulated in the same manner as the conventional food (SOT 2003). The EU has taken a different approach, invoking the precautionary principle. This approach requires new technology to be examined with skepticism and indicates less willingness to have scientists as the sole authority in their regulation (Gaskell *et al.* 1999, Stogstad 2008). Additionally, as a body of 27 states, the EU must negotiate between national positions on GMOs.

Regulation of GMOs began at the EU level in 1990, with Directive 90/220/EC on the deliberate release of GMOs at the same time some member states were beginning to draft national legislation. In 1990, MON810, a variety of GM maize was approved despite the opposition of all but one member state (Stogstad 2008). Member states as well as farm, consumer and environmental groups who were unhappy with this pressed for more strict regulation at the same time that international negotiations on the Cartegena Protocol on

Biosafety were taking place (Bradley 1998, Meyer 2007). The negotiations between levels resulted in a change in approach, and by 1999, the EU had developed policies resulting in a *de facto* moratorium (Meyer 2007).

In April 2001, with the approval of Directive 2001/18/EC on the deliberate release of GMOs, (repealing the previous Directive) a procedure was developed for the deliberate release of GMOs and their introduction to the market. Consent could be granted for individual products after being assessed on a case-by-case basis, by the European Food and Safety Authority (EFSA) with compulsory monitoring schemes put into place. Public consultation and labeling of GMO products were also required as a response to demands from lower levels, such as member states.

Adjusting policy to the preferences of lower levels resulted in conflicts with international actors, however. In May 2003, the US along with Canada, Argentina and other third-parties challenged the EU at the WTO, claiming that the EU policies were unjustly affecting agricultural and food imports.

In the three years it took for the WTO to reach a decision, the EU continued to pass stricter regulation on GMOs. The Cartegena Protocol on Biosafety was transposed into EU law (Regulation EC No 1946/2003), stricter labeling requirements were adopted (Regulation EC No 1829/2003 and No 1830/2003) and recommendations were given regarding national coexistence legislation (Recommendation 2006/556/EC). When the WTO finally reached decision they did not explicitly state that bans cannot be adopted

but instead criticized the risk assessments employed by EU member states demanding that bans be based on scientific knowledge of risks (Meyer 2007, Stogstad 2008).

Legislation on GMOs in the EU is still in the process of changing to respond to the actors involved. The high resistance to GM crops in a number of member states contrasted with their use and adoption in others, coupled with international pressure to open markets has resulted in a situation where the EU has preceded cautiously in the development of regulation towards GMOs. Policy is still evolving, however and in March 2010, the EU approved decisions on five GM crops. This came at the same time as an announcement that a new authorization system is being developed that will allow member states more freedom in deciding whether or not to cultivate GMOs on their territory (EUROPA 2010).

3.2.2. Regulation of GMOs in Poland

Polish legislation regarding GMOs has been developed along with and in opposition to EU policy – subject to supranational bodies, as well as the preferences of the Polish public. By examining three main laws regarding GMOs in Poland, I will show that despite the strong anti-GMO stance taken by the Polish government at the insistence of the public, resistance to change, different interpretations of EU legislation and difficulties in implementation have made these laws ineffective.

Official legislation regarding GMOs was first adopted in 1997 and went into effect in 1999, five years before Poland's entry into the EU and soon after the first shipment of

GMOs reached Europe in 1996. This legislation was intended to create regulations regarding direct release, introduction to the market, monitoring and labeling of products containing GMOs. However, according to even the Ministry of the Environment the regulation was "just a paper tiger" with field trials taking place and unlabelled GM feed being imported (ANPED 2000, Meyer 2007). This lax enforcement spurred the response of community organizations and NGOs who called for tougher regulation and labeling requirements.

NGOs and community groups organized campaigns to restrict the use of these products. Initially this took the form of the adoption of voluntary "GMO-free" declarations. The first ban consisted of eleven farmers in the Małopolska region of Podkarpackie province during August 2004, and developed into a ban throughout the province (Meyer 2007). After achieving local success higher levels were targeted. Aiming at provinces' administration and politicians, a nationwide campaign led by ICPPC was launched and in February 2006, after only twenty months of campaigning, all sixteen provinces of Poland had adopted GMO-free declarations (ICPPC 2006). Using the momentum behind the regional campaigns pressure was put on national government to draft legislation.

As a result of public outcry and the need to harmonize national law with EU Directives, the Polish parliament adopted several laws regarding GMOs establishing the conditions for contained use and banning sale of seed and feed. These laws were intended to present a clear message of the Polish position against GMOs. To understand how the Polish government attempted to enact strict regulations on GMOs and why that has not been

more effective, I will now describe the laws established, the challenges of these laws by the EU, and inadequacies in implementation and enforcement.

There are three main laws I will discuss that have been adopted to regulate the use of GMOs in Poland:

1) Act of 22 June 2001 on Genetically Modified Organisms (Act on GMOs): adopted to harmonize national legislation with EU Directive 2001/18/EC, created a committee of ministers, scientists and representatives of industry and civil society responsible for advising the Minister of Environment on decisions concerning the release, use, marketing, export and transit of GMOs.
2) Law of the 27 April 2006 - Revision of Seed Law and Plant Protection Law (Seed Law): prohibited the import of GM seeds to Poland and excluded GM seeds and plants from being listed in the national plant record.
3) Law of 22 August 2006 on animal feed (Feed Law): prohibited the production, sale and marketing of GM animal feed.

I will now elaborate on the formation of these laws through negotiations of actors at various levels. I will consider the government's different interpretations of EU legislation, resistance to systemic change, and the difficulties of implementation to highlight the challenges faced by Poland and other CEE countries as they develop policies to regulate the use of GMOs.

3.2.2.1. Interpreting EU Directives

As mentioned Poland has adopted the EU environmental *acquis* as part of the accession process and this has included transposing EU Directives on GMOs. The Polish Act on GMOs is the main law designed to regulate "contained use" by establishing an advisory board to make decision regarding and regulate the use of GMOs. The EU has recently challenged the implementation of this law, however. According to the EU the Polish implementation fails to require all field trials to be reported to national authorities and lacks mechanisms to properly assess and classify potential risk. While Poland has drafted a revision to the Law on GMOs, the Council is still not satisfied due to the lack of a coherent timeline. This case was referred to the European Court of Justice in March 2011. The EU is also unsatisfied with regulatory measures to record, monitor, and control which are included in the Polish transposition of the legislation but have not been implemented.

Despite transposition into national law, the Polish Law on GMOs has been ineffective. Polish authorities lacked decision-making power in the formation of these laws and were required to adopt legislation that was drafted through negotiations of member states before the time of accession. This situation reflects how one Directive can have many interpretations (Gorton *et al.* 2005) as well as the lag in implementation common in CEE, especially with regards to environmental legislation (Falkner and Treib 2003, Zellei 2001).

Poland has also repeatedly come into conflict with the EU regarding the passage of Polish laws that violate EU Directives in the forms of the Seed and Feed Laws.

The passage of the Seed Law, which banned the marketing and sale of GMOs in Poland was referred to the ECJ by the EU which claimed that by banning all GMOs for all time, Poland was not adhering to EU procedures on "contained release" found in Directive 2001/18/EC. According to Article 23, known as the 'safeguard clause,' individual member states may restrict or prohibit the use or sale of individual GM products but this must be done on a case-by-case basis justified by risks to human health or the environment. Poland's proposed ban does meet these criteria and the ECJ supported the EC in their decision made in July 2009.

Like the Seed Act, the Animal Feed law has also been challenged by the EU. By attempting to ban the marketing of GM feed at a national, rather than EU level, the EC claims the law violates Regulation 1829/2003/EC which created a single authorization procedure for imports throughout the EU based on independent risk assessments (for each specific product) carried out by the EFSA. By circumventing this provision the EC has found Poland to be creating a legal uncertainty and breaching its obligations under EU law. The case was submitted to the ECJ in March 2010 and a decision has not yet been reached.

Both of the Polish laws banning GMOs violate EU regulations, which was clear even at the time of adoption. Whether the Polish government was trying to pass effective legislation, appease the public, or change EU policy regarding GMOs is unclear. This could be an example, like the implementation of LEADER where officials are misunderstanding EU principles, or it could be an example of the Polish government's

reluctance to take a strong stance preferring to create regulations that are unenforceable (Furmankiewicz, *et al* 2010). In an interview with the Warsaw Business Journal, Professor Andrzej Aniol, a member of the Polish committee to regulate GMOs, said Polish authorities prefer leaving the decision-making regarding GMOs in the hands of the EU as it absolves them of responsibility (4 October 2010).

3.2.2.2 Resistance to Change

The Polish central government has a strong history of retaining power, even throughout socialism (Hann 1985). This has been reflected in the adoption of laws that maintain control at the national level or can be overseen by national authorities (Furmankiewicz, *et a.l* 2010, Gorton *et al.* 2005). As a result of retained autonomy during socialism, many of the decision-makers and institutions from that period remained even after the change of government in 1989 (Furmankiewicz, *et al* 2010). While the continuity in the power structure made adoption of the *acquis* a swift process it also led to the formulation of policy that reflected a reluctance to make systemic change.

While the campaign to persuade all regions to declare themselves GMO-free in 2004 was a success, these declarations lacked legal force, as provinces and regions do not possess the authority to make decisions regarding GMOs and this is a matter of central government under Polish law (Meyer 2007). Using the momentum behind the GMO campaign, however, regional authorities pressed national representatives to draft legislation in the form of the Seed Act and Feed Act.

While opposition to GMOs was strong several years ago, the series of legal disputes, a growing pro-GMO lobby and a change of the Minister of Environment along with other key officials have caused shifts in the debate. Just two weeks before the ban on GM feed was to be implemented the date was postponed until 2013 as the result of the lobbying efforts of a coalition of Polish and U.S. trade associations (Meyer 2007). Although legislation was passed nationally the government was been slow to implement these new laws indicating the central government's reluctance to engage in systemic change that shares decision-making with lower levels of government. The conflict with the EU over implementation of supranational Directives further reflects the hesitancy of the Polish government to enforce new laws, which is further illustrated by the lack of implementation.

3.2.2.3 The Difference Between the Legal and the Actual

While laws regulating the release and use of GMOs have been passed, implementation is virtually non-existent. Despite Poland's strong stance against GMOs in the form of voluntary GMO-free zones and legislative attempts to prohibit their use, there are an estimated 3000 ha of unauthorized GM planting in Poland (Noisette 2008).

When the Seed Act was passed it felt like a "big victory" to members of ICPPC who interpreted the ban as a success but this feeling was short-lived as they soon realized that only sale and marketing had been explicitly prevented, not cultivation. The Seed Law contained a loophole that undermined its effectiveness – while prohibiting the sale, and marketing of GM crops it did not specifically prohibit planting. This loophole is made

explicit in a USDA document which states “According to a Polish government contact, the legislation does not ban the planting of biotech seed varieties registered in the EU seed catalogue and purchased outside Poland” (USDA 2006) and implies that Polish legislators intentionally left this option open to weaken the legislation.

Using this caveat, representatives from Monsanto and the Polish Lobby Association for Biotechnologies offered farmers addresses and contact details of GMO seed suppliers in Slovakia and Czech Republic resulting in the estimated 3000 ha of GM crops, a number which has remained static following a tenfold increase in known GM cropland in 2007 (infoMG 2008, FOE 2011). It is unknown to what extent GMOs are currently present in Poland and specific information is difficult to find. According to the Info Center on Genetically Modified Organisms (infOMG) Poland is both a country that allows the planting of MON810 and has banned it. Additionally, despite the pending Feed Ban, all imported feed in Poland, unless marked otherwise, contains GMOs according to the people I spoke with at ICPPC.

Despite the passage of legislation more progressive than that of the EU the Polish government has failed to implement these laws and has not even established the regulatory mechanisms necessary to monitor known plantings. This renders all laws prohibiting GMOs ineffective and the remain just “paper tigers.”

3.2.3 The Current State of GMO Regulation

After passing some of the most stringent anti-GMO legislation in the world, Poland seems to have lost its momentum in the campaign against GMOs. The laws adopted by the Polish government were far-reaching and extensive, attempting to ban all GM crops and imported feed, indefinitely, but this has not happened. Instead Poland is left with voluntary bans and laws in the process of being challenged with very little in the way of enforcement mechanisms. The inability of regional government to pass anti-GMO legislation under Polish law is an example of the central government's reluctance to engage in systemic change that shares decision-making with lower levels of government.

The motivations of the government in the passage of the Seed and Feed Laws, which clearly violated EU Directives is curious. This could be an example, like the implementation of LEADER where officials are misunderstanding EU principles, or it could be an example of the Polish government's reluctance to take a strong stance (Furmankiewicz, *et al* 2010).

While the central government seems intent at preventing decision making at higher (EU) or lower (regional) levels, they have failed to create mechanisms for implementation and enforcement of the nationally adopted laws on GMOs, Seed Act and Feed Ban. Despite the laws passed and ECJ cases, the extent of GMOs being cultivated is still unknown, highlighting the divide between the legal status and realities of implementation.

Accountable to EU harmonization policy, the Polish national government has ceded a large amount of control regarding their ability to regulate genetically modified crops and has come into conflict with the European Commission on several occasions as result.

The EU and Poland are both adapting laws continually, representing the process of negotiation between levels, but complicating the development of mechanisms for implementation. When I spoke with a leader of ICPPC about their campaigns against GMOs, she felt that the original GMO-free declarations indicated an interest in promoting traditional agriculture, by both farmers and regional authorities. In her opinion, public opinion remains anti-GMO but powerful political forces consisting of corporations, and politicians and scientists influenced by corporations, are using their money and resources to sway the debate. It has become obvious to her that even when legislative battles are won, success could only come with proper implementation and a commitment by leaders. Currently, ICPPC is working on proposing a 10 year moratorium on GMOs, but even if successfully such a moratorium would again violate current EU Directives.

At all levels, from local communities to supranational bodies, attitudes towards GMOs are debated and in flux. Currently it is unknown what stance Poland or the EU will take in the future. Regardless, the examination of the interactions between levels in this case reveals many of the complications of multi-level governance. Despite the hesitancy of the Polish people to embrace GMOs and the highly organized and focused efforts of campaigns to encourage legislation limiting and controlling the use of GMOs, the

interests of politicians and lobbyists at the national and supranational levels have taken precedence.

3.3. Agrobiodiversity legislation in the EU and Poland

Agro-biodiversity is a multi-faceted issue. Efforts to conserve agro-biodiversity are entwined with traditional farming practices, cultural values, organics and environmental policies encouraging reduction of inputs, better land management, and conservation (Jarvis *et al.* 2000). I have shown that anti-GMO policy is the result of public outcry and action from lower levels of government. I will now show how agrobiodiversity policy is shaped through international agreements that are transposed into EU and then national law.

I will argue that policies promoting agro-biodiversity originate in international treaties and EU legislation, rather than at the grass-roots level. While these policies have been transposed nationally, implementation is difficult, as environmental policy often conflicts with economic factors and is met with societal reluctance

3.3.1 EU

The CBD, developed in 1992, aims to conserve biodiversity through the sustainable use of its components while developing equitable benefit sharing of genetic resources. While the CBD provided a starting point for the protection of plant genetic resources, it included few specific provisions for agriculture, had a narrow scope, and lacked adequate funding to meet its stated goals (Frisvold and Condon 1998). This led to the development

of the FAO Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture (FAO GPA), which was incorporated, into the International Treaty in 1996 and includes more specific provisions for the *in-situ* and *ex-situ* conservation of plant genetic resources in agriculture. The European Union's interpretation of Agricultural Biodiversity includes all elements of biological diversity 1) of relevance to food and agriculture and 2) constituting the agro-ecosystem (European Commission on Agriculture and Biodiversity 2010). The EU adopted a Biodiversity Action Plan for Agriculture in 2001. The Action Plan was designed to coordinate with international agreements such as the CBD, and the FAO GPA.

Using CBD and GPA as a basis, the priorities of the EU Action Plan include the promotion and support of environmentally friendly farming practices that benefit biodiversity directly or indirectly, support for sustainable farming activities in biodiversity-rich areas and the maintenance and enhancement of good ecological infrastructures, and promotion of actions to conserve local or threatened livestock breeds or plant varieties. The Action Plan is designed to facilitate coordination between member states, and seventeen main projects have been carried out since 2007 six of which involved Poland.

Some specific directives to encourage conservation of agrobiodiversity include Regulation 1467/94/EC (replaced by 870/2004) on conservation, characterization, collection and utilization of genetic resources and Directive 2008/62/WE designed to simplify registry of local varieties. Despite the recent development of policies aimed at

the conservation of agrobiodiversity activists throughout the EU are dissatisfied with the force of EU legislation in place, which has led to the widespread emergence of activist networks seeking to fill the gap and conserve as much agrobiodiversity as possible before more is lost.

3.3.2 Poland

Since 1989, agroenvironmental policies in Poland have been shaped largely by international institutions and the EU. While conservation measures regarding agrobiodiversity have been adopted, the number of species continues to decline due to changes in land use and intensification of agriculture, motivated by the economic changes as a result of the shift to a market economy (Sikor 2005).Without a strong negotiating role in the development of CBD or the current CAP, and a responsibility to meet the *acquis,* the preferences of the individual CEE new member states have been largely ignored, as seen in environmental policy throughout the region (Jehlinka and Tickle 2004).

I will argue that, like legislation on GMOs, much of the legislation regarding agrobiodiversity exists on paper but lacks the infrastructure and financial support necessary for these policies to have effective impacts. As a condition of accession, Poland was obliged to adopt EU policies, but as seen with the Nitrates Directive the way that laws have been transposed varies from country to country and is not always effective (Gorton *et al.* 2005).

Environmental protection through sustainable development is promoted in the Constitution of the Republic of Poland, adopted in 1997. These activities fall under the jurisdiction of the Ministry of Environment and are defined in the National Environmental Policy. Elements of the National Environmental Policy that specifically focus on agriculture include: maintenance of diversified agricultural landscapes (focusing on integrated and organic farming) and the preservation of traditional management practices. I will discuss the general laws concerning agro-biodiversity and the ways that Poland has worked to establish itself as a partner in global conservation strategies.

In addition to including sustainable development in their constitution, Poland has developed legislation to meet its obligations regarding agrobiodiversity, both internationally and within the EU. Poland has been a party of the CBD since 1996 and has worked to implement its goals since that time through the adoption of a National Strategy for Conservation and Sustainable Use of Biodiversity. To fulfill obligations to the FAO GPA Poland works to implement the legal framework for the conservation of genetic resources and has developed programs for *in*- and e*x-situ* conservation, working through national bodies and in line with the EU (Bulinska-Radomska *et al.* 2008). *Ex-situ* conservation is managed by two bodies: The Plant Breeding and Acclimatization Institute (IHAR) and National Research Institute of Animal Production. *In-situ* conservation is encouraged primarily through the use of subsidies. A modification of the Seed Act, to bring Polish legislation in line with EU directive 2008/62/WE created subsidies for commodity and seed production of local arable crops, and the maintenance of traditional orchards (Ministry of Environment 2009). By examining the agrobiodiversity legislation it is clear that Polish policies have been developed in a top-down manner.

The National Strategic Plan was prepared to meet Regulation 1698/2005/EC on support for rural development, aimed at strengthening the EU's rural development policy and simplifying it's implementation. Addiotnally, the Rural Development Programme, provides subsidies intended in to reimburse costs or compensate losses incurred through production methods based on environmental principles pursuant to 1698/2005/EC. Currently, certain traditional breeds elicit a subsidy: cows (4 varieties), horses (3 varieties) and sheep (15 varieties). (National Research Institute of Animal Production 2009).

While the Polish government has passed a large body of legislation to address conservation of agrobiodiversity there are still some basic regulatory and implementation mechanisms absent. The protection of high nature value (HNV) farmland, a component of EU rural development policy has not yet been defined by the Polish government (Council of Ministers 2008), making it a difficult thing to protect. Additionally, according to representatives of DDOiR, there is no definition of heritage or traditional breeds or varieties, and for a group working to protect these species, this lack of clarity proves to be a challenge: "We don't know if traditional means pre-war (World War II), post-war or some period before that – what species are we supposed to protect?"

While a number of measures have been put into place to conserve agrobiodiversity and provide economic incentives for this conservation the strategies so far are underfunded and undeveloped especially when confronted with economic pressures that make maintenance of small landholdings difficult. Falling crop prices and growing off-farm

employment opportunities push farmers to intensive land or abandon it and conservation of agro-biodiversity must be adequately funded if the rapid loss is to be slowed (Zellei 2001, Pascual and Perring 2007).

3.4 Costs of Accession

While multi-level governance is defined as a "process of negotiation" (Marks and Hooghe 1996) the conditions of accession for new member states has involved a loss of control in determining state-specific agroenvironmental policies (Jehlinka and Tickle 2001). I have shown that in the cases of anti-GMO and agrobiodiversity legislation the Polish government has been forced to sacrifice decision-making power and when, as with bans on GMOs, they have attempted to draft more progressive policies they have been overruled. Furthermore, these states often lack the capability to enforce legislation even once it has been transposed making even the legislation adopted largely ineffective (Zellei *et al* 2001).

4. Framing the Issues

In the previous chapter, I discussed laws regarding GMOs and agrobiodiversity in Poland and the EU and the interaction of actors at various levels in the formation of these laws. While this provides a political perspective on the state of these agroenvironmental issues, the debates that lead to policies occur in society and are shaped by the values and beliefs of the specific population. Campaigns, such as those run by ICPPC, SIE and DDOiR, work to mobilize action and their level of success is determined by the extent the discourses they present resonate with the people.

In this chapter, I will introduce the concept of framing and frame alignment to provide structure for describing strategies used by campaigns to resonate with populations and gain support. I will then briefly discuss discourses surrounding agro-biodiversity and GMO campaigns to demonstrate the framing of these issues at a global level. Next, I will situate these discourses in the Polish context. To do this I will use examples from my research as well as literature on similar campaigns in Poland and the region to elaborate on the frames and alignment processes employed by civil society groups in their work to mobilize the public by asking: How do global narratives surrounding agro-biodiversity and GMOs campaigns resonate differently with Polish peoples' understanding of the role of humans and nature in the environment?

In Chapter 2, I introduced the primary organizations working on anti-GMO and conservation of agrobiodiversity campaigns – ICPPC, SIE and DDOiR. I will now assess the attempts of these campaigns to align their discourses with those of the population. I

will examine the beliefs and values held by activists and farmers to describe the types of frame alignment employed and the level of success these campaigns have achieved as a result of their framing strategies.

I will argue that although both campaigns use similar frames in their work, anti-GMO campaigns have mobilized high levels of public support while agrobiodiversity campaigns have had more difficulty resonating with the population. The frames I explore were determined by the beliefs and values expressed to me in interviews and examination of campaign materials. The frames are: conceptions of risk to human health and the environment, national identity and religion, and resistance to globalization. By discussing the values and beliefs expressed by activists and farmers I will argue that agrobiodiversity campaigns are hindered by economic constraints which prevent the level of frame alignment achieved in anti-GMO campaigns, but that resistance to GMOs and conservation of agrobiodiversity both reflect resistance to change and a precautionary approach..

4.1. Frame Alignment

Groups working to promote social and environmental issues will adopt different strategies in order to gain support of the population depending on the specific context. An important tool used by organizations to mobilize participation is framing. According to Goffman (1974: 21) a frame is a "schemata of interpretation" used to "locate, perceive, identify and label" the events that occur in their lives and the world. Frames are composed of "interests, values and beliefs" and provide life occurrences with orientation

that is used to give events meaning, organize experiences and motivate action (Snow *et al.* 1986: 464).

To be effective, organizations must be able to link their "activities, goals and ideologies" with the "interests, beliefs and values" of individuals in a process called *frame alignment* (Snow, *et al.* 1986: 464). Snow, et al. (1986) identify four types of frame alignment that are useful alone or in combination, dependent on the circumstances:

1) *frame bridging* – the linkage of two ideologically connected but structurally unconnected frames,

2) *frame amplification* – the clarification or invigoration of interpretative frames that address specific issues or problems,

3) *frame extension* – the extension of the boundaries of a frame to incorporate a wider audience, and

4) *frame transformation* – the redefinition of a frame when existing frames do not resonate with the intended audience (Snow, *et al.* 1986).

Frames can also take different forms: 1) domain-specific - attempts to change views on a specific issue (e.g. consumption patterns, minorities) and 2) global interpretive – radical changes of worldview (Snow *et al* 1986).

This conception of frames and frame alignment is used by a number of scholars to examine the relationships between campaign discourse and the mobilization of

participation (Woods 2003, Mincyte 2011, Kurzer and Cooper 2007). I will use these terms to describe the ways that organizations in Poland invigorate public support by working to align their values with the public in discussions surrounding GMOs and agrobiodiversity.

4.2. Discourses on the Issues

All issues are surrounded by discourse motivated by belief and values. In the discourse surrounding agroenvironmental issues these beliefs involve ideas about the environment and people's role in the environment, as well as conceptions of rural identity and its place in society (Gray 2000, Mincyte 2011). At the global level and in Poland discourses surrounding anti-GMO campaigns and the conservation of agrobiodiversity overlap in goals and ideologies and sometimes activities but the frames presented do not always align with the population. I will now outline the discourses globally in order to provide context for the discussion of campaigns in the following sections.

4.2.1 Concerns about GMOs

As I discussed in Chapter 3, GMOs represent a 'global object of contention' provoking debates about human health, the environment, ethics of genetic engineering and globalization (Muller 2006). GMOs have been the cause of protests, petitions, lawsuits and demonstrations around the world. The level of resistance to GMOs and the motivations for opposing them vary widely in different contexts (Muller 2006, Pagis 2006, Kurzer and Cooper 2007). Scholars have examined the different forms of resistance and the underlying frames that motivate action by groups opposed to GMOs (Jasanoff

2005, Gaskell *et al.* 2006). These studies have included comparisons of rapid acceptance of GMOs in the United States compared to the more cautious approach of the EU (Gaskell, *et al.* 1999), the different attitudes and approaches towards GMOs in the EU-15 (Kurzman and Cooper 2007) and motivations of different actors within the same state (Pagis 2006, Harper 2004).

I have found that resistance to GMOs in Poland, like the resistance to GMOs globally, involves a variety of actors, who draw upon different values and perceptions to motivate support. Public support of GMOs in Poland is very low. A survey from 2007 found that over two-thirds of the public had negative opinions of biotechnology; scientists working on biotechnology, and the multi-national companies marketing these products (Lubiatowska-Krysiak and Twardowski 2008). This statistic is especially interesting when contrasted with survey data from 1996 which found 70% of Polish people in favor of GMOs (Lubiatowska-Krysiak and Twardowski 2008). What factors caused public opinion to change so drastically? I will examine the discourses addressing risks to human health and the environment, ethics and religious beliefs, and anti-globalization sentiments to better understand Polish opinion regarding GMOs and the way frames of populations and campaigns align.

4.2.2 Motivating the Conservation of Agrobiodiversity

Discourse surrounding conservation of agrobiodiversity is not filled with contention in the way that anti-GMO discourse is. As mentioned in the introduction, since the 1900s, 90 % of the worlds' crop species have been lost and half of the species of domestic

animals have been lost as farmers shift to genetically uniform high-yielding varieties and the acknowledgement of this loss motivated campaigns to prevent further loss (FAO 2004).

Due to factors of land abandonment and agricultural intensification, agrobiodiversity is lost when it is not actively preserved (Young *et al* 2007, Henle *et al* 2008), making these campaigns essential to the conservation of remaining agrobiodiversity. Both of these trends are motivated by economic incentives – people leave the land to go find work in the city or begin farming with industrial methods to increase their yields. In Poland, farms exhibit low profitability (Monroe 2001) and I found that land often goes unattended or is leased to neighbors. However, many families with whom I spoke maintain small plots sometimes as a primary source of income, as additional income (combined with off-farm employment) or for subsistence.

In Europe, where much of the landscape has been shaped through centuries of agricultural use, traditional agricultural practices are an especially important tool for conservation (Bignal and McCracken 2000). CEE countries remain relatively rich in biodiversity due to a variety of geological, historical and economic factors (Young *et al.* 2007). In Poland, due to the continued presence of small family plots (throughout socialism and continuing into the present) (Dannenberg and Kuermmerle 2010) represents a place with special potential for preservation of agrobiodiversity and there has been increased activity in this area recently through the work of groups such as SIE and DDOiR.

In this section I will focus on the values and beliefs that motivate or prevent farmers from adopting practices of *in-situ* conservation focusing on the preservation of tradition and culture for future generations and economic incentives. I will examine discourses of risks to ecosystem health and food security, ethics and religious beliefs and anti-globalization sentiments and the ways these issues interact with economic pressure to better understand Polish opinion on conservation of agrobiodiversity and the way the frames of populations and campaigns align.

4.3 Managing Risk

Risk is defined by Beck (1992: 21) as a "systematic way of dealing with hazards and insecurities induced and introduced by modernization itself." Unlike previous conceptions of risk associated with natural disasters and events outside of human control, Beck (1992) uses this definition to address the way that modern society, through the development of new technologies has created new risks that lead to invisible and irreversible harm defined by the knowledge surrounding them and, thus, are open to social definition (Beck 1992: 23). This kind of risk is posed by the introduction of GMOs and the loss of agrobiodiversity. I will discuss how GMOs, by nature of being a new technology, present potential risks to human health and the environment while loss of agrobiodiversity lead to simplification that creates artificial ecosystems, requiring constant human intervention (Altieri 1994, Stogstad 2008). I will also present ways that Polish people, with a long history of imposed change, are wary of new changes to farming practices introduced from outside.

4.3.1 GMOs as Uncertain Risk

As discussed, GMOs are a new technology and regulations for their use are still evolving. Some risk assessments have been carried out before approval of each product by national authorities to determine effect on human health, but most of these studies have been short-term and long-term effects remain uncertain (Domingo 2007). While it is known that GM crops cause contamination through cross-pollination, the real long-term risks of this are also not understood (Haslberger 2001). As GMOs are released into the environment they develop their own agency because they are alive, but they lack responsibility for that agency. Societies are then required to engage in debate and negotiation to decide which risks are worth taking (Muller 2006). I found that organizations like ICPPC and SIE work to educate the population about these risks to inform this debate and negotiation.

ICPPC uses publications such as such as the Benbrook study (2009) or Jeffrey Smith's "Seeds of Deception" (Smith 2003) and "Genetic Roulette" (Smith 2007) arguing that GM crops do not increase yields or reduce pesticide use. SIE has hosted events, such as the 'Farmer's Tour' where Canadian and American farmers shared their experiences with contamination from GM-crops to serve as a warning for Polish farmers. This discourse of unknown risks resonates with farmers' traditional beliefs. Activists to whom I spoke told me that farmers are often hesitant to try new things, when they are uncertain about the outcomes. One man said to me, "Polish farmers can be stubborn, they can be tough. They

are not always open to new methods. They know what things work and they usually prefer to keep things this way."

Furthermore, ICPPC specifically has used sometimes radical, visual strategies and actions to oppose GMOs, such as a street theater acting out how "Big GMO" tricks Polish villagers by putting on green shirts, or delivery of "mutant" stuffed animals to politicians. These strategies are similar to what Harper observed in Hungary, where "dystopic science fiction" is juxtaposed with "actual scientific products" (2004:486).

Using strong imagery and language is a strategy that Dorota of ICPPC finds powerful, but has this been criticized by most other activists with whom I spoke as "sensationalized and misleading." Another activist working on similar issues told me, "I do think GMOs are the 'big evil' but that's not how we address it because it isn't effective. We want to educate." She believed that ICPPC was playing on peoples' fears instead of expanding their understanding of the issue. Despite their efforts, sensational or not, activists with whom I spoke feel that most people are still not greatly educated on the issue and that this is a hindrance to mobilizing action. While invigorating fear of the unknown through frame amplification can inspire protest and public outcry, the goals of campaigns are to increase understanding, as well as motivate anti-GMO beliefs.

As introduced in Chapter 3, GMO regulation in the EU relies on the precautionary principle. This principle has the aim of requiring decision-makers to take action 'in the event of a potential health risk…without waiting for the risk to be confirmed by scientific evidence' (Noiville 2006). Opponents to GMOs in Europe are skeptical of the risk

assessments carried out by the EFSA and believe that policy regarding this novel technology should be shaped by political debate (Jasanoff 2005). In Europe and in Poland, GMOs are viewed as not useful and a risk to society" (Gaskell et al 2006). These sentiments were expressed to me when I asked Polish farmers about GMOs. Farmers I asked had heard about GMOs but were uncertain. Several people initially told me they had "no opinion" but then quickly added "but they aren't natural" or "they aren't safe." As one woman said "They're better to avoid – I don't know about them and I don't want to try them."

I found that Polish people were also invoking an interpretation of the precautionary principle, or precautionary approach. Their hesitancy towards accepting unknown technology reflected a comfort with methods they were accustomed to and a fear of change. I found that when it comes to the type of non-perceivable risk to human health and the environment posed by GMOs, campaigns have found a high level of public support and alignment through frame bridging. Campaigns, through informing the public of the uncertainty involved (by presenting scientific studies) and the problems experienced by others (such as the Farmers' Tour) were able to resonate with the population. Shock tactics such as those employed by ICPPC have also been effective, but this invigoration of beliefs employs frame amplification. The unknown nature of this new technology is congruent with public sentiments and grievances regarding risk and change, allowing campaigns to mobilize public opinion leading to the development of anti-GMO legislation.

4.3.2 Agrobiodiversity with Potential to Mitigate Risk

The conservation of agrobiodiversity reduces uncertain risk created by reliance on few species with high inputs, as well as and economic risk posed by reliance on single crops with fluctuating prices. Adopting traditional practices reduces the need for inputs, bolsters ecosystem heath and increases food security (Altieri 1994, Brush 1992). For example, a case study in Zimbabwe found groups of women who identified themselves as "keepers of diversity" continued to grow traditional crops in small plots to supplement cash crops grown for market(van Oosterhout 1996). Their motivations were not based on an interest in biodiversity per se, but rather provided a way to ensure food security by planting crops that were drought-resistant, were easy to prepare and stored well. Though the conservation of agrobiodiversity was not the primary goal, the genetic resources of these species were preserved.

In Poland, there have been drastic shifts in farm size since 1989. While the number of large farms has expanded, so has the number of very small farms (between 1 and 2 ha) (Dannenberg 2010, GUS 2001). These small plots provide subsistence basis with food produced for household use. Even the farmers with whom I spoke who had larger plots (about 40 ha) maintained small vegetable plots for personal use. Rural communities in Poland have strong ties to the land and maintained small family plots throughout socialism and this pattern has continued (Szurek 1987, Dannenburg 2010). While some of the farmers saved seed they did so to save money, not in the interest of agrobiodiversity. Additionally, many people maintained Polish animal breeds such as the Green-legged Chicken and Polish Red Cow. When asked why they chose these varieties I was told that these animals needed little care to produce eggs and milk for household use and, in the

case of the Polish Red, farmers were interested in government subsidies associated with this breed.

This indicates that Polish farmers reduce their exposure to risks associated with new varieties and market exposure through the maintenance of local varieties. However, the motivations I found for these practices are largely economic – a way to offset costs and reduce the financial risk associated with intensifying or focusing on one crop or animal. One woman expressed interest in focusing on just one product, such as cattle, but it was too expensive to shift and too risky if prices were to change.

DDOiR and SIE both work to conserve agrobiodiversity but rely on other strategies in their campaigns to motivate support and align goals, such as invigorating national identity, which I will discuss in the next section. While economic risks pertaining to individual households are felt and mitigated by maintaining subsistence agriculture, I found that associated uncertain risks, to ecosystem and human health, are not a concern in the case of agrobiodiversity in the same sense that they were with GMOs, perhaps due to the long-term and invisible nature of risk associated with loss of biodiversity. There is potential for alignment of goals but it would require active frame extension. Campaigns could widen the discourse of ecosystem health to incorporate economic concerns, or work with governments in valuation of ecosystem services to highlight the potential risks – environmentally and economically - if agrobiodiversity is not conserved.

4.4 National Identity and Religion

Polish people are both Slavs and Catholic, an identity they have maintained through occupations and assaults (Hann 1985). This identity has proved very strong even throughout socialism, as they maintained a level of independence from Soviet influences and were able to continue their tradition of small land holdings (60% less of all farms less than 5 ha) despite the goal of collectivization (Szurek 1987, Gorton *et al.* 2005). Polish identity and religion played a role in the end of socialism and the beliefs and values associated with this history of resistance remain strong.

To understand the issues valued by Polish people it is important to understand the roots of their beliefs and identities, as these components shape the *frames* of people's beliefs (Snow *et al.* 1986). Everyone I spoke with in Poland was eager to tell me about how good Polish food was, and how strong the people were. I was told everything from "Polish people are the people who are used to eating good food" to "Polish pigs are the best pigs." In this section I will discuss how national identity and Catholicism, the national religion, have shaped current frames and the ways that organizations have worked to align these values with their campaigns.

Polish identity is strongly tied to Catholicism, and religion has played an important role in political opposition throughout the last century as the Polish nation has defined itself against German Protestantism and Russian Orthodoxy (Borowik 2002). Throughout socialism, and especially since the 1970s, the church served as a 'standard of freedom' and 'shelter for truth' against political censorship (Borowik 2002). As the Church began

to speak out for human rights, Pope John Paul II became Poland's first pope andinspired actors in the Solidarity movement (Borowik 2002, Anderson 2003). When visiting Poland I saw images and memorials of the Pope in every village and town I visited, and country roads were lined with altars, highlighting the importance of the Church in the everyday lives of the people

4.4.1.GMOs as Foreign and Unethical

In addition to debates about the human health and environmental risks associated with GMOs, there are also ethical concerns about the morality of transferring genes. The majority of Europeans and Polish people find GMOs "morally unacceptable" (Gaskell *et al* 2006). While this statement is undefined in the work by Gaskell (2006), I found that for Polish people morals are equated with religion and strongly shaped by the Church. Activists understand this connection, and campaigns use discourses of national identity and religion to align frames as these morals can be extended to shape anti-GMO campaigns.

One argument against genetic modification that resonates well with the population comes from the Church. SIE used Catholicism explicitly in their campaigns against GMOs from 2005-2007. Three educational campaigns were conducted targeted at farmers, monasteries and parishes and used statements made by Pope John Paul II such as:

> *"We can only look with deep concern at the enormous possibilities of biological research. We are not yet in a position to assess the biological disturbance that could result from indiscriminate genetic manipulation and from the unscrupulous development of new forms of plant and animal life, to say nothing of unacceptable experimentation regarding the origins of human life itself. It is evident that in any area as delicate as this,*

> *indifference to fundamental ethical norms, or their rejection, would lead humankind to the very threshold of self-destruction."*
> *-Pope John Paul II (World Peace Day 1990)*

Although the Catholic Church has not taken an official stance on GMOs, Malgorzata from SIE believes that quotes such as that above, from "their Pope," resonate powerfully with the Polish people due to the role Catholicism, and especially Pope John Paul II played in the end of socialism and democratization. By invoking the Church, SIE is easily able to extend the frame of anti-GMO advocates to include the wider Polish population.

Of course, religion is only one aspect of the Polish identity. With a huge rural population, the countryside with its traditions and cuisine are also important components of national identity. I was told again and again about the superiority of Polish food (and fed a lot of it!) during my time there. Dorota told me: "We are a nation that is used to eating good food. Joining the EU has made us victims of big supermarkets but people are realizing it's very bad quality food in supermarkets and so they are looking back to the farms."

By highlighting that GMOs are not Polish and extending the frame to position GMOs as a threat to Polish tradition, campaigns are able to motivate opposition to GMOs. In Poland when I asked farmers why they distrust GMOs, I was told they are "not healthy." When asked what was meant by "healthy" I was told they could *see* these things by looking at their own farms. They felt that their food was superior because they knew where it came from and understood the methods of production used. This indicates that unknown products are associated with uncertain risk and avoided for that reason.

The success of incorporating nation and religion to align perceptions regarding GMOs lies in frame amplification and extension. By invigorating beliefs and extending the boundaries of values that are already strong, such as national pride and morality as defined by the Catholic Church, anti-GMO campaigns can draw on these sentiments without needing to establish a new discourse – a strategy that that influenced the success of their campaigns.

4.4.2 Agrobiodiversity to Maintain Tradition for Future Generations

Agrobiodiversity is not a fixed asset that every person values, rather it is experienced contextually and its value is socially constructed (Rodriguez *et al* 2006). In addition to concerns over food security and ecosystem health, traditional forms of agriculture and local varieties of plants and animals are maintained as a component of cultural identity (Perreault 2005). Even traditional knowledge, practices and varieties maintained are under threat from sociocultural changes, especially in CEE as outmigration occurs and reliance on subsistence agriculture decreases (Birol *et al* 2006, Young *et al.* 2007). While individuals keep traditional varieties for personal use to maintain tradition (such as the maintenance of old orchards) many old varieties are being replaced with new varieties that have higher yields and are more easily sold in the market. Effective economic incentives must be developed to help farmers reduce costs, enhance their viability, and reach markets (Pascual and Perring, 2007).

For the primary groups working on conservation of agrobiodiversity in Poland, DDOiR and SIE, their main motivation is preservation of tradition and culture. Their task is not

an easy one. To begin with, Pawel of DDOir, told me there is contention over what "old," "heritage" or "indigenous" means as these terms are not defined in Polish law. One goal of DDOiR involves collecting old books, notebooks and pamphlets in a library to establish what plants and animals were present and when, which is a necessary step to find out what has been lost and to establish the origin of varieties. Currently, Pawel has an orchard of over 400 different varieties of trees. DDOiR is trying to identify and classify these species with the eventual goal of expanding their use and marketing the products.

Pawel told me that working to conserve agrobiodiversity is something he does for his children and, more generally, for the future generations of Polish people. He feels that agrobiodiversity is an important part of Polish identity that represents the resistance of the people to collectivization throughout socialism and the maintenance of tradition despite a series of occupations.

SIE has worked to link agro-biodiversity with religion through a program to reinstate traditional orchards and gardens on monastery grounds. Monasteries historically served as a location for preservation – of texts, religion and plants. By finding a preserved monastery garden from the 1930s, SIE was able to plant and educate about the care of these now rare varieties in fifteen monasteries. By linking agrobiodiversity to the Church, SIE seeks to link the idea of continuity of traditional varieties with that of the church, both symbolically and functionally. For the activists with whom I spoke, protecting biodiversity is a moral responsibility. However, even if farmers value the principles of

agrobiodiversity, economic factors can encourage shifts in practices to the cultivation of high-yield hybrid varieties to meet the demands of the market.

Although campaigns to conserve agrobiodiversity attempt to invigorate and bridge the same beliefs as anti-GMO campaigns, they have had more difficulty. Frame extension or transformation could help to align goals but economic factors must be overcome to enable success. In the next section I will elaborate on the ways that DDOiR and SIE work to develop economic incentives for the conservation of agrobiodiversity.

4.5 Globalization and EU accession

Throughout the 1990s, Poland underwent significant political and economic changes that affected the everyday lives of the people. One result of rapid exposure to market forces was that farmers were pressured to sell or expand and intensify their land (Dannenberg 2010). Meanwhile, environmental and agricultural policies were quickly harmonized to meet conditions of EU accession (Zellei 2001). While CEE had welcomed the end of socialism the transition resulted in many complications. The processes of market integration, EU accession, and exposure to globalization have resulted in some backlash and the view that these factors are a new form of imposition from the outside (Verdery 2003, Harper 2005, Schwartz 2005).

Accession to the EU has involved the adoption of many new laws that dictate how rural communities function, how people can use their land, and regulations that must be followed to meet health and safety regulations (Falkner 2008, Zellei 2001, Young *et al.* 2007).

By examining the framing of GMOs and other environmental issues in her work on Hungary, Harper lends insight to the perceptions of the environment in CEE countries and fears of globalization. She notes that these campaigns address concerns in the region of 'eco-colonialism,' the idea that Western corporations take advantage of the less environmentally aware and developed CEE countries using them as sites for exploitation of natural resources and trials of risky new technologies (Harper 2005).

Farmers with whom I spoke also felt they were being taken advantage of by the EU and the market economy, illustrated by the falling prices of their products and the amount of profit being lost between producer and consumer. Many people told me that the government should regulate prices or restrict imports. I was told that EU subsidies are "funny money" and that accession to the EU was "nothing but negative."

In this section I will consider the role of globalization, as the source of environmental risk associated with new technologies and economic risk associated with market forces, as a perceived threat to Polish national identity in the framing of the issues. I will examine the ways that both GMOs and conservation of agrobiodiversity are seen as Western concepts that are imposed and met with resistance.

4.5.1 GMOs as Resistance

As discussed in the previous sections, GMOs are new technology with associated unknown risks, and as a result they are met with a high level of resistance in much of

Europe. This has led to efforts by biotech companies to introduce products where there is least knowledge and resistance, exploiting the lack of awareness. According to Dorota, these companies invite farmers to dinners, workshops and even trips to the United States in attempts to persuade them to plant GMOs. Biotech companies promise higher yields and increased profits, but for some of the people with whom I spoke this has provoked backlash and a feeling that these biotech companies, with so much money and power, are trying to conceal the risks and negative issues associated with their products.

Public response to GMOs in Poland was a result of individuals feeling this backlash. In 1997, according to an anti-GMO activist, field trials began in Poland without the consultation of the public (Harper 2004, Meyer 2007). A biotech company had been carrying out field trials of GM potatoes in Germany, but activists kept digging up the field at night in protest. To avoid the disruption of the trials, the company then moved their activity across the border to Poland where people had not even heard of GM crops, let alone developed opinions about them (Harper 2004). Then In 2000, a farmer's union offloaded a shipment of feed onto the railroad tracks in an act of protest, claiming the product had falsified GMO-free certificates and demanding proper labeling (Meyer 2007).

While viewed by some as 'ecocolonialism,' GMOs are also perceived as a threat to tradition and nation, with one farmer telling me that she doesn't want GMOs because they are "not Polish." It is concern that multi-national companies are controlling the

market and limiting farmers' choice that serves as the primary motivation for the organizations and activists working on anti-GMO campaigns.

Dorota, from ICPPC, regards GMOs as a "threat to the Polish countryside" and traditional methods of farming, and she doesn't want to see Poland follow the path of intensification and homogenization of agriculture that much of the industrialized world already has. In her opinion:

> *"If you look towards rich countries, Western countries - like Canada, or the US, they now try to revive something and they [spend] a lot of money and they cry for their losses that they lost from all of these chemicals and, now GMOs are even more of a disaster. So we can't repeat again and again the same mistakes, and Poland is a perfect example for sustainable agriculture."*

Other activists felt similarly about GMOs. While environmental and human threats were a concern, the biggest danger posed was the control of multi-national corporations over rural life and the decreasing choice given to farmers and consumers. Malgorzata from SIE said "I think we don't know enough about GMOs, but really, I think that these companies are trying to control production, and if you control food production you control everything."

The rapid acceptance of GMOs in much of the world has resulted on the dependence of farmers on corporations for inputs and seed. GMOs are not even especially useful in Poland with the small land plots, so their acceptance would likely lead to widespread changes in land use that would change the very nature of rural communities.

This case represents frame amplification, where farmers' fears of being exploited (based on their past and the shifting political context) are invigorated by the dishonest and sneaky way farmers feel that GMOs have been introduced. These beliefs can be further aligned with campaign goals if anti-globalization sentiments can be bridged with beliefs about nation and precautionary attitudes associated with unknown risk.

4.6 Aligning the Frames

By examining the frames of conceptions of risk to human health and the environment, national identity and religion, and resistance to globalization, I have elaborated on the ways that campaigns work to make their activities, goals, and ideologies resonate with the values of beliefs of local communities.

I have found that the frame that aligns most effectively for both campaigns is the discussion of risk. This occurs despite the fact that anti-GMO activists themselves are primarily concerned with anti-globalization, and conservation of agrobiodiversity is largely motivated by discourses of national identity. I have found that Polish farmers are often resistant to new approaches, which was confirmed by people with whom I spoke. One activist told me “Polish farmers can stubborn, they can be tough. They are not always open to new methods.” While this enhances the efforts of anti-GMO campaigns, it also hinders activities to conserve agrobiodiversity. Discourses of national identity and religion are also more effective with anti-GMO campaigns, despite the explicit efforts of

DDOiR and SIE to align these values with conservation of agrobiodiversity. Anti-globalization discourses have less resonance in both cases, but there is difficulty.

The efforts of campaigns on both issues are largely domain specific, attempting to resonate with the population and mobilize action on one specific issue, whether opposing GMOs or conserving agrobiodiversity. There are also attempts to employ global interpretative frame alignment, which requires a shift in worldview. For both campaigns to be successful, this type of frame alignment is necessary and it involves the adoption of a different perspective of the issues, situating them in a global context as opposition to uncertain risk, and homogenization of culture and markets. In the next section I will discuss ways that campaigns organize with each other and communities to more effectively align orientations and make more campaigns successful.

5. Social capital

In the previous chapter I discussed framing to examine the discourse surrounding the issues of agrobiodiversity and GMOs and the ways campaigns work to align their goals with the beliefs and values of people to mobilize action. In this chapter, I will discuss the networks and relationships campaigns use to communicate their discourse on the issues.

I will now introduce the concept of social capital and the ways it functions in civil society and post-socialist states. In doing so I will elaborate on ways that organizations working to conserve agrobiodiversity and oppose GMOs work within existing social structures as well as to construct new networks that are more effective in facilitating negotiation and action within communities and in relationship to the government. To do this, I will begin with a discussion of social capital and how the term has been used in different contexts. I will then use my experiences in Poland to elaborate on social networks there and how they have been shaped and function today. I will discuss the repercussions of the socialist past, the importance of informal networks and the results of recent accession to the EU by asking how the social networks that formed throughout and following socialism have adapted throughout these transitions and how does this impact the effectiveness of current agro-environmental campaigns?

5.1 Social capital

Social capital, as defined by Coleman (1988) is created in the relationships between people and used to facilitate action through the use of networks, reciprocity, trust, and social norms. While physical capital describes tangible tools (money, natural resources,

etc.) and human capital describes knowledge and skills (education and experiences), social capital describes the relationships between people, which allow them to use physical and human capital to cooperate and coordinate action for mutual benefit and to facilitate change (Coleman 1988, Putnam 1995). For example, societies with strong social capital may have more voluntary associations and community organizations. This creates interpersonal networks where people have built trust and feel responsibility to meet obligations to one another.

Putnam writes that social capital strengthens networks of communication and cooperation allowing for more effective negotiations between actors in society, policy and economics. When problems arise in society that need to be addressed, societies with high levels of social capital already possess interpersonal networks based on trust and reciprocity that can be utilized to facilitate change. In contrast, if a society has low social capital these networks must be forged before action to address the problem can occur. The level of social capital available can then provide an explanation for the success or failure of similar efforts to manage common resources in different societies (Putnam 1993, Putnam 1995). While the relevance of social capital to the success of social movements has been acknowledged, its relationship to government institutions is debated.

Putnam's early work on social capital highlights that civic engagement enhances democratic institutions that then foster more civic engagement in a reciprocal fashion (Putnam 1993). In more recent work, focusing on the United States, he elaborates on the ways that social trust is learned from participation in associations, and how the strength

of associations determines the effectiveness of institutions (Putnam 2001). He argues that effective government institutions are the result of high levels of social capital and civic engagement. This causal relationship has been reshaped and sometimes outright challenged by scholars, especially when applying the concept of social capital outside established Western democracies (Letki 2004, Letki and Evans 2005, Evans 1996).

The concept of synergy or the way that "active governments and mobilized communities can aid each other's development" avoids implying causality between effective government and societal trust by examining the relationships between levels of social capital, government organization, politics and interests (Evans 1996). According to Evans (1996), social capital is a helpful component of change, but limited by the openness and willingness of government organizations to incorporate input from below, requiring public officials with interests that coincide with those of their constituents. Using the concept of synergy, social capital can facilitate effective cooperation but only when political institutions allow input and are receptive to the concerns of constituents.

This adds to the discourse on social capital by acknowledging the interplay (rather than causal relationship) between public and private actors and the ways that this interplay is context-specific, thus societies posses varying levels of social capital and governments vary in their receptiveness to input from society. The relationship between these factors determines the relevance of social capital. Having introduced some ways that social capital is defined, I will next situate the concept in the post-socialist context. I will then elaborate on some of the forms of social capital present in Poland today and how these

are used by agro-environmental campaigns.

5.2 Post-socialism and social capital

CEE countries are often viewed as having weak, or even destroyed social capital as a result of the prohibition of independent social engagement throughout socialism (Putnam 1995, Chlouphova, *et al.* 2003). Paldam and Svendsen (2000) go so far as to argue that social capital in CEE today is 'negative.' They maintain that by dismantling voluntary organizations dictatorships destroy social capital. In its place, due to the ineffectiveness of supply chains, interpersonal and informal networks develop that, while officially discouraged by the state, are permitted to function with some controls. The authors argue that sine the end of socialism, these networks have remained and without state control flourish in a form of 'negative social capital' (Paldam and Svendsen 2000).

Such conceptions of 'negative social capital' and Putnam's stress on the bottom up relationship between interpersonal trust and involvement in associations have been criticized in the post-socialist context specifically (Letki 2004, Letki and Evans 2005). These critics maintain that forms of interpersonal trust that persist in post-socialist societies, even after socialism where the uncertain political situation created a reliance on interpersonal networks, have not been destroyed or distorted into negative forms (Letki 2004).

Letki (2004) argues that in the post-socialist context, instead of a lack of interpersonal trust preventing involvement in associations, involvement is hindered by distrust of institutions and a lack of understanding of the political process. She finds that

transparency and understanding of democratic institutions are the most important factors in development of social capital. Letki and Evans (2005) maintain that effective institutions shape strong social capital, instead of social relations determining the effectiveness of institutions, as argued by Putnam.

During my research in Poland I found interpersonal networks, especially in rural communities, to be strong. Whenever I asked farmers and rural residents about their relationship with their neighbors I was told nothing but positive things. I was told that neighbors rely on each other to borrow tools, and when needed, labor. They also cooperated to purchase seed in bulk or trade seeds that are better quality. People described their relationships with neighbor to me as "very good" where "everyone gets along."

When asking unaffiliated farmers about their relationships with voluntary organizations and government, however, I was met with indifference and negative responses. I was told that government is "not helpful" and doesn't respond to peoples' concerns. One village woman seemed surprised by the question but then told me, "They [the government and organizations] work a lot but it has little effect: sometimes it is better and sometimes it is worse. We live in peace and calm here in the village – working with organizations and the government only makes our lives difficult."

In her work, Letki (2004) used survey data to examine levels of interpersonal trust, membership in voluntary organizations, and former Communist Party membership to

explore the links between these factors and participation. She found that high levels of interpersonal trust were not reflected by involvement in voluntary organizations. Instead she found that active involvement in community organizations and even former Communist Party membership were more closely tied to an individual's willingness to participate. As a result, she concludes that an understanding of the political process learned through experience and the transparency of democratic institutions to allow citizens to learn are the most important factors in development of social capital.

While many changes have taken place to establish transparent democratic institutions in Poland, I found distrust is institutions remains prevalent and discourages participation. Representatives of the organizations I spoke with indicated that people are often reluctant to get involved in campaigns, explaining that many people do not have the time or inclination to participate, and doubt collective action will be productive. Dorota from ICPPC said, "It is difficult to get farmers involved. People are hesitant to work together because of memories of the communist time and so many times things were not working. They think they should produce food and that the role of the government, local or national, is just to help them sell and distribute food in the best conditions."

Voluntary organizations were dismantled under socialism, but interpersonal, informal networks were a part of daily life (Chloupkova *et al.* 2003, Paldam and Svendesen 2000). I will argue that this does not indicate that social capital was destroyed or has become negative, however. I found that interpersonal and informal relationships that exist in rural communities today are strong and positive with the potential to motivate change. In the

next section I will elaborate on ways that these networks forged in communities under socialism remain a valuable form of social capital and have played a vital role in the biggest successes of the agroenvironmental campaigns I examined.

5.3 Informal Networks

Interpersonal trust and informal networks remain important in the daily life of rural communities, especially within post-socialist states (Verdery 1996, Pine 2007). Throughout socialism people relied on the informal sector to acquire goods that were not available on the market due to inefficiencies in the state-controlled economic system (Verdery 1996, Chlouphova *et al.* 2003). Today, Polish people continue to rely on these networks and the informal economy to reduce costs and diversify their incomes (Chaplin *et al.* 2005). I will give examples of forms of how social capital created by these networks can and are being employed to enhance the effectiveness of agroenvironmental movements in Poland. I found that the main ways interpersonal connections and informal markets were used were to avoid bureaucracy and to reach consumers more easily.

5.3.1 Avoiding Bureaucracy

The percentage of the Polish economy operating in the informal sector in the period from 2004-2005 was estimated at 27 % (Gardes 2009). Malgorzata of SIE believes that number is much higher. “People rely on this black market. It is what they know and what works for them. I imagine it must be more than the government can know or want to say.” During my time in Poland I met people who sold a variety of agricultural goods in the informal market, especially dairy products such as milk, cheese and eggs. I was told

that these goods are often sold informally to avoid the bureaucracy and paperwork required to sell things formally since EU accession with requirements of the EFSA.

I was told that EU regulations for sale of goods are complex for many farmers with little experience filing papers and keeping records, especially in the form in which they have been transposed into Polish law. I was told that while the EU regulations change little, Polish laws are changing constantly. One woman, a certified organic farmer who continues to sell goods mostly in the informal market kept pulling out files and files of pamphlets and papers trying to explain to me the complexities of the Polish law. In addition to avoiding bureaucracy these informal networks ensure fairer prices and more socially just economic exchanges (Mincyte 2011).

5.3.2 The Personal Connection

Villagers in Poland show a higher willingness than their urban counterparts to collaborate within their own community, and while trust in institutions is low it has been growing since EU accession (Fedyszak-Radziejowska 2008). Interpersonal community trust and relationships have the potential to increase effectiveness of collaboration within communities, and throughout the social structure as a whole, especially if this can be coupled with government reforms and increased transparency (Letki 2004). In Poland, campaigns work within these personal networks in their work to promote agroenvironmental issues. As discussed in Letki (2004) I found that increased involvement in community initiatives encourages more participation. I also found that new ideas and values, as well as the best place to get eggs, spread through these informal

networks. Most of the work of activists was spread through work of mouth, with people contacting the organizations they had heard of.

The village of Pokrzydowo, in Kujawy-Pomerania seemed the embodiment of cooperation for local profit-retention, environmental protection and tradition. In this small village of less than a thousand people there are two local processing plants, an organic distribution company and the headquarters of DDOiR. While DDOiR is a registered organization, it has strong links with the distribution company and processing plants (all are owned and run by members of one family) as well as farmers and community members.

One day, in the headquarters of DDOiR I witnessed a meeting of fourteen farmers who had gathered to discuss the process and possibility of converting to organic. There was no program or reception, just a circle of chairs and the possibility of coffee or tea. I asked how they organized such events and was told that usually people contact them, or mention interest at other events. When this happens the people at DDOiR take the contact information and once they have a list of people (every month or so) they call everyone for a meeting. It's simple and informal and that seems to be the way they like to work. Pawel was committed to these strategies and almost annoyed by more structured seminars and conferences, where according to him "most of the funding gets spent on food and location." Instead the members of DDOiR work pragmatically to address as many issues with as many people as they can.

When Pawel was taking me around the village he would point out the organic farms, which seemed to encompass most of what we saw. I asked him if this was an "organic village" and he laughed and said yes, in some ways it was. He showed me an area where they planned to start doing field trials of local varieties of seeds and an old orchard of more than four hundred trees that they are working to identify and categorize.

This method seems to be working, especially since DDOiR and similar agroenvironmental organizations like Heifer International and SIE strive to show farmers that conversion to organic agriculture and the use of local varieties can increase incomes and reduce costs. I found ideas originally conceived by a few people in this area are spreading through the community, region and even the country through interpersonal networks, making this form of social capital an important resource for activists.

This means that to be effective most campaigns work at the local level. While effective for mobilizing change locally working through interpersonal and informal networks often leads to difficulties when campaigns try to influence policy at higher levels. When describing work between communities one activist told me "It is much more difficult to have projects with many communities. People are not used to working this way. We have to tell them 'They [the other community] are not your enemies, they are your friends.'" While facilitating cooperation between communities is more difficult he was optimistic, adding "It's a learning experience. For us, it is possible. For them, it will be possible."

I found that while campaigns can benefit from the social capital present in interpersonal networks the success of wide-reaching campaigns will still require the building of trust between communities and towards government institutions.

5.4 Moving Towards the West

I have shown some of the ways that history has shaped society's response to collective action and agroenvironmental issues. In addition to the distrust in institutions as a holdover from socialism and the prevalence and potential of informal networks, I will now discuss how these contextual factors interact with the EU and international actors.

Interaction with international actors has both positive and negative results for farmers and rural communities , especially since Poland has the largest rural population in the EU. Terms of accession meant that CAP was adopted without negotiation, which has caused some resentment in the rural farmers I spoke with. These people were frustrated by the amount of bureaucracy they encounter such as the requirement to register every animal and the stipulations of EFSA regulations that must for products to be sold on the market. As I mentioned in Chapter 4, EU subsidies are viewed as "not useful" and "funny money," with farmers desiring government regulated prices and bans on imports as were present under socialism. This reflects a resistance to systemic change from the population and results in a complicated relationship with the EU. When I asked farmers if they felt a connection with other farmers in the EU or globally it seemed this was not a situation they had previously considered. One woman told me, "I'm sure it is hard for everyone, but for us, it is especially hard." The lack of connection Polish farmers feel with the

outside world is a hindrance to cooperation in wider social movements necessary to negotiate large-scale change.

While farmers are often resistant to adopt new ideas the involvement of outside actors can actually help to motivate change. Several people told me that new ideas are sometimes viewed as novel and more justified when introduced by foreigners. As one organic farmer from Western Europe now living in Poland told me "If a stranger comes, he makes strange things. This is more normal than when someone from the community does this and sometimes the strange ideas become good ideas." Despite the resistance often felt towards outside influences when someone with new ideas join the community this seems to make Western ideas more valid than when introduced in government programs.

For organizations, there are also positive and negative aspects in their relations to international groups. All organizations collaborate with and rely heavily on grant money from the EU and international organizations and ICPPC and DDOiR, were founded as the result of inspiration from similar organizations abroad. These relationships grant Polish groups access to grants, experts and knowledge that are critical to their effectiveness. To gain access to these resources, however, they must adopt the language of international discourses and frame campaigns to fall in line with the goals of funding bodies. Malgorzata told me that SIE is not always able to address the issues they would like, or in the manner most suitable as a result. Another woman, Ela, told me that she has learned over the years which groups she can work with and which she would prefer not to.

The adoption of international goals and discourses to acquire funding can result in the "reformatting" of political claims and practices to gain access to benefits (Michon 2002). While the organizations interviewed would prefer not to rely so heavily on outside sources they are also grateful for their relationships with outside bodies and the funding that makes their work possible.

5.5 Social Capital in Poland

In my research I found that strong interpersonal networks offer great potential to mobilize change for environmental issues but this change is somewhat limited to the local level due to the nature of the networks. I also found that Polish people work around EU regulations through the use of informal markets.

Letki (2004) found that involvement in local organizations led to greater trust and further participation as people became familiar with the political practice. Activists with whom I spoke also felt this way and were positive that education was the most important part of their work. I was told that new ideas are "growing like berries" as more people learn about these campaigns through word of mouth.

While campaigns work successfully through informal networks, stronger forms of social capital are formed with the potential to mobilize widespread action. For the time being campaigns seem most satisfied and effective working through established networks and slowly building more far-reaching networks.

6 Conclusion

Political ecology allows for the description of political, economic and social factors and their interaction with environmental issues. My examination of campaigns opposing GMOs and those promoting the conservation of agrobiodiversity legislation reflects the interplay between society and government as well as the relationships between members of society and government at different levels.

Without exploring the political, economic, and social factors at play it is difficult to understand how these two interrelated environmental issues have been received so differently by Polish government and society. GMOs are strongly and widely opposed—by individuals, campaigns and the government—through citizen action and legal bans. The strength of the opposition has led to clashes with supranational government and created a mobilized public. In contrast, the issue of conserving agrobiodiversity has sparked almost no debate, and the government has passively accepted legislation designed in international and EU bodies.

In the case of GMOs, the legislation reflects the Polish state's struggle to assert a decision-making power that comes in marked contrast to the passive acceptance of agrobiodiversity legislation. The campaigns reflect similar struggle taking place between activists and citizens as well as between citizens and the government. The reception and responses to theses issues by the Polish people and government highlights the way that agroenvironmental policies differ not only in degree but in kind and the way that national

policies, even those transposed from EU legislation, develop differently as a result of distinct national histories and characteristics (Bruszt 2008, Jehliaka and Tickle 2004).

In my study I have illustrated how related campaigns can be shaped and received differently, even within the context of one state. I found both the opposition to GMOs and the indifference to conservation of agrobiodiversity to be rooted in a hesitancy on the part of the Polish population to accept new ideas, especially when these new ideas are perceived as being imposed on them from outside sources. In examining the opposition to GMOs Poland, I found that campaigns resonated most effectively with communities when highlighting the uncertain risk of this new technology and invoking a fear of the unknown. This came in stark contrast to campaigns seeking the conservation of agrobiodiversity, for whom this strategy was far less effective and, as a result, have had more difficulty in mobilizing action.

The population of Poland has historically resisted change when it is dictated to them from above, whether from the Soviet Union or the EU, and I found this hesitancy to adopt new practices to be at the root both of their opposition to GMOs and indifference toward the conservation of agrobiodiversity. Both the adoption of GMOs or policies promoting the conservation of agrobiodiversity would require changes in governance and practices, and as such both concepts have been met with heavy resistance.

The Polish government's lack of enforcement of EU legislation and its limited support for programs that conserve agrobiodiversity reflect the an unwillingness or inability—or both—to adopt new practices despite demands from both the EU and the Polish public.

Campaigns have found the most success by working through pre-established social networks and by appealing to pre-established beliefs and values. This indicates that, despite the strong feelings people have opposing GMOs and some EU CAP policies, the general public in Poland is reluctant to adopt not just new ideas and technology but also new social structures and methods for mobilizing change.

The narratives surrounding these issues has been determined by EU and international parties, and this threatens the Polish people's power to self-govern and control their environment (Stott and Sullivan 2000, Schwatrz 2005). This idea may be at the root of many people's reluctance to adopt these narratives.

A desire among the Polish public to retain decision-making power and to shape and determine their own interpretation of international and EU concepts provides and illustration of some of the challenges that are faced in the implementation of EU policy in the CEE region. Post-socialist histories and rapid transformations of governments and economies, coupled with the conditions and stipulations of EU accession, have resulted in different interpretations of laws and influenced the response of the public as they try to navigate their place in the EU (Zellei 2001, Gorton *et al.* 2005). In Poland, this has been

reflected largely by the reluctance of communities and government to make systemic changes, whether they be to policies, practices, beliefs or relationships.

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