Fostering a Sustainable Future

Edited by Maria S. Tysiachniouk and Noel Deang

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FORWARD

For me, discussions of sustainability offer a refreshing alternative to our preoccupation with post-modernity. For, if the post-modern world exists as a deconstruction of modernity—its facing up to its own generation of anomalies and need for change—then sustainability must be thought of as a successor era to modernity. While it is tempting to dream about the content of a sustainable world, as if we were contemplating a new Utopian ideal, it is vital that we remember to ponder not only the end point but also the axis of transition. In short, where is sustainability being generated within the modern/post-modern society?

In this hybrid collection of papers by American students and Russian academics and practitioners, we have the opportunity to examine this point of origin for sustainability. I have always liked Douglas and Wildavsky’s conceptualization of social and environmental change as being generated from the periphery of society, while the social core maintains the dominant existing practices and logic (1982). Thus, we would expect sustainable innovations to be arrayed along a continuum from the core to the periphery. Some practices become accepted, mainstreamed and are applied at the core. In contrast, new innovations are pushed from the edge of society, perhaps to eventually also become normative.

The authors of this collection prefer to think in the sociological concepts of political effectiveness and problematization. Within this theory,
change is attempted through the existing social and political effectiveness structure. When innovation is blocked, change agents attempt to force it by conceptualizing, campaigning and educating around "problems." In my view, this theoretical model can be reconciled easily with the core/periphery concept, since the political effectiveness structure is at the core of society and problematization is a tool of the periphery to gain attention and action.

**Sustainable Change at the Core**

Having made this reconciliation, we can see a useful logical structure for this work. Some of the actions toward sustainability that are described here are clearly now actions of the core society, implemented through the routine tools of social operation. Practices such as recycling, wetland based sewage treatment, construction of energy efficient housing, and restoration of shorelines all represent, to varying degrees, ideas that were at one point peripheral but have moved toward the mainstream. Even if they are not fully accepted as normal practice, they are no longer flaky concepts. Rather they are innovations toward sustainability that are now generally accepted within the normative structure, even if somewhat exceptional. In the case of recycling in New Jersey and New York, practices are now quite mainstreamed. A parallel case study from Russia would show recycling to be far less established. Beach replenishment, as described here, is increasingly practiced, although one might question it as a sustainable approach absent mitigation of threats to shoreline stability. Solar homes and energy appropriate buildings are still rare, but hardly inconceivable.

**Sustainable Change from the Periphery**

In contrast, this book profiles various organizations that sit toward the periphery of social action, using a combination of core practices such as legal action and planning, but also problematization approaches such as campaigning and education. The eco-social change groups that are described here range from local and regional environmental action groups, groups concerned with sustainable information exchange, legal pressure groups and a group formed to foment change in sustainable practice on college campuses. On one hand, these groups can themselves be arrayed along an axis ranging from closer to the core to considerably more fringe. Perhaps more useful, however, than locating these groups at a specific point on a continuum, is the realization that groups can change their approach and their location, depending upon their focal point and the degree to which the focal approach is accepted at a given time. All of the groups considered here are relatively peripheral, no matter how institutionalized they become and how much they use institutionalized practices.

**Sustainable Change Beyond the Periphery**

Finally, this collection offers a third point of comparison considered neither by the core-periphery notion nor the political effectiveness/problematization conceptualization. In contrast to core institutionalized action toward sustainability and the groups that mobilize resources at the periphery to establish sustainable goals and actions, we can here consider those groups that have moved beyond the periphery. As three fascinating case studies from Russia document, we such groups may be less interested in changing society, per se, than in moving outside of its axis to experiment with new directions and rules for the residents of the community. Such intentional communities involve a conscious proto-utopian design for ecological, social and organizational functioning. In placing themselves as far outside the periphery as they need to go to have social space to experiment, they represent an inward focus absent from the core or peripheral agents of change. Yet, in creating possibly replicable or franchizable models, these "space stations" can eventually exert considerable influence back on earth on core social structures. For example, the Kitchi model described here, offers an alternative institutional structure for addressing the problem of orphans in Russia.

In conclusion, as a whole, these chapters reveal a continuum depicting sustainable change at the core, the periphery and beyond the periphery of society. While the chapters may be diverse in detail, form and content, they paint an interesting portrait of three separate axis of sustain-
able change, all worthy of further consideration and all necessary for
any model of the transformation toward a potential sustainable society.
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Douglas, Mary and Aaron Wildavsky. Risk and Culture. Berkeley: Uni-

INTRODUCTION

This book explores attempts to implement sustainable development
strategies by non-governmental organizations (NGOs) in the United
States and Russia. We hope this book will be useful for those practi-
tioners and policy makers who are engaged in promoting sustainable
development on the local, regional, national or international level. The
volume also can be used as a text in college and university courses and
will be of interest to a broad range of scholars.

The first chapter represents a collection of sections in which we ad-
dress attempts to implement sustainable development strategies by en-
vironmental non-governmental organizations in the United States (New
York/New Jersey) and Russia (St. Petersburg region). NGOs in the US
and Russia operate in two advanced economies with entirely different
historical, political, social, and environmental contexts. In Russia,
solving environmental problems and finding ways of sustainability is
even perhaps more challenging than it is in advanced democratic coun-
tries with relatively stable economies. There are many peculiarities to
the realization of sustainable development and the functioning of non-
governmental organizations (NGOs) in the post-totalitarian transition
period in Russia.

In the US three NGOs were selected for case studies: Hudson Valley
GREEN, the New Jersey Public Interest Research Group Citizen’s
Lobby and Orange Environment, Inc. Hudson Valley GREEN is de-
scribed from an historical and analytical perspective. The study is focused on the organization’s structure, identity, values and relations to social movements. The importance of this organization is seen through its effectiveness in networking, its ability to rally public attention, its success at instilling a sense of community, and its effectiveness in alerting the region of potentially harmful local and worldwide environmental hazards. The study of the New Jersey Public Interest Research Group Citizen’s Lobby address the issues pertaining to sustainability that the organization is working on. History of the organization, governance, its operational strategies, and affiliations with the other institutions are analyzed. The case study of New York NGO Orange Environment explores some of the diverse variety of practices and repertoire of collective actions used by this organization in its effort to make Orange County a more sustainable place.

The section on Russian issues gives an overview of NGO sustainable development initiatives in St. Petersburg region. The focus of the section is both on the history of the Agenda 21 movement in the Baltic region and an overview of sustainability initiatives, including six case studies. A great deal of attention is given to the analysis of the context and political opportunities for NGOs in Russia. The section analyzes attitudes, suggested policies and barriers towards sustainability expressed by Russian environmentalists. Special attention is given to the analysis of public participation in sustainability initiatives in Russia.

The main intellectual effort of this chapter is to test Western models of social movements in the Russian context. Two distinguished basic paradigms in social movement research are applied to analyze both US and Russian environmental movement organizations. These paradigms are: the resource mobilization paradigm and the new social movement paradigm. The chapter demonstrated that to some extent and with certain limitations, perspectives and concepts developed for the analysis of advanced highly modernized democratic Western societies can be applied to the analysis of the movement that emerged in post totalitarian society. Readers will see how an environmental organization diversifies its strategy to operate successfully under its social, political, and historical context.

The second chapter represents a compilation of case studies on US "good sustainability" practices collected by students at Ramapo College of New Jersey as part of the "Building Sustainable Communities" course. Eight case studies were selected for this book. A parallel effort to describe "good sustainability" practices was organized in Russia by the NGO Green World. The study in Russia was conducted by Green World, the Center for Independent Social Research, the Society of Naturalists, and Smolny College students. The results of research conducted in Russia (eight case studies) are published in a separate brochure "Sustainable Baltic—The First Steps," inserted into this volume. In both countries the same description scheme and the same "good practice" selection criteria were used. These criteria and research design was developed in Western Europe and adopted and provided to Ramapo College of New Jersey by the NGO Green World.

The third chapter explores how people build sustainable communities in post-Soviet Russia. Three case studies were conducted: Nevo-Ecoville in Reuskala, Karelia; Kitezh in Central Russia; and Tiberucle in South Siberia. All three communities were created after the collapse of the Soviet Union in 1991. All three eco-communities consist of former city residents who make considerable efforts to reconnect themselves to the land and learn how to subsidize themselves by growing their own organic food.

The eco-settlement Nevo Ecoville in Reuskala can be regarded as an attempt by Russian people who have found themselves in a world with rapidly changing "rules of the game" to create a structure, a small society, which would help them to live in harmony with nature and realize their ideals. The paper focus on the history of the settlement, on its system of administration, its financing, farming activities, gender roles, ecological practices and plans for development.

The Kitezh case study explores how several families with adopted children are building a sustainable village "Kitezh" in Kalujskaya region, Russia. "Kitezh" community is the first example of an alternative institution for child development in order to help parentless children. It is a rural working spiritual community and eco-village that provides an
education and home with foster families for orphaned Russian children from extreme social situations. Kitezh is a concrete alternative to the institutionalized care provided by the state.

The Tibercule case study describes an ecological community in South Siberia, Krasnoyarsky region, Russia. This paper analyzes how a religious cult, the "Commune of Vissarion," which considers natural disasters resulting from global climate change as a possible reality in the near future, is building an eco-settlement. This paper explores ecological and ethical aspects of the communes' religious conception, relation to nature, gender roles and health issues.

Similar investigations of eco-settlements in the US are in the process of data analysis and will be published in the next edition of this book.
An Agenda for Sustainable Development for American and Russian Non-governmental Organizations

By Maria Tysiachniouk, Alexander Karpov, Mathew Goodwin, Brad Bollen, and Chris Vernak

1. Introduction

In this chapter we will discuss how different aspects of historical/cultural contexts shape the behavior of actors and institutions within the current environmental movement in the U.S. and Russia. In the sections that follow, social theory and case studies will be juxtaposed to present a picture of environmental activities in both countries. Particular attention will be paid to how the concept of sustainable development fits into the general environmental movement and how non-governmental organizations (NGOs) are implementing sustainable development policies. The case studies presented pay particular attention to NGOs’ practices and internal structures, as well as to how they relate to their efforts to develop and implement local sustainability agendas. The reader can assess the potential of NGOs to influence the cultural and political agenda of societies within the current historical context in the U.S. and Russia. We will analyze three US NGO case studies and focus on general descriptions of environmental NGOs development in Russia, placing particular attention on the movement of
Agenda 21 in Russia. We will use the same theoretical framework for NGO analysis in the U.S. and Russia. We will analyze NGOs in the frame of new social movements and the resource mobilization paradigm.

2. Theory

The new social movement paradigm was developed by the European school of thought, by A. Touraine (1981, 1985), C. Offe (1985), D. Rucht (1988), and A. Melucci (1980, 1985, 1989). New social actors appeared in 1968 as a result of the environmental, women's and peace movements. They were referred to as "new" social movements signifying a difference from "old" labor and agrarian movements. A social theorist, Offe, demonstrated that the new social movements were characterized by democratic decision-making, a decentralized and flat structure, broad values, a middle-class identity and a well established support base (Helmer 1996:15). New social movements represent a reaction to processes of modernization in late capitalist societies. Lifestyle, autonomy and new identity are among the foci of new social movements. Among these values is a desire for community (McAdam, 1998 et al. :701).

Ecological identity refers to the different ways in which people interpret themselves in relation with nature and the earth in regard to personality, values, actions and sense of self (Thomashaw, 1995:3). When a person or organization's decision-making is influenced by the ecological integrity of a region or focuses on the benefit of the environment, it is based on their ecological worldview. This is a characteristic associated with an ecological identity (Thomashaw, 1995:5).

The resource mobilization paradigm was developed by McCarthy and Zald (McCarthy and Zald, 1977). It stresses the importance for movement organizations to obtain resources in order to accomplish their goals and successfully operate on a grander societal scale (Helmer, 1996:22). According to this paradigm, there is continuous conflict between movement representatives and authorities. The movement mobilizes informational, scientific, human, organizational, and financial resources. The members of the existing well-developed environmental groups together with grass roots organizations encourage public participation in the protest (McCarthy and Zald, 1977: 1214).

Environmental organizations are hindered by certain external ideological and institutional limitations. These outside conditions can be referred to as political opportunity structure. This paper applies the concept of political opportunity structure, developed by Kitschelt (1986;1991) and Tarrow (1988a,b) to explain how political conditions in a given historical period can promote or suppress NGO development. This opportunity structure is defined as the willingness of the political system to react to demands from groups such as environmental organizations. When environmental organizations become persuaded that a particular path is viable and can provide some results, political opportunity is created (Helmer, 1996:61). Therefore, by the term political opportunity structure we mean the sensitivity of the whole political system to pressure groups such as NGOs. The term expresses the constraints on the groups' political possibilities (Hjelmar 1996:39).

We will show how NGOs in the US and Russia respond to changing political opportunities and how they use the existing political structure in their strategies.

We will also analyze the US and Russian NGOs identities and practices using Hjelmar's approach (Hjelmar 1996). The identity of the movement is itself the result of a process rooted in historical context. Environmental organizations generally take on a movement identity or a pressure group identity. A movement identity refers to an organization that serves to gather resources and people for the benefit of the "cause". Sociologist, John Lofland has characterized associations that are sustained by volunteers as a "movement organization local form" (McAdam et al. 1998:116-17). A movement challenges the current political order by addressing social issues and internal contradictions.

Pressure groups accept the political order and their organizational agenda involves "change from within". The organizational identity of a group can change sporadically, depending on the political opportunity structure. The same environmental organization might be predomin
nantly a movement in one period, when political opportunity structure is unfavorable for the NGOs to achieve their goals, and a pressure group in the other, when the government is sensitive and provides NGOs with political opportunities to achieve their goals through a consensus building process (Hjelmar, 1996).

Environmental organizations often utilize certain strategies to influence decision-making. NGOs identification is typically revealed in their strategies. Movement identity NGOs usually attempt to set a new political agenda through the practice of problematization. Problematization is an effort to make the public aware of environmental hazards and is based on the concept of confrontation as opposed to compromise. Problematization utilizes the role of the outsider in an effort to rally public interest (Helmer 1996:43). Problematization can be effective in convincing people to question the idea of progress and the values of modern society (Helmer 1996:46). The group tries to redirect public and political attention to address its concerns.

A fundamental aspect of problematization is that it attempts to expose gaps in the current political structure, e.g. emphasizing a problem for which no current solutions exist. The NGO applies leverage to promote its solution through a variety of confrontational techniques, typically grass roots organizing, media campaigns, informational assaults, or civil disobedience. Problematization is usually adopted when the political opportunity structure does not favor consensus building or other non-confrontational strategies.

NGOs with pressure group identity usually adopt the practice of political effectiveness. This practice does not challenge the political regime or reveal its weaknesses. Instead, pressure groups accept the current political structure and attempt to influence the direction of political action. The practice of political effectiveness involves tactics that include lobbying, campaign contributions, or litigation. Political effectiveness is usually adopted by environmental groups when the political opportunity structure favors it. This paper is the first effort to apply the concepts of identity, problematization and political effectiveness to both NGO activities in the U.S. and NGO development during Russian transformation.

Another major factor of environmental organizations is their organizational form. Environmental organizations may have either a flat or pyramidal structure. A flat authority structure is one that is non-hierarchical or not arranged in order of rank. Flat structures characteristically distribute power equally among all members that are active in the organization. The object is to instill a sense of responsibility and commitment among the members. A flat structure normally excludes any powerful leaders and lacks control. The organization typically consists of volunteers and they tend to work only if they feel that there have been no violations of their integrity (Helmer, 1996:36). Flat organizational structures often experience sluggishness in decision-making, but the members have the benefit of learning the importance of democratic procedures in the society at large (Helmer, 1996:37).

3. Methods

The research for the following study was designed by Dr. Maria Tysiachniok. In the United States research was conducted in Spring 1999 by Ramapo College of New Jersey students. Methods include the semi-structured interviews with NGOs’ leaders and participant observation. Interviews were conducted with Jim Gordon, the managing editor of Hudson Valley Grass Roots Energy and Environmental Network (GREEN); Benita Jain, Field Organizer of New Jersey Public Interest Research Group (NJPIRG); and Dr. Michael Edelstein, president of the Orange Environment (OE). Literary research included the by-laws of Hudson Valley GREEN, two (2) current issues and five (5) back issues of GREEN TIMES; leaflets and reports produced by NJPIRG and OE. A participant observation of an OE board meeting, in March, 1999 was also used in the study.

The interviews in Russia were taken from March 1995 until October 1999. Additional information was collected during a series of NGOs’ seminars and intersectoral conferences on sustainable development held from November 1997 through April 1999. In a semi-structured interview the respondents were asked a set of predetermined open-ended questions. Some questions were specific to the occupation of a respondent. The interview design contains core questions elicit the
priorities which identify Russian NGO activists regarding sustainability. The questionnaire addresses the concept of sustainable development, centering on policies and barriers. Special attention was paid to studying the interaction of the NGOs with the government, scientific institutions and public. There were no specific questions concerning historical/cultural, macrosocial and situational context, but many respondents addressed those issues in different parts of the interview. The respondents’ assumptions and statements were used to form the contextual inferences which were then verified and compared with practices observed during participatory observation.

In 1998, three out of four seminars in St. Petersburg were run according to a common scheme which included two subsequent workgroups (moderated discussions with 5-7 people) on the environmental problems of the region and how NGOs can participate in developing Local Agenda 21. Representatives from 35 organizations participated, in total about 80 people. All interviews and workgroups were taped, transcribed and coded for analysis. There was no specific method for documenting participatory observation, although the results were discussed and several interpretations were compared. Reports on the St. Petersburg International Conference on Sustainable Development for the Region held April 28-30th 1999, written by Chris Church (TACIS EAP NGO advisor) and by Eugenia Mackhonina (Green World), were used. Unpublished manuscripts of Alexander Karpov and Maria Tysiachniouk were used for the analysis of public participation in environmental decision making in Russia.

4. An Agenda for Sustainable Development for US NGOs (New York-New Jersey Case Studies)

4.1. Grass Roots Energy and Environmental Network (GREEN) by Matthew Goodwin

4.1.1. Introduction:

When the topic of non-profit or non-governmental organizations surfaces, it is common to think of large, nationally or internationally renowned groups such as Greenpeace or the Sierra Club. These groups have won many decisive and important environmental battles. But many battles are won in the trenches and it is with some difficulty that the small grass-roots organizations gain the recognition that they deserve. I would like to address the importance of these organizations in regard to protecting the environment while at the same time building a strong sense of community. Hudson Valley GREEN (Grass Roots Energy and Environmental Network) has been chosen as a case study to prove that small NGO’s (Non-Governmental Organizations) devoted to the environment and its sustenance, can be efficient and effective, regardless of its size.

4.1.2. History

In March of 1979 the accident at the Three Mile Island power plant sent up a warning flag to the public about the safety concerns involved with the use of nuclear energy. The anti-nuclear movement that resulted still had some momentum left in 1983. Hudson Valley GREEN was founded in 1983 in an effort to stop Con Edison from building a nuclear power plant along the banks of the Hudson River in Red Hook, New York. Possibly more effective than the anti-nuclear persuasion was the idea of such a tremendous potential hazard in the local community. NIMBY is an expression that has often surfaced in regard to the protection of the environment. It stands for "Not In My Back Yard" and principally refers to the polluting of, or the degrading of, an area or region in close proximity to the concerned party. An effective way to arouse the attention of the public is to convince them that the negative impacts of proposed environmentally destructive projects would directly affect their immediate community or living space. Such was the case with Hudson Valley GREEN. It was created to save the region from dangerous environmental circumstances and has lived to be what is referred to as a "gadfly" or one who annoys others (Gordon). Hudson Valley GREEN plays the role of agitator by alerting the public of projects that may be harmful to the environment.

4.1.3. Organizational Structure and Resources:

Hudson Valley GREEN publishes a quarterly periodical called the GREEN TIMES; a newspaper entirely devoted to the environment. It
evolves around the issues of alternative energy systems and the decentralized power in the region. The importance of localizing environmental threats is the strength of Hudson Valley GREEN. Realizations of environmental impacts are much more likely when they occur in one's own community.

Their board consists of eleven members when fully staffed and they have dozens of volunteers for different tasks. The board leaves the responsibilities of article selection and order to the managing editor. Most of the decisions involving format belong to the editor. The organization has experienced its share of problems from lack of funding and resources to an inability to keep volunteers. The group's overall inconsistency has prohibited their potential to accomplish greater ambitions. Growth has been difficult without proper funding, as money has taken on the role of limiting factor (Gordon). They have a good relationship with colleges and high schools. One of the board members is from Marist College. The annual board meeting is held at Bard College. Hudson Valley GREEN presents at Vassar College campus on Earth Day. Presently, Hudson Valley GREEN is attempting to rekindle their relationship with high schools by heading environmental education programs.

4.1.4. Main Direction of Activities

Jim Gordon (managing editor) has discussed the "ideal" Hudson Valley GREEN. Future goals and aspirations include modernizing the organization. Upgraded computer systems and a web site are essential. Publishing 12 times per year is another goal. This would consist of 4 newspapers (quarterlies) and 8 updates that would be printed monthly in the form of a newsletter. The updates of approximately 4 pages would prevent issues from falling into the cracks. It is difficult to cover all of the important events and issues that take place in the environment when a publication only comes out every three months. The updates would serve the purpose of filling the void. The final goal would be to increase the number of intimate volunteers from ten to three dozen. With these revisions, Hudson Valley GREEN could become a more useful networking tool.

Hudson Valley GREEN falls into the category of a new social movement. It is a movement that focuses primarily on regional and local environmental issues. In the 1998 Fall/Winter issue of the GREEN TIMES there were two articles that dealt with the possible construction of a paper plant and a cement plant along the Hudson River. There was considerable focus on the Indian Point power plant in Westchester that could harmfully affect the Mid-Hudson Valley region. There were several articles pertaining to the polluting of the Hudson River. Hudson Valley GREEN focuses on the areas in society regarding health and nature, whether it be polychlorinated biphenyl (PCB) clean up in the Hudson River or the decentralization of power sources and alternative energy in the area.

Hudson Valley GREEN has ecological values. Their publication is entirely devoted to the environment and the promotion of sustainability. Half of the articles printed focus on regional issues and the remaining articles deal with general environmental topics, but every article printed is targeted to benefit the environment.

Structurally, Hudson Valley GREEN is a "flat" organization. The decision-making process is a non-hierarchical one. According to the Hudson Valley GREEN By-laws, decisions are made on a democratic basis. There is a majority vote among all board members for routine decisions. Each member of the board has an equal voice. The organization does not contain powerful leaders.

Another "flat" characteristic of Hudson Valley GREEN is the high concentration of volunteers in the organization. It is almost entirely voluntary, with only one paid staff member. The board of directors consists solely of volunteers. There are approximately ten volunteers that deal with the organization on an intimate level. There are dozens of volunteers that assist in distributing the newspapers. Volunteers write most of the articles, with the exception of a few articles written by Jim Gordon (the only paid staff member). Jim Gordon assigns an article to a volunteer, which relates to a particular environmental topic. After submission, the article is reviewed and input is offered. Together, both offer their own specialties and the end result is a quality article on the
subject. Volunteers participate in fund raising, activism and editorial duties. The recruitment process is done through the newspaper, fliers, public service announcements and word of mouth. There are no restrictions or requirements for membership, and Hudson Valley GREEN is always open to new ideas from volunteers. One of the problems associated with volunteers has been keeping people on the staff. Last year several volunteers were lost because they did not keep busy and lost interest.

Hudson Valley GREEN effectively utilizes the practice of problematization. They strive to bring environmental problems to the surface in an effort to create public awareness. The goal of the organization is to educate the public by questioning the values of modern society. Mass media is an extremely effective tool used by environmental groups in forming public opinion and problematizing aspects of social reality (Helmer 1996:49). The GREEN TIMES periodical serves as a component of the media and Hudson Valley GREEN utilizes the newspaper to form public opinion. Ten thousand copies are distributed quarterly to libraries, schools and local businesses. Hudson Valley GREEN has no formal relationship with the media. Local radio appearances occur at various intervals. There are plenty of local radio stations in the region, but there are no local TV stations or opportunities. Hudson Valley GREEN’s relationship with the government has been described as "respectfully adversarial," but the government seldom pays close attention to an organization of such small size (Gordon).

Hudson Valley GREEN has remained effective through networking and resource mobilization. As an environmental network, the organization is responsible for acting as a link between people and organizations. Networking in the area has been a major concern. There are a considerable number of organizations in the Mid-Hudson Valley region, but there is little coordination between them and they do not effectively coordinate activities. GREEN TIMES tries to make connections between them. In the past they ran an environmental calendar and they are in the process of putting it back together. The newspaper prints letters from concerned citizens and advertises for local businesses. They are connected with scientific institutions, which they rely on for expertise, especially Hudsonia, a group that studies the biology of the Hudson River. They try to get people actively involved in environmentally sound projects such as gas and energy alternatives. Hudson Valley GREEN has a scarce amount of material resources. They have a small office that they rent in Red Hook and they own some computer equipment. Their greatest resource aside from the actual newspaper is their human resources. Volunteers are the backbone of the organization and the volunteers are effectively mobilized whether it be for distribution of the newspaper or for a presentation at a college campus.

4.1.5. Conclusion:

Effectiveness and importance can not be measured by the size of an organization. Hudson Valley GREEN may not ring with familiarity in a majority of environmental circles, but to the people of the Mid-Hudson Valley region, it has an importance that may far exceed that of the "major" environmental organizations. It has managed to succeed by effectively networking and instilling a sense of community in the region. Through the effective use of problematization, Hudson Valley GREEN has defeated the Con Edision power plant and changed the entire geography of the East side of the Hudson River. Most often, a lot of development is associated with power plants, which add to the pollution and degradation potential of an area. Resource mobilization (primarily human resources) has resulted in effective distribution practices. Overall, Hudson Valley GREEN has called attention to the importance of a pristine river. It has succeeded in bringing an aura of environmentalism to the Hudson Valley region and stressed the importance of a clean Hudson River.

4.2. New Jersey Public Interest Research Group Citizen’s Lobby
by Bred Bollen

4.2.1. Introduction

The objective of this section is to do a detailed study of New Jersey Public Interest Research Group Citizen’s Lobby (NJPIRG.). The paper
documents the practices of NJPIRG and places them in a historical and social context to clearly articulate how the organization has evolved and what outside factors have caused this evolution. The paper addresses issues pertaining to sustainability that the organization is working on. The goal of the research is to explain the day to day functions and operations of NJPIRG and show why an organization like NJPIRG plays an essential role in a democracy. This case study demonstrates how one NGO, has been effective in working for sustainability.

4.2.2. Description of NJPIRG

NJPIRG is non-profit and non-partisan, combining research, legislative advocacy, media and grass roots organization. It was started by Edward Lee Rosenthal twenty-five years ago while a student at Rutgers University. It was started because the leader wanted to find innovative and practical solutions to New Jersey’s critical problems. He wanted to find a way that students could address "gut-level social problems" and win. This was accomplished by convincing over half the students at Rutgers to sign a petition supporting the establishment of a Public Interest Research Group on their campus. Endorsements came from six members of the New Jersey Congressional delegation and a resolution in support of establishing NJPIRG, introduced by then-Assemblyman Tom Kean, passed through state legislature. A campus referendum regarding the PIRG fee was held and over half the students turned out to vote. The referendum passed, the University Senate endorsed the PIRG concept, and the battle for NJPIRG’s establishment was won.

NJPIRG consists of student volunteers and Professional Staff. They have successfully sued more illegal water polluters than any other group in the country. They practice a technique called "the watchdog," which they use to uncover dangers to public health.

The analysis of the interview and web page demonstrates that NJPIRG goals and activities are as follows: they speak up for the public interest against the special interests, on issues in the news and below the surface. They help consumers from becoming victims of private greed. They help the average citizens who suffer from an absence of govern-ment attention or an excess of government bureaucracy. They fight for our threatened natural environment. In the watchdog tradition, they uncover dangers to public health and wellbeing and fight to end them, using the time-tested tools of investigative research, media expose, grassroots organizing, advocacy and litigation. NJPIRG attempts to deliver persistent, result oriented, and public interest activism to achieve concrete changes that improves the quality of the environment, government and life.

NJPIRG has worked on a series of campaigns. Several of the more significant campaigns this NGO has fought include Clean Air Now, where NJPIRG Citizen Lobby and public health experts called on the state to clean up polluting power plants, resulting in state officials setting groundbreaking clean air standards. With the Clean Water campaign, NJPIRG Citizen Lobby sued the state after the Whitman Administration moved to weaken enforcement of clean water laws and allow more toxins in the state’s waterways.

Through the Toxins Program comparing, NJPIRG Citizen Lobby worked with New Jersey’s congressional representatives to improve and expand public access to information about toxin use. Due to the NJPIRG Citizen Lobby-crafted Community and Worker Right to Know Act, according to the NJPIRG annual report, New Jersey residents already have access to more information about toxic chemicals than most U.S. citizens do. In 1997, NJPIRG convinced state and federal officials to reduce the number of diesel buses used by NJ Transit and fund the purchase of alternative fuel buses. NJPIRG Citizen Lobby distributed more than 200,000 New Jersey Legislative Scorecards in 1997, alerting citizens to how their state representatives voted on key public interest issues.

NJPIRG worked with environmental and community groups to win funding for road repair, pedestrian safety and mass transportation and to preserve open spaces. According to their Web site, they state that in the future NJPIRG will continue to monitor the implementation of new clean air safeguards, continue their work to protect consumers, and watchdog the government and special interest.
As stated earlier in this paper, NJPIRG was established in 1972, in response to the need for student organizations that could address gut level problems. At the time of the organizations’ conception, there were few other public interest research groups operating in the United States. In the states of Oregon and Minnesota students were having successes operating in this type of organization. As a result of the need, NJPIRG was formed.

4.2.3 Organizational Structure

NJPIRG has three different divisions. There is a NJPIRG law and policy center, which is a 501c3 organization; this division works with education and public outreach, coalition building and public policy. There are two 501c4 divisions of PIRG, the NJPIRG Student Chapter and NJPIRG Citizen Lobby. They are both 501c4 because these divisions partake in lobbying.

The NJPIRG Student Chapter is active on all Rutgers Campuses around New Jersey. This division of NJPIRG works with students to give them key citizenship skills and the ability to work on lobbying the campaigns and issues they care about. Finally, there is NJPIRG Citizen Lobby, which is the citizen outreach area of NJPIRG, which lobbies on state issues as well as federal.

There is a Board of directors that is comprised of students that are elected by other students. The students comprised of NJPIRG Student Chapter Board of Directors make the decisions on which issue that NJPIRG is going to concentrate on. Professional staff approves the decision and action is taken from there. The action is taken in the form of coalition building, working with the media, direct lobbying and research.

4.2.4. Affiliations with other institutions

NJPIRG works with the media by holding news conferences, where they invite reporters to release a report in order to put an issue out in the public arena. They also produce letters to the editors and talk to reporters to educate them on central issues.

According to the interview done with Benita Jain, when it came down to cooperating with a decision-maker or opposing them it depended on the issue and where that decision-maker stood. NJPIRG continuously meets with the State legislatures, as well with the Governor’s staff. At the same time that they are meeting with decision-makers they organize citizens to put grass roots pressure on the decision-makers to make sure the public demands are carried out. According to the NJPIRG Action Alert web page this is done by encouraging New Jersey residents to send letters to their members of Congress, in addition NJPIRG asks the citizens to also send a letter to the editor of their local paper.

NJPIRG’s business relationship is similar to their relationship with the decision-makers; it depends on the situation and where the business stands on an issue. If they are working towards similar goals, then both will collaborate. If they are on the opposing sides of an issue, then they work against each other, or try to find a compromise. For example, NJPIRG Citizen Lobby is working on energy issues to try and stop a huge 9 billion dollar consumer funded bail out of the electrical utilities that was making its way through the legislature. NJPIRG representatives canvassed “door to door” to speak with numerous small businesses around the state to explain to them what kind of impact it would have on energy prices. The representatives received support from the smaller businesses, in terms of the small businesses signed on as coalition members and wrote letters and made phone calls to their legislatures. Additionally, NJPIRG worked with large corporations. In the past they opposed some of these corporations, but on this particular issue NJPIRG and the large corporations were working toward the same goal.

NJPIRG does some of their own research but also works with different institutions around the country. At the current time NJPIRG is working with the Physicians for Social Responsibility in New Jersey to put together a research report on reproductive toxic chemicals and their effect on peoples’ health in New Jersey.

As the previous section has shown, NJPIRG works with a wide variety of organizations. They work with other organizations doing research.
They work with other groups doing grass roots organizing, with businesses, legislatures and smaller citizen groups. They work with who ever they need to work with in order to encourage public participation and do the research, the lobbying and the different types of grass roots pressure.

4.2.5. Sociological Analysis

NJPIRG will be analyzed in the frame of the Resource Mobilization paradigm. The organization fits this paradigm because a lot of their time and efforts are based around gathering the necessary resources to take on the special interest and fight for the issues citizens of New Jersey care about. Data obtained on NJPIRG support Helmer’s (Helmer, 1996: 65) analysis of resource mobilization. Suggested in the article is that specific mobilizing conditions determine which form of political practice is the most appropriate and successful at a particular time.

In terms of effectiveness, NJPIRG operates by adjusting to the political structure. If legislatures will not hear them, then they mobilize citizens to put direct pressure on the legislature. If the courtrooms don’t serve justice then they take it to the streets, picket, and boycott, what ever it takes to get the message out and their voices heard.

The political opportunity structure defines an NGO and how they operate. Writing about this Helmer (Helmer, 1996: 39) states that the political opportunity structure defines the space in which environmental organizations can maneuver politically. Most importantly is the readiness of the political system to respond to claims from groups and this readiness can direct or halt the efforts of the organization to influence decision-makers and produce political results. Along these same lines is where the practice of political effectiveness falls, which deals directly with the decision-making process.

In an article by Helmer, (Helmer, 1996: 60) it states that to a certain extent environmental organizations are governed by the structure of the political system in which they take part. There are certain ideolo-gies and institutional limitations and possibilities imposed on them from the outside and in conjunction with that is the political systems readiness to respond to the environmental organizations claims. An organization can be faced with a lot of adverse points of view that they must attempt to maneuver within to create real policy changes. The political opportunity structure can offer a range of possibilities for groups such as NJPIRG, but is relative to the receptivity of the political structure that the organization is working in. Political opportunity can be created when the environmental organization become convinced that a certain route is viable and can produce some results. It is up to the organizations to find those routes and pursue them; they have to be willing to play the political game.

As it was mentioned above, there are different strategies, which are included in a practice of political effectiveness: lobbying, electoral strategies and litigation. According to a pamphlet obtained from the office of NJPIRG, they try to influence decision-making in the state through two of these forms of political action. They have a pressure group identity because of their practice of lobbying and litigation. NJPIRG follows the most appropriate and effective route to make changes in New Jersey. Lobbying is one of the traditional pressure group tactics. Lobbying has become an integral and institutionalized part of the political practice of NJPIRG. It has become a kind of political action, which requires much organizational support. From the Grass-Roots point of view, lobbying is mostly viewed as an example of how national organizations are caught up in conventional politics. In an article by Helmer, (Helmer, 1996: 67), it states that other grass-root groups become offended because of the degree to which lobbyist look and act like politicians and administrators and not like the Grass-Roots members they are representing. The lobbyist needs to make the decision-makers trust them and for that purpose they have to adjust to the dress code and ruling political culture. Lobbyist in environmental organizations have conflicting roles, on one hand, environmental organizations represent grass roots, concerned with basic issues in the relationship between humans and nature. On the other hand, these organizations use professional, like lobbyist, and thereby signal to the members the importance of a practice of political effectiveness. In this day in age, the only sig-
significant way to change the way things are done is to practice political effectiveness. NJPIRG acts within the political structure that it is forced to deal with. That same political structure has shaped NJPIRG over the years. They have to be constantly changing with what’s going on in the political sphere. The political sphere varies over time, sometimes its extremely receptive to environmental organizations cause and sometimes its utterly opposed. NJPIRG has to continually adjust to meet these changes so they can get the results they are after.

4.2.6. Conclusion

The practice of political effectiveness revolves around the political structure one is trying to work in. This research demonstrates that NJPIRG works by adjusting to the political structure to achieve their goals and to do it effectively with the least amount of resources wasted. They are a complex organization that has many methods or tools for being successful in the issues they fight for, each tool is used dependant on the political structure they are working in. The results of this study suggest that this way of running an organization is the most effective because the NGO is always ready for whatever the political opportunity structure will be. This research has also shown that the more diverse an NGO is in their activities the more it can accomplish in the New Jersey political system.

4.3. Orange Environment

by Chris Vernak

4.3.1. Introduction

Of many NGOs located in New York State, one of the most active is Orange Environment (OE), Inc. which has been case studied for this project. This research was conducted through the analysis of social theory and case studies. The material gathered presents a qualitative social study of this selected organization and its interaction with the local community and government. The discussion will center on how Orange Environment is working for building a sustainable community in Orange County. The reader will be able to assess how the NGO is influencing Orange County in the direction of being sustainably sound through the court system and education. The research will also reveal the unique nature of the organization in the environmental movement.

4.3.2. Methods

The research for this paper was designed by Dr. Maria Tysiachniouk. Leaflets, reports, and publication were analyzed. An in-depth interview with the president of the organization, Dr. Michael Edelstein, was included. A participant observation of OE board meeting, in March 1999 was also used in the study.

4.3.3. Description of the organization

OE formed to prevent Orange County from selling Glenmere Lake, a water resource in the region. It has since been involved in many other environmental issues. The organization is a member of the Stewart Park Reserve Coalition (SPARC) fighting to save vital tracts of land. OE has formed Lookout Mountain Coalition to preserve the Dutchess Quarry Lookout Mountain prehistoric site from mining. It is a member of the Sterling Forest Coalition, which has protected Sterling Forest from development. In the past few years, it has focused much of its attention on waste issues and protecting the Orange County water supply. This is shown in the case studies and their support of the Pencor-Masada waste ethanol plant, which will convert waste into ethanol.

Orange Environment was founded in 1982 and became tax exempt under tax code 501(c) 3. The organization is run by a board of fifteen people. Dr. Michael Edelstein is the President, two vice presidents and a treasurer assist him. OE is a membership organization consisting of approximately two thousand community members and volunteers. Decisions within the organization are made by the board and situational are made by Mike Edelstein with the assistance of OE’s lawyer Scott Thornton.

Since Orange County contains more than 350,000 people, OE has formed a broad mission statement. This in short, is to protect the envi-
ronment and communities in Orange County by educating, community training, and litigating.

Education has been accomplished through various mechanisms. Earth Day is held annually at a local high school and local college. They provide teachers with environmental education which includes a teacher network and newsletter. OE runs an annual battery-recycling program. During a local radon crisis OE provided the community with radon test kits and education. OE has a web page, a newsletter, and other publications to educate the citizens of Orange County about current action they take on behalf of the community. This might include litigation, which is presented in the case studies.

4.3.4. Main Focus of Activities

Orange Environment has focused, during its history, on the Wallkill River. A direct result of this has been the Wallkill River Action Plan (WRAP). This includes research, public education and stewardship in order to create a greenway along the river. The action taken would be environmental restoration, surveying the river health, analysis of development pressure, protection and getting public consensus for action. Supporting agencies of the program include the Orange County Department of Planning and the Orange County Land Trust.

The focus of the Wallkill River is important to Orange Environment and the community due to the fact that the Southern Wallkill Valley Aquifer is a significant supplier of water to the region. In order for OE to protect this resource, they have focused on preventing landfill expansion along the river. These landfills have caused water pollution and have potential negative health related impacts. OE works with the State Environmental Quality Review Act (SEQRA), New York States equivalent to National Environmental Policy Act (NEPA), to assess the environmental impacts and to see if landfill operation is feasible. They have also used the Clean Water Act for issues dealing with the Wallkill River. OE has utilized this approach in successfully litigating over Orange County Landfill and Al Turi Landfill.

4.3.5. The Orange County Landfill Case

OE began to focus upon the Orange County Landfill from its earliest days. By 1983, it had successfully inaugurated a party of interest process to help NGOs, the public, government, and the county communicate effectively about landfill concerns. This process broke down by the mid-1980s, when the county pressed ahead with an intention to expand the landfill site despite concerns for the Southern Wallkill Valley Aquifer and the Wallkill River. By 1987 and 1988, OE was engaged as an intervenor in administrative hearings over the proposed expansion, successfully defeating the plan by arguing that waste reduction and recycling could serve as an alternative means to meet the county's waste management needs. Subsequent to the expansion's defeat, however, a new plan of expansion was created which the State of New York accepted without reopening the hearings. Despite OE's concerns raised for lost wetlands and for impacts on neighboring individuals, a permit was issued and the first sections of the new landfill were built in 1988 and 1989. The only concession to OE was an effort to write a permit that protected the community while promoting waste recycling. In these respects, it was one of the strongest permits ever written in U.S. waste management history. However, when OE then discovered that the county had built the landfill without federal permits required for filling wetlands, the organization filed a lawsuit under the Clean Water Act. Litigation took nearly nine years at the cost of millions of dollars, but in the end OE successfully settled the lawsuit. The county gave up its rights to ever use the landfill, which cost $52 million, it promised to replant vegetation, to monitor pollution using OE's expert's suggestions, to set up a $750,000 fund for the improvement of the Wallkill River and to pay all of OE's bills. When OE subsequently defeated an expansion of the nearby Al Turi Landfill, as discussed below, it ended waste disposal in the county. At the same time, its ten year campaign to promote 90% or greater waste reduction and recycling helped to attract the Pencor-Masada waste-to-ethanol plant to the county, employing a process that will accomplish a minimum of 95% waste recovery. In short, using a combination of education, negotiation and litigation, OE introduced a complete transformation in waste handling in Orange County from unsustainable practice to world model
for sustainability. It took nearly twenty years and intense work to achieve this goal.

4.3.6. The Al Turi Landfill Case

This case deals with the request of Al Turi to expand its landfill located on the Wallkill River. Al Turi made a request to New York State to expand their landfill. Orange Environment saw potential for environmental destruction. The landfill boarders the Wallkill River, a mile down from the Orange County Landfill, and OE considered the river at risk for contamination. They also saw Turi unfit for expansion, because they where associated with criminal activity and had previously been cited for leakage of hazardous materials.

The result was a victory for Orange Environment. This case however, was not won on the grounds of the possible environmental contamination of the project. It was won because the administrative court felt that Al Turi was unfit to expand because of their criminal history. As in the case with Orange County landfill, they used NEPA and SEQRA to make their case. OE felt waste reduction plan would make there no need to make the landfill larger, because the amount of garbage recycled and reused would not be going to the landfill.

4.3.7. Sociological Analysis

Orange Environment is a new social movement organization for a myriad of reasons. It is a middle class movement and has not arisen out of social deprivation, but instead has broader values associated with the environmental movement. The organization has focused on making Orange County’s actions and decision more sustainable. It is concerned with protecting the environment in any way possible. The litigation taken against Orange County and Al Turi is a prime example. Expanding the landfills in the view of OE was not in the best interest of the environment or the people of Orange County. Education and litigation is an effort by OE to make the community more environmentally conscious. This endeavor toward the community stress public participation with the Earth Day events and other community education tools.

This NGO only differs from a new social movement in one aspect. Contrary to the new social movements in the U.S, which have flat decentralized structure, OE is centralized, and based on the authority of its president. This, however, does not affect the fact that OE is a new social movement organization.

The resource mobilization theory developed by McCarthy and Zald can be applied to the analysis of activities of OE. OE mobilized human resources, by informing the public about the case and by encouraging public participation. Material resources where mobilized as well. Newsletters and leaflets where distributed, requesting donations to assist the organization to continue its lawsuits. The Newsletter also provided the community with information about OE’s current activities in the local region. The Wallkill River Action Plan is another example of a successful resource mobilization by Orange Environment. This case coagulated community education and scientific research to inform Orange County that the Wallkill River is a vital resource to the community which must be rehabilitated and preserved. As a result of the Orange County Landfill Lawsuit, moreover, OE won $750,000 for a fund to protect the Wallkill River.

The political opportunity structure in recent years in the United States was favorable for the NGO litigation process. It enabled OE to successfully win strong settlements in several lawsuits. OE has been successful in litigating against Orange County and in its interventions into administrative hearings against Orange County Landfill, Al Turi Landfill, Inc. and RSR, Inc., a secondary lead recycler. The opportunity for this NGO to take the county or a business to court can resolve problems that otherwise could not be fought at this level.

Since the political opportunity structure was positive for OE, this allowed the organization to operate in a politically effective manner. Since OE utilizes political effectiveness, this identifies them as a pressure group organization. In this case, the authoritative structure was an advantage to the litigation process. During the litigation with Orange County and Al Turi, the president of OE and his professional team took the initiative to lead the Organization against these powerful opponents. The use of the litigation has not changed specific policies,
but has changed the way in which Orange County approaches a project. Orange Environments’ weapon of political effectiveness aids them in their movement.

Orange Environment also utilizes the practice of problematization. Problematization is used in community education and the newsletters. OE is a grass roots organization, which uses its resources to expose the shortcomings of the local government or a local business. If they cannot change a problem using these tactics, they will use litigation.

4.3.8. Conclusion

Orange Environment, Inc. illustrates how a place-based organization with a strong and clear mission can redirect hazardous and wasteful practices in the direction of sustainability. Using the political opportunity structure whenever possible, OE has litigated often and effectively. Yet, the organization also engages in diverse educational, consensus building, and problem solving activities that avoid litigation. When pushed to the periphery, OE mounts issue-oriented campaigns that are illustrative of the problematization process. The organization illustrates the ability to move between core and peripheral positions and to use multiple approaches, often simultaneously. OE is well on the way to reshaping Orange County in a sustainable direction.

5. An Agenda for Sustainable Development for Russian NGOs (St. Petersburg Case studies)

by Maria Tysiachniouk and Alexander Karpov

5.1. Introduction

A number of NGOs in recent years in Russia are actively involved in encouraging public participation in the sustainable development movement. Activities related to Agenda 21 became the main arena for the dialogue between the three sectors of the society in Russia and the main sphere where citizens are encouraged to participate in solving environmental, social and economic problems.

This section is devoted to the analysis of St. Petersburg Agenda 21 initiatives under the present historical, political and economic context. The main emphasis is on the role of the third sector in encouraging participation in sustainable development processes. This paper examines problems, barriers and trends of Agenda 21 initiatives in the St. Petersburg and Leningradsky regions. Western theories of social movements (see section 2) are applied to the analysis.

5.2. Agenda 21 Through the Efforts of the Third Sector in St. Petersburg Region

A number of groups in St. Petersburg, together with Western partners, are developing a Baltic Regional Agenda 21. There weren’t any movement towards sustainability in St. Petersburg Region until November 1997. It was the initiative of Swedish, Finnish, and Baltic States NGOs to develop Agenda 21 for the Baltic Region. Green World translated into Russian An NGO Vision of an Agenda 21 for the Baltic Sea Region, issued by Coalition Clean Baltic and the Baltic - Nordic NGO Network for Sustainable Energy, and began to distribute this document among NGOs in the North-West region of Russia. Almost simultaneously another project was launched which had been prepared long before by city and regional administration.

The Interdisciplinary Center for Additional Professional Education of St. Petersburg University in cooperation with the city administration started the project "The Coastal Conservation and Local Agenda 21" and involved local authorities of Kingisepsky and Primorsky districts in the local Agenda 21 process.

The second step was the conference "Local Agenda 21" organized by Green World in December 1997 in Lomonosov -St. Petersburg to find strategy and methods of further co-operation between NGOs and municipalities. At the conference it was decided to attract non-governmental environmental organizations of St. Petersburg to work on generating the local Agenda’s 21. The participants of the conference from environmental, public, research institutes and municipal structures of St. Petersburg, Sosnovy Bor, Lomonosov,
Kingissepp and Primorsk, as well as Estonia and Finland, agreed upon the basic concepts of local Agenda 21 for the Russian part of the Baltic region. At this conference, an initiative group of NGO representatives was formed.

In January 1998 the group of the NGOs of St. Petersburg region (St. Petersburg Society of Naturalists, Center for Independent Social Research, Transboundary Environmental Information Agency, Green World, Center for NGO Development) decided to support this initiative and organized several workshops on "Local Agenda 21" to involve other St. Petersburg NGOs in this process. The seminars were organized with the aim to provide maximum complete information on the facts and documents pertaining to the concept of sustainable development, and the potential participation of public organizations in elaboration of strategic decisions for the region. The participants of the seminar were offered a selection of relevant information on facts and documents. Each seminar was accompanied by an exhibition of books on the concept of sustainable development. The seminars covered training and included "brain storming" in small groups.

Most environmental NGOs treat Agenda 21 in a somewhat skeptical manner. They consider this document as official, inoperative and much too global, having little to do with the actual specific problems encountered by public organizations on nature protection. However, according to the opinion of most NGO activists, green movements must participate in the generation of regional and local programs of sustainable development, and to ensure that these programs will incorporate potentialities to resolve the actual problems they deal with.

On June 30 1998, the seminar organizing committee held an intersectoral conference "Baltic Agenda 21: Mechanisms for Interaction of Initiatives in St. Petersburg and Leningrad Region". The next step was an international interdisciplinary conference "Democracy in Action: Building Sustainable Communities in Russia and the US" held on August 26-27, 1998, at the Center for Independent Social research. The next event where sustainability activists participated, was a Russian-Finnish Forum "Our Common Environment" which took place in September 1998.

In the Spring of 1999, the Coalition of Clean Baltic (CCB) member organizations conducted a survey to collect different countries' knowledge and experiences and select good examples of sustainability practices in the governmental, business and NGO sectors in the Baltic region. Green World, sponsored by the CCB, in cooperation with the Center for Independent Social Research, collected information on best sustainability practices in Northwest Russia.

In the Spring of 1999 the association of organizations working on Agenda 21 in St. Petersburg and Leningradsky Region formed an association named "Dialogue 21". The main goal of "Dialogue 21" is to distribute information about sustainable development and initiation of a constructive dialogue with power structures and sustainable businesses. They organize seminars on public participation in assessment of environmental projects, a round table with the Legislative Council of St. Petersburg on public participation, and they organized the workshops on "Public Participation in a Project Joint Strategic Policy for St. Petersburg and Leningradsky Region". Another reason for the formation of "Dialogue 21" is to poll all of the people who initiated "Agenda 21" together. This grouping allows for more professionalism in the field and enhances organizations' chances of future funding.

On April 28-30 1999, the "Dialogue 21" association held the St. Petersburg International Conference on Sustainable Development for the Region. The conference was organized by the NGO Development Center, St. Petersburg Society of Naturalists, Green World and the Center for Independent Social Research. It was a new effort to initiate the dialogue between sectors of the society and to involve social and health sector NGOs in cooperation with environmental NGOs. The conference was dominated by NGOs; however, government representatives and academics attended the event. Foreign participation was limited and only three foreign speakers attended (Chris Church, TACIS EAP NGO advisor, Johan Niss coordinator of the Clean Baltic Coalition and Slavka Macakova from ETP organization in Slovenia).

Sessions included formal presentations, group discussions and role-playing. Speakers sessions were followed by a poster and exhibition
session where 28 NGO-run projects related to sustainability were presented. Projects included environmental, children and youth, social, health, self-help projects and Municipal-NGO projects. The youth environmental group demonstrated a wide range of things made from already used objects.

Sessions covered: local agenda 21 work, the issues of public participation, assessing good practice for sustainability in projects (tried out criteria for local sustainability projects developed by ANPED network), and arranging co-operation between NGOs and local self-government bodies.

One of the most interesting events of the conference was a workshop titled "Local Agenda 21: A Scenario for the Future of a Specific Territory. How to start?" The aim of the workshop was to demonstrate to the participants how they could benefit from co-operation when starting the Local Agenda 21 process. The workshop was attended by fifty two representatives of local municipalities and NGOs and facilitated by Eugenia Makhonina, Local Agenda 21 program coordinator (NGO green World) and Tatiana Chernysheva, "Coastal conservation and Local Agenda 21" project coordinator (Interdisciplinary Center for Additional Professional Education of St. Petersburg University).

5.3. NGOs projects related to Agenda 21 in St.Petersburg and Leningradsky Region

There are still few working sustainability projects in the NGO community of St. Petersburg and Leningradsky Region. Many sustainability initiatives are in the early stages of their development. Here are several examples.

5.3.1. The Department of Environmental Sociology of the Center for independent Social Research

The Department of Environmental Sociology of the Center for Independent Social Research identifies local environmental initiatives and examples of the sustainability practice across the region. Researchers promote sustainability programs in the region using sociological intervention (organizing focus groups, workshops, and community visioning meetings).

5.3.2. Green World

Green World was one of the first organizations which began working on both a regional and local Agenda 21. They are actively networking both on the national and international level. Their participation in the Agenda 21 movement was already highlighted above. In addition to sustainability initiatives, the focus of Green World is to promote awareness of nuclear energy and the situation on the nuclear power plant in Sosnovy Bor. Green World is the only organization which gives timely and detailed information on nuclear units on the southern coast of the Gulf of Finland. It educates about safe energy and suggests safe energy solutions in Northwestern Russia. It is also working for preservation of Baltic Marine ecosystems and has an environmental education program. Problematization of environmental issues is their main practice.

5.3.3. Keep St.Petersburg Tidy

Keep St. Petersburg Tidy is a member of an international association, Keep Baltic Tidy, and a member of a Nordic Council. Their particular interest is on recycling, decreasing the amount of garbage, and promoting eco-tourism. They not only conduct workshops on city environmental issues, but also organize campaigns on cleaning the coastal zone, actions of "Less garbage" and "Collecting of aluminum cans and plastic bottles." They also have an environmental educational program and adopt the practice of problematization.

5.3.4. Eco-teams

Other sustainability advocates belong to the Eco-team movement which started in St. Petersburg since November 1997. This movement has been initiated through the TASIS Environmental Awareness program. This is a pilot project of the Global Action Plan in Russia, where the
Swedish model has been used. This movement represents an experiment on exporting the Western Eco-team environmental movement to Russia. Eco-teams in St. Petersburg work with the public to promote an environmentally friendly lifestyle in households based on recycling, conserving gas, energy and reduction of garbage. They are spreading to other Russian cities and already started in Vologda and Novosibirsk. Participants of the eco-teams work almost on the family level and encourage families to supporting each other in promoting an environmentally safe lifestyle. Small family groups meet on a regular basis and discuss improvements in waste management in the apartment; how it is possible to use less water and energy; how to decrease consumption; how to travel sustainable and how to provide empowerment to other people. Eco-teams measure their progress and calculate group savings of resources. Along with saving resources, families reduce their spending on household needs, which is extremely important taking into account the economic situation in Russia.

During the first step, professional trainers from Sweden conducted three pilot eco-teams. The teams included representatives of different environmental NGOs, psychologists, sociologists, and teachers. The participants altered the Swedish eco-team book to fit Russian conditions. The book was published in the Russian language and is now widely used. Participants of the first eco-teams became trainers for the other groups. Since January 1998, 68 eco-teams were registered, a total of 340 families participated. According to self-assessment data, members of eco-teams after completing the program decreased waste by 40%, and decreased water consumption by 25%, decreased energy consumption by 22%.

5.3.5. Eco-House

The project Eco-House started almost at the end of 1998 in the Moscow district of St. Petersburg. The experimental house is a 9-story building, built in 1966. It contains 287 apartments and 470 inhabitants, 60% of which are senior citizens. This is a cooperative house with an elected self-government. This project is a model of a house that demonstrates sustainable management.

In 1993 the eco-house main activist Alla Sokol participated in a program sponsored by the Center for Civil Initiatives "Kitchen gardens in the City." She initiated a vegetable garden on the house roof and in 1997 formed an organization "St. Petersburg Club of City Vegetable Gardens." Vegetables are grown in plastic tubs and frames, and a greenhouse was built. The house inhabitants have some links to a nearby market gardening program which assisted them to start up. Initially, soil was dug up locally and was stony and of low quality. Some compost was brought in as a solution. Recently, in the basement of the house, people started to keep red Californian worms and started to make compost from food wastes.

This program is financed by the TASIS environmental awareness program. Energy meters have been installed in the block and energy-saving programs are being set up as part of the Eco-team initiative. The organization cooperates with city and regional administration and with several scientific institutions. Most of block residents are at least partially supportive, some of them because of the access to the vegetables. These are also supplied to local elderly people. From December 1998 to April 1999 six eco-teams were held in this house. The participants of the eco-teams were elderly people and teenagers. Middle aged people rarely participate in the eco-teams. The house is starting small businesses within the Eco-House program. They are preparing the project "City Mini-Farm On The Roof." Twenty activists are focusing on wastes collection and separation. The House has agreements with different plants about wastes utilization and recycling. This project is an excellent example of how a community-based project can be helped to develop with small amount of support from international funds.

5.3.6. Neva River Clearwater

The Neva River Clearwater organization in 1998-99 initiated a project "Agenda 21 on the Banks of the Neva River." Twice a year, Neva Clearwater NGO has its outdoor environmental school during the trip from Schlisselburg to St. Petersburg. All schools in the towns along the Neva River are participants in the event. Parents and communities
are involved as well. During the trips, participants stay in local schools. In each Neva festival, children monitor water quality data and present plays in the evenings. Local town administrators, representatives of local departments of education, teachers, laborers, agricultural workers, and parents are amongst the invited guests. Within Agenda 21, on the Banks of the Neva River Project, Neva Clearwater decided to set up community focus groups within schools.

In the Spring of 1998, the Center for Independent Social Research organized a training workshop for teachers and researchers affiliated with the Neva Clearwater NGO. The workshop took place in Yacht Club in St. Petersburg and can be considered a pilot initiation of community visioning focus groups. Participants suggested community indicators to be collected. Within the indicators were ecological, social and economic factors. Ecological indicators included bio-indicators of water and air quality. These kinds of indicators have been already collected annually by participants of the youth outdoor educational program in conjunction with scientists from the Lake Research Institute and Marine Technical University. Students affiliated with the Neva Clearwater program became experts on air quality, bio-indicators based on lichens analyses, and bio-indicators of water quality. Participants of the workshop suggested monitoring the number of polluting enterprises along the banks of the Neva River which survived during the economic crisis and are still polluting water. Teachers with the help of their high school students decided to collect data on all point sources of pollution of the river and to create a map in order to inform local communities. There was a decision to monitor all landfills and both legal and illegal dumping places along the coast. Special attention was paid to the indicators related to traffic in the area.

Teachers paid a great deal of attention to economic and social indicators which directly apply to the current situation in Russia. Provided are some examples of suggested indicators. They were: the number of businesses which are potential sponsors to help feed hungry children at schools, the percentages of children who continue their studies after eight-year education, the number of months teachers were not paid their salaries, the number of parents who can afford to buy toys for their children, the number of people who have a TV, bicycle, or home computer, the number of people who can afford to travel to St. Petersburg for educational purposes, the number of free educational clubs in the houses of youth creativity, and the number of sports clubs at schools. The school statistics of the state on children health will be used to develop community health indicators. Particular attention will be given to the number of chronic diseases and diseases caused by poor diets.

Almost all people in the villages along the Neva River have their own kitchen gardens. Community indicators include the assessment of what people grow and to what extent their land can supply them with food for the winter. High school students were supposed to make a survey and compare the ratio between the food people buy compared to the food they grow. They will also assess to what extent berries and mushrooms from the forest and fish from the river supply families with food and to what extent this supply is essential for people. Students will collect data on how many people have agricultural animals at home and how they are maintained.

During the Spring and Fall festivals in 1998-99, high school students conducted a survey in Chlisselburg, Kirovsk, Pavlovo, Ust-izora, and Ukina Zavod. The best working indicators were developed on traffic and waste management along the Neva river. High school students found a pipe with wasted oil running directly to the River Utka, a tributary of the Neva River. Students wrote a letter to Lenkomecologija (environmental protection Agency in Leningradsky region), the problem was resolved and the violators were punished.

In September of 1999 during the Fall festival, local administrations collaborated together with teachers and students to discuss student data obtained during the survey. Focus groups were repeated with participation of representatives of Department of Education of the Ministry of Leningradsky region, local City Hall representatives, business people and representatives of the Former Military Industrial complex. Using the indicators collected by students, communities will identify shared values and visions. The goal of the community visioning will be to develop a strategy for community development.
On September 29, 1998, Neva River Clearwater NGO established an experimental project, "Country Petrogradia," which is a sustainable development initiative for the Petrogradsky district in St. Petersburg. Petrogradsky district is based on 5 islands and represents a beautiful area. The environmental youth group of the House of Youth Creativity in Petrogradsky district, Center of Love and Kindness "Children", and seven schools participated in the project. Participants divided monitoring initiatives between schools. One of the schools monitors water quality around islands, rivers and channels of Petrogradsky district. Other schools are collecting information about waste management and analyze traffic. One of the schools is collecting data on population and health and monitors a problem with homeless animals around Petrogradsky district. Activists join together during vacations to discuss their research results and inform each other about their findings.

Neva Clearwater NGO tries to involve orphan and deinstitutionalized children in their environmental educational projects. The leader of the organization received from the city authorities a house for such children to live close to the Clearwater office. Residents of this house participate in all Clearwater projects. In addition Clearwater helps families with children with disabilities to organize recreational activities. These events usually occur without sufficient funding.

5.4. Context. Political Opportunities for NGOs in Russia

In the 1990's, the Russian political system for decision-making has been changed in a dramatic way due to reasons external to the environmental movement. The state power was spliced into three levels; a number of independent subjects appeared in the economic life of the society; interest groups started to differentiate in a very distinct way. The 90s brought significant changes to the process of economic and political decision-making in post-Soviet Russia. In January of 1992, market reforms changed the political opportunity structure for Russian NGOs. The standard of living for the majority of the population decreased immensely, demobilizing the environmental movement and greatly weakening the non-governmental sector. Political opportunities for environmental groups decreased as communists and nationalists became dominant in the political arena (Yanitsky and Khalyi, 1996: 105-106).

Governmental officials, even those who were supported by environmental NGOs, failed to complete their environmental programs. The NGOs protest activities became less frequent compared to the Perestroika years(1987-1989). In order to survive they became dependent on foreign governmental and non-governmental environmental organizations. In 1993, Russian Greens lost the elections to the State Duma.

As a result of these developments, environmental decision-making was influenced and the structure of political opportunities for environmental NGOs operation changed dramatically. Several important processes which characterize the changes in the structure of political opportunities should be stressed. Privatization and the following market reforms created independent actors in the economic life of society. The unshared political power which had been concentrated at the top governmental level and controlled by the Communist party was apportioned between federal, regional and local administrations. Federal and regional levels received independent legislative bodies. Local municipal deputies were elected thus starting the establishment of independent local municipal governance.

Due to attention to environmental problems in the early 1990s, the functions of environmental control and regulation were acquired by many state bodies on the federal, inter-regional, regional and local levels (Sayapina et al, 1996: 34). On the regional level there may be about 10 committees representing federal services and there are also environmental departments of regional administrations and legislative bodies. The environmental information needed for decision-making is also dispersed widely and could be found in dozens of organizations (Sayapina et al 1996, Elizarov, Smelianski 1998). However, regional environmental bodies usually refer to federal organizations such as the ministry or state committees. There is no coordination between regions and vertical networks still dominate over horizontal links. Federal authorities and regional bodies have many overlapping functions (Yanitsky, 1999: 147-150).
Yanitsky argues that currently in Russia there is no room for environmental groups in the formal structure of regional power (Yanitsky 1999: 147). Relics of the old Soviet regime still dominate political decision making. There is no point of entry for environmental groups to pursue political effectiveness in these hierarchical regimes. Since the regional power structure is bound to be responsible to the federal powers above them in the hierarchy, they are unlikely to listen to or act on the pressure of NGOs. According to our findings, NGOs interact with the governmental bodies in a convoluting way using strategies which are less common in the West.

Our interviews found many expectations about the possible mechanisms of "pressing the power (administration)". Two mechanisms were formulated: pressing administration through consolidated opinions and lobbying suggested policies or solutions from environmental NGOs through sympathetic persons in the state bodies ("infiltration"). Some NGOs are encouraging their members to enter state organizations, others try to become acquainted with members from the state administration. There is a strong desire to use these links to make the authorities do what the NGOs consider appropriate. In some action programs developed in the seminars, there was much said about what the administration should do and very little said about the responsibilities of NGOs that proposed the plan. Research demonstrates a lingering tendency from the Soviet era to look to the governments to solve problems, even among NGO activists (Tysiachniouk and Karpov, 1999).

On the other side, state bodies and mostly state owned research institutions created "non-governmental organizations" of their own, thus "infiltrating" in the milieu where it is possible to compete for grants and other resources. Still, it would be a simplification to consider those state-created organizations only as "grant-eaters". By infiltrating to governmental bodies, environmental groups are seeking policy change, while state institutions by infiltrating to the third sector are seeking legitimacy and funding. Our research demonstrated mutual infiltration between state institutions and NGOs (Tysiachniouk and Karpov, 1999).

In 1994-95, many NGOs oriented towards cooperation with the state institutions (Yanitsky and Khalyi, 1996: 107-108). In the late 1990s NGOs and the government were mutually interdependent and adapted to each other. Today consensus dominates over confrontation in their relationship.

Yanitsky discusses the role of science in regional policy making. He highlights the interactions among NGOs, executive powers and those in the science triangle. He states that, in recent years, regional and federal administration has initiated the conflict which provoked NGO reaction and scientific involvement. During the decision making process the NGOs are invited to participate in early stages and are neglected during the final stages. However, science also does not play a significant role in decision making because of its weakness during the current economic crises (Yanitsky, 1999: 160-163). As we will see the current political opportunity structure is unfavorable for neither NGOs nor scientists participate in environmental decision making.

In our interviews the respondents frequently stressed that the rights of experts in environmental decision-making are negligible and that the administration and business will disregard and ignore even scientifically approved conclusions in the "spirit of investment" as one university staff and project manager explained. "They (the administration) do not understand what we are proposing... There is a need for public pressure to make them act in a more efficient way" (university staff, project manager) (Tysiachniouk and Karpov, 1999).

There is minimal belief in local, experiential citizens expertise in Russia. The respondents insist on the necessity for "professionalism" and "scientific approval" in decision-making. In general terms, "scientifically based" is used as a synonym of "objective, unprejudiced" and is opposed to the "unprofessional cries of people". Competence to make scientific statements is determined by one's position in the academic hierarchy. "Incompetence" is usually defined as not being allied to the scientific (or state) elite, which is considered crucial for expelling parties from the decision-making dialogue. Science is commonly considered to be a "fourth sector" - an independent force on the political scene.
This myth is supported by all the interested parties in environmental decision-making that apply scientific reasoning to prove the creditability of their positions. It seems, in that way, science is trying to gain its place in the market economy through the privatization of the access to "finite truth" (Tysiachniouk and Karpov, 1999). The myth of "competence" is the instrument for competition between old professionals and new green movement professionals (Yantovsky, 1999: 152). Used in that way the claims for scientific credentials works against public involvement because it perplexes the search for positive solutions based on the group interests.

5.5. **Attitudes, suggested policies and barriers towards sustainability**

Criticism of the concept of sustainable development was part and parcel of every Russian response. The main aspects of criticism were: sustainable development is a post-capitalist ideology and can not be applied to Russia, sustainable development is not a policy for a country in transition, the term is speculative, there is too much similarity between sustainable development and communist ideology.

Policies suggested by Russian NGO activists focus on both social and economic aspects. Within the "social" compartment the strongest emphasis is on working for sustainable development through environmental education directed at children. The economic group is focussed on preventing the overexploitation of resources and protecting scarce resources from the "wild" unregulated market. Taxation of land and natural resources accompanied by tax reduction on labor and production have been proposed as effective policies. The respondents argued for the policy of economic incentives for sustainable businesses through tax relief. They suggest tax breaks for those who adopt sustainable energy consumption and clean technologies. Some respondents argue for reducing taxation, especially income tax, to overcome the present economic crises and to promote national businesses. Some respondents suggested developing strong leaders who would guide environmental protection. In their opinion, the present government is unable to change the situation in the country. Russian respondents complained about the corruption in the public sector and promoted maintaining people’s security. To some extent these suggestions are reminiscent of the Command and Control System and probably originate from the insecure situation in Russia under the conditions of economic crisis.

Russian respondents see markets, land policy, corporate power, poverty, institutional conflicts, and the lack of understanding of environmental issues as the main set of barriers. Many respondents emphasize the lack of environmental consciousness and the value system existing in Russian society as barriers towards sustainable development. According to the respondents' opinions, the implementation of sustainable development policies can become possible only when the majority of the population accepts the value system of sustainability. Russian respondents continuously complain about the lack of ecological culture at all levels of society. The respondents include under ecological culture issues such as personal lifestyle, economizing natural resources, and concern for the security of present and future generations. There is little faith that government can help to solve environmental problems because environmental laws, like other laws, cannot be enforced in the present situation.

This study demonstrates that in Russia, despite the lingering effects of the administrative-command system, persistent decline of production, and uncertainty of social and political life, there is an inherent orientation of society towards stability. Many respondents even defined sustainability as stability in their interviews. This natural orientation can definitely be used by NGOs to accelerate the evolution of effective sustainability policies. The public can accept the values of sustainable development and reorient itself only if it perceives sustainability as a part of the total solution of economic and social concerns. It means that environmental imperatives must be built into the process of reforming society as a whole.

5.6. **Public participation in sustainability initiatives**

A set of opinions, both from activists and from the state bureaucracy, can be provided to illustrate the problems of public involvement in
the work towards environmental policy. The most common statement was that the general public is not involved in environmental movements and environmental NGOs, which are the main non-governmental actors, do not represent the population. This was explained by a general lack of interest in environmental issues and of public apathy due to survival problems. Additionally, a structural lack of opportunity for participation was cited as in this comment: "There aren’t any mechanisms for public participation. We do not know what to say to people and what to call them for." Many respondents noted apathy and lack of political will in society.

The analysis of the interviews and workgroups, as well as numerous discussions throughout the last years, clearly shows that the term "public" is used in Russia in a specific way distinctly different from contemporary understanding approved by international treaties. The Western approach considers every person or juridical person to be a public participant in the decision-making process, thus including businesses, professional groups and associations, local and even federal authorities, legislative bodies, etc. On the contrary, our respondents usually referred only to a limited range of citizens such as "cook or housewife" and "retired people" trying to illustrate their understanding of public. The concept behind this characterization is the Soviet philosophy of distinction between "power" which includes property, legal and intellectual power and "people," uniform in their lack of any power and property. Thus only the people who do not belong to any organization are considered representatives of the "public".

The imprints of Soviet practices can also be seen in the respondents' unfavorable responses to the idea of mass action. Crowds were frequently mobilized by the state without reflecting democratic involvement. They associate calls to volunteer during their days off work with the common Soviet practice of mass constructive action called "subbotniki," referring to voluntary unpaid work on Saturdays. And respondents cited demonstrations and mass protest actions during Perestroika which created support for a move toward a democratic society as examples of negative social responses where unorganized and unconstructive emotions were displayed. These instances, from the Soviet period and Perestroika, now discourage impulses to participate in new environmental mass initiatives.

What should also be taken into consideration when interpreting the data from the interviews is the possibility of a narrow-minded understanding of environmental problems on the part of the respondents. One has to remember that the extent of the environmental problem was exposed to Russian society only about 10 years ago and there is no consensus yet on how broad the field of "environmental science" and the priorities in this field should be. That is a partial excuse and explanation of why the respondent's judgements about "low activity and interest of the population" are frequently based on the lack of support for a specific project initiated by the respondent.

With all the peculiarities noted above, we can proceed with an analysis of the barriers to public involvement in the sustainability movement. The moderated discussions appeared to be a useful tool and helped in revealing some problems which should be addressed as "real". The key issue is undoubtedly the lack of mechanisms for public involvement. "We do not know where to find interested people, nor do we know what to suggest to them" (university staff, project manager). Usually this confession is accompanied by lamentations about the lack of financial aid and public recognition for voluntary initiatives, but additional questions always reveal that respondents do not have any idea how to work with volunteers, how to implement their initiatives and how to utilize the results of their labor. "Environmental organizations are able to mobilize people only for protest actions, but that is outdated and ineffective. We do not know how to raise people for some constructive actions and are afraid of misunderstandings. We do not know how, we do not have experience of talking to people." (university staff, Local Agenda 21 project).

An inventory of the mechanisms engaged by environmental activists which were named during interviews and workgroups clearly shows that they were inherited from the past experiences of activists and are not adapted yet to specific conditions of the new Russian non-profit sector. Most people suggest and try to use the mechanisms of "repre-
sentative democracy". This means that the right to participate is delegated to somebody elected by voting. In this scheme participation means voting, trusting and control.

"At the end of 1996 we formed a Council which joined about 50 environmental organizations, movements and parties. The representatives of our Council were channeled into the Co-ordination Committee on the Environment formed by the St. Petersburg administration." (activist, secretary of public Council).

"We have to have a co-ordination committee which considers a complex problem and directs the work of individual organizations. The systemic approach for problem solving is in directives from above and initiatives from below." (environmental activist).

"It is necessary to create a list of organizations (NGOs) which we trust to participate in decision-making on behalf of the NGO community"(environmental activist). It is necessary to note that with the inflexible management inherited from Soviet state-governed organizations, such a representative democracy fails to operate on an effective basis.

Other common mechanisms for encouraging public involvement include: seminars and conferences, electronic networks, research expeditions and environmental monitoring programs. Usually the respondents experienced difficulties when asked about target groups for their actions, tools for monitoring response and after-effects. They also had only a very general idea about ways of disseminating information and mostly referred to inexact mass-media (papers, TV) as a most valuable tool. Application to mass-media was usually combined with an ambition to "foster the population" or "rear an environmental mentality". This view is based on a desire for some tool which will help to change the situations with minimal effort by influencing every man and woman evenly and reliably. Given the number of severe environmental problems in the territory of the ex-USSR, such a tool would be indispensable if it existed.

Several questions raised about the public participation process help to clarify the current state of mind of Russian environmental activists:

"What could we get from the administration, what resources could they provide? We do not have any idea." (environmental activist) "What will it cost to work with the public? I do not know, we have no estimates" (city administration staff).

Several common excuses where found for the failure to encourage public participation which are in use in the environmental community to explain general problems. Namely, they are: "the legislation does not work" and "environmental activity of people depends on their wealth". Notably, there were also many discussions about the environmental concerns of the rich part of population with an agreement that "rich people do not care" which contradicts the previous statement. These two excuses are usually made without any confirmation and are readily accepted by any audience. It is a stable psychological formula for relaying the responsibility from the environmental organizations to another sector of the society, usually either government or business.

5.7. Application of Western Sociological Theory to Russian Context

The study shows that the Agenda 21 movement in Russia has the same organization and structure as Western new social movements. It promotes an alternative, sustainable, environmentally friendly lifestyle and ecocentric attitudes toward nature. The movement is oriented toward generating a new value system and new identity. The sustainability movement in Russia the same as western new social movements, is organized in a decentralized way. It is oriented towards the creation of small informal groups with horizontal informational and coordination networks. We obtained the similar results in Russia to those obtained by Melucci for western societies (Melucci 1988:343). Agenda 21 initiatives in St. Petersburg and Leningradsky region are spread in small groups, which interact with each other, exchange information and resources. The submerged network cannot be noticed in the political arena before it starts mobilization. The members of the small groups, "islands" of sustainability, do not have determined roles or well established ideas. There is no clear border between the outsider and a member of the movement, or between the leader and the ordinary member.
New social movements are developing on three levels: cultural, political, and philosophical. The trajectories of the levels are independent (Melucci 1980, 1988). According to data from interviews and analysis of the Russian eco-team movement, the movement towards sustainable development, in the social sphere, tries to change attitudes towards consumption of goods and fights against the intervention of international corporations in Russia. On the political level, this is a movement for democracy in decision making. This was clearly expressed by our respondents in their interviews. On the philosophical level, the Agenda 21 movement promotes the balanced human interaction with nature, considering the Earth as a living organism and humans as part of nature.

Sustainability in the views of the respondents, clearly goes further in changing the value system towards post-industrial values. The sustainability movement can be considered a new stage in the development of the values of post-modernity and the evolution of the new environmental paradigm. In the West such movements are middle-class movements, while in Russia academics and intelligentsia are the most active.

Today, the political opportunities for NGOs to participate in sustainable development in Russia are contradictory. On the one hand, there are no formal barriers to the development of NGOs and their participation in creating a sustainable development policy. On the other hand, because of the lingering effects of the Soviet past both in the governmental and non-governmental sectors, NGOs did not learn to take advantage of their formal opportunities.

In Russia, political effectiveness practices rarely work. The young, and as yet underdeveloped, democratic process yields unfavorable political opportunities for the practice to succeed. This social context determines the socio-psychological aspects of Agenda 21 activities at the grass roots level. Many environmental groups have responded by leaving the political process. The most effective groups are those which provide environmental education which can be considered as a form of problematization practices. Many NGOs incorporated the concept of sustainable development in their educational programs problematizing Agenda 21 issues.

Working towards a sustainable future, NGOs maintain networks with their initial engendering milieu, universities and research institutions, and create their own stable communities which are relatively independent from the political process. Very few participate in policy making or fighting polluters because the political opportunity structure is so unfavorable. However, the number of NGOs is increasing and they find their own niches in the variety of sustainability initiatives, where they can successfully function and develop in the current historical and political context.

"Dialogue 21" is setting up Agenda 21 in the region through the practice of problematization, by organizing the seminars and workshops. A fundamental aspect of problematization is that it attempts to expose gaps in the current political structure, e.g. emphasizing a problem for which no current solution exists. "Dialogue 21" is successfully working to redirect the political agenda of St. Petersburg city administration to address the sustainable development agenda. "Dialogue 21" is using in full current existing structure of political opportunities and is taking advantage of it.

5.8. Conclusion:

In Russia, the government controls the main environmental policies while third sector institutions are still developing. To some extent, the Russian third sector develops and functions because of the international support. In most cases the Russian government is unable to develop effective supportive policies for NGO development and tries to maintain the state-ruled administration system. In this situation the Russian population continues to be dependent on and subordinate to the authorities. Therefore, the general public is not involved in environmental activism. Environmental NGOs, who are the main non-governmental actors, do not represent the population.

This research demonstrates that for raising environmental consciousness and developing a value system consistent with sustainability in
Russia, deepening democratic transformations and further development of the third sector are necessary. Only the environmental movement and an independent NGO sector can provide new social actors who will spark the values of sustainability in communities.

Currently Russia is witnessing the process of the adaptation of the environmental movement to the new policy-making system. It includes the comprehension and occupation of new social niches by environmental NGOs, diversification of the interests they represent, and the enhancement and enrichment of the technologies they are able to use. The sustainability movement is searching for new types of public participation given the realities of post-Soviet risk society. If such technologies would appear, one can expect the significant growth of environmental concerns, increased interest in Agenda 21 initiatives and the growth of responsibility in the population.

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Chapter 2
Case study of Skylands CLEAN's Approach To Zoning Ordinaces In Ringwood, New Jersey

by Laura Turner Lynch

STATUS: Experience

LOCATION/GEOGRAPHY: Ringwood, New Jersey U.S.

TIME PERIOD: From 1996, till present day.

Characteristics of Location: Approximately sixty percent of the land is part of the park system. The town of Ringwood has a number of local lakes and is home to the Wanaque Reservoir, which supplies water to over 2 million people. The town government consists of 7 council members, who serve a four-year term, one of which is elected to be mayor for one year. Decisions and ordinances are debated and approved based on a majority vote. Many counsel meetings are open to the public in which residents may voice their opinions and provide evidence.

MUNICIPAL PROFILE:

According to the 1990 census, the population of Ringwood was 12,623. The land area totaled 24.97 square miles. Density of people per square
mile was 505.46. The average household income was $70,260 and the medium price of a home in the area was $188,100. Economic activities include local business such as stores, service providers and some light industry.

**Goal:**

To stop sprawl, protect Ringwood’s scenic beauty and water supply, and implement more sustainable practices.

**OVERVIEW/BACKGROUND OF THE CASE:**

CLEAN is an issue-oriented, non-partisan organization. Activities are not based on politics or party affiliation. CLEAN is made up primarily of volunteers and, in recent years, paid staff members. CLEAN is concerned and involved in zoning, planning, water quality, preservation and ecological designs, all of which are ongoing issues in many communities throughout the state of New Jersey. For over ten years, CLEAN has been fighting environmental battles in the community and surrounding regions. They were instrumental in exposing 12 town violations by the Van Orden Sand & Gravel facility. For years, this quarry has been negatively impacting local residents with blasting, noise, vegetation removal, truck traffic and unauthorized extraction.

The zoning ordinance known as R40-V is another important issue that CLEAN has been involved in. CLEAN has been fighting this ordinance since 1996. While focusing on the ordinance battle, they have provided sustainable planning strategies that limit development. CLEAN is highly concerned that an influx of people into Ringwood could severely impact the water supply. Traffic, quality of life and preservation are also important issues that are being addressed in this process. R40-V has led to many discussions on community designs which is an important part of CLEAN’s work. CLEAN assists other municipalities with planning issues. The experience and information compiled from R40-V is utilized in helping neighbouring towns such as West Milford, New Jersey which is currently facing extensive development. West Milford’s board is seriously contemplating higher water standards and the adoption of the nitrate dilution model based on the evidence provided by CLEAN and other concerned organizations.

Ringwood also has been in an intense struggle between residents who want the community to remain semi-rural and those who support housing developments. In December of 1996, the Ringwood Borough Council approved zoning changes. The new code allowed homes to be built near the reservoirs and on steep slopes throughout the town. Developers are now capitalizing on these ordinances. For example, one builder is seeking to build 37 homes on a 67-acre parcel near Skyline Drive. Only a few years ago, town planners had said that the land could support only 18 new homes because of the demands of the septic systems. The land has not changed, only the zoning has. Critics say that the rezoning could allow more than 2,000 acres of mountainous terrain to eventually be carved into dozens of new developments. Former Planning Board member Jeff Tittel fears that unless local planners come to their senses, the ordinances could someday lead to 1,000 more homes, an additional 2,200 kids in the local schools, 3,000 more cars clogging the borough’s two-lane arteries, and a lot of pollution seeping into the watershed. (www.skyclan.org). The key issues are to stop sprawl and preserve the essential character of Ringwood. More important is the protection of the water supply that services over 2 million people. Preservation and ecological designs are also part of CLEAN’s hope for Ringwood.

**IMPLEMENTATION:**

In 1998, the town council decided to update the zoning laws. CLEAN attended numerous planning board meetings. They studied the ordinances and collaborated with engineers to formulate a sustainable plan. The following recommendations were given to the Mayor and Council of Ringwood. "Steep slopes should be no greater than 15%. There must be protection of scenic ridgelines and viewsheds. Encourage environmentally sensitive designs and minimize re-grading and disturbance of slopes. Require a review process and public hearings when building requires blasting which is highly disruptive. CLEAN also looked at other effective municipal plans and advised the Ringwood Council to consider the use of the nitrate dilution models and environmental impact statements."
Since Skylands CLEAN is a non-profit organization their funds are limited. The majority of their work is supported by grants. The research, communications and involvement were handled by the coordinator and volunteers. Members spent hours discussing this issue and attending town meetings. Banisch and Associates, a professional planning and design firm, were brought in to evaluate R40-V. They made numerous recommendations and, on a number of occasions, accompanied CLEAN to town meeting to address key points to the council. As these events were unfolding, two members of CLEAN and two active supporters ran for seats on the town council. Their platform was based on protecting the environment, encouraging a more cohesive community and sustainable planning. They spent months at local stores campaigning and bringing these key issues to the forefront. They mailed out flyers to all residents outlining their hopes for the town and warning people of the current destructive development plans of the current administration. While these candidates lost the election, they educated the public to some of the serious problems threatening Ringwood’s environment and resources.

RESULTS & IMPACTS:

Despite the substantial evidence and recommendations that CLEAN provided, the Ringwood council approved R40-V. At the time of the vote many of the council members acknowledged that valid points were made and that the ordinance could be revisited. They stated that their approval was based on the fact that the new version was better than the old law, and that a lot of time was spent on the issue.

Skylands CLEAN is now filing a lawsuit against the town of Ringwood, contending that the current zoning does not comply with the town’s own master plan. CLEAN is challenging the town on protection of the watersheds, maintaining steep slopes and preservation of environmentally sensitive areas in the community. To link their local issues to the region they are calling it a “Highlands issue” in hopes of bring other groups on board for financing and/or partnerships. The fight for more sustainable practices in Ringwood will continue into the new millennium. Although CLEAN’s members did not win the election; they were instrumental in bringing key environmental issues to the unsuspecting public. Thanks to their efforts there is an increased awareness of the development plans, potential impacts and the need for citizens to attend town meeting to express their concerns on these issues.

R40-V in its current format could have negative effects on the local environment. Additional homes equate to more people, more cars and a greater demand for municipal services. Population increases will contribute to water pollution of the local lakes and the Wanaque Reservoir. For example, many homeowners treat their lawns with pesticides. These chemicals eventually run off into the waterways, thus decreasing water quality. Extra automobiles will add to air and water pollution in the region. CLEAN is proposing limited development in an effort to protect water resources, preserve open space and limit air pollution. Too many new homes could threaten the social quality of life in Ringwood, by creating more traffic and congestion on the roadways. New homes will bring more children into the school system. Additional students per teacher could potentially lessen the overall quality of education currently available. A need for more schools and/or faculty will lead to tax increases, which is not good news for residents who already pay high taxes. These social issues also tie into the economic impacts that development brings. Analysis of ratables demonstrates that developments often create a deficit as the new homes require additional services such as police, fire, road work, garbage pick up, snow plowing and education. In many cases, developments negatively impact residents environmentally, socially and economically. CLEAN is fighting for all three of these concerns. They are seeking to protect the water resources of the community, preserve the semi-rural environment, encourage sustainability and enhance quality of life. The current results of R40-V are not final as CLEAN takes this project to the next level in litigation. CLEAN will continue to promote sustainability and good planning in Ringwood and other surrounding towns.

BARRIERS & CONFLICTS:

It is stated that several of the council members have close associations with the developers. Therefore, they have monetary incentives to sup-
port development in Ringwood. This is a difficult barrier to overcome. Also, public apathy has weakened the strong arguments that CLEAN has been presenting, as not enough citizens have been attending public planning board meetings.

REPLICABILITY:

The methodology of CLEAN was an effective approach to the issue. They educated and informed the decision-makers and citizens. The strategies used would be operative in other communities. The lessons learned on this case are transferable to other development plans and environmental issues that CLEAN will face in the future.

LESSONS LEARNED:

Appeal to the public as much as possible. The more citizens involved the better. This fact was demonstrated in the Quarry issue mentioned earlier in this case study. CLEAN had advised the town of the violations and many citizens came to the meetings to validate the accusations. In response the town did not renew the quarry’s license. Unfortunately, there was less public participation in the R40-V debate. It was often the same citizens attending the planning board meetings. The council was almost indifferent to comments and evidence as it was often coming from the same people. CLEAN rallied many to the meeting when the final vote was taken to support limits to development, but at that point, decisions had already been made. Public participation throughout the process is very important and could make the difference in approval of more sustainable practices.

FURTHER INFORMATION

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Alternate Energy and Education Center, commonly referred to as the Alternate Energy Center (AEC)
by Timothy Kenny

Status: Experience

Duration of Project: established in 1975 till present.

Location/Geography: Ramapo College of New Jersey’s campus

Characteristics of Territory:

The AEC occupies a small fraction of the 300 acre campus. The center is located at the far end of the commuter parking lots. It is bordered by a wooded area on the South side, a parking lot of the East side, a college dumping ground for biodegradable materials on the West side, and on the North side is athletic practice fields. Ramapo College has 2,700 full-time students and 2,000 part-time. It is located 25 miles from New York City (Ramapo, 1).

The surrounding towns are rural/industrial and are being developed at an incredible rate; open space is being encroached upon rapidly by developers. Bergen County, the most densely populated county in NJ, has approximately 825,380 residents, in 70 towns (Bergen, 1). Due to the nature of a densely populated area, the county has little "open space."
Goals:

To demonstrate alternative methods of producing and utilizing resources. To educate students, faculty, staff and community members regarding sustainable living practices.

Background information:

The AEC was built from a series of active reactions to the energy crisis of the 1970's, and out of the need for students and faculty to learn about appropriate technologies. These technologies are vital to the integrity of life on this planet now and in the future. When the school was first established in the early 1970s, the Environmental program was amongst the strongest components of the school. It was also considered by many scholars to be on the "cutting edge" of environmental thought and action. Ramapo offered classes that could not be found elsewhere on the East coast and therefore attracted many outstanding environmental professors and students.

The plan for the AEC was developed, maintained and built by Ramapo students and faculty. The AEC is a "totally integrated ecological system, utilizing old and new technologies to create a self-sufficient environment" that is "energy-efficient and pollution-free." The Center also strives to develop a greater understanding in the areas of sustainable food production, waste recycling and alternative energy (AEC pamphlet). The center is "off grid," having no imported electricity.

Description of project:

"The interacting components at the Alternate Energy Center are based upon the concept of human ecology, where humans are an integral part of the environment rather than isolated entities" (AEC pamphlet). All byproducts of production are cycled back into the Earth through composting or are reused or recycled. The Center is dependent upon only renewable resources and is involved in the "education and research of solar, wind and biomass energy; biological agriculture and materials/waste recycling; and small scale animal husbandry" (AEC pamphlet).

Biological Agriculture:

When the project was first started there were two acres of land under cultivation in the form of organic vegetable gardens (AEC 1). The garden, designed with space saving techniques such as intercropping, companion planting and raised beds, was conditioned and fertilized with compost that was made on site from organic materials collected from the campus community and local community.

Solar Greenhouse:

The greenhouse, which is used for all vegetable and herb seedlings for early planting, was designed to be heated solely from the Sun's energy. The building is a competently designed passive solar collector, which is designed to maximally receive solar input during winter months, storing excess heat in the building's mass for reradiation when the sun is down. Storage is partially provided by six 7' X 18" fiberglass containers each containing 600 gallons of water, heated by the sun during the day (AEC pamphlet). As a backup, a wood burning stove can be used to store heat in a rock collection system. Over 25 years, the backup system has never been needed.

Small Scale Animal Husbandry:

When the Center was originally began, there were rabbits and chickens that were raised to help nourish the garden with fresh manure. The chickens also provided AEC workers with protein through eggs. Three chickens and a rooster can still be found at the AEC (AEC pamphlet).

Worm Culture:

Vermiculture has been practiced at the center since its inception, with worms originally grown in containers in the greenhouse and released to the gardens and compost bins (AEC pamphlet). A portable demonstration "worm house" is also maintained to show people the awesome composting ability of worms.
Wind Powered Electric Generator:

A 2KW Jacobs windmill originally provided all of the electrical needs for the AEC to run, power tools, greenhouse lights, etc. This Jacobs was a refurbished windmill from the 1920s mounted on a 50 foot tower in the 1970s. There is now a new and more efficient windmill in its place, a state-of-the-art Whisper 1000.

Recycling Center:

When first established, the AEC had a fully operational recycling station. This station had glass, oil waste, aluminum and paper recycling facilities that were open to campus students and faculty, as well as the local community (AEC pamphlet). Once New Jersey implemented a state-wide recycling program, based at the community level, the recycling center at the AEC was replaced by a larger facility in the town of Mahwah.

Water Pumping Windmill/Solar Panel:

In the 1980s, a water pumping windmill was erected to provide water for the garden and greenhouse from a well dug at the AEC. When it became evident that the windmill would not pump efficiently in the summer months, when water was most needed, due to decreased amounts of wind, it was replaced. An electric water pump is powered by a solar panel tracing the course of the daily arc of the sun. This new pump provides all of the water needs for the greenhouse and the garden.

Community Gardens:

As much as 2 acres has been under cultivation in the raised bed organic gardens at the AEC, used as a community garden by Ramapo College students, faculty and staff. At its peak use, the garden has generated hundreds of pounds of produce for food kitchens in Bergen county.

Solar School House:

The Solar School House provides a clear demonstration of all forms of solar energy. Built over seven years by students in the Alternate Energy Workshop, the building is heated by passive solar energy, both direct gain and through convection through a Trombe wall, with a wood stove backup. Electricity is provided for lighting and appliances by two PV panels, with a backup wind generator. Solar hot water heating and cooking systems are also provided. The main floor of the building is used for class room visits and discussions. The second floor serves as an office for the student Environmental Alliance.

Events:

The AEC has long played an important role in key environmental celebrations on campus, hosting the annual Earth Day in April since 1974, along with events for "Sun Day" and for harvest festivals. Orientation activities and other college activities make use of the center, offering tours and workshops. Often local high school students are involved in the activities. In addition, many lecture series and workshops have been hosted by the AEC, covering such topics as aquaculture, solar greenhouse food production, wind energy, permaculture, straw-bale construction, and owner-built homes. The AEC is included in the annual national tour program of solar homes sponsored by Real Goods.

In addition, tours of the center are given for Ramapo's College Seminar program and for other general education and environmental courses, in an effort to promote ecological literacy. Tour groups from regional schools have frequently made use of the center for similar ends.

Courses:

Among the many courses that have been based at the center over the years are Appropriate Technology, Ecological Agriculture, Sustainable Communities and various Alternative Energy Workshops. Independent Study courses and work study positions are used to involve students in managing the center for credit or pay.
Implementation:

Various plans for the center have been prepared over the years. Currently, there is an effort to find funding to restaff the center with a coordinator supported by two student assistants.

Projects and facilities have been chosen for fit with the center’s objective of demonstrating sustainable applications for households and small institutions. While upgrades to technologies have been made periodically, current plans are to invite green businesses to use the center for demonstration of their products in return for helping to make the center more state-of-the-art.

Financing:

The AEC has always been a model low-cost operation, utilizing many recycled components and using student, alumni, and other volunteer labor. Other than the land, Ramapo College’s contributions have been quite modest. One recent estimate was that only $30,000 in direct campus financing has gone to the AEC. Other funding has come from state grants through CETA, a county program involved with community service, used in the first decade of the center for staffing and supplies, from a state curricular initiative, and from donations by students and community individuals and businesses. The college has funded scores of work study and student aide positions over the years (Interview with Bill Makofske, 99).

Results:

The results of the AEC can be seen today. The facility still stands and serves its purpose: to act as an educational example to those who want to learn about alternative, appropriate technologies. The AEC provided a learning facility based on example for “a whole generation of students” (Interview with Bill Makofske, 99). Many generations of students have come and gone, with the AEC providing an important part of their educational experience. Scores of classes have been based at the AEC or used the AEC for demonstration of such topics as organic backyard food production, solar energy, wind energy, passive solar construction, and composting.

Barriers and Conflicts:

Inadequate funding has plagued the AEC for much of its existence. Except for brief periods of state funding, badly needed staffing has been absent. College funding and responsibility for the center has been sporadic over the years, although campus support has increased substantially recently. College personnel now help to mow and maintain the landscape, to repair buildings and equipment, and to improve the center. Such help is modest but much appreciated. When the solar school house was recently painted, for example, the college bought the paint and helped prepare the building, while student volunteers working through a weekend of celebration did the actual work. Problems stemming from the lack of a certificate of occupancy for the school house are being addressed with the help of the College. Ramapo has assisted in making the center more accessible for the handicapped. In short, there are signs that a long period of official neglect is coming to an end. While the AEC’s history demonstrates that a facility can be created and operated with little support and resources, the promise of campuswide support promises to renew and enliven the center’s role as a regional demonstration site for sustainable practices. The newly created New Jersey Higher Education Partnership for Sustainability, networking colleges and universities across New Jersey, has selected the AEC as a demonstration site for what campuses can do for their students and the community in showcasing the path toward sustainability.

Replicability:

One of the main purposes of the AEC is to serve as an example to interested people that this type of sustainable living can be done with minimal amounts of labor, money and skills. As long as there is enough community involvement and the right amount of knowledge, planning and financing, this can be done at any school, institute or home.

Several aspects of the AEC are more easily replicable than others. For example, the garden and compost bins are less expensive to start than the solar house or greenhouse. A compost system can be made and
maintained by one person, but a house, on the other hand, would take plenty of research, labor and resources.

**Lessons learned:**

The AEC has been a model of faculty-supported student initiative. It has been an innovative model socially and technologically. Through periods of adequate support as well as dry years, those dedicated to the AEC have kept it going. However, the costs of sporadic support have often been evident in upkeep, delayed projects, and problems such as the current issue over certified occupancy. It is hoped that efforts underway will herald an effort by the college to showcase the center and invest in its future. Certainly, with adequate support, the AEC can more effectively meet its mission. It is instructive, however, how grass roots support and low cost approaches have succeeded in making the center an effective locus for the demonstration of ecological change over time. In garnering adequate institutional support, it will be important not to lose this sense of community ownership.

**Contact Information:**

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School of Theoretical and Applied sciences (201) 684-7734.

Works Cited/Acknowledgements:

The Alternate Energy Center (AEC): Ramapo College leaflet published and compiled by Ramapo College.

Alternate Energy Center Tour Guide. A flyer published and compiled by Ramapo College Bergen County web page http://dr.yahoo.com/regional/U_S_States/

New_Jersey/Counties_and_regions/Bergen_County/Cities/ November 12, 1999 2:54pm.
Passive Solar Home

by Michael Earle

Status: Experience

Geography: Warwick, New York

Time/Duration: Construction began in April-November 1998

Characteristics of the Territory:

Warwick has been described as a picturesque village dotted with Beds & Breakfast, historic homes, antiques stores, and restaurants. A Sunday farmers market offers fresh local produce, wines, and breads. The village is nestled in a valley boasting apple orchards, dairy farms, and wineries. The building site is hilly and moderately developed. There are plenty of open spaces and treed areas. However, Warwick’s beauty has led it to become one of the fastest growing Town’s in the region. Despite twenty-five years of grass roots planning for sustainability, new housing developments are replacing farms at an alarming rate. With the exception of the project described here, these new homes could not be described as sustainable in any way.

The home sits on 3 acres of land. The site was selected after a long search. To the north of the house is a hill which shelters the home from
the prevailing north winds during the cold winter months. The hill continues to drop off towards the south, allowing for a walk-out basement. There is an ample amount of area for a large garden for organic food production, as well as recreational use and parking. The size of the lot allows for privacy even in the face of development. Notably, not all of the property was disturbed. During the construction, a fair amount if it was left in its natural state.

Goals: To utilize solar resources to its maximum and minimize inputs.

Background Information:

The passively heated solar house consists of 2,400 square feet of space, including two utility rooms. It is a ranch style home, with a walk-out basement. The home uses a combination of systems to be efficient and affordable. The desire was to create a simple home that would be easy to maintain over time. A long time interest in solar technology, combined with the challenges of living in a hundred year old building for many years provided the motivation to build the house. The old home required a lot of maintenance (painting, general repairs) plus was badly sealed and insulated. The utility bills were high, especially during the heating season. The idea of a home that used minimal resources and requires a minimal amount of maintenance was very attractive. The climate of the area is relatively friendly towards a passive solar home, with the largest problem being periods of cloudy days.

Project Description:

This solar home is a revolutionary method of bringing solar technology into American homes. While living in a home such as the subject house isn’t exactly the same as living in a conventionally heated or cooled house, it is not that of living in a home that is completely solar dependent. The house takes a step in the direction of a solar home that people might be willing to take. Having a home that is completely independent of the power grid is a difficult, if not financially impossible, proposition. It is nearly impossible because of the huge amount of thermal mass, or heat storage, that is required to keep a building warm through a period of cold, cloudy days. The thermal mass becomes very expensive. As a result, there is a balance between cost and efficient solar energy use. In the subject home, conventional heat is used only for those few days a year when solar input is minimized as an alternative to sizing the storage system large enough to provide heat 360 days a year. The building costs are thus kept reasonable, making it feasible to build solar. This may be one of the home’s most significant aspects because it opens up a new arena for taking steps towards becoming more environmentally sustainable.

The building is constructed by conventional means, a poured foundation and basement walls (stepped down the hill for the walk-out basement), 2x6 framing in the walls, and fiberglass insulation. A special effort was made to carefully caulk the walls and joints completely to make the building airtight, so that infiltration of cold air is negligible.

To ensure air quality in the building, an air to air heat exchanger was installed. The outside of the building is clad with first a foam board, then Tyvek house wrap, and finally vinyl siding. The basement slab is insulated underneath with two feet of foam insulation, to minimize heat loss to the earth. Beneath the floor and the foam is a radon gas collection system. This system is a grid of perforated piping which has one end open at ground level, and the other vents out of the roof. Fresh air enters the system from outside, at grade, and flows through the network and out the roof, evacuating any radon gas. This is a local code requirement.

The south side of the building has 180 square feet of glass. The windows are thermal pane, filled with argon gas, as well as covered with a high efficiency coating. The windows have a R value of 3.3. The windows in the basement allow sun to shine directly onto a dark tile floor which absorbs heat during the day, warming the room, and slowly releases it during the night. The upper level windows allow sunlight to strike the floor and furnishings, which warms the air in the rooms. The windows in the house provide for heat energy roughly equivalent to 200 gallons of fuel oil to enter the home. Also, an overhang over the windows projects adequately enough to shade the windows in the summer to prevent extreme heat build up. The projection is about 24 feet,
both of the roof and the cantilever of the main living level to shade the lower level windows.

A small greenhouse is planned on the south side of the house. A door into the greenhouse could be opened to allow heat to flow into the building by thermal currents, further reducing the heating bill by as much as $50. The back-up heating system is a high efficiency oil fired hot water boiler. It heats baseboards in the main level of the house and radiant floor heating in the basement. The boiler pulls air from outside the building for combustion, and exhausts it back out in a sealed combustion cycle. A pair of 4 ft. by 8 ft. solar collectors are installed on the roof, along with a 2 square ft photovoltaic panel. These panels provide electric current for a small pump. Then it also heats an anti-freeze solution for heating domestic hot water. The unit pumps the solution through the panels and then a heat exchanger where it thermosyphons into a 80 gallon storage tank. The system is said to be able to raise 55 degree water to 140 degrees during the course of one day of full sun in the summer. For the month of November 1999 it reduced the total heating bill to just $14. Also, a gray water heat recovery system will be added to warm water coming in from the well, which will further reduce costs for heating domestic hot water. Without either the solar system or the heat recovery system, the annual cost to heat domestic hot water is about $180. With the solar collectors in place the cost is expected to drop to $50, and then to just $10 with the heat recovery system.

The last component of the climate control systems of the building is a "air to air" heat exchanger. Due to the high insulation of the structure, this system is needed to keep the air in the building fresh. The exchanger is approximately 80% efficient and is capable of raising the temperature of 20 degree outside air to 55 degrees. This is accomplished by extracting heat from the outgoing air and placing it into the incoming air. During the warm and sometimes hot summer months two window fans are used at night to pull cool air into the building. During the day the home is closed, and stays cool until the outside temperature drops enough to open the windows and doors back up. Even on the warmest nights the house stayed comfortable, without any air-conditioning.

The rooms are laid out so that the most often used are to the south, so that they can collect light and heat during the day. The bedroom is situated on the north east corner of the house so that it catches the morning sun to help warm it up. A total of 180 square feet of windows located on the south side of the structure admits ample light into the house, with the most used rooms being located on the south side of the house. In addition, the house is positioned about 10 degrees east from due south in order to catch more of the morning sunlight. This is beneficial, because the time warmth is most needed is in the morning. The entry of the house has a vestibule to help keep cold air out when you enter the home. A large coat/storage closet off this space is functional, as well as providing a buffer zone between the outer wall of the building and the inside living space. The closet is located in the north west corner of the building, which takes the most direct "beating" during the cold months.

A large garden located at the southeast corner of the house provides organic food. Kitchen waste (vegetative), leaves and weeds are buried directly into the beds and when needed, fish emulsion, bonemeal and cotton seed meal are added, however their use is minimal. The soil has been built up over many years and is now very fertile and rich. The homeowner had his carefully tended soil trucked to his new house. No pesticides or herbicides are used in the garden, although a 9 foot high fence surrounds it to keep deer out. The fence is made of cedar posts that were reclaimed from trees that were removed to make way for the structure.

Partners:

The only two people who were involved in every step of the project is the couple who built the house. They engineered the house, found the site, had drawings completed by a draftsman, contracted the contractor who contracted most of the sub contractors, and implemented many of the fine details themselves.

Financing:

The cost of the project was modest, coming in at about $155,000 for the basic house, with $20,000 in additions (such as maple floors and
trim, extra tile, well, heat exchanger, solar panels for domestic hot water, top quality windows, high efficiency furnace, etc.). The lot is three acres and costs approximately $59,000. This brings the total approximate cost of the project to $234,000. Taking into consideration the size, location and benefits of the house, this is not an unreasonable cost. Labor was provided through contractors and the funding was private.

Results:

The results of the project are only beginning to be understood. The first winters’ heating bill was only $100, a full $500 lower than the estimate the builder gave to the homeowner and one tenth or less of a typical heating bill. The greenhouse, when added will lower that cost even further. The benefits of the heating of domestic hot water have yet to be seen since the system is not yet in place. It is reasonable to believe that the estimates of the homeowner will be accurate, given his other correct forecasts. The objectives were accomplished, and the owners are satisfied with their investment. The environment is benefited from the reduced consumption of the home. The occupants are living in healthy environment, and sustaining themselves from an organic garden. The garden provides nearly all of the food in the summer, and some food is stored for use during the winter. People are occasionally invited to see the house and the benefits that it offers. Some may be motivated to make improvements or build similar projects of their own. The home and the lifestyle that the owner lives should lead to a better social situation. More time spent together (especially for families with younger children) is a positive thing. Being away from the TV and learning a way of life and the values that are associated with a sustainable lifestyle is a valuable outcome.

Barriers & Conflicts:

There were few problems encountered with this project. The builder was not familiar with passive solar systems, but was able to follow the plans and had no problems. In fact, some interest was shown by the fact that the builder brought newspaper articles about solar heating to

the homeowner during construction. There were no political interests in this case since it was a private residence constructed with private funds. The use of conventional building techniques and a backup heating system helped win approval of the plans.

Replicability:

This project could easily be applied to thousands of other projects around the world. The technology is simple to understand and even simple to build. Furthermore, it requires almost no maintenance once it is functioning. What it does require is a lifelong commitment. This is a commitment to be patient with cool temperatures in the winter and sometimes warm ones in the summer. The physical aspects of this are easy to replicate; however the lifestyle issues are something entirely different.

Further Information:

The homeowner has requested that all contact information be kept confidential.
Water Use, Reuse and Reclamation, Arcata California

by Brian Bigler

Status: experience

Geography: Arcata California

Time/duration: 1979–1986 initiative. 1986-Present

Characteristics of the Territory:

In the late 1970's, the City of Arcata and the surrounding communities were faced with mandated reforms on the quality of the water discharged into Humboldt Bay. The treatment facility in Arcata provided for only primary treatment and the State of California, along with the United States Environmental Protection Agency required that either the facility be upgraded or that a new, regional facility be constructed. After many studies regarding the feasibility of the regionalization program, the City of Arcata chose to initiate a viable alternative to the conventional methods of wastewater treatment and instituted a beneficial reuse of effluent.

Goal:

The establishment of a marsh system that would utilize aquaculture.
**Background information:**

In conjunction with the regulatory agencies, The City of Arcata formed a Task Force on Wastewater Treatment that determined that the natural processes of a constructed wetlands system would provide the level of treatment required. It would also provide a habitat for birds and animals. The ultimate result was the formation of Arcata Marsh and Wildlife Sanctuary.

**Project description:**

The AMWS project began in 1979, with the implementation of more stringent requirements for wastewater treatment by regulatory agencies (most notably, the State of California and the U.S. Environmental Protection Agency "USEPA"). Seeking alternative methods of wastewater treatment that would utilize wetlands and aquaculture, a Task Force on Wastewater Treatment was formed. This Task Force determined that wastewater could be a resource instead of a disposable commodity and proceeded with the construction of the wetland systems that would supplement the treatment capabilities of the area while providing a natural habitat for migratory wildlife. The Arcata City was provided with 87.5% funding of this 6.3 million-dollar project by Clean Water Grants from USEPA and California State Water Resources Control Bonds. The project included an upgrade to the current treatment facility, a system of wetlands described as treatment marshes (providing for natural attenuation), and a co-generation facility that would generate power via methane gas production. This system has provided a reuse of wastewater treatment plant effluent. The treatment marshes reduce total suspended solids and biochemical oxygen demand. The restoring of agricultural and abandoned industrial sites into a freshwater marsh system created the enhancement marshes (AMWS). These marshes also provide for the additional treatment required for the City of Arcata Wastewater Treatment Facility to meet the more stringent limits that have been previously discussed. It also provides an environment for wildlife and public use. It is estimated that there are over 150,000 visitors per year.

The wetlands system was completed in 1986 and has been in operation since that time. Over the past thirteen years, the natural ability of marsh plants, soils and associated microorganisms has been utilized to meet the need for a cost-effective and environmentally sound wastewater treatment technology that meets mandated water quality requirements. It has also provided a habitat for wildlife, economic relief to the area and has aided in restoring a degraded urban waterfront. There are now approximately 100 acres of freshwater and saltwater marshes, all a result of the efforts taken by the City of Arcata.

**Partners:**

The City of Arcata (Mayor & Council); The State of California (Department of Environmental Protection); The United States Environmental Protection Agency; and Friends of the Arcata Marsh (FOAM), a non-governmental organization. FOAM was formed as a tool for fund-raising and environmental education. The volunteer organization's main project was the initiation of the Arcata Marsh Interpretive Center. They also operate tours of the marshes and explain the intricacies and benefits of this wastewater wetlands system.

**Financing:**

Total cost of the entire wastewater treatment and reuse system was approximately 7 million dollars. Funding was provided by Clean water Grants from USEPA (75%), California State Water Resources Control Bonds (15%) and the City of Arcata.

**Results:**

The City of Arcata and the AMWS have met the challenges presented with great success. Arcata has met and continues to meet all of the discharge limits for its wastewater treatment system. It also converted abandoned industrial sites and unused land into a useful commodity. The AMWS provides an environment for wildlife and public use. It is estimated that there are over 150,000 visitors to the AMWS per year.
Barriers and conflicts:

One of the main barriers was ascertaining the fact that this type of wetlands enhanced treatment would work on a fairly large scale (Arcata discharges approximately 2,300,000 gallons per day) to the regulatory agencies. The project was in the design and testing phase for over three years, prior to getting authorization for the full-scale constructed wetlands system. The other main conflict came from the other communities in the area. After it became clear that the cost of the regionalized facility would be cost prohibitive, the City of Arcata proceeded on its own. The other communities then had to devise their own wastewater treatment projects and funding.

Replicability:

The success of the Arcata project has been duplicated in sixteen other sites in the United States. Arcata has become a model for the appropriate and successful wastewater reuse and wetlands enhancement technologies. The only problem is the availability of land for the construction of these wetland marshes.

Contact information:

United States Environmental Protection Agency
Region IX, 75 Hawthorne Street, San Francisco, CA, 94105

Contact: Robert Bastion e-mail: bastion,robert@epamail.epa.gov

The City of Arcata:
Contact: Jill Geist e-mail: jgeist@tidepool.com

Publications:

Constructed Wetlands for Wastewater Treatment and Wildlife Habitat (EPA Publication) A Natural System for Wastewater Reclamation and Resource Enhancement: Arcata, California (EPA Publication). These publications are available through the EPA office listed above or via the internet {epa.gov}

New Jersey Higher Education Partnership for Sustainability
by Russ Klotzkin

Status: Experience

Geography: Ramapo College of New Jersey

Time/Duration: Project began in March of 1999

Characteristics of the territory:

The New Jersey Higher Education Partnership for Sustainability, NJHEPS, was first established in March of 1999. The New Jersey Higher Education Partnership for Sustainability is based in Ramapo College of New Jersey. NJHEPS consists of ten member colleges from within the state of New Jersey. These colleges include: Bergen Community College, Paramus; Kean College, located in Union; Montclair State University, located in the town of Montclair; Ramapo College in Mahwah; Rutgers University based in New Brunswick and Camden; the New Jersey Institute of Technology, in Newark; Frost Valley YMCA in Claryville New York; the College of New Jersey in Trenton; William Paterson university, in Ewing; and Princeton Universities' Environmental Institute in Princeton. The last three joined NJHEPS in December 1999. All of the members are located within New Jersey, except
for the Frost Valley YMCA which is located in New York State. Covering north to south, NJHEPS hopes to eventually have all the colleges of New Jersey as members to its organization. New Jersey is the most densely populated state within the United States.

**Goals:**

To include environmental sustainability within the college curriculum of all colleges and universities. Other specified goals are:

- Mount campus-based consciousness, raising initiatives through workshops and lecture series, use of mass media, establishment of websites and internet-based communications systems.
- Formalize a campus leadership structure which involves students, faculty, administrators and staff that will be responsible for sustaining these activities.
- Improve the quality of recycling as well as energy conservation.
- Eventually eliminate pesticide usage on college campuses.
- Implement the use of alternative fuel vehicles. (Web 1).

**Background Information:**

Dr. Michael Edelstein and Dr. Cliff Peterson, both from Ramapo College of New Jersey, as well as Dr. Donald Wheeler director of the Center for Global Studies at Kean University, were the three principle authors of the grant. Three months later, the organization was established, and since, has become the epiphany of sustainable development within the state of New Jersey. Dr. Edelstein was the initial project manager and executive director. Dr. James Quigley was hired in Spring 1999.

**Project Description:**

Currently, there are 13 members on the steering committee, one member from each college, plus an extra representative from Stevens Institute of Technology and two extra from Ramapo College. There is also a student organization that is partnered with NJHEPS called Sustain, Student Undertaking Sustainability Through Action.

The NJEPS is the first one of its kind within the state of New Jersey, and has assisted many other institutions of learning. Its steering committee meets monthly. The Executive Director of NJHEPS is Dr. James Quigley, who is also a professor in the Environmental department at Ramapo College. NJHEPS would like to assist any form of organization, ranging from business corporations to grammar schools, as well with local governments to become more sustainable, as well as helping.

**Partners:**

Currently, there are 10 college and university campuses throughout the state of New Jersey which are members of NJHEPS. Seven other higher educational learning institutions are members of NJHEPS.

**Financing:**

NJHEPS is financed by the Geraldine R. Dodge Foundation, which was established in 1974. This foundation funds organizations, and local projects within New Jersey. The foundation funds projects which sustain human society and the environment which shelters it.

**Results:**

Each campus that is a member of NJHEPS have documented their achievements in becoming a more sustainable campus. There is a joint recycling project, a sustainable brochure for incoming freshman and development of web-sites.

Bergen County Community College has proposed a photovoltaic cell to power a computer within its technology building. The college has implemented a new environmental technology program as well.

Frost Valley Environmental Education Center has proposed a project for K-12 students to learn about Newark’s watersheds. They now travel to the Newark Museum which has a new focus on the sciences. It has also completed a composting facility, added a 14 computer Geographic Information Systems (G.I.S.) laboratory and an energy efficiency program.
Kean University has proposed a revised solid waste management program, as well as a new, more sustainable food service contract. It has an ongoing tree planting project and a recycling program. It has completed light retrofitting of lighting as well as a cogeneration plant.

Ramapo College of New Jersey has proposed installing motion light sensors, as well as using bike patrols for its security services to limit automobile pollution on campus. Within the Ramapo College community, there is an ongoing health and safety committee as well as a recycling program. There is also an Ecoliteracy Curriculum and Faculty Development Project funded by the US Department of Education. A proposal to add sustainability to the college mission is under discussion.

Montclair State University has proposed an extensive environmental inventory, conducted with student participation. It is working to improve its recycling program.

Rutgers University, the largest University involved with NJHEPS, has proposed an environmental procurement manual to be handed out statewide within higher educational facilities. It also wants to develop a website, as well as sponsor a program to teach welfare recipients of Camden how to landscape and "beautify" the town. In conjunction with these proposals, Rutgers has created a 15 minute video on its waste stream, and written a proposal to the Environmental Protection Agency (E.P.A.) for teaching K-12 teachers environmental management at their schools. Ongoing work includes recycling, a herb garden, a book written on environmental justice in Camden, New Jersey, and two hydroponic greenhouses in a retirement community within Burlington, which is to be partially maintained by the retirement community. A Cook College of Rutgers had students plant trees during Senior Week.

Steven's Institute of Technology has proposed the revision of the four year engineering curriculum to infuse sustainability as a major strand throughout the curriculum, part of the major goal NJHEPS is guiding itself towards overall. It has finished bar coding its chemicals for life cycle control, use reduction and costs savings (Web 1).

Barriers and Conflicts:

The barriers and conflicts involving NJHEP are mainly due to administration. Most higher educational administration facilities do not have time or money to work on "greening" the campus. Also, the lack of student participation is seen in a variety of campuses among New Jersey. Financing proposed projects is also a conflict for NJHEPS.

Replicability:

The project will be a model for other institutions and other states.

Contact Information:

James Quigley Executive Director
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Sources:

(Web 1) http://www.ramapo.edu/content/units/has/njheps/ The New Jersey Higher Education Partnership for Sustainability, March, 1999.

Personal Interview with James Quigley. December 14th, 1999
Project for Building Sustainable Coastlines in New Jersey

by Betty Habegger

Status: Project

Geography: Monmouth County, New Jersey

Time/duration: 5 years

Characteristics of the Territory:

The coastlines of New Jersey are well known around the state for their scenic beauty and reputation as a summer playground. These playful resorts and areas of beauty are being identified as areas that are depleting in size, grain by grain of sand. Although beach erosion has always existed, more and more beaches are depleting in size. They are not only shrinking from the constant pounding of the surf on the shore, but also from increased development around and on the beaches. The attention to this problem has caused people to take action to sustain the coastlines. The main motivation for the project is the concern of lost revenue in the summer season. Town councilmen and women are concerned that a decreased amount of people will flock to the beaches if they are smaller in size. The project's lead sponsor is the U.S. Army Corps of Engineers, who are aiming to help preserve the beaches for years to come.
The areas that the Army Corps of Engineers has targeted specifically are the beaches in Monmouth County. According to the Department of Economic Development and Tourism of Monmouth County, it has been identified as one of the fastest growing counties in the state. As of the 1995 census, the total resident population was 578,509. Located in the central part of the eastern seaboard, the county occupies 471.57 miles Squared and has over 27 miles of coastlines, with the total acreage of public open space of 32,11.

Goals:

- To widen the beaches.
- To stop the shore’s soil erosion.
- To maintain the sustainability of the beaches’ coastlines.

Project Description:

Sustaining the shoreline is not a simple task; it is a problem that has many facets. The main reason for the call for beach replenishment is not only for sustaining the size of the coastline, but also to maintain the shape of the coastline. The constant tide and surf are contributing factors to the erosion, as well as the prevention of sand flow through groins. These structures were constructed and designed to "stop sand that moves along the ocean front in the littoral drift, the direction in which prevailing currents flow." According to the Army Corps of Engineers, "If properly designed, they are effective in stabilizing beaches where sand is lost by along shore movement." By taking an initiative as to notch these groins in a way, allowing sand to penetrate them, is to prevent further erosion. It is in fact working; a total of 21 groins have been notched to date as of August 1999.

In conjunction with the sand prevention and replacement, as a way of extending the beaches, there is the continuing problem and demand to control development and urban sprawl. With the continuing demand for the valued sea side land, population is expanding in the coastal area. This rapid development strains the local natural resources of the area. The state legislatures has formed a new policy to address this issue. Raymond E. Cantor, the assistant Department of Environmental Protection commissioner for land use management and compliance, addressed the new policy. This policy meshed the 1992 State Development and Redevelopment Plan with the coastal Area Facility Review Act regulations, as "the first time in New Jersey history we will be setting the limits of where development can go in environmentally sensitive areas. The state plan is a voluntary blueprint aimed at controlling costly suburban sprawl. Its goal is to channel growth into cities and other developed areas called 'centers' and preserve the 'environments'.'

Financing

This phase of the project in Monmouth County is part of a $23.5 million, 21-mile beach replenishment project in the state. However, this is just a small portion of the $210 million project for all the coastlines of New Jersey. Of the $23.5 million total, the federal government is paying, $15.3 million, the state of New Jersey, $6.2 million, and local municipalities in the county, about $2 million.

Results

The manager of the Department of Environmental Protection’s Bureau of Coastal Engineering, George Caporale explained that the pumped sand will create a construction berm of approximately 250 feet. He also pointed out that after completion, the ocean tides would begin their work to create a natural slope to protect the new beach. It is now recognized that although this is a costly project, it will help to prevent further degradation of the coast when storms hit the shore.

There are negative impacts from dredging sand off the continental shelf. By taking sand from the continental shelf to build bigger slopes close to the shoreline, small baby clams and oysters are placed vulnerable on the shoreline. Subsequently, the native sea gulls, the predators of the ocean, are often seen swarming en masse above the surface of the ocean, preying on the helpless clams and oysters, decreasing their population.
**Barriers and Conflicts**

This project is only a temporary solution to a longstanding problem. The Jersey Shore has always been an attraction to people from close and far away. The continued beauty and natural landscape is vulnerable to a number of limiting factors as mentioned before hand. Although this is a project to sustain the coastline, it is one that has to be continually targeted and maintained. To build a sustainable coastline is something that has to be addressed by all, the locals to the area, as well as the visitors. To become a truly sustainable asset, it must be respected and considered by all who use this beautiful natural resource.

**Souses:**


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**Recycling—State and Local Initiative**

*by Romina Gebolys*

**Status:** Experience

**Geography:** Clifton (Passaic County), New Jersey, U.S.A.

**Time/Duration:** 1987 to Present

**Goal:**

Reduction of waste flow into landfills

**Characteristics of Territory:**

The city of Clifton is located on the northeastern part of New Jersey, with New York being approximately 15 miles east. This urban/suburban community has a land area of 11 square miles with a population of approximately 75,000 people.

The city is governed by an elected freeholder form of council, which consists of seven members including the mayor. A separate committee, whose responsibility is to foster resident compliance with city ordinances, enforces the city’s recycling program. Through the impressive efforts made by the City of Clifton and its residents, the city was recognized on a national level. The Environmental Protection Agency
(EPA) issued a report, "Cutting the Waste Stream in Half: Community Record-Setters Show How," which describes Clifton as one of eighteen communities that has made substantial efforts in solid waste reduction.

**Background Information:**

In 1987, recognizing the shortage of sanitary landfill space, rising prices of garbage disposal, environmental pollution and the need for conservation of resources, New Jersey passed the "Statewide Source Separation and Recycling Act" to mandate all counties to recycle the following four items: glass, aluminum cans, newspapers and leaves. By 1990, the state required sixty percent recycling of the waste stream.

Presently, Clifton recycles over twenty items from thirteen different categories. The incentive is a mandatory ordinance with two warnings and then fines for subsequent offenses. The city provides curbside pick-up by the Department of Public Works (DPW) or a resident drop-off site located at the City's municipal complex. The funding for this program, including equipment and manpower is established through local tax revenues and state grants. Clifton's recycling program is cost-effective due to the size of the city and being able to have direct marketing of recyclables which avoids processing fees. Another reason is that a source-separated collection method is used instead of commingled.

All organic materials in Clifton were being collected for recycling. This type of practice can be seen as one of the most sustainable for many reasons. The collection of grass clippings, leaves, brush, yard/garden debris and holiday trees is used for the composting and mulching program. A portion of the materials are collected at specific times of the year, but yard debris and grass clippings are collected curbside weekly.

Due to the lack of land availability and recent loss of its compost site in a neighboring town, Clifton has been paying a private composting vendor, Nature's Choice, to pick up the organic materials to be processed. In return for paying Nature’s Choice $4.50 per cubic yard of logs and no charge for other vegetative waste, the city receives one thousand cubic yards of screened compost, as well as mulch. These organic materials, along with firewood, are made available to Clifton residents free of charge.

Compost is the result of the breakdown or decomposition of organic matter by microorganisms into a nutrient rich soil conditioner. The community uses compost and mulch in recreational parks and "beautification" programs. People can utilize this natural process in gardens. A myriad of benefits emanate from composting. Several of these benefits include the reduction of garbage, the reusing of materials, and the recycling of nutrients back into the earth. Clifton encourages individual practices of backyard composting if managed properly. In addition to yard debris, people can considerably reduce trash output by adding kitchen food scraps and certain paper to a composting pile. The adding of these materials makes the decomposition stage progress on a more rapid level and ensures better quality compost. However, it is necessary to have a right balance of between materials with high carbon content and high nitrogen content to avoid offensive odors and pests. The goal here is to cut down significantly on trash and at the same time improve the yard without chemicals. This practice is very inexpensive and has no negative environmental impacts.

**Barriers/Conflicts:**

There is no opposition to recycling by Clifton's residents.

**Replicability:**

Clifton's Recycling Coordinator educates schools and civic groups on reducing and reusing by giving presentations and educational materials. The DPW and Nature’s Choice both have made printed information available. Annually, the local newspaper produce and mails a recycling program guide with out any cost to the taxpayers. Many brochures, pamphlets, and how-to guides printed by the EPA, are available to anyone at no cost.

**Contact Information:**

Alfred Dubois Jr., Recycling Coordinator
City of Clifton Department of Public Works  
Address: 307 East 7th street, Clifton, NJ 07013  
Tel: 973-470-2239  
Fax: 973-340-7049

Nature’s Choice Composting Facility  
Tel: 1-800-637-4140

Publications:  
EPA report, Cutting the Waste Stream in Half: Community Record- 
Setter Show How.  
Published by the United States Environmental Protection Agency, June 
1999.

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Rockland County Solid Waste Management Authority – Materials RecoverY Facility AND 
CO-COMPOSTING FACILITY  
by Lara Zelistra  

STATUS: Operating Project

GEOGRAPHY: Hillburn, New York (Rockland County)

TIME/DURATION:

Project started 1996. The Materials Recovery Facility was launched in 
July of 1998.

CHARACTERISTICS OF THE TERRITORY:

Rockland County is located in the South Eastern tip of New York State. 
It borders New Jersey’s Bergen County and is situated in close proxim-
ity to New York City. As of 1998, the county had a population of 
281,338 people while the household median income average 
$52,731. According to a 1992, the economic activities in this region 
are as follows: 2,586 service, 1,676 retail, 692 wholesale, 330 manu-
factoring and 4 mining outfits (Web 1).

Rockland County has a number of environmental and historic features 
particular to this area. Some of its environmental characteristics in-
clude: the Ramapo River, a Federally designated Sole source aquifer for the Ramapo River Basin Torne Brook, a stream that supports the spawning of brook trout; Turkey Vulture Roookery, Harriman State Park; and Torne Mountain, which qualifies for the National Registry of Natural Landmarks. This area provides habitat for various wildlife including Red Tail Hawks, Great Blue Heron, Green Heron, Fox, Coyote, Black Bear as well as Timber Rattlesnakes and Osprey which are on the New York State Threatened Species List.

Historic features of Rockland County include Torne Brook Farm (1873) which is on the National Registry of Historic Places, Historic Iron Works Sites established in 1795, Camp Ramapough, which was a Revolutionary War fortification, and Native American Rock shelters that date back 10,000 years. Torne Mountain and Valley located in Rockland County are known for their scenic beauty and have been the subject of many famous Hudson River School paintings (Web 2).

BRIEF OVERVIEW:

The Rockland County Solid Waste Management Authority has created several stations in order to facilitate the following projects:

- Garbage Disposal
- Recycling
- Household Hazardous Waste
- Yardwaste Composting
- Sludge Composting
- Education Center

The project began construction in 1996 and the Materials Recovery Facility and the Co-Composting facility are presently running. In the near future, the Co-Composting Facility will be in full operation and this will eliminate incineration of sludge completely in the county.

OBJECTIVES/GOALS:

Rockland County Solid Waste Management Authority’s Mission Statement:

"We shall provide the people of Rockland County well by providing needed solid waste management services in order to protect and enhance our environment in a high quality, ethical, courteous, timely, and a cost effective manner."

- To find an environmentally sound and economically reasonable way to dispose of Rockland County’s solid waste (garbage) and liquid waste (sewage).
- To reduce the quantity of solid waste entering landfills.
- To recover recyclable goods for resale value.
- To generate mulch for municipal projects.
- To create an overall sustainable environment for the future.
- To educate the public on garbage issues including reduction, recycling, composting and solid waste disposal.

BACKGROUND INFORMATION:

Motivating circumstances behind the construction of this facility were the concern with the inevitable end of garbage exportation from the state of New York and the reduction of landfills within the state. States such as Virginia and Pennsylvania are already refusing garbage importation from New York state. New York and New Jersey are the two main garbage exporting states in the country. New York’s garbage is hauled as far away as New Mexico to be landfilled (Rathje 108). Although New York has much land for potential use as landfill sites, it has closed down nearly 298 landfills and opened only 6 new landfills since 1982 (Rathje 109).

PROJECT DESCRIPTION:

Waste Management of New York and the Rockland County Solid Waste Management Authority entered an agreement in June, 1996 to design, build and operate a Materials Recovery Facility (MRF) and a Co-Composting Facility (COCO) on 38 acres of land in the town of Ramapo. The facility also has an Educational Center geared toward informing the public of waste management issues.
The MRF is a processing plant designed to sort, process and prepare recyclable material for shipment to other plants where they will be manufactured into new products. Materials are received in 2 streams, one for comingled containers and the other for commingled paper. Both are delivered to the tipping floor. Nearly 205 tons of recyclable materials are processed daily, baled into one tons bricks, and are shipped to markets to become new items.

The COCO plant receives sludge from 5 waste water treatment plants and incorporates it with clean wood and landscape waste and turns it into compost. Nearly 100 tons of bio-solids are received daily, and then the high nutrient compost is sold as a soil amendment for landscaping and crop propagation purposes.

The Education Center teaches visitors about the county’s solid waste management programs. In lectures, tours and interactive exhibits, visitors are able to view the facility in operation. The educational sessions can be geared toward any age group or organization in order to learn about reduction, recycling, composting and solid waste disposal. Antioch New England Institute in New Hampshire, a college that specializes in environmental education, helped design the exhibits, educational tactics and curriculum for the Center.

PARTNERS:

There were no partners in creating the facility. The Authority consists of appointed officials that dictates all decisions made for the facility. The committee of legislators and administrators that make up the authority consist of Herbert Reisman, Chairman, and the Executive Director is Ronald Delo. There are also 5 town supervisors, and several county representatives that make a total of 17 members in the authority.

Antioch New England Institute members, composters, and teachers aided the Authority in determining what the Education Center would need in order to communicate a sense of environmental awareness to community members and other interested parties.

FINANCING:

The construction of these facilities was financed through New York State grants and bonds which totaled $11.6 million. The Rockland County Solid Waste Management Authority runs the facilities and generates revenue from sale of recovered materials. Taxes from county residents also help maintain the operation.

RESULTS/IMPACTS:

The positive impacts of this project are extended space in landfills for the future, lower disposal costs for municipalities because there are no tipping fees, reuse of materials for new products and a cleaner environment. Members of the community have received flyers about the facility, which informs them of the times available for them to drop off materials. This has aided in developing an increased awareness about waste in the area. People now know that much of what they throw out can be recovered and used again.

Their Education Center has extended itself to reach the public even outside the county. They schedule appointments with any group or organization that is interested in learning more about solid waste problems. The Education Center Coordinator, Kerri Scales, has coordinated with Ramapo College to also make internships available to interested students in the area.

BARRIERS/CONFLICTS:

There were conflicts that arose during the planning of the Materials Recovery and Cocomposting Facilities. Originally, it was difficult to find a site for the facility. The residents of the county did not want the facility in their backyards. Residents did not welcome the prospect of a solid waste recovery facility in their neighborhoods, especially not one that would also handle sludge. There was also the problem of finding the funds to construct such a large-scale facility.
REPLICABILITY:

There are many similar types of facilities throughout the county and the world. While it is not difficult to design or construct these facilities, financing and politics may make it harder to obtain them in certain areas.

CONTACT INFORMATION:

Rockland County Solid Waste Management Authority
Kerri Scales: Environmental Education Coordinator
Herbert Reisman: Chairman
Ronald Delo: Executive Director
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Fax: (914) 753-2281

REFERENCES:

(Web 1) Rockland County Homepage. http://www.co.rockland.ny.us/

(Web 2) Torne Valley Preservation Association. Savetorne@aol.com


Scales, Kerri. 1999. Rockland County Solid Waste Management Authority. E-Mail Interview. December 1, Kscales@bestweb.net
BUILDING SUSTAINABLE COMMUNITIES IN RUSSIA

by Dr. Maria Tysiachniouk, Svetlana Pchelkina and Antonina Kuliasova
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INTRODUCTION TO THE ECO-SETTLEMENT NEVO-ECOVILLE

Eco-settlements in post-Soviet Russia began to emerge in the early 1990s. This period has been characterized as a time when the Soviet Union disintegrated and new national states came into being. These newly independent states were formed from former Soviet republics. The Russian state at this time found itself in a profound economic crisis and conditions of social instability. At this time Russian society had been living through an especially acute ideological crisis. The prevailing communist ideology was replaced by a pluralism of opinions and ideas. Diverse groups began to form with their own ideologies, world-views, and understandings of the process of transformation that was taking place. The time was ripe for the formation of eco-settlements on Russian soil. This tendency was evoked by new ecological problems, new techniques and technologies, a new level of awareness, and understanding of the importance of a sustainable way of life (Gilman, 1994: 11).
The eco-settlement "Neo-Ecoville" is located in the Republic of Karelia, not far from the settlement of Reuskula, Sortavala Raion, on the site of an old farmstead. The project was started in 1995 on a territory of 29 hectares, on the north shore of Lake Ladoga. The main enterprise in the settlement of Reuskula is a stock-raising state farm; there is no industry and the population is less than 1000 people. The settlement belongs to the category of the so-called "dying out" communities. Since the basis of its population consists of pensioners, young people depart for larger population centres because in Reuskula they cannot find jobs and a good quality of life.

The project's ultimate objective is to construct on the territory of the Sortavala Raion, a sustainable, economically self-sufficient settlement, consisting of a general cultural-consumer service centre and small settlements, located near private and cooperative, ecologically-oriented small business outlets (fruit sapling nursery, experimental kitchen-garden, a nursery forest, an ecological tourism centre, etc.). This project is supposed to become a model of the revival of rural life. This model is supposed to draw on everything progressive from the traditional Russian and Finnish village and raise the prestige of life in rural areas.

METHODS

Research on the ecological village Reuskula NGO "Neo-Ecoville" was conducted utilizing these methods: autobiographical interviews, inclusive and participatory observation, and analysis of documents. Expeditions were carried out in October 1996, in February 1998, in August 1998 (in conjunction with American researchers), and in October 1998. A total of 15 people were questioned during the expeditions. Six of these people were women, seven were men and two were children. Of the 15 people interviewed, there were five married couples. The spouses were interviewed together. A total of 21 interviews were carried out. During each expedition, researchers tried to speak with as many of the previously interviewed people as possible. These follow up interviews were used to follow the dynamics of the eco-settlement’s development.

During the first expedition, participatory observations were carried out (Poplin, 1972: 276). At that time, 4 adults were living permanently in the settlement. The leader and his family did not live permanently in the settlement. At the time of the second expedition, 11 adults and 8 children were residing in the settlement. Of the 19 people (including the children), only 10 adults were interviewed. At the time of the third expedition only participant observation was used. At the time of the fourth expedition, 6 adults and 6 children were planning to spend the winter in the settlement. One family (3 people) left the settlement for a time; two older people decided to remain in town, depending on the state of their health, one family (3 people) left permanently, and one person left the village temporarily.

HISTORY OF THE CREATION OF THE SETTLEMENT

The initiators of the eco-settlement were former residents of large cities, who in the early 1980s, traveled to the Valaam Island in order to work on a historical-cultural preserve. Valaam is the site of a major Russian Orthodox monastery, vacated under Communism by the church. In 1989, the monastery returned to the island and began to carry out a policy, which gradually forced the secular residents and organizations to leave the island. Around 1994, a group of 6 people who owned 2 cooperatives on the islands - a restoration co-op and a horticultural co-op - decided to transfer to the mainland. They did not return to the megalopolis because they considered urbanization depraved, but decided to construct a sustainable community of a new type in a new place, uniting in itself the positive attributes of urban and rural life - "a cultural village", in their words. The leader of the group, Ivan Goncharov, had an unsuccessful experience in 1986-87 on the Karelian Isthmus in the Leningrad Oblast in building a community, based on Ryokih's ideas of Living Ethics or Agni-Yoga. From the failure he drew the following lessons: a sustainable settlement must be economically self-sufficient and the philosophical-religious views of its residents should remain their personal affair.

In Autumn 1994, after receiving compensation from the monastery for the land and buildings of the co-ops and private houses in which they
had lived, the settlers moved to the place where they would realize their programme - to the settlement of Reuska in the Sortavala Region. They spent the first winter in a house, which they rented from village residents. Most of the money set aside for building homes was "consumed" by inflation, and in principle there were no funds for building roads and electricity transmissions. Therefore, it was decided to postpone the construction of living quarters and invest the remaining funds in a productive basis, which, in the future, would permit them to earn money for building and to lower the cost of houses. Thus the construction-architectural workshops "Mir" were established.

In spring 1995 they started constructing the first house and laying out the fruit and berry nursery (the materials for the house and planting materials for the nursery were brought from Valaam). They registered the non-governmental organization, the Centre for Ecological Initiatives "Nevo-Ecoville", for which a tract of land with an area of 29 ha was prepared. The future of the project was uncertain because the galloping inflation did not make it possible to make the work of "Mir" profitable. All funds were spent solely to save it from complete ruin and liquidation.

FINANCING

In 1995 "Nevo-Ecoville" became part of the worldwide network of eco-settlements and received a grant for $50,000 from the Danish organization "Gaja Trust", which supports a network of eco-settlements all over the world with a structure of communications. With the funds received, they built part of the road from the settlement to the highway and electricity transmissions lines. In Sortavala (the regional centre) the office of the Centre for Ecological Initiatives "Nevo-Ecoville" was opened with communications equipment (computer, fax, etc.). Most of the funds were used in order to acquire 70% interest in the construction firm "Mir. This is an atypical investment of grant funds, but the settlers succeeded in convincing "Gaja Trust" of the rightness of spending the money in this way. This was the only grant, which "Nevo-Ecoville" used. Today, "Mir" maintains the office in Sortavala, divides up the money for common needs: purchasing fuel for the tractor, fuel for heating, the construction of common premises, road repair, the organization of the volunteer camp, payment for the cordless telephone, etc. However, the economic situation in the country is such that a small construction firm at present is not able to earn enough money to implement many programs and plans.

One of the aims of the settlement is that the organization itself should earn money and rely mainly on their own efforts and not on external resources. Each family has its own parcel of land, which does not belong to the organization and independently earns money for the development of their own household. Such structure of an eco-village has very much in common with the eco-villages and co-housing communities of the 1990s existing all over the globe (Metcalf, 1998) contrary to the much more communal way of living and financing in 19th century communities (Hinds, 1971; Bouvard, 1975: 26).

PARTNERS

"Nevo-Ecoville" cooperates with the local administration and the government of the republic of Karelia. Currently, together with the administration of the town of Sortavala and the Sortavala Local History Museum, a project is being proposed to give part of the North Ladoga area the status of a historical-natural preserve. This status will permit them to develop ecological tourism and ecological educational focused programs on this territory. There are contacts, mainly in the area of informational exchange, with other ecological settlements in Russia and abroad. Nevo-Ecoville seeks to become part of a network of villages, self-reliant in economic terms, but interconnected in terms of information as it was described by Robert Gilman (1983).

CURRENT SITUATION IN THE ECO-SETTLEMENT

Presently, 4 winter houses and 2 summer houses have been built in the settlement, a summer dining hall, a bath house, the foundation has been laid for a winter house, parcels of land have been cleared and laid
out for 9 families for kitchen-gardens (on property of the families) with a general area of 8.5 hectare. One of the family holdings is a nursery of local types of fruit trees, seedlings and berry bushes. Another is an experimental orchard and garden, cultivated with the application of alternative agro-technology (soil mulching, low-impact ploughing of the soil, application of forest humus, use of humus for fertilizer, produced by soil \'\93rain\'4 worms). Residents of the settlement, not interested to be engaged in agriculture can work in the architectural-construction workshops at "Mir", earning wages.

We can divide the eco-settlement residents' ecological views into the applied and the ethical. The applied views are expressed in the way of life in "Nevo-Ecoville" oriented toward decreasing the burden on the environment. The Nevo-Ecoville residents' ecological ethical views can be called internal ecology or the ecology of the person. Ecology is regarded as a state of harmony between the person and nature, between the person and people around him/her, and harmony with oneself. The same as Western intentional communities members (Bouvard, 1975: 29), the Nevo-Ecoville residents believe that living in harmony with nature and complete self expression is possible only in rural communities, and not cities.

The same as in other eco-villages, Nevo-Ecoville residents are seeking an environmentally friendly, sustainable lifestyle. Trash is sorted, that which can not be recycled is hauled away to the town. Glass and iron are set into building foundations, organic wastes are put into the compost piles. Paper is used for mulching or burned in the stoves. They also plan to arrange the re-processing of plastic wastes on site.

Water is taken from a spring and the stream. However, the spring is not certified. Drains from the bath house, toilet and the washstand are cleaned with the simplest septic filters, which are made from sand, pebbles, and glass. As a result, "grey", water remains in the settling tank, to be used for irrigation.

The electrical transmission line has been laid from the settlement of Reuskula. In some homes there is little electrical power (at the maxi-
Nevo-ecoville is built on strong family values. This reflects the tendency of the contemporary communities movement, where much less sexual experimentation is accepted than in the communities of the 1960s (Metcalf, 1998). In Russia, sexual experiment is absent. Gender roles in Nevo-Ecoville are close to the traditional ones. In large part this is dictated by the women's way of life. For the most part, they manage the household, bring up the children, and work in the kitchen garden. Heavy physical labor is performed by the men. Families are structured on the egalitarian principle.

The leader of Nevo-Ecoville is the chief spokesman and administrator of the eco-settlement. Most of the residents of the eco-settlement are also dependent on him economically. Only household-economic problems are solved jointly. The base of the eco-settlement consists of the group, supervised by the leader, which transferred from Valaam and established "Nevo-Ecoville." These are people interconnected to each other by many years of friendship. The leader most often makes decisions aiming to protect the interests of the main group. Newly arrived settlers should consider the opinion of the main group on all questions. If it is not possible to reach a consensus, the "newcomer" has to leave. Many recent arrivals suffer from the insufficient social intercourse. They hope that the situation will change when there are more inhabitants in the settlement.

Currently, 12 people are living permanently in the settlement, including children. There are 33 members of the organization. Each summer a tent camp for volunteers is set up near the settlement. For two consecutive summers the community has taken in orphan children from the Sortavala boarding school who had a holiday and helped in construction. The office for communications continues to operate in Sortavala.

**PLAN FOR DEVELOPING THE ECO-SETTLEMENT**

According to the participants' plans, when the settlement is fully developed it should consist of a central farmstead (where the educational center, shop, hospital, communications center, premises for general activities, and places to accommodate guests will be concentrated) and several separate settlements. They plan to establish autonomous sources of electrical energy such as wind generators.

Most programs should be economically sustainable and should be able to pay for themselves (ecological tourism, fish farming, a nursery forest, handicraft workshops). A controlling package in these production centres will belong to "Nevo-Ecoville" (as is done with "Mir"), and proportional parts to the direct participants in the programs (residents of the settlement) or outside is who are ready to invest money. The funds earned by these enterprises will be used to implement the planned non-profit programs (such as the educational centre) and the social sphere of the settlement. Nevo-Ecoville is planning to develop itself as a service community similar to those described in North American society (Kanter, 1972: 193) and Europe, for example, the Mondragon Cooperative group in Spain (Gillman, 1992). Gillman names such communities "full-featured settlements," where the economic, social and private spheres are not separated and is balanced in proportions (Gillman, 1991).

The slow development of the program is conditioned by the deficiency of resources, both material and human. "Nevo-Ecoville" at present is not in a position to grant living quarters for free ever on credit to people who are prepared to move to a permanent place of residence in the settlement. New residents must pay the cost of constructing their houses themselves (approximately 10-16, thousand dollars). Many do not have these funds, therefore they come only for the summer, work their land, and live in tents or summer cottages.

In spite of the slow development of the settlement, its residents do not consider their experience as unsuccessful, saying that they came here for the long term and do not expect rapid results considering is sustainable movement as success. This is what they say in reply to a comparison of their experience with projects which are more impressive for their short-term results: "Now you can't determine it, for example, looking at the little oak shoot with two leaves, and that gigantic, mighty burdock, with such a stalk, who has what kind of potential in him. The burdock dies in the autumn, the next spring a new burdock grows, but
the oakling hardly grows. Next autumn this burdock dies again, and the oak sprout grows a little more. But the moment will come when this will be an oak tree and these burdocks will be at its roots."

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SOCIAL ASPECTS OF SUSTAINABILITY: KITEZH CASE STUDY

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INTRODUCTION

The non-governmental organization (NGO) "Non-profit Partnership of Foster Families "Kitezh" (hereafter NPFF or "Kitezh") represents a settlement in the form of a community or a commune. As the name literally states, the organization unites people who are prepared to take in and bring up children who have been left without parental care. In essence, this is an attempt to create a system of raising and educating orphan children as an alternative to state-mandated children’s homes. Presently, the NPFF is attempting to receive official status as an ecological settlement. Thus in Yanitsky’s terms of classification, it can be assigned to the alternative wing of ecological NGOs (Yanitsky, 1996).

According to official statistics, there are nearly two million orphan children in Russia. The majority of them are not "real" orphans but children whose parents have been deprived of parental rights because they lead an anti-social way of life. The systems of the children’s state homes
are not equal to the task of socializing such children. Teachers are not able to devote sufficient attention to each child, since the children are brought together in large groups. Due to social neglect, many children remain behind in development and are not motivated to learn. Therefore, the level of education in schools within children’s homes, oriented toward children with low aptitude and motivation, limits the opportunities for acquiring knowledge for those children who possess natural talent. After graduating from such a school, it is very difficult for a child to enter an institution of higher learning. The children’s constant residence in a specific closed milieu hampers their development of elementary, everyday social skills. The children do not possess the basic knowledge the common child has, such as knowing how to take care of their clothing, preparing the simplest kind of food, keeping their living quarters clean and orderly, using household appliances (because in a children’s home these matters are looked after by the service personnel); making use of transport and shops, and observing the regulations of living together in a large society. In addition, the educators in a children’s home are responsible for the child only until he/she completes school. Upon completion, the 16-year-old individual remains alone with his/her problems and has no one to turn to for advice and help.

Since 1989, people have started to place formerly institutionalized children with families. Socially successful families adopt and raise three to five children, who all receive state payments as educators, and are fully responsible for the children’s upbringing and education. This process was confronted with a multitude of difficulties: the payments and allowances for the children are small, psychological help for the children and foster parents has not been developed, the separate family children’s homes have not formed a unified system and also can not help each other. Kitezh is an attempt by foster families to unite and help each other to adapt to foster children, struggling together against objective difficulties.

This paper represents a qualitative sociological study of Kitezh settlement. Qualitative research has been conducted using 22 in-depth biographical interviews and participant observations during the site visit, which took place in December 1998. We will focus on the history of Kitezh, organizational structure of the settlement, system of administration, financing, process of adopting the children, farming activity, gender roles, ecological practices, rituals and plans for development.

**HISTORY OF THE ESTABLISHMENT OF KITEZH**

In 1991, Dmitrii Morozov, a commentator for the radio station "Mayak," began to realize his dream of creating a settlement in the form of a community consisting of families prepared to adopt and bring up children who were parentally deprived. A radio marathon was broadcast in order to raise funds and attract possible participants to the project. In Moscow, an initiative group was formed of people who were interested in this project. They got in touch with Morozov via telephone, and proceeded through psychological tests to ascertain their aptitude for becoming foster parents. Meanwhile, Morozov was engaged with searching out and developing the necessary tract of land, which was found in the Baryatsk district of Kaluga Oblast. In 1992, the first settlers arrived there, rented houses in the closest village, Chumazovo, and began to build the "Kitezh" settlement. Marina Maksimova, a physician, became the leader of the initiative group in Moscow. She organized the firm "Kitezh Agency", based at the All-Russian Foundation for Education, in order to earn money for the construction of the settlement. The firm was unsuccessful because members of the initiative group did not have the aptitude for commercial activity. But the All-Russian Foundation for Education granted quite a large sum which subsequently was used to build the settlement.

**IDEAS**

The most significant concept in uniting the settlers, is the desire to help children who have been left without parents. As one respondent noted: "Our religion is children." A small Orthodox Church will be built in Kitezh. A priest who will serve in this church is leading the construction and is directly involved, since he also likes the idea of a family children’s home. The community members are not religious people but recognize the role of the Orthodox Church as a spiritual
Russian tradition. A respondent told us: "We don't chase off anyone for that... But on the other hand, if the community goes to the church with candles at Christmas, then whether you’re a Muslim, or a Buddhist, it's worth while for you to go and feel the presence of God here, isn't it?" Practically all Kitezians share the ethical views of the Ryorikhs. (Elena and Nikolai Ryorikh were Russian philosophers who created a philosophical-religious system, "Living Ethics" or "Agni-Yoga", which traces its roots back to Buddhism). The community members think that by attaining harmony within one's consciousness, perfecting oneself and ridding oneself of evil thoughts and actions, a person promotes the harmonization of the environment. All these people left large cities because they consider that life in nature, "closer to the earth", is more natural for people than life in a large technological society. They are careful in the way they treat the milieu which they inhabit, and teach the children to love and understand nature. Kitez community belongs to the new wave of intentional communities which can be defined as "a group of people who have chosen to live together with a common purpose, working cooperatively to create a lifestyle that reflects their shared core values" (Kozeny, 1994). People in intentional communities are usually dedicated to a mutual goal, realization of which gives participants the sense of self fulfillment and satisfaction (Questenberry, 1996)

KITEZH POPULATION

Kitez is a settlement of the village type in Kaluga Oblast, occupying 90 hectares of land, which was allocated to the organization in 1993 for permanent possession. As of now, 11 houses, a school, bathhouse, farm, apiary, and garage have been built. A chapel is being constructed as well. 23 adults and 26 children from 3 to 15 years old live in the settlement. The community consists of families with children (their own and adopted children). Each family lives in a separate house and owns personal property.

The adult population is divided into two groups: members of the community and volunteers. Members of the community are people who live permanently in Kitez and have resided there for at least two years. The people who have met this criteria are accepted as members of the community at the general community meetings. They also have the right to vote ("Instructions for new arrivals").

A volunteer is a person at least 18 years old, temporarily living and working in the community on the basis of a decision by the general meeting, who has concluded an employment contract for a specific period, and has the right to a consultative vote. People who come to Kitez for a short period out of curiosity, or with the intention of moving there to live in the future, receive the status of "new arrivals," are provided with room and board, participate in general work or pay for their room and board, do not have the right to vote, and are not permitted to work with the children without the permission of the general meeting.

According to the charter, those accepted into the community as members are predominantly teachers and builders, ages 30-35, with families and ready to adopt and raise foster children. In practice the main criteria for selection of future community members with full rights is their psychological and philosophical compatibility with the main group that comprises the community. Age, profession, family situation and even the capacity to become a foster parent do not play decisive roles. This position is explained by the fact that people in a small settlement interact very closely and members of the community should find a common language among them, avoid serious conflicts, and be able to work out decisions which suit everyone. Earlier, community members tried to influence the worldview of volunteers and new arrivals, to persuade and educate them. But after two families left Kitez, in spite of all efforts applied to their adaptation (one family took three foster children with them), the community members abandoned these efforts. Now a person (or family) decides for themselves to what extent they will accept the rules and traditions existing in the settlement, and the main group observes the newcomer/s and draws conclusions about whether they can fit into the collective. Our respondent told us: "People should be free... There's a way of life which is appropriate for some, not for others. Therefore, we are the only community that has survived up till now." If the new arrivals can not establish relations with people
or violate the rules of conduct which are accepted in the community, the general assembly can carry out a decision about the undesirability of their continued residence in Kitezh, to which they should submit. Only one such case was reported, involving a volunteer who started to drink. Usually the "unsuitable" people go away themselves.

**SYSTEM OF ADMINISTRATION**

The general assembly is the "legislative authority" in the community. Dmitrii Morozov, the community leader, is the president of the community according to the charter and has the right to veto a decision of the general assembly. However, no instances were related of his having made use the veto; as a rule, they manage to reach a consensus.

The general assembly elects the community council and the leader of the council is currently Vadim Terentiev the head of the community. The council, consisting of three people, decides all everyday matters of the community's vital activity and assigns the daily work. The council's decision must be carried out. The general assembly meets once a week, decides on strategic questions of the community's development, resolves conflicts, and distributes the funds.

**PROPERTY, FINANCING**

In 1993, the administration of the Baryatsinsk Region, Kaluga Oblast, transferred 90 hectares of land to Kitezh's possession for an indefinite period of time. Living quarters, buildings, livestock, transport and work tools legally belong to the community. In fact, each community member considers as their belongings, and bears responsibility for, property which they have at their disposal and with which they directly work. According to the respondent: "If the carpenter has an axe, then that doesn't mean that the axe belongs to the community; the man with the axe belongs to the community." Each family owns personal property.

The community's budget consists of allowances for children (born and adopted), salaries for the teachers, and voluntary contributions. Every month, each community member and volunteer receives a small sum of pocket money, if the budget permits it. If the community member needs money for travel, medical treatment or a major purchase, he turns to the general assembly to request that they allocate the necessary sum.

NPFF has close relations with the state, because the legal basis of a foster family is a contract on guardianship which is concluded with state agencies. Apart from that, wages for the community members, teachers and allowances for the children (natural and foster) are paid from the budget.

"Kitezh" has connections with the business sector through sponsorship aid, which was regularly received from Russian businessmen up to the most recent crisis. Currently, the leaders of the community are trying to establish relations with foreign philanthropic foundations, in order to receive financing as a charitable organization and ecological settlement. Up until now, the community has received financial and material support from abroad only privately, from its friends who are linked to the international network of eco-settlements and communities. Findhorn Foundation is a main fundraiser for Kitezh. There are exchanges of guests and delegations with kindred NGOs in the West (eco-settlements in Scotland, Australia, and North Carolina).

Food in Kitezh is a community affair. Differing foods are purchased centrally. Breakfast, lunches and suppers take place in the common dining hall. The abundance and variety of food depends on the presence of the financial resources in the community. One of the community members has permanent responsibility for preparing meals (according to the decision of the general assembly). In addition, each day one of the adults is designated to be the "on-duty" assistant, and several children are given the task of cleaning the vegetables and washing the dishes. Volunteers usually are assigned to be on duty in the kitchen. On Sunday the Kitezhians prepare meals at home, foods for this are allotted from the general store room. Given that each family consists of 6-8 people shared meals make it possible to liberate a great deal of labor (predominantly women's). Moreover, the common dining room performs a communicative function.
In Kitezhe, there is an economic game for the children because it is impossible for children to learn in a natural way to handle money as no money circulates within the community. A special "children's currency unit" has been created - the "kiyani." The children receive compensation for their labor (duty in the kitchen, work on the farm, preparing fuel wood, etc.). "Kiyani" are paid for leisure (computer games, horseback riding school). There is also a banking and taxation system of enterprises and joint-stock companies present as well.

CONTACTS WITH OUTSIDE WORLD

The retired nature of daily Kitezhe life is explained by the special aspects of the location - Kitezhe is situated 300 kilometers from Moscow, 20 kilometers from the closest regional center. There is no regular transportation link. When possible children are taken on excursions to Moscow. Guests often come to Kitezhe - teachers, scholars, and representatives of non-governmental organizations. They present lectures and hold classes with the children and with the adults.

For several years in succession, a summer school has been in operation, offered by the pedagogical group "Chimera" (the leader is Vyacheslav Zagorski, candidate of chemical sciences, lecturer at Moscow State University). Only the gifted children work in "Chimera," winners of the Moscow Olympiad in chemistry and physics. Such opportunities have had a developmental influence on the Kitezhe school children, many of whom did not know how to read and write before arriving in Kitezhe.

"Kitezhe" actively cooperates with the mass media to a great extent due to the fact that the organization's leader previously worked as a commentator on one of the central radio stations and has maintained his earlier contacts. A radio marathon was broadcast with the aim of raising funds and attracting the attention of interested people. As a rule, people who come to Kitezhe heard about it from the mass media.

Kitezhe maintains contacts with communities and ecological settlements in other countries, community members (adults and children) have visited Australia, Scotland, and the USA. They receive visitors from abroad. The Findhorn Foundation organizes summer courses in Kitezhe for students from Europe and the USA and provides help with strategic planning and management of the community. However, as it is described by Metcalf, Findhorn itself is much less intense and communal than Kitezhe (Metcalf, 1998).

ADOPTING THE CHILDREN, UPBRINGING, EDUCATION

Community representatives travel to nearly children's homes looking for children possessing the necessary intellectual potential and capacities for development. They carry out psychological tests. At first the child is invited to visit during the holidays, so that he/she can get accustomed to the community and choose a family with whom to live. If the child likes Kitezhe, an agreement on adoption is formalized. It is important that relations are established not only with the foster parents but also with the other children living in the family. The child has the chance to change families if conflicts can not be resolved successfully, but this rarely happens. As a rule, the community does not intervene in parents' relations with the children.

In the community, there is a non-comprehensive school with in-depth study of the humanistic sciences, subordinate to the Baryatsk Region section of public education. Several community members are professional teachers, but in principle, each person with higher education becomes a teacher in Kitezhe. In their work, the teachers make use of the experience of Russian educators who have created their own programs of teaching (Shchetinin, Amonashvili). Apart from school lessons, the children engage in different activity circles; they practice handicrafts and perform plays.

The Kitezhe teachers (who simultaneously are foster parents) consider that their task is more than just giving the children a basic education. Most important is formation of a world view, development of the personality, and social healing of the after-effects of the damaged childhood without parental love. They often talk with the children, teach them to form and express their own views, and take
a respectful attitude to their opinions. The work of raising children in Kitezh goes on around the clock. Such an approach brings its fruits. The children free of any inferiority complex begin to take pleasure in learning. After a year of residence in Kitezh, it is difficult to distinguish the former children's home residents from the "home-grown" child as to the level of knowledge and conduct. Kitezh children are sociable, friendly, and uninhibited. Several adopted children who have finished school continue to study in other population centers and come to Kitezh during holidays and on weekends to their families, where they feel at home.

FARMING ACTIVITY

Maintaining the vital activity of the settlement demands much labor. The community members independently build the homes and farm buildings. The community garden produce up to 50% of the Kitezhians' vegetables. Raising livestock provides milk, eggs and meat. There are 4 cows, steers, a horse, sheep, and chickens on the farm. There is a bee-garden; if the summer is not rainy it produces up to 200 kg of honey. Stoves provide heating. Wood stoves have been installed in the small homes, central heating uses coal in the large homes. The children perform simple farm tasks for the families and for the community.

Although the farming method in Kitezh is close to that of the traditional village, the community members' worldview is different that of rural residents. Farming is not the priority. The applied value of farming is recognized as a means of earning a living. The main attention is devoted to other areas—child rearing, cultural or community relations, spiritual and intellectual activities, and self-improvement.

GENDER ROLES

On first glance, the allocation of gender roles in the community is close to traditional patriarchal roles. The men perform the heavy physical work. The sphere of women's work is household management. This is explained by the fact that the Kitezhians do not regard the traditional way of farming as unequal. It is considered that each should fulfill his/her own function in his/her place, and each function is equally important. Often, without reflecting, the community members follow gender-role stereotypes that have come into being. For example, in looking after the kitchen, the boys clean the potatoes and wash the floors (these jobs are done by soldiers in the army when they are on duty), and the girls wash the dishes. The importance of the womanly, maternal role in the foster children's adaptation is emphasized, although the men also spend a great deal of time with the children and participate in bringing them up.

In the area of decision-making, relations are structured on the principle of equality. Men's and women's' votes at the general assembly have equal weight. Women are members of the community council.

COMMON ACTIVITIES, RITUALS, CREATIVITY

Life in the community is full of rituals and unwritten rules. Each morning the community members assemble for common exercises with elements of psychological self-regulation. The general assembly is held on Fridays. On Tuesdays there is a meeting where the community members talk about psychological and philosophical subjects.

On Thursday, the women gather in the "women's salon." This meeting, which traces its roots back to the Russian tradition of the young people's gathering (women in villages used to get together, each one busy with her own needlework, and chatted). Each woman in turn proposes a subject for conversation at each "women's salon." This might be a lecture, an account of a book that someone has read, joint work on handicrafts, a game or simply conversation about some "women's" theme. The men and children are not admitted to the "salon." On Wednesdays, a similar "salon for the girls" is held under the guidance of one of the adult women. Twice a week the community members heat up the bathhouse. This procedure, in addition to its hygienic purpose, has a certain ritual sense. In the men's and women's groups there are volunteer "bath house attendants" who know how to do a massage with the bath besom (beach twigs), they can treat pains in the muscles and joints, and remove tension. The "men's club" is combined with
one of the bath days - a gathering of men, analogous to the "women's salon." Once a week the children independently organize a discotheque. During the discotheque two children's cafes operate - this is part of the economic game - where delicacies made by the children are sold for "kiyani" (the children buy the ingredients from the community for "kiyani").

Handicrafts and domestic creative work are widespread in Kitezh. The community members consider that creative activity facilitates a person's spiritual development. Practically all Kitezhians draw during their free time, even those who earlier didn't know how to do this. The houses are decorated with pictures and articles that the community members make themselves and give to each other. Several souvenirs are made especially for sale at Scottish eco-village Findhorn in the shop "The Way To Yourself," which gives the Kitezhians the opportunity to obtain additional funds.

ECOLOGICAL ASPECTS

Until recently the community members did not identify Kitezh as an ecological settlement. However, living in a rural settlement and seeking harmony with nature made them environmentalists. Communitarians of all kinds can be considered environmentalists because of their sustainable life style and acceptance the ideas of sharing, ecological balance and equality (Bouvard 1975: 29). At present Kitezh is attempting to acquire official status as an eco-settlement. This happened because the Kitezhians realized that their values and ideology correspond to those of the environmentalists - they strive to reduce the burden on the environment and to observe ethics with respect to nature. Moreover, in public awareness in Russia, any attempts by former urban residents to leave the city for the countryside are regarded as the establishment of an eco-settlement. In recent years this has prestige and gives the chance to obtain financing.

Currently, among the ecological practices in Kitezh one can number the selective collection of trash (paper is burned in the stoves, organic wastes are fed to the animals or added to the compost piles, iron and glass are put into the foundations of the houses), cultivation without the application of chemical fertilizers, and explaining to the children the rules of conduct in the forest (one must not needlessly break off branches, pull up flowers, throw away litter).

Many of the Kitezhians' ecological ideas can not be put into action without additional financing. If the necessary financing is obtained, the community members are ready to organize children's ecological camps on their territory, clean up ponds, modernize the toilets, carry out expert evaluations of future building sites and the consequences of this or that project, or to build an eco-dome.

PLANS FOR DEVELOPMENT

Speaking at the conference on sustainable development in Findhorn in the summer 1998, Morozov stated: "Now there are two tasks before us - to live through this winter in a normal way and to secure a transformation of all systems of work with children in Russia."

The Kitezhians think that now, a working, viable model of a community has been created - the family children's home. This model is sustainable and more successful than the existing state system of bringing up orphan children, especially considering the fact that in Kitezh, for each child thirty times less is spent than what is officially allocated from the budget for maintaining a child in a children's home.

There are natural limits on the growth in the size of the Kitezh population. In the opinion of Morozov, Kitezh can grow, without harming its sustainability, by 3-4 more families and 15-20 children. The long-term outlook calls for the emergence of other similar settlements which would be linked to each other. In the opinion of the leader, the efficiency of small scale communities will be favorable "because serving one large Kitezh will cost ten times as much as maintaining three small ones." The alumni of Kitezh could organize such settlements which will be networking with one another and represent a "team of villages", as described by Gillman (1983). As many other intentional communities around the globe, Kitezh represents what Bouvard has described as a "laboratory for social change" where new miniature
self-sufficient, full-featured societies can be developed and reproduce (Bouvard 1975: 189).

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1. Russian distinguished teachers

2. A procedure for creating harmony between the community and nature
GREENING OF NEW RELIGIONS IN RUSSIA: TIBERCLE Case Study

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METHODS

Field research was carried out from 02.11.98 to 15.11.98. Participant observation and interviews took place in the "Church of the Last Testament" in Kuragino; 4 villages: Cherepovetska, Petropavlovka, Zharovsk, Gulyaevka; the Town of Sun (Gorod Solntse) [also known as: Town of Masters (Gorod Masterov), New Jerusalem (Novii Jerusalem) and The Hill (Gora]) the town Down Dwelling (Nebesnaya Obitei) [also known as: Dwelling of Sun Raise (Obitei Rassveti)] and the town of Minusinsk.

Research has been conducted using the following methods: in-depth, semi-structured, biographical interviews; participatory observation, including daily general meetings of community members; travel notes were kept.

The choice of respondents was carried out according to the "snowball" method. We conducted a total of 48 interviews, 18 with women, and 30 with men:
24 with 12 complete families, where husband and wife were questioned separately;
- 20 with community members, who do not have family relationships;
- 1 with the leader Vissarion;
- 2 with representatives of the local authorities - head of the administration of the Cherkemshanka village council and the forestry officer of the Cherekshanka tree farm;
- 1 with Vissarion’s aunt in Minusinsk.

In addition we conducted 2 group interviews - at a meeting in Gora and in the community house in the village of Petrovskovo. A survey was also conducted among local residents about relations with commune members. 39 interviews were conducted with commune members living on the territory of the econosphere-settlement "Tibergul", 6 with commune members living outside this territory.

Print record analysis has also been conducted: the newspaper "Zemlya Obetovannaya", books of the Last Testament, published by St. Petersburg Vissarion’s Center and video and audio cassettes with recordings of Vissarion’s sermons.

RELIGIOUS CONCEPTION: ECOLOGICAL AND ETHICAL ASPECTS

This econosphere-settlement is based on the belief that Vissarion is Christ, come to earth in accordance with prophecies about the salvation of all humankind or, if this is not successful for reasons of freedom of choice, the consolation of the remnants of humankind. Up to the age of 30, Vissarion was an ordinary person and his name was Sergei Torop. Then he was granted consciousness of Christ and realization of his mission to bring to people the Word of the Heavenly Father. Sergei Torop, who bears the religious name Vissarion Christos, is beginning to distribute the Doctrine, under the title "Last Testament," using literature, audio- and video-cassettes, the mass media, sermons and public appearances, and is registering his religious organization under the name "Church of the Last Testament". His followers regard him as the Word of the Heavenly Father and the Truth on Earth. For them he is the Teacher. According to Vissarion’s the previous Doctrine of Jesus Christ, people’s attention was directed primarily toward the relations "person-person", "person - god and the light powers of heaven" and "person - devil and the dark powers of hell." Another theme in Vissarion’s "Last Testament" began to resound quite powerfully too, the need to achieve harmony between the human being and Mother Earth and Nature. The Last Testament contains an idea about the indignation of Mother Earth at the non-ecological behavior of people, which leads to their premature death and the destruction of cities. So that this will not happen, according to Vissarion reading, it is necessary to change man’s relation to Nature and his behavior on Earth. Below are samples from instructions of the Heavenly Father, given by Vissarion Christos, which the residents of the econosphere-settlement "Tibergul" strive to carry out and which can be considered ecologically friendly:

"5. You can kill a representative of the animal or plant world only when there is a weighty necessity. If the good from this exceeds the loss to Nature. But throughout your life, strive to restore even the slightest loss to Nature.

"18. Strive to achieve the Heights of Spiritual Love. It arises between the human being and the world surrounding him, both with people, and the animal and plant world. This Summit is inevitable for everything that rises.

"23. The greatest sufferings will be experienced by the one who is more attached to a life on the basis of taking but not giving.

"36. Strive to achieve harmony with the Godly and Natural principles in your essence. Reason was given to you in order to create this harmony. After that it can truly develop by itself.

"38. The human being should know only what helps to develop his true capacities for harmony with the surrounding world."

Beyond common Christian ideas of the Father and Son, Holy Spirit, and Jesus Christ, Vissarion’s followers use such concepts as they carry out the instructions of "the Most High" as "the One People" holding "the One Faith," "the One," "the Spirit of Life," "Mother-Earth," "the Cosmic Mind, as well as unitary perceptions of the world, culture, language and traditions different from those now existing. They believe
in a coming world ecological cataclysm which "the One People" will survive and go on to first resettle West Siberia and later the whole land.

BRIEF DESCRIPTION OF THE ECONOOSHERE SETTLEMENT "TIBERKUL"

The econoosphere-settlement has several distinct territories. There is the territory which does not belong to the econoosphere-settlement. This is an extensive territory, where people who have come from cities to Vissarion have settled in various existing villages. These settled points for the most part are situated along the road from the district center Kuragino to the village Cheremshanka. These are the villages Podgornoe, Zherbatikha, Imisskoe, Mozharma, and the village of Zhuravlevo, on the closest railroad. In these villages the people have settled according to their own discretion, waiting for the opportunity to move closer to Vissarion's house. Those who remain here for a long time are for the most part single men and women, single mothers, homeless people, those returning from places of imprisonment and other marginal groups, and problematic families and parents who have come without faith following their children.

There is the territory of the econoosphere-settlement "Tiberkul" itself include the villages of Petropavlovka, Cheremshanka, Gulyaevka, Zharovsk, Tiberkul. In order to attain residence in these five villages, the consent of the Teacher Vissarion is necessary. For the most part, they are inhabited by complete families with or without children live, believers, and incomplete families, where one of the members is a skilled worker or responsible for a certain area of community work. In the future this territory is supposed to become part of a preserve. Negotiations are now being held with the regional and Russian Federation administrations about the boundaries and status of the preserve.

Thirdly is the territory of Gora, comprising Gorod Solntsa, (or Gorod Masterov or Novii Jerusalem). Only complete families, confirmed in the faith, receive Vissarion's blessing to settle there. As described in their interviews "according to the degree of spiritual maturity." The country road goes as far as Sukhaya Gora and passage to Gora is difficult for automobiles. A steep narrow path, 12 km long, leads across the hill to Gorod Solntsa, passable only for people. There is also a path for horses, longer and less steep. All loads reach the hills on horses or in backpacks. In winter, after the soil and marshy areas are well frozen, the winter passage is in operation. The track ("kamaz") passes along it as far as the warehouse, the place where the community food is stored, standing on the outskirts of Gorod Masterov. The use of machine technology in Gorod Solntsa is not planned, although in exceptional cases it is permitted. For example, Vissarion allowed the use of 5 petrol-powered saws for the felling and clearing of 60 hectares of forest, intended for construction and heating of houses and public buildings in the settlement of Sukhaya Gora. According to the plan, Gora is divided into three further territories. There is the territory of the public buildings and workshops; the territory of the orchards, kitchen gardens, parks, flower beds; and the territory of virgin forest, where settlement is not planned.

Vissarion lives at the territory of Sky Dwelling (or Nebsnaya Obitel, or Obitel Rassvet). There are located the houses of the apostles, priests, the "Stone of the Heart", the "Simvol Very" (Symbol of Belief) church, and other cult structures.

HISTORY

In the second half of 1994, an initiative group of Vissarion's followers came out with the proposal to create a settlement in the taiga, by Tiberkul Lake, and to form as a preserve a territory with an area of about 300 square kilometers with five already existing villages. An ecological program was initiated and a tract of land of 250 hectares was allocated on the hill near Tiberkul Lake. In August 1997 the non-governmental association "Econoosphere-settlement "Tiberkul" became a member of the international Social-Ecological Union under the name Krasnoyarsk Regional Section "Tiberkul". In addition to the non-governmental association, the community owns the AO "Tabrat" company in order to carry out general economic and cultural activity. Even earlier, in 1991, they were registered as a religious association, "Church of the Last Testament".
Different people from different cities of Russia and the Newly Independent States come to "Tiberkul". Prior to arriving, all visitors must familiarize themselves with Vissarion's doctrine, believe in it, and be ready to build a new life in the "Promised Land", as Vissarion's followers call this part of Siberia. A minority followed their closest relatives without having any special faith, wives after husbands, husbands after wives, parents after children, children after parents. Many became believers after arriving. Among the community members, there are people of various professions: teachers, doctors, musicians, artists, engineers-technicians, economists, many former soldiers, pilots from the missile forces, and research workers with academic degrees. Most commune members are people with higher education. Practically all of them came from far away, were urban residents, and did not know handicrafts or the skills of agricultural work.

People, who have come to "Tiberkul", as a rule, were engaged in a spiritual search before coming to Vissarion. They have read esoteric literature, participated in different associations, many became interested in, and themselves experimented with, non-traditional health and fitness methods or practiced healing methods and most went through the influence of "Agni Yoga". All respondents, in reply to a question about why they rejected their spiritual paths and came to Vissarion, noted the impossibility of practically realizing their ideals in the worldly society. They think that it is possible at "Tiberkul".

Many respondents connected their spiritual development with life in nature. We would like to provide some examples from the interviews:

"Why am I in this eco-settlement? ... To learn to perceive the world as purely beautiful, good, to forget sorrow, forget fear, forget hate. That's the ecology of the soul. Exactly that is necessary now for nature. It's exactly that which she's suffering from more than from everything that man is doing with his scientific-technical progress. And that's what we came here to learn, to learn."

"Life in harmony with nature is the inalienable part of our spiritual development. It's impossible to be in harmony with nature and not to develop your soul. In the first place it's necessary to purify the soul and those processes, those very actions, they will be natural."

When they had arrived, they had to master the rural way of life. Many men learned construction skills and mastered trades, several became skilled workmen. The skilled workmen are a basic and respected category of "Tiberkul" residents.

LIVING IN NATURE

On the basis of interviews with commune members and representatives of the administration, it became clear that at the beginning of their life in Tibercul, the people made many mistakes. There were some violations of Russian environmental regulations. In building the town on the hill, the weak soil was damaged, since a 6 km path was made. Birches were cut, petrol was stored by the river, and illegal felling was done for fences. In laying out the winter path, with the all-terrain vehicle, they damaged the moss and soil. They destroyed 0.04 hectares of cedar, in the villages they did illegal felling for fuel wood and fences. However, these and several other violations took place for the most part in the first phase of the communities' activity.

At present, as both the forestry officer and the head of the administration noted, the situation has become normal, the mistakes were corrected. Moreover, the community members planted 125 hectares of cedars, they cleaned up another 250 hectares of cedars to display the very good quality, about 80 people participated in this activities. The commune members cleaned a stream between the Tabrat River and Tiberkul Lake and freed it of many fallen logs, thus creating normal conditions for spawning.

In order to heat the houses, ordinary wood stoves are used. They are quite uneconomical. Researchers were witnesses of how the housewife, in the process of cooking the meal for the family, raised the temperature in the house to higher than 25-30 °C and then opened the window or door in order to lower the temperature by ventilation. In general community members use living birch fuel wood, considering it to be
waste wood, and frequently use green fuel wood, since most of them do not have shelters and sheds in order to preserve fuel wood. Heated winter premises have a rectangular shape. We saw only two commune members with homes built in hexagonal form. The rectangular shape creates an excessive load on the living environment.

The interviews show that people who have come to Vissarion gave first priority to questions of faith, cleansing, and spiritual development, and second to their interaction with nature and the environment. Many, especially those living in villages, in general don’t think about the ecological soundness or unsoundness of their lives and their actions. Several, well knowing the commandments concerning relations to nature, in fact only study, but barely try to apply them in life. However, there are those who are seriously concerned with creating an ecological life within the separate family and the settlement as a whole.

The most ecologically sound life is organized on the Hill and in the village of Zhavorosk, where there is no connection to the unified electric supply network. In Zhavorosk solar batteries, thermal batteries and petrol batteries are used for the work of the video recorder, in order to watch cassettes with Vissarion’s talks.

Some respondents feel comfortable living with nature and are not afraid of wild animals. For example one of the respondents told us: "A lynx with a cub let me come close, only the cub was scared and ran away. Such a big lynx. Earlier I didn’t see any lynxes at all. I thought they were just bigger cats... I didn’t feel that she had any aggression against me. It feels like cooperation."

The way of life includes various everyday adaptations, which make life more ecologically sound and promote a break from money.

This happens especially on the hill and in families where money is irregularly on hand. Lye is used instead of laundry detergent, instead of soap and shampoo blue clay is used, and an infusion of various wild-growing herbs are used to replace tooth paste.

**BY THEIR OWN WORDS**

"I washed with lye. You take the ashes from the stove... It ferments and increases so the water is soft like soap. Approximately one glass per basin. And in general the children’s diapers can all be laundered very well like that."

"When there were nettles in the summer, I picked them, let them soak for two days. On the third day, we heated them up, washed ourselves and washed our hair. When the nettles are soaked, the water becomes soapy, that is, soft. The hair becomes light. It falls out less."

"Now we’re discovering for ourselves some clay with amazing qualities, means of the clay it’s possible to satisfy the needs of the flesh, to satisfy the need for calcium. We don’t have enough calcium, flou- rine, manganese, bromine -microelements that are abundant in the clay, I sit in all the meetings, I have a little white clay on my tongue, the blue clay tastes even better, we have deposits of blue clay here. It’s very tasty."

"We make shampoo from clay. Use lye, add nettles, add birch, add clay, add down, several more ingredients, and prepare it in proper quantities. Anyone who wants can come, take a jar of this shampoo and wash their hair. I tried twice in the bath to wash myself simply with clay. It’s so soapy, it forms so much lather."

"In the morning I wash myself with snow. All the pores are opened. Someone uses birch leaves, someone boils nettles (for tea), someone washes with clay."

"We steam the fir branches, until they’re soft, simply soak them in boiling water. You can use this water to wash your hair or your body. It smells wonderful. You know that if you add a few drops of fir oil to the bath it’s already wonderful, and here it has an absolutely vital effect... The wood of the fir, the spruce, removes negative energy. Aspen, fir, spruce, these trees."
AGRICULTURAL PRACTICES

Community residents proclaim that it is necessary to depart from the monetary unit, therefore farming and gathering are becoming the principal sources of life support. One of the respondents said to us: "In general, we supply ourselves with food, using natural farming, private plots, still. If there's not enough, we buy something."

Other respondent stated: "Before we plant we pray... and this is just the question which you asked, how we can live without money. Well this is our idea, as they say, actions, programs: to get rid of money as soon as possible. Thanks to the gifts of nature, Mother Earth, where we can plant, work the soil... we'll have grain... nature teaches us how to relate to her, I can spend half an hour with each root... and so with everything, with mushrooms, with berries, with horses, with trees."

The main type of farming, both in the villages and on the Hill, is kitchen gardening. However, commune members already have started to use common fields. For example, this year they successfully sowed buckwheat. In the future the importance and number of community fields is supposed to grow. Communitarians plan to sow the fields in traditional places, close to the villages, on the former state farmlands. In kitchen gardening they use a method which is traditional for these areas, growing in hot beds. That is, they spread decayed matter (mature, compost) on the beds, and all the weeds are placed in a furrow on the bed, around its perimeter. This method is used by the majority of respondents.

On the Hill there are two small greenhouses that work round the clock. One of them is like the veranda of a residential building. In the greenhouses residents cultivate tomatoes, lemon trees, and banana trees. As yet the greenhouses do not bear a real functioning crop for the inhabitants of the community.

After gathering in the harvest, the commune members redistributed all the main foods among themselves, depending on need. Part of the produce is stocked up for the hill for common use, the villages help the

Hill. In the villages themselves there is not yet a general distribution of produce but this is planned for the future.

NUTRITION

Only vegan food is accepted in the community. It provides for excluding meat, fish, and eggs from the diet. Dairy products in small quantities are permitted only for children, pregnant women and nursing mothers. Fats are practically excluded, even vegetable oils. Vegetable oil is permitted only on Sundays. The use of wheat and products made from it is restricted, wheat flour is replaced with rye flour. Bread since it is baked independently, without yeast, is used in limited amounts.

It is recommended that drinking is limited. Black tea and coffee are not used. The principal foods are potatoes, buckwheat porridge, and vegetables in season and preserved sauerkraut, and mushrooms. Respondents describe how they are gathering berries, mushrooms and herbs.

"We pray, ask Mother Earth for forgiveness for picking these berries. And you know, such unique things happen, it's as though there weren't any berries. And you approach, it's as though the leaves raise themselves up, and there are the berries. You came with good intentions, you didn't come to take away from her (not to plunder her). It's even as though we have a rule: you don't take everything, down to the last berry. That is, you must leave 1-2 berries on this bush."

"Everything is here: contact with the chipmunks, and a bear running across the path, and hares, and black grouse, and prayers, and trees. And there's an enormous number of herbs, that you can use as food, that nobody knows about... That's how we live."

One of the respondents describes his motivation for vegan nutrition: "On the Earth there are many associations, which try to come into harmony, to a harmonious life, to themselves, on Earth. So, let's say, vegan food, intercourse with nature, the aspiration to life, toughening your body..."
GENDER ROLES

Women who earlier occupied an active position in the society, who hold prestigious positions in a "real" world, in Tiberkule manage the household and master the technique of cooking on wood-burning stoves. The kitchen gardens are also primarily taken care of by women. Several do sewing and engage in needle work. The bulk of their time goes into working in the home. Gender roles in the eco-settlements are very much polarized, women strive for femininity, men for masculinity. It is considered that women should develop intuition and be responsible for the link with nature and follow the man, who is responsible for spiritual development, the link with God, and should have reason.

In order to be more feminine, women in general wear long dresses or skirts, which for the most part they have sewn themselves in an original style. It is accepted that women wear their hair long, and wear on their heads adornments sewn or plaited from birch bark and head-dresses. Men also observe an original style in clothing. In time free of heavy work, on holidays, and at meetings they wear tunics (long shirts with slits at the sides and waist). It is also accepted that men wear their hair long.

FROM THE INTERVIEWS

"Here girl could go the girls' way, that is, she becomes as it were a potential bride, having mastered as it were, so to speak, the rudiments of housekeeping, mastery of a woman's secrets. And all this is related to Mother Nature: the elements of water, air, earth, fire."

"With regard to the fact that our women look so fine, the man does what is predestined by God, strives to be a man. A man in the first place is the one that a woman boldly goes after. Because she always senses who's a man and who simply puts on a jacket and tries to look the part. So, conquering his weaknesses, a man becomes naturally stronger, he becomes stronger in spirit. And a woman should live on this spirit. And being filled with it, she blossoms. The man looks at her and admires her, becomes stronger still the woman becomes still more beautiful."

"But it turns out so agreeable to be weak, to be beautiful, to be the kind of woman that the husband, the brothers admire. That's why I don't know, maybe if they haven't gone through it, businesswomen don't understand how pleasant it is."

"...working on the soil is an enormous pleasure for woman. You gain such strength. Especially the mystery, when you work in a long dress. When the skirt is down to the ground, it's like a cupola, and all the energy comes and the women... go barefoot and never get sick. That's the mystery itself."

CHILD DEVELOPMENT

Practically all women in the eco-settlement bear their children at home, in water, in the presence of the husband or midwife. Children are educated at home. In 1998, in the village of Chermshanka, an attempt was undertaken to establish a community kindergarten. Children of school age learn at home for the most part and study other subjects externally in the local public school. Since the school is located in Chermshanka, several community children study there. A community school up to the 5th grade exists here. Here children study in a specially established program. They try to remove from the learning process all knowledge which, in the opinion of the commune members, bears elements of destruction and aggression. The program on history and literature is revised especially vigorously. There is no special environmental education at school. However, children are raised in nature and on the opinion of our respondents, this kind of ecological education is the best.

Our respondent described: "A boy was born here. He started growing up. At an early age, a year and a half, two years, he ran around in the herbs and brought herbs to us. He himself ate herbs, and gave some to his parents. He had this internal feeling with him. This happened on Lake Tiberkul. He taught them [parents] to gather herbs."
BUILDING THE COMMUNITY

At this phase in the eco-settlement there is a process of creating a united family. Daily there are community meetings (general, economic, moral-ethical, men's, women's) in each village. At the meetings, questions are resolved that are related to the community's economic life (for example, the question of preparing fuel wood, common work, etc.). They consider conflicts between the united family and the personality, contentious, conflictive issues in families. People try to give each other suggestions as to how best to get out of a situation. As a rule the meeting participants do not come to a single opinion, therefore they formulate questions for Vissarion and send envoys to him. The answer is recorded on an audio cassette and everyone listens to it together. It is taken as absolute truth. The objective of creating a single family is that all its members come to a single understanding of the truths of the Last Testament, to a simplification of relations among people, based on love, faith, a relation to one's neighbor like that to a close relative, and the creation of a single economic structure, supporting the life of the family.

One of the respondents described: "The base of our presence here is not only intercourse with nature. The most important factor is that of people associating among themselves as a unified, integral, harmonious organism, present on our planet. Because we people living on the Earth are a unified organism. We’re children of one God, the one God. And here people of different beliefs have come together, people of different nationalities, they came from different places."

CONCLUDING REMARKS

As we can see Tibercuri community represents an intentional community where people live together intent on the realization of their beliefs in practice. They have a common purpose to create a new environmentally friendly society on the land, where people will be able to survive natural catastrophes and disasters. They have shared values, shared beliefs and see their neighbors as extended family. All these characteristics correspond with those described for intentional communities the Western countries, as well (Questenberry, 1996; Boulevard, 1975; Kozeny, 1996). The same as in other intentional communities around the globe, described by Kozeny, Tibercuri residents’ shared values include creativity, self sufficiency, environmentally friendly technology, equality, personal growth, cooperation and peaceful social transformation toward a sustainable way of living (Kozeny 1996).

In terms of its scale, Tibercuri can be assigned to the category of mega-settlements. A mega-settlement is an alternative settlement, consisting of many hundreds and even thousands of people (Shubin, 1998: 9). The Tibercuri settlement numbers several thousand people and is prepared for unlimited growth in numbers. In addition it is a settlement with a complex structure, uniting in itself six population centers. It represents a "team of eco-villages" spread in a vast territory. Such a structure, according to Gilman (1983), can be considered as very effective.

Tibercuri has much in common with US religious intentional communities described by Bouvard (1975). The same as what she terms the "US religious movements," the Tibercuri community displays puritanical attitudes, strong family values and simple lifestyle. The Tibercuri community has many similarities with the US Anabaptists. The same as Anabaptist movement, described by Bouvard, Tibercuri community represents an intentional association of believers fully committed to god. Contrary to Free Church communities in the U.S., Tibercuri residents are allowed to compromise with ethnicity and encouraged to join all nations and nationalities within the Tibercuri community and become members. Like the apostolic church of early Christianity, the Tibercuri community sees its purpose as missionary for their own particular beliefs. In these beliefs, the word of the Heavenly father was commanded to Vissarion as a reborn Christ who dictated a revised Last Testament to an evangelist scribe.

It has been stated in western literature that religious communities are the most successful in their development all over the world competed to other eco-settlements (Kanter, 1972). Tibercuri community also
can be considered the biggest and most successful in terms of organization and development in all of Russia. Their religion gives communitarians the necessary commitment and strength imperative to overcome difficulties in building the community in a situation of Russia’s transforming society. However, their dependence on Vissarion as a charismatic leader makes some of the followers worry about the future of the eco-settlement.

ENDNOTES

1. The Noosphere is the social-cultural sphere which according to the Russian scientist Vernadsky surrounds and influences the world’s ecosystems.
2. All references in the article to the Last Testament refer to the version proclaimed by Vissarion.

REFERENCES


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