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Sustainable

Development Report



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Introduction

In the past year, sustainable development has become one of the most common catch phrases used in debates on the future of development. This phrase is widely used within government, business, and social organizations.

Ten years have passed since the 1992 United Nations Conference on Environment and Development (UNCED) in Rio De Janeiro, where leaders of most nations on earth gathered to discuss global environmental and development issues and to deliberate plans to assure sustainable development. A World Summit Conference on Sustainable Development has been organized to take place in the South African republic of Johannesburg in August 2002 to examine the progress made in the last ten years and to discuss future plans for worldwide sustainable development.

To prepare for this conference, governments, international institutions, and non governmental organizations throughout the world are developing assessments of progress made over the last ten years, of the problems that have been encountered, and actions needed in the future. In this regard, Green Liberty is working with other non governmental organizations in Latvia to realize the vision of the EU PHARE ACCESS program's supported project Road to Rio+10, which had a goal of preparing for the Johannesburg Summit and the preparation of an NGO report on sustainable development in Latvia.

Following renewed independence in 1991, Latvia began moving towards the development of a democratic government and free market economy. During this time, Latvia, by signing the Rio De Janeiro Declaration, pledged to follow the principles of sustainable development. Over these years Latvia has adopted many governing laws and sector specific policies, a national development plan has been devised, and work is underway on a strategy for sustainable development.

This report of non governmental organizations on Latvia's progress towards sustainable development is the culmination of the work of 89 people from 30 different environmental protection and social organizations, unions, and academic institutions. The findings of this report are supported by the results of six thematic seminars and on an analysis of Latvia's overall and field specific development and how they compare to Latvian international relations and studies and recommendations by non-governmental organizations moving towards sustainable development.

In our report, we focus on what we believe to be six fundamental issues: access to information and public involvement, integration of environmental matters into sector policies, change to consumption patterns, climate change, agricultural policy, and the role of multinational corporations in Latvia's development.

Access to information and Public Participation

Effective public participation is one of the preconditions to democratic and sustainable development. These principles can be observed in the Rio Declaration and other UN documents. The most significant international legislation, on a European Level, is the UN ECE Aarhus Convention, “regarding access to information, public participation, decision making, and the rights to turn to institutions charged with protecting the environment.”

Latvia signed this convention in June 1998 and ratified it in the beginning of 2002. Also of political significance for Latvia is the EU 1990 directive (90/313/EEC) “Regarding free access to environmental information”.

A precondition to ensuring effective public involvement is a vibrant civil society. Currently there are approximately 5,000 different NGOs in Latvia. Of those, approximately 500 have a set goal of solving problems regarding environmental protection and sustainable development.

In the past ten years, many fundamental normative acts have been passed that provide for the possibility of public information access, participation in decision making processes, as well as the defense of their legal rights in court. It must be recognized that these legislative changes took place slowly and not without bitter debate. Although Latvia’s legislation provides for these rights, the level of public participation is very low. This is primarily due to the public’s lack of conviction about their rights and capacity for meaningful change. Capacities for disseminating information to the public and involving them in the culture of governmental institutions have not been adequately developed. The public is rarely informed adequately or in a timely manner and also is rarely involved in decision-making. Governmental administration institutions do not actively work to motivate the public to be involved in the decision-making process. As a result, the public is not involved in decision-making and therefore resorts to picketing and other methods to express their views after the fact.

In this introductory section we look at the changes that have occurred in the availability of information and public participation in legislation and its implementation in Latvia during the past ten years.

1 Access to Environmental Information

One of the most important aspects in the development of a democratic government is the right of public information access. This facilitates public participation in governing and prevents corruption. Written into Latvia’s Constitution are the rights to have a quality living environment and access to environmental information. The term, “environmental information” gained usage in Latvia’s political arena following the signing of the Aarhus Convention in 1998. Legislation also states that governmental institutions and local governments protect society’s access to environmental information.

It is necessary to establish effective data gathering and processing systems to enable the responsible institutions to execute this obligation. In Latvia, the Latvian Environmental Agency (LEA), regional environmental boards, and other institutions gather, process, and analyze environmental information. The obligation of these institutions to disseminate this information can be divided into two categories:

- *Active* obligation to inform society about environmental matters.
- *Passive* obligation to respond to public requests for information.

In this section we will examine both of these functions and analyze the government’s policies and public’s practical possibility for access and barriers to information access.

1.1 Active Dissemination of Information

Legislation is in place to ensure that government and municipal institutions actively disseminate, process, and renew environmental information falling under their jurisdiction. The obligations of these responsible institutions are:

- Inform the public of their rights and opportunities to acquire environmental information and participate in environmental protection decision making.
- Create and implement publicly accessible data banks, registers, and internet home pages.
- Prepare and publish documents on the state of the environment, environmental policy planning, and programs.

To ensure adequate the distribution of quality information, it is necessary to establish effective methods of data gathering, processing, and analysis. Institutes involved in this

process, by and large, believe that establishing effective systems of data acquisition and analysis will require increased financial support. NGOs, on the other hand, tend to see problems with information access resulting from the fragmentation of the process. For example, data is acquired by numerous institutions with inadequate inter-coordination. This creates difficulties for residents to acquire the information that they seek in one place. As a result, only a small percentage of acquired data is publicly distributed.

Previously, responsible institutions distributed information very passively and citizen needs were not adequately determined. One of the most popular methods for informing the public is for the ministry or municipal government to prepare environmental reports. Last year, open houses and press conferences were organized, brochures were produced, and modern communication techniques such as the internet were used.

Publications

Every year, regional environmental boards prepare environmental

Tenth Principal of the Rio Declaration: Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

summaries of their territory and the LEA reads a national environmental overview in Latvian and English. These summaries report on statistical data and overall environmental quality, including air, water, soil, economical effects on the environment, environmental effects on human health, as well as information pertaining to Latvia's natural water, forest, fisheries, and extractable resources. These summaries are publicly available and are also freely distributed at various events. Unfortunately, preparation of these summaries takes considerable time and, as a result, often the information is dated on distribution.

The Latvian Ministry of Environmental Protection and Regional Development (MEPRD) also develops and publishes other informative materials and brochures. Generally these materials are published in connection with a defined project. Latvia's environmental policy plan, a description of MEPRD and its sub-structures, studies of Latvia's environmental legislation and supported EU directives, Latvia's climate releases, and other publications have already been published and made publicly available. Materials relating to Latvia's adaptation of the Aarhus convention have also been created.

When creating environmental reports and other informative materials, the needs of citizens are often not considered — analysis is not conducted on societal views or requests for information. Also, very little is done to create simplified summary information. As a result, much available information is not used.

Other fundamental sources of environmental information are the Baltic Environmental Forum's informative material regarding environmental quality in Estonia, Latvia, and Lithuania. Also, in creating these materials, many non governmental organizations are actively involved in the distribution of environmental information and the raising of environmental consciousness.

Information Centers

Currently, Latvia is experiencing a rapid upsurge in growth of environmental information centers. These centers, focusing on education and informing the public, are influencing local government institutions and non governmental organizations. In the last year, many such environmental information centers have been created in regional environmental boards. Also, MEPRD is creating an information center within the current ministerial library. These centers are oriented towards organization of educational events for officials and citizens, as well as to inform the public of the nation's environmental situation.

The Riga environmental center, Agenda 21 has been created in Riga's city government and functions to fully inform the citizens of Riga of their environmental situation and also addresses questions and complaints relating to the environment. There are also many non governmental environmental centers and a "hot telephone" which is accessible to anyone to acquire environmental information in Latvia. The goal of the Agenda 21 center is to provide general and specialized environmental protection information to the public and NGOs. The public appears more willing to use NGO information and consultation services than the MEPRD library because there are no psychological barriers which might occur when dealing with governmental officials. Possibly NGO workers have a friendlier and freer demeanor when working with the public.

The Internet

MEPRD and other governmental environmental protection institutions have created internet home pages. The MEPRD internet home page provides accessible information pertaining to the overall structure of the agency, as well as environmental legislation, environmental oversight, and the environmental information that has been organized under MEPRD's control and care.

The LEA has a well developed information system on the internet. Data banks, which contain data on the environmental situation, can be found on this home page. This data bank is not available to the public as a password is required to access it. This inaccessibility disregards the Aarhus convention which states that those requesting information should not have to substantiate their reason for accessing such information.

Through the Riga City Council home page it is possible to familiarize

oneself with environmental information such as air quality data in various Riga neighborhoods. This page also allows one to send email which is considered as an information request. This is considered the biggest achievement for internet usage in terms of informing the public in Latvia even though there have been many instances where no reply was received to email sent via this site. This is usually justified by the lack of laws in Latvia specifically dealing with electronic documents.

1.2 Passive Distribution of Information

Latvia has accepted fundamental normative acts which obligate the national government and local government agencies to ensure passive distribution of information: listening to specific questions from the public and providing answers to these questions.

Physical and juridical persons are legally ensured the right of response to approaches to governmental and municipal agencies with individual or collective written or oral applications, complaints, or proposals. Those requesting information are not obligated to substantiate reasons for their requests and these requests can not be denied because the information is not related in some way to the party's background. Despite this, often governmental and municipal administrators refuse to provide information prior to explanation of how it will be used. This contention is supported in the Society for Directness', "Delna" study, "Access to information in governmental and municipal institutes" (2000). Such offenses are generally more apparent in the lower levels of governmental and municipal agencies.

In Latvia, the specified time for response to resident's letters is quite progressive. For example, in the Aarhus convention, it is stated that a reply must be provided no later than one month, though this may be extended to two months. In Latvia the term is 15 days following the receipt of an information request; if supplementary review or supplementary information is necessary then 30 days are allowed.

With some exceptions where requests touched on certain issues, generally NGOs that have approached MEPRD, its subsidiary environmental institutions, and local governments admit that, overall, requested information has been made available.

1.2.1 Denial of Information

Difficulties result in stating barriers to information access or confidentiality. If information is important to society, that information must be accessible by the public. This principal often conflicts with governmental views regarding state secrets. As a result, ruling of the Constitutional Court states that, "Rights of accessibility to information can only be restricted with laws and only in specifically foreseen circumstances...notably, people's rights to access information are not restricted unless the law states otherwise. Therefore, any single restriction for information access must be interpreted narrowly."¹ Legislation anticipates that requests for statistics gathered by the government and analysis of data relating to environmental pollution and material environmental loss cannot be denied. It is also stated that information related to natural disasters and their consequences, as well as the state of the environment, cannot be a state secret.

In the event of denial of a request for information, agencies, within their power, must state why the request was denied, where, and for how long, an appeal is possible. This facilitates resident impact on decision-making. The aforementioned "Delnas" study demonstrates that these conditions are very rarely considered.

Government and municipal agencies often argue when denying information:

- *This is not the expertise of our agency.* The agency that provides reasons for information denial must inform the requesting party which agency is capable of providing the requested information.
- *The information is simply not gathered or processed.* The government does not have clear policies for gathering information and is lacking resources (financial or human) to gather or process this information.

- *The information is classified.* This assertion is also used as an argument in circumstances where the information that is requested has a generally accessible information status to which the receiving party is not required to substantiate their interest or reason for use.

There are also problems when requests and complaints are poorly prepared, unclear, and do not follow procedures defined by law. In these circumstances, governmental institutions should not deny the information but provide the party with consultation necessary to prepare a request.

1.2.2 Payment for Information

Unclassified information that does not require extra processing is provided free of charge. The payment for receiving information can not exceed the cost of finding the document or information, any extra processing, and duplication. As a result, an institution may not request payment for any other expenditures resulting from solving legal or political issues associated with responding to an information request.

Confusion results in establishing fees for extra work that is necessary for preparing information in response to requests. Uniform pricing and methodology for calculating such expenditures have not been established. As a result, prices can vary dramatically between different agencies. Anyone may request release from an obligation to pay for services and the institution can decide whether to decrease or eliminate charges but there are no clear regulations for how this should occur. Requests to residents for non official payments by governmental or municipal agencies are not permitted. It is common practice to provide non-monetary statements of "gratitude" (souvenirs, candies, gifts) and "social barter" (service for a service), that could be considered "mild corruption."

2 Public participation

Public participation in the creation of environmental policy is one of the preconditions of sustainable development and a democratic government. In Latvia, the public participation process, in the formulation of environmental policy, began in the late 1980s with the initiation of massive public protests against the new hydroelectric station project on the Daugava.

In the nineties, provision was made for public participation in many normative acts. As a result, public participation is now legally formalized. In this section, we examine possibilities for the public to participate in the shaping of environmental policy and opportunities for their participation in deliberations regarding construction of new facilities, territorial planning, and environmental impact assessment procedures.

2.1 Public Participation in Preparation of Environmental Policy and Regulations

With the renewed independence of the Latvian Republic in the early nineties, it became necessary to create a new basis for legislation: to set policy goals and development plans, and governing laws. In this phase public participation is fundamentally important in the creation of these documents.

The possibilities for public participation in preparation of normative acts were quite restricted in the beginning. However, in recent years, there has been a visible yielding towards a more tolerant attitude on the part of governmental institutions. Already in 1995 the government's administrative reform program stressed the obligation of governmental administrators to encourage the participation of social organizations when possible. These changes are occurring as a result of international pressure, a changing political climate, and the increasingly professional contributions of NGO representatives.

2.1.1 National Administrative Institutions

In 2000, the *Law about Environmental Protection* was changed. A section was added which states the rights of public participation in environmental policy decision-making. This legislation envisions public participation in public policy formulation in regulatory acts, strategy,

planning and the preparation of programs. It is the responsibility of government and municipal institutions to involve interested members of society, in setting schedules for public meetings, providing for public involvement, ensuring examination of public opinion, and public access to information about specific projects.

Changes are also evident at the level of the Cabinet of Ministers. Administrative rules have been proposed for the Cabinet of Ministers (CM) that provides for informing and involving the public on a timely basis. These proposed rules define NGO rights for submitting public policy proposal documents, to propose acts regarding responsibilities and to provide reports for review by the CM. This initiative can be viewed as a positive development even though the proposed rules haven't yet been accepted, and at this time it is too early to judge its efficacy.

Another important milestone is the development of internet home pages by these institutions. Draft regulations and approved projects can be found on the MEPRD and CM home pages. As a result, the public can use these resources to familiarize themselves with prepared regulations, plans, and programs, as well as submit their own input.

Notwithstanding these positive changes, Latvia's environmental NGOs recognize, that, in delivering draft legislation to the CM or some other responsible institution, it must go through bureaucratic structures where it may be completely changed and no longer carry the original intention. Situations also occur where interested NGOs receive information about legislation in preparation only belatedly or incomplete. This results from unclear mechanisms on how to designate organizations which should be informed regarding legislative planning. The deficiency in participation mechanisms also results in organizations rarely being given the opportunity to participate in work group sessions. Discussions are underway to determine at which stage public participation would be the most effective in the legislative and rule making processes.

Cooperation between governmental institutions and NGOs continues to depend on informal personal connections or the perseverance of NGO representatives. Effective cooperation has developed between MEPRD and professional organizations. These include organizations such as the Latvian Packing Association, Waste Management Association, the Latvian Municipal Union, Latvia's Ornithological Association, Latvian World Wild Life Fund, and others.

A problem results from MEPRD not having complete information about Latvia's current environmental NGOs and their scope of interest. Partially the blame lies with the NGOs themselves as organizations have not been active enough in providing pertinent information and haven't stated the readiness or desire to participate in policy development processes. Though it would be much more effective, environmental NGOs are not cohesive or powerful enough to create a unified coalition and participate in decision-making with shared proposals. Currently an NGO advisory board is being created to improve communication between NGOs and MEPRD.

2.1.2 Local Governments

The outcome of the decentralization policy of the State has been an expansion of local government authorities that issue corresponding rules, regulations, and instructions. Local governments must inform residents of the times and agendas of their meetings and of rulings by local authorities. Residents have the right to attend Council and advisory board sessions. Also local governments have an obligation to include residents and public organizations in the resolution of environmental protection issues.

The public may also submit their position regarding municipal environmental policy through written proposals or complaints. The municipal government has a responsibility to review the proposal and reply with a substantive response. Public involvement in municipal environmental protection activities can also be expressed as involvement in municipal commissions and work groups. Although such cooperation has been developed in many different domains, this has not been finalized in terms the area of environmental protection.

Environmental protection organizations have rights to appeal not only acts of the municipal administration but also to request that the municipal government legally fulfill defined responsibilities to issue specific administrative acts.

Public participation, in the creation of environmental policy on the municipal level, is in many ways even more problematic than on the higher level of national governmental administrative institutions. Residents are still not psychologically adjusted to the fact that they have rights to influence and control the work of the municipal government. As is recognized in the UNDP report, *Latvia Human Development Report 2000/2001*, the public participation process, "...is not dependent on the size of municipal government. Many counties are trying to inform their residents, distribute local newspapers, in which, along with other information, are published decisions connected with environmental protection. On the other hand, there are many local governments which make little effort to inform the public."

2.2 Public Meetings as a Method for Public Participation

In the past ten years, public debate has been gaining popularity as a method of public participation. Currently these procedures are obligatory in several matters. These include territorial development planning, construction, as well as projects that could have a fundamental impact on their surrounding environment.

2.2.1 Public Participation in Territorial Planning

Territorial development planning is an integral part of determining local development priorities. Participation by local residents in this process is important. To ensure that this would happen, many regulations were instated in the late 90s, which relate to public participation in territorial planning.

Yet, these normative acts did not solve all of the problems and there are still many issues which local governments encounter when organizing their territorial development plans. In some cases, precise mechanisms for public involvement have not been finalized through legislation and in other cases the stated needs of legislation are defined too strictly and thus are sometimes as a result completely not suitable.

Notable hurdles to effective public participation in territorial planning are:

- Social inertia. The public mistrusts its ability to effect meaningful change through their participation. Residents only state their interests in circumstances that touch on their own personal interests (related to their own individual rights or most immediate surroundings).
- The organizers have a lack of skill or knowledge in the process of public participation.

Territorial planning would be an effective instrument for improving the environmental situation if, during the phase when alternatives are considered that an environmental impact assessment would be conducted with significant public involvement. To encourage public involvement, it is necessary to increase awareness — provide more information to residents about their rights and where to turn for consultation and unclear issues. Such information should be located in local government offices in an area accessible to residents. To effectively increase public participation in territorial planning, more care is

needed in ensuring involvement of civil society organizations.

2.2.2 Society's Role in Creating Public Debates

Similarly to how it is necessary to encourage public participation in the review of territorial plans before the local government adopts decisions about socially important construction projects, residents have rights to be informed regarding the project and to provide feedback. Residents

also have the right to dispute the concept of the project and to state their suggestions for change. Final decisions on concept acceptance or rejection are made by local deputies in an open council (board) session. If the project follows regulations and policy plans, then even the opinion of the majority of residents usually cannot challenge it.

The right to participate in public meetings is unfortunately exclusive to those who own property in the respective territory and to its permanent residents. There have been many circumstances when NGO representatives have been denied the opportunity to participate in building project public meetings. Usually the motivation for denial is because the organizations are not registered by that local government and they own no property in its territory.

Legislation, in this domain, is already outdated and the included procedures for public participation are in conflict with other current legislation. This results in situations where the customer chooses whatever law is best for their needs. What is considered important construction is also not defined in legislation. Thus every municipality can interpret this to their liking and public debates in the case of construction are rare. It is also absurd that those initiating construction projects are also those that organize public debates. It is important to define types of buildings and facilities whose construction requires mandatory public debate and make this obligatory for environmental impact assessment.

2.2.3 Public Participation in Environmental Impact Assessment

In the late nineties the *Law on Environmental Impact Assessment* was put into force that follows EU directives and the Aarhus Convention. The new law ensures much broader possibilities for the public to state their opinions and to participate in decision-making.

Any person can participate in an environmental impact assessment whose interests could be affected by the anticipated activity. During the environmental impact assessment procedure, the public has the right to information on the planned activities and alternatives, the content of the decision that is adopted, the basis of the accepted decision, and actions planned to prevent or diminish negative environmental impacts.

Unfortunately an environmental impact assessment is only appropriate for very large projects whose processes or end result can fundamentally impact the environment. It is also expected that environmental impact assessments could be adapted to smaller projects, yet the mechanism for establishing and judging environmental impact assessment procedures for such projects has not been clearly defined.

2.3 Public Participation in the Work of the Environmental Protection Fund

The Latvian Environmental Protection Fund, that manages the special environmental protection budget, is important from a financial resource standpoint. Along with the financing of environmental protection projects, this Fund also supports environmental education and

environmental information systems projects.

The Latvian Environmental Protection Fund's structure includes the Advisory Board which has important impact on the decision-making process for allocation of resources. This Board currently has 20 members (NGO representatives, scientists, trade and craft unions). Following discussions in the Advisory Board, the Minutes of the meeting are given to the Fund's Board of Directors which, with consideration for the Advisory Board's input and critique, makes final decisions. The Advisory Board's position is defended at meetings of the Fund's Board of Directors by a representative selected by the Advisory Board.

MEPRD initiated projects rarely have difficulties receiving financing from the Fund. Often these projects already have cooperative agreements with other sources of financing that expect governmental guarantees for participation in the projects. Recently, however, the situation is changing for the better and also poorly prepared Ministry projects are not approved until they have been improved and elaborated upon.

3 Conclusions and Recommendations

Over the past ten years there have been vital advances in the domains of information disclosure and public participation. Fundamental normative acts have been adopted that ensure formal rights for residents to receive information and state the obligations of responsible institutions to distribute information to the public. There are several normative acts that govern public participation in public meetings as well as in the development of plans, programs, and normative acts.

Work has begun on the development of an institutional base and information networks and technologies. Environmental information centers are being developed and modern technologies are being used to continually increase public participation and access to information.

In the sphere of the courts, a juridical system has been developed and harmonization is presently underway of all national acts dealing with the rights of individuals and juridical persons. Concrete pretrial appeals procedures now exist, and the rights and procedures have been formalized in law to appeal to the courts and to receive suitable remedies.

Primary Problems

Access to Information

- Institutional fragmentation and ineffective use of resources for data gathering and information processing.
- Lack of a consolidated information system which structures meta-data and eases information searches.
- Low knowledge level of government officials relating to issues of public access to information.

Public Participation

- Lack of experience and timely information exchange between responsible government agencies and NGOs in the preparation of normative acts governing public participation.
- Lack of clear stated mechanisms which define procedures for how to involve the public in the preparation of normative acts.
- Institutional workers lack of skills or abilities for organizing public meetings and also disinterest in ensuring effective public participation.
- Public inertia and passivity.

Recommendations

Access to Information

- Develop detailed instructions or guidelines that state procedures for actively informing the public.
- Under the Latvian Environmental Agency, create a, "One Stop Agency" that assures that residents get requested information, that processes complaints, accepts suggestions, and helps them to prepare applications for government services.
- Develop a consolidated shared environmental information bank which contains meta-information required for automated access to environmental information repositories controlled by various governmental agencies with their differing competencies.
- Create and develop environmental information centers throughout Latvia that include regional environmental authorities, nature preserves and protected territories, and local governments.
- Conduct a needs assessment to determine what kind of information is important to society and make a more concerted effort to disseminate such information.
- Delegate appropriate ministerial functions for information access and dissemination to social organizations, providing the necessary financing and oversight.
- Create an NGO advisory board within the MEPRD to facilitate cooperative information exchange and public participation.
- Develop mechanisms which provide for easing restrictions and fees for accessing information.

Public Participation

- Develop detailed instructions that state procedures for public participation and mechanisms for development and introduction of environmental policies, plans, programs, and regulations.
- Develop mechanisms for regular and timely information exchange between MEPRD, local governments, social organizations, and others on planning activities, programs, and the development of normative acts.
- Leaders of local governments should work towards increasing their workers qualifications for informing the public and including them in decision-making processes.
- Make determination of the impact of strategic decisions on the environment obligatory in the development of structural economic policies.
- Concretely define the terms, "significant environmental impact" and "publicly important construction" to prevent possibilities for overly wide interpretation.
- Raise state and local governmental institution worker qualifications in matters of public participation and related legislation.

Sustainable consumption is the use of goods and services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations.

*Symposium on Sustainable Consumption, 1994. Oslo, Norway
<http://iisd.ca/susprod/principles.htm#definitions>*

Sustainable Consumption and Production Patterns

Discussions about changing world consumption patterns are nothing new. Already, in the eighteenth century, economists spoke about effective resource use and excessive consumption by people as well as the discordant rate of consumption between the rich and poor. A fundamental turn in the domain of sustainable consumption began in 1972 with the release of the book, *The Limits to Growth*. It is notable that this book was released in the same year as the Stockholm United Nations Conference on the Human Environment in which the concept “sustainable development” was defined.

Governments have recognized that there is a strong connection between current production and consumption patterns with lifestyles that directly impacts movement towards sustainable development. For many years there have been discussions on an international level on necessary changes to consumption and production models. In this regard several international agreements have been adopted, and states are developing national strategies to change these patterns of consumption. The European Union has developed a sustainable development strategy of which sustainable consumption is a component.

Sustainable Consumption is decreasing use of resources, increasing quality of products, and changing consumption patterns. To achieve this, it is necessary to change policies for production, distribution of resources, consumption, investment, and taxes. Adopting the Sustainable Consumption model would facilitate positive effects on the natural, social, and economic environment. This would prevent exhausting of natural resources, decrease pollution, and facilitate biodiversity. This will help in the fight to eradicate poverty and to safeguard local economies and cultures from destruction while decreasing the gap between the rich and poor.

The issue of sustainable consumption has not been on Latvia’s political agenda. There also is not a consensus approach for development of new patterns of consumption and production. Consensus strategies and policies for sustainable consumption and production have not been worked out. MEPRD is primarily responsible for issues relating to sustainable consumption but tax and economic policy development issues fall under the competence of the Finance Ministry and the Economic Ministry. The Agricultural Ministry and other agencies regulate matters relating to food.

The development of Latvia’s economy and the increasing incomes of residents have led to rapid growth of personal consumption and a widening gap between the rich and poor. Growth of consumption is also indicated by the rapid increase in private automobiles in recent years; from 332 thousand in 1996 to 557 thousand in 2001. Rapid growth has also occurred in consumption of household chemicals and home electronics (refrigerators, washing machines, audio/video equipment, etc.). In the last four years consumer credit systems have developed which have accelerated growth in private consumption. Rapid increase in consumption of household goods is related to replacing worn out and obsolete products with new more modern ones.

Regardless of the rapid growth in private consumption the, consumption of water and energy has decreased approximately 30% in the past four years. There has been a decrease of solid waste from 657 thousand tons in 1995 to 585 tons in 2000. These trends are primarily due to the collapse of industry and the increase in wages for services in the early 90s. Rapid increases have also occurred in the volume of packaging waste — according to the forecast of the “Latvian green dot”, this will increase at 5% per annum..

In this section we will examine governmental policy that impacts production and consumption patterns, promotes the responsibility of producers and the use of cleaner technology, as well as how information is distributed to consumers regarding their rights and ensures informed decision-making.

1 Tax Policy Change

One of the primary methods of facilitating sustainable patterns of consumption and production are economic instruments: taxes, duties, governmental subsidies, guaranties, and tariffs. Tax policy for facilitating sustainable production and consumption patterns is based on two primary principles:

- ‘Green Budget’ reform — increase the tax burden for natural resources and pollutants and decrease income taxes (business and individual income taxes). This would result in increased individual and business incomes while rendering natural resource use (for example logging and cheap peat export) and polluting branches of industry much more expensive. This would achieve much more effective use of technology and increase the competitiveness of labor intensive sectors.
- Include environmental costs which result from the production of goods and services as external costs in the price of goods and services. This allows more fully to demonstrate the total social cost of goods and services and to facilitate development of environmentally friendly business activity.

Fundamental, to the encouragement of sustainable patterns of consumption and production is the elimination of environmentally damaging government subsidies and the redirection of government resources and support to more environmentally friendly business activity and consumption.

1.1 Tax Reform

The tax system of Latvia has been completely recreated during recent years. Several laws have been passed which define the tax system for the country and different taxes have been developed to meet specific needs. The most important achievement in the domain of environmental taxes is the passing of the Natural Resource Tax (NRT). This tax covers mining, pollution, waste, and packing, as well as the import and use of goods damaging to the environment.

Environmental activists have attempted to improve this tax by asking to increase the burden for residual fuel oil, packaging and disposable dishes. Only some of these demands have been met. In the most recent changes, the NRT decreased the tax rate for disposal plastic dishes and table accessories but increased the rate for plastic packaging, tires, mineral oils and air polluting emissions. It is also necessary to increase the tax burden for agricultural chemicals that have been used in the country such as pesticides, fungicides, various mineral fertilizers, etc.

Also positive is that most of the income which results from these taxes is directed towards a special budget for improving environmental quality and protecting the environment. These resources help to support the classification, recycling, and processing of industrial waste. The NRT also allows for short term easing of natural resource taxes to compensate for loss of international competitiveness.

Besides natural resource taxes, there are other taxes which influence sustainable consumption and production patterns. One of these is the excise tax. This tax covers fuel and transport and states differing rates for leaded and unleaded gasoline, as well as registration tax rates set proportional to automobile age. Another notable tax is the value-added tax (VAT — 18% of price). This tax covers almost all goods. The exception is a decreased tax rate for certain goods which includes public utility payments presently set at a 0% tax rate (in force until 2003, following which will be 9%). Also, real estate taxes provide for tax relief. Property used for environmental protection has been exempted from the tax but this exception will be abolished in 2003. It would also be ideal to decrease the VAT tax rate for organic agricultural production and property tax for land which is worked with conservative agricultural methods.

1.2 Governmental Investments and Subsidies

Governmental subsidies and investments are key mechanisms for facilitating the development of sustainable consumption and production patterns in the country. Latvian Finance Ministry data regarding the government's collective support of business operation, show little support for environmental protection (see table). This support was given from the Environmental Investment Fund. This Fund is used to provide subsidized loans for environmental protection projects.

Governmental support of employer projects (millions of lats).

Sector/goal	1999	2000
Together	67,333	50,034
Environmental protection	0,26	0,0016

The second largest supporter of environmental projects is the **Environmental Protection Fund**² (EPF). Though initiatives financed by this Fund are not considered as government support, they have a fundamental impact on facilitating development of environmentally friendly business activity in Latvia. EPF resources come from environmental resource taxes and partially from excise taxes for petroleum products. Primarily, EPF resources are used in the development or reconstruction of infrastructure: general municipal wastewater treatment facilities, municipal water supply systems, residential waste landfills, etc.

Along with general infrastructure project financing, other important work of the EPF is waste (glass fragments, lead storage batteries, mercury based light bulbs, mineral oils, plastic packaging, used tires) recycling/disposal financing, repayment for original products — bottles, new storage batteries, bulbs, etc. to pay for natural resources taxes. In 2000 the EPF spent 1,783 million lats for such goals. The EPF also subsidized businesses that work with environmentally toxic substances, waste, and post consumption processing of packaging.

The Ministry of Agriculture also provides subsidies for farms, including organic farms and those that work in non traditional farming. However, dissatisfaction arises from large-scale conventional farms that generally are also the largest users of agricultural chemicals. Governmental subsidies are also available for aquaculture.

The government is currently giving consideration to a national bio-fuel production and usage program in which 157 million lats from the private sector and more than 10 million lats from the government's budget would be invested by 2010 for bio-fuel development

Governmental support for subsidized double tariffs for renewable energy (wind, sun, hydro) has enjoyed broad popularity. A conflict has

emerged between supporters of biodiversity and owners of small hydroelectric plants. Small hydro construction negatively impacts the life cycle and ecosystem of migratory and other valuable fish species which Latvia must protect according to our international obligations. So far, small hydro provides for only .3% of Latvia's total energy demand. Though this year planned capacity is expected to rise to 1% of total demand, this would not ensure a positive return on public investment. Anticipated returns and gains are far smaller than losses due to necessary government subsidies and decreased bio-diversity. Another problem is that most of the electrical energy from small hydropower is generated during the time when there is sufficient power available. As a result the excess generated electricity must be sold for much lower prices to other countries than are paid to the Latvian small hydro producer.

2 Changing Production Patterns/Dematerialization

The primary goals of dematerialization are to decrease resource consumption and environmental impact. This is related to the life cycle of all goods and is connected to marketing and product development, as well as production and distribution of goods. Changes in production patterns can be divided into two groups:

- **Process effectivisation** — process control strategic and process planning effectivisation.
- **Product effectivisation** — issues of technology choice and product design to achieve greater productivity using the same amount of resources as previously.

Change in the production model or dematerialization — efficient use of energy and raw materials in the production process with reduced energy consumption during the use of the product and reduced volume of residual waste at the product's disposal.

Cleaner Technologies — The continuous application of an integrated preventive environmental strategy applied to processes, products, and services to increase overall efficiency and reduce risks to humans and the environment.

- **Production processes: conserving raw materials and energy, eliminating toxic raw materials, and reducing the quantity and toxicity of all emissions and wastes.**
- **Products: reducing negative impacts along the life cycle of a product, from raw materials extraction to ultimate disposal.**
- **Services: incorporating environmental concerns into designing and delivering services**

/UNEP/

2.1 Stage of Production

2.1.1 Introduction of Clean Technologies

In the past year there has been a noticeable tendency to bring newer and cleaner technologies into the country. This is primarily in connection with enterprise reconstruction that started after the early 1990s economic crisis and industrial collapse. Latvian enterprises are ready to invest in changing production if this decreases their expenditures. Many enterprises appear only to be interested in working to solve environmental problems in the future on the premise that they must first gain a place in the market before they are ready to invest in environmental protection.

It is difficult to statistically evaluate how many enterprises have brought in cleaner technologies as often bringing new technologies is more motivated by effective economic indicators with little consideration for environmental impacts.

Also, from the governmental side, many helpful events are occurring which are waking enterprises to the need to expend effort in bringing in cleaner technologies. Enterprises can receive Resource Tax reductions if they

use cleaner technologies and decrease emissions. Currently, the UN is backing introduction of clean technology concepts in Latvia. The MEPRD Environmental Protection Department is coordinating three projects related to clean technologies:

- Latvia–Holland Cooperation framework, “Clean technology and energy conservation in Latvia's food processing enterprises”,
- Latvia–Denmark Cooperation framework, “Bringing clean technology to Latvia”

- Latvia–Finland Cooperation framework, “Training course for clean technology in industrial enterprises”

It is anticipated that, following the completion of these projects, the experience will be used as a basis to develop a Clean Technology Concept for Latvian enterprises. It will be necessary for enterprises to adopt ISO 14001 standards, EU EMAS rules (Environmental Management and Auditing Scheme), as well as EU directives that specify measures for decreasing pollution and waste.

Enterprises also have access to sources of financing for adopting such technologies. Financing can come from the Latvian Environmental Investment Fund and the Northern Environmental Technology Corporate Organization (NETCO). Though these credits only have a small easing of terms, they still facilitate adoption of cleaner technologies.

There are also other projects which facilitate the adoption of cleaner technologies. One of these is the Environmental Institute’s project which provides for “Environmental Prizes” for enterprises that adopt cleaner technologies. Also, the Baltic Sea Region’s Baltic 21 program, (<http://www.ee/baltic21/>) develops an annual regional plan for encouraging the introduction of clean technologies in the industrial sector. Latvia has been involved in the Baltic 21 process since 2000. Also, Latvia’s Technological Park has developed a website that has information on all adopted clean technology projects in Latvia and in the future information will be available about clean technologies from the other nations of the Baltic Sea Region.

Unfortunately Latvia has not signed the UN Environmental Program (UNEP) International Declaration on Cleaner Production which would commit governmental institutions to adopt mechanisms that facilitate introduction of cleaner production. However, the new *Law on Pollution and Integrated Pollution Licensing* promotes cleaner technologies and the introduction of environmental management systems. A large role of introducing these technologies could be played by tax abatement that could also be related to reductions in the VAT.

2.1.2 Environmental Management System (EMS)

Adoption of environmental management systems by enterprises offers another important mechanism to bring about sustainable production. Similar to the case of cleaner technologies, enterprises introduce environmental management primarily to decrease expenditures, increase production quality, and to also improve the image of the enterprise.

In Latvia, only approximately 10% of enterprises are ready for future adoption of ISO 14001 standards and these are primarily only larger firms. Currently 11 firms have received ISO 14001 certification. These are, for the most part, due to Latvia — Denmark Cooperation Program, in which enterprises were educated about this standard. Two projects have been implemented within the framework of this Program to adopt environmental management systems for the Latvian food industry and farm enterprises and their preparation for adopting ISO 14001 standards. Similar projects have been started in the metal working and chemical industries. 30 more Latvian enterprises are expected to become familiar with this standard in 2002.

Adoption of environmental management systems is facilitated by the new Law on Pollution and Integrated Pollution Licensing and the introduction of a system for issuance of A, B, and C category permits as well as the fact that enterprises that adopt ISO 14001 standards can receive reductions in resource taxes.

2.2 Usage and Waste Stages

Although Latvia’s enterprises devote considerable attention to technological process effectiveness, product effectiveness is neglected. This could lead to environmentally friendlier product design which would be more environmentally conservative in their use and be subsequently recyclable. Extended Producer Responsibility (EPR) is not sufficiently promoted.

Mechanisms that further EPR in Latvia are the recently created organizations, **Latvia’s Green Dot** and **Latvia’s Green Belt**. The goal of these organizations is to further producers’ accountability for packaging and subsequent recycling. Firms that process used packaging with the Green Dot standard are expected to receive a reduction in resource taxes. Green Dot responsibilities include informing the public about packaging issues and recycling possibilities.

In 2002, two new laws were passed (*Waste Treatment* and *Packaging* laws), that are expected to have a fundamental impact on increasing the responsibility of producers and reorganizing the waste treatment systems in Latvia. The packaging law is expected to be phased in and a transition to waste separation by 2007 when at least 50% of used packaging will be recycled. Currently only a small percentage of used packaging is recycled and sorted waste retrieval barely occurs.

Latvia also hasn’t introduced the obligation of producers to accept back products that have no further use in the economy after they have been worn out to be processed into new products or to ensure that they wouldn’t cause damaging impact on the surrounding environment. One method to introduce a system of accepting back products is the introduction of the deposit system. A deposit system has yet to be fully worked out in Latvia. Based on the principle of voluntary compliance by enterprise, this system will be introduced from 2004.

Environmental Management — BS7750 is a specification for an environmental management system. The system is used to describe the company’s environmental management system, evaluate its performance and to define policy, practices, objectives and targets; and provides a catalyst for continuous improvement.

/UK Environmental Management Standart: BS7750/

Extended Producer Responsibility (EPR) Responsibility is placed on the producer for damage to the environment by the enterprise, its products or services across the life cycle of the product starting with raw material acquisition, production, sale and ending with product recycling or the disposition of residual waste.

Optimization. — change to the infrastructure on which depends economic and social activity to create new opportunity for informed choice to consumers. Optimization means change to the patterns of consumption that in and of itself as a limiting factor to the consumption of resources.

3 Changing/Optimizing Patterns of Consumption

Dematerialization and continuous improvement in effectiveness cannot continue indefinitely. This is restricted by the technology, market forces and the competitive environment that force enterprises to decrease the costs of production if at all possible. Also, increasing consumption and continuing worldwide population growth restricts the potential for dematerialization to ensure sustainable development.

As a result, to ensure sustainable consumption and production patterns, it is necessary to create suitable infrastructure and to educate consumers. This is not only the responsibility of government and business but also of social organizations.

3.1 Transforming Infrastructure

Transformation of infrastructure is one of the primary means to create favorable conditions for sustainable consumption. Infrastructure change can be considered in two categories:

- **Institutional Infrastructure:** changes to governmental policy which are directed more towards increasing human well being than to economic development.
- **Material Infrastructure:** All production sectors (for example: transportation, food, energy, etc.) require changes to infrastructure

and related environmental and economic policy. For example, in city planning this could mean strengthening the role of public transportation.

The government is one of the largest consumers in the country and as a result it is fundamentally important that the state direct its resources to help develop areas that support sustainable production and consumption patterns. Government must not only initiate activities and be supportive but also begin using environmentally friendly goods and services. Arguments for this position include:

- Residents will not follow governmental encouragement of environmentally responsible purchases if the government does not heed its own advice.
- The government is one of the biggest consumers in the country and its budget can be used to make businesses change their production patterns.
- Governmental purchases can stimulate development of environmentally friendly production in the country and decrease prices.
- It is not economically sound to make cheap purchases today if their purchase will result in greater future costs. For example, it is better to acquire renewable energy now than to pay later for undoing consequences of climate change in the future.

Purchases by Latvian government agencies are regulated with a law whose dominant criterion for purchase decisions is price. Other purchasing criteria such as the environmental impact of goods and services, or ethical criteria, are the responsibility of the buyer. There are no known precedents where environmental criteria have been stated as an added requirement by a government customer. Since price is the primary condition, it is not advantageous for a responsible person to choose environmentally friendly goods which, in short term consideration are more expensive.

The existing infrastructure usually furthers non-sustainable consumption patterns. For example the government's construction of new expressways facilitates development of private transport. It would be important to assess government infrastructure investments and specify their environmental impact in the determination of their value.

The transportation sector stands out as one of the most painful examples of environmental neglect in Latvia. No environmentally beneficial infrastructure is being developed. In Latvia there are almost no bicycle paths and public transportation is not being sufficiently cultivated. For example, passenger rail traffic has been closed down on several primary lines to free the way for transporting petroleum and other transit goods.

There have also been large changes in the business sector. Chains of supermarkets are rapidly developing, causing difficulty for smaller enterprises to compete. Often stores in Latvia start with dumping prices and thus push out smaller enterprises. This is also supported by statistics: in 1997 there were 1493 small stores in Riga (to 100 m²), but in 1999 the number has shrunk to 99.

3.2 Informing Consumers

The end-consumer is one of the most decisive elements for the introduction of sustainable production and consumption patterns. The consumer can make much more responsible choices and use of goods and services. The producer is responsible for offering suitable production and Government agencies are responsible for developing appropriate infrastructure. Consumers need general education about goods and services and their impact on the environment and information about products and the sales locations of producers. This information is available on product labeling. Unfortunately, consumers are not always aware that they should have knowledge of this information prior to acquiring goods. The Consumer Protection Center and Latvian Consumer Interest Protection Association (PIAA in Latvian) provide information to mass media but this may not be enough. As an example

of what can be done, the PIAA has prepared a consumer information page for publication, "What must a consumer know about genetically modified foods?"

In 1985 the UN adopted the Guidelines for Consumer Protection. In 1995 this document was amended for sustainable development and recommendations were made to member governments to introduce the principles stated in this document into national legislation as quickly as possible. Consumers must be provided with complete information on the environmental impact of goods and services. The government must popularize environmentally friendly goods through labeling and must monitor the advertising market so that advertisements mirror the truth about producers and individual products.

Latvia, in recent years, has developed legislation that fully corresponds to EU directives. The Consumer Rights Protection Center has been created as well as other institutions including the Food and Veterinarian Service, the National Sanitary Inspection, and others. However, these government agencies have no mutual relations. Throughout Latvia there are 10 working consumer rights protection clubs which are social organizations. However, this consumer legislation and the above mentioned organizations do not get involved with the analysis of the ecological aspects of consumption and related consumer education. Their primary mandate is to protect consumers from dishonest merchants and poor products.

There has also been a rapid development of advertising. This encourages consumers to ever greater consumption without always providing full information about products and services; sometimes even being deceptive. Advertisements are a new phenomenon for Latvian consumers. Consumer protection is necessary against partial and deceptive advertising that promotes the purchase of poor quality goods, services, and unneeded products. Sometimes advertising also promises to solve unsolvable problems. Though an active unified consumer protection system is lacking, there are several government agencies whose mandate includes regulation of the advertising market.

Eco-labeling is text or symbols on a product or its packaging that describes the effect that the product or its packaging has on the environment.

EU Directive 2000/13/EC

3.2.1 Environmental Certification and Labeling

Residents and firms make choices to support certain things they consider advantageous and evaluate many criteria that are important to them. In the case of restricted financial means, price is one of the primary criteria used by people to make purchase choices. In Latvia, a middle class is only now beginning to form. Generally this ensures consumption of more environmentally friendly goods and services and their higher relative growth within a nation.

In order for a consumer to make an informed purchasing decision, a great deal of information is necessary regarding the producer, the goods, how they were produced, used, and utilized, and how this impacts the environment, social circumstances, and the local economy. Many questions must be posed which can not always be answered by examination of packaging and advertisements. Often the merchants or even those marketing the product don't know the answers. To solve these problems, Latvia is using a variety of environmental labels to provide consumers with greater information about products in an attempt to ensure informed consumer choice.

Several labeling systems have been designed to ease consumer choice. Labels show utilization possibilities by type of product: Those are:

- **Chemical Substance Label** — unfortunately rarely used. Recent expansion of regulations has led to a corresponding increase in use.
- **Energy Efficiency Label** — Currently only obligatory for washing machines, refrigerators, electrical ovens, and bulbs.
- **Packaging Label** — From this year is obligatory for plastic and metal packaging. Until 2004, other materials can be label voluntarily. It is planned to apply such labels to other materials in the future. The packaging will be required to show the material code and recycling method.

- **Food Products Label** — This does not include labeling for genetically modified organisms as there is a total absence of government controls even though a law has been passed and an institute created with this responsibility.

In Latvia certain producers themselves have chosen to popularize their goods through labels which are widespread in the marketplace.

- **Product label, “Latvian Eco-product”** — This is owned by the Union of Latvian Organic Farmer’s Organizations. This marker attests that the marked product has been produced with ecologically pure materials.
- **Product label, “Quality Latvian Product”** Has been developed to facilitate an honest perception about products that are grown and produced in Latvia pursuant to their increased sale. This label is used for food products that have at least 75% content grown in Latvia and that meet quality requirements.
- **Latvia’s Green Certificate for agro-tourism lodging** (under development) — It is anticipated that in the next three years a certification standard will be developed and then the certification process will start. Primary criteria will be electrical, fuel, and water consumption, substances used for washing, and the quantity and flows of wastes.

In Latvia products are available with popular Scandinavian eco labels such as the: **Nordic Swan**, **Good Environmental Choice**, and some products with Germany’s eco label, **The Blue Angel**, and **The EU Eco-Label**, which will be freely available in Latvia from 2004. However, these labels have an insignificant role in consumer choice.

4 Recommendations and Conclusions

In recent years a tax system has been created and the Natural Resource Tax has been developed. This tax is the primary fiscal instrument in the country for effecting sustainable consumption and production patterns. The Environmental Protection and Agricultural ministries foresee the use of subsidies to encourage environmentally friendly technologies, eliminate environmental abuse, and support environmentally friendly agricultural methods.

In the past ten years, there has been a complete restructuring in the industrial and service domains. Along with economic recovery, new technologies are being widely introduced. The new Pollution Law and Integrated Pollution Permits facilitate introduction of cleaner technology and an environmental management system (EMS) in the country. Introduction of EMS into Latvia will also facilitate introduction of environmental audit and management systems which will be voluntary from 2004.

Fundamental legislation has been created in Latvia for consumer rights protection. Several governmental approved environmental labels have been devised and several environmentally friendly stamps for products have been developed in Latvia.

Biggest Problems:

- The price of goods does not reflect actual costs of production, use, and utilization.
- The government is not paying adequate attention to the introduction of the “Green Budget” in Latvia. The potential for such a reform of the tax system has not been discussed at the governmental level and studies have not been conducted to evaluate the impact of reforms on economic development and improving environmental quality.
- Many taxes which further sustainable patterns of production and consumption will be eliminated in the coming year.
- A significant share of governmental resources (government supports) are being directed towards environmentally degrading activities, support of projects and product categories that are counter to

sustainable development, and an infrastructure is not being developed that furthers sustainable patterns of production and consumption.

- Sustainable patterns of consumption and production are not on the political agenda and there is insufficient policy coordination between ministries, resulting in weakening of cooperative problem solving and the need for much greater effort for their solution.
- Latvia has not signed the UN Environmental Program’s (UNEP) *Declaration, About Cleaner Production* that would mandate government agencies to institute mechanisms to facilitate cleaner production.
- Little consideration is given to product effectivisation to create environmentally friendly designs.
- Belated facilitation of waste limiting packaging, take-back of used products (producer responsibility), and recycling.
- There is no defined government strategy for green purchases.
- Repair of products, especially household electronics, has become economically disadvantageous.
- Little effort is given to popularizing sustainable patterns of consumption and production.
- There is a lack of standardized consumer information — eco labels that would be a defined government standard and cover many groups of products.

Recommendations

- Encourage inclusion of **indirect costs** in computing total production costs, introduce the “**Green Budget**” to Latvia, and shift the tax burden from the workforce and income to resources and pollution.
- Conduct studies on the potential for introducing the “Green Budget”.
- Introduce a “**carbon**” or **energy tax** which would ensure increased prices for goods that require large amounts of energy for their production or transportation.
- Introduce a **balanced transportation tax** — fuel used for aviation must be included and public transportation must receive at least the same subsidies as private transport.
- Revise the Natural Resource Tax so that pollution from the full life cycle of goods is taxed.
- Decrease duty on incoming goods that are certified with generally recognized eco-labels.
- Increase the tax burden for agro-chemicals that are used in the country: pesticides, fungicides, various mineral fertilizers, etc.
- All ethical investments (at least 4 environmental and 4 social criteria) should have at least 2% lower taxes than others.
- Environmentally degrading government investments must be eliminated and government subsidy policy must be revised.
- Promote the transition from an economy based on the purchase of goods to a service economy.
- Promote eco-friendly product design and limit the introduction of non-recyclable goods in Latvia.
- Require the expanded producer responsibility for the full life-cycle of products, ensuring the re-acquirement of products and residual materials, recycling, and changing product designs in such a way so that costs for these commitments are minimal.
- Direct more attention to green consumption and set a good example,

ensuring economical use of energy, waste sorting, and processing.

- Require foreign direct investment in Latvia to use the best available technology and enforce ISO 14 001 standards.
- Start a large scale public **information** campaign about sustainable consumption patterns: **Prepare** and publicize information about the extent of energy and resource consumption and popularize environmentally friendly goods.
- **Develop indicators** for determining consumption quantities, and modeling their changing dynamics as well as environmental impact.
- Forbid advertisements in schools or teaching materials and prevent the commercialization of schools and the dependence of school financing on commercial sponsors. Forbid any commercials oriented towards children under 16 and create commercial free zones.
- Ensure that environmental and ethical criteria are included in purchasing criteria of governmental administrative institutions and that government purchases are consistent with goals set by government (for example, the quantity of renewable energy) and international agreements (for example, the Kyoto Protocol).
- Create a three sided (NGO/Government/Business) institution which would examine ethical complaints of consumers. This institution would also examine various statements about goods and advertisements (for example, that organic products aren't tested on animals, etc.) to substantiate their accuracy.
- Review government investment in infrastructure development specifying environmental impact as a criterion.

Recommendations for Information on Products:

- **Product's Nation of Origin** — on goods show at least one nation (up to three) in which the product was produced as well as the origin of the raw materials.
- **Components** — the successful food product labeling must be widened to other groups of products to show the 10 primary components.
- **Energy Consumption Labeling** — the EU energy labeling scheme from A to E must be broadened to all goods which use energy. The amount of energy consumption used in the manufacturing process must be shown.
- **E-Commerce** — All currently standing and above mentioned norms must also function for e-commerce.

Foreign Direct Investments

This section of the report examines the question of whether Latvia's economic development policy for foreign direct investments supports principles of sustainable development. Foreign direct investments (FDI) are executed primarily by companies that fundamentally do not work altruistically. Despite this, in deciding to invest resources in current business or starting new enterprises in foreign countries, the leaders of these companies making foreign investments can choose to help local residents and enterprises. This can be done while maintaining respect for this country that provides its human and natural resources and enterprise facilities while simultaneously earning a profit. This would be a responsible business undertaking. The workforce can be considered not only as production factor, but as human beings empowered to choose the most suitable branch of industry and production methods for the locale where they live. Also natural resources are not only raw materials but also the environment that ensures our existence. Such would be the business philosophy of a responsible company that promotes sustainable development.

It would be unsound to think that philosophy is only related to thinkers. This is the norm, especially in relation to direct foreign investments, that influence any and all economic domains at every level.

This section is written in the spirit of critical discourse to show that a fundamental change is needed in the paradigm of development. The current neo-liberal mindset that fosters inequity, over-consumption, and social stress needs to be transformed towards sustainable development that protects social intimacy, spiritual richness, and our cultural and natural diversity with economic sufficiency.

This analysis utilizes current actual Latvian economic policy documents, the collective normative acts, UN and social organization documents, press publications, and notes from Latvian environmental and social public organization seminars.

1 Context — UN Environment and Sustainability Conference 1992 and the World Summit on Sustainable Development 2002³

In the Rio Conference, the development discourse (see the Report's introduction), in which the leaders of 176 nations unanimously agreed that, "we are gambling on our planet's future if we do not halt its damaging exploitation"⁴, was a notable and unprecedented event in international politics. It was difficult to reach agreement that the unique functioning of the environment is being abused. However, the most difficult task was, and continues to be, to agree on the causes of the problems.

In 1992 approximately 28,000 International Non Governmental Organization (NGO) participants in the Global Forum gathered concurrently with the official gathering to show the governmental leaders and business representatives, by way of discussion, that development based on the dominant model of quantitative growth creates social inequality and damages the surrounding environment. We call this phenomenon, which has liberalism as an ideological base, economic globalization.

Unfortunately, the idea of freedom was lost from classical liberalism

and liberalism in its current battered form has become a speculative weapon of narrow-minded corporate interest groups.

A broad and diverse section of international society views the Washington consensus policies (among them privatization and investment liberalization), popularized and backed by the Bretton Wood's Institutions, as the cause of development problems and a hurdle for sustainable development. The official and actual distribution of power in these institutions differs considerably. Principally, the representatives of developed nations and their respective economic lobbyists — multinational business associations — set the international development tone and methods⁵. This is attested by the fact that nearly a twenty year long effort to develop a legally binding company code of conduct was curtailed and its standards and guidelines were not discussed during the time of the Rio Conference. This was an unexpected shock for social organizations. Unlike the public forum the chemical, oil, food, textile company offences in many world nation's were not criticized at the official meeting. Environmental disasters were ignored, including the tragic Shell activities in 1970 in Nigeria which resulted in an oil leak disaster, the 1984 Indian gas leak from pesticide factories of the US company Union Carbide (currently Dow Chemical) that killed more than 8000 workers, as well as other known, yet less frequently mentioned events.

In its place, under the referenced leadership of M. Strong with counsel from Swiss millionaire, one more corporate lobby group was created — the Sustainable Development Business Council. The tendency was to replace a binding convention with the encouragement of voluntary and self regulating mechanisms for companies. A current UN instrument for facilitating work of companies to be socially responsible and environmentally non-harmful is the UN Global Agreement — a *voluntary* agreement⁶ by which signing companies pledge to heed and popularize nine principles of human rights, respect for worker rights, and environmental protection. Civil society organizations feel troubled that the world's largest corporations, many of which, in practice, do not respect environmental and human rights, have affiliated themselves with this agreement to use it to clean or polish their image. As a result, NGOs are asking that the Compact be fundamentally reformulated, to prevent its misuse as a positive example at the Rio + 10 gathering. Companies must take on responsibility for their actions and this cannot be based on the voluntary choice principle. Rio + 10 must encourage debate and the adoption of legally binding documents⁷.

Documents of businesses, non governmental organizations, trade-unions, and other participating groups point to the Rio+10 gathering as a means for continuing the battle between historical orthodoxy and critical scientific reasoning. That is, a fight between paradigms of social development: one paradigm, that strengthens the dominant development models and a paradigm that invites freedom from these models or radical change.

2 Sustainable Economics

The decision about the necessity of sustainable development was conceptually accepted with the 1972 UN Stockholm Declaration and reinforced with the five 1992 Rio documents. Accordingly it is the responsibility of nations to introduce the internationally accepted principles into national policy. The Rio Declaration in relation to business and industry states that the nation must adopt national laws that declare responsibility for and compensation to victims of pollution or other

environmentally damaging influence that they have generated (principle 13). The double standard (principle 14) states that they must also accept laws that prevent foreign enterprises from such work which is done under lower standards than those that apply to the headquarters nation. The safeguard principle (principle 15) states that if there is significant pollution or threats of environmental hazard then they cannot use the excuse of a lack scientific evidence to forestall measures to safeguard the environment. The polluter pays principle (principle 16) states that polluters must take responsibility for resulting pollution. The principle 17 states that they must perform observable work for environmental impact assessment.

For the purpose of developing a sustainable economy, at a minimum, these principles must be recognized. Resident opinion in Riga, which has the highest concentration of FDI, is that, "Local economic development and support is seen as sustainable when it does not create dependency on other nations or large international firms, which have been severely criticized from a sustainable development standpoint, and secondly decreases transport that is often damaging to the environment." Consequently, as stated in surveys⁸ and following from discussions, sustainable development is reflected by support for local products and small businesses, and a priority on using small stores in central Riga.

Sustainable Business Economy

Sustainable development principles for business include¹⁰:

1. Ethics, values, and principles. To what extent does the business monitor that it meets ethical values and principles.
2. Responsibility and transparency. To what extent has the business formalized a comprehensive and effective management system that commits to make public reports on progress towards sustainability.
3. General business policy on environmental protection, social and economical aspects.
4. Environmentally friendly production process. To what degree does the enterprise decrease any and all negative impacts on the environment by, for example, changing materials, re-tooling, or changing practices resulting from its production processes? Agenda 21 has set the goal for furthering cleaner production and stated objectives for enterprises to increase resource use efficacy, including, reusing and recycling surplus materials, as well as decreasing the amount of waste generated per unit of production. Baltic21 — calls for the introduction of environmental and quality management systems.
5. Environmentally friendly production. To what extent has the enterprise anticipated environmental protection principles across the entire lifecycle of its products. For example, have they considered developing or reshaping their product line to decrease negative environmental impact?
6. Socio-economic development. How actively and constructively does the enterprise use resources to support the community — through local social and economic development.
7. Human rights. How actively and constructively does the enterprise respects the human rights of their workers, neighbors, and local residents in regions where it conducts business.
8. Work conditions. What measures are pursued to improve working environment conditions?
9. Involved parties. Involving business partners (cooperative enterprise partners, contractors, shareholders, and clients) in company sustainable development strategy realization.

This year, Denmark's government started an environmental management system pilot-project in Latvia, during which time, the Latvian Pollution Prevention Center, together with the Danish institute FORCE, and the consulting firm COWI, worked together with Latvia's Economic Ministry (without compensation) to train ten representatives of Latvian regional wood processing firms. A result of the training is that these firms will prepare and bring into operation, environmental management systems that support ISO 14001 international standards⁹.

10. Inclusion of non business partners. Company relations that further international understanding and cooperation with outside partners (government, NGOs, consumers) both in quantity and quality. Agenda 21 states broad conceptions about creating public and partner relations.

3 Foreign direction investment policy development in Latvia¹¹

In 1991 Latvia began moving from the socially planned management model to the capitalist market economy model. As stated in the OECD summary of policy trends of the Baltic States in the transition period, "similar to other countries undergoing transition, the Baltic States in the early nineties began offering approximately the same, 'political approach package': economic policy liberalization firmly grounded in a macroeconomic framework."

During the ten year transition period, Latvia opened its internal market internationally and worked on introducing structural reform.

Liberalization of foreign investments was one of the primary reforms started with the 1991 Law On Foreign Investment in the Republic of Latvia and continued with its changes in 1993, 1994, 1995, and 1996. Latvia has signed more than 30 bilateral double taxation avoidance and investment promotion and protection treaties. The privatization process resulting in FDI is concentrated on some of the largest light industries, energy, transport, telecommunications, and finance sector enterprises.

Table 1. Foreign direct investment in Latvia (end of year in millions lats)¹²

	1995	1996	1997	1998	1999
Accumulated foreign direct investments	330.5	520.5	750.2	886.2	1057.2
Foreign direct investments received in one year.	94.1	210.6	303.4	209.9	202.7
Percent compared to Gross Domestic Product.	4.0	7.4	9.3	5.8	5.5

Two organizations, the Latvian Development Agency (LDA) and Foreign Investment Council (FIC) are the most important for economic policy development.

In 1993, the government established the joint-stock company Latvian Development Agency, whose goal is to attract foreign direct investment and promote Latvian exports as well as deal with the issue of effective utilization of the energy resources. LDA is governed by the Economic Ministry and its other members are the Foreign, Finance, Environmental Protection and Regional Development Ministry, as well as representatives of the private sector. The objective of the LDA is to ensure information dissemination, and to learn the needs of foreign investors and help them to realize investment projects in Latvia. The LDA is given rights to provide proposals for legislative changes that would improve the investment climate in Latvia. The LDA represents Latvia in international initiatives that are related to FDI¹³.

The Foreign Investment Council's (FIC) mission is to improve the business environment and to promote foreign direct investments. The FIC's participants are ABB, Alte Leipziger, Coca-Cola, Ericsson, Ernst&Young, Jeld-Wen, Linstow ASA, Readymix Zement GmbH, Schenker-BTL, Statoil Marketing, Stora Enso, Tatko Group, Vereinsbank, Volkswagen, Volvo Truck, and the US, Great Britain, Sweden's chambers of commerce, and the German-Latvian Business Association. The FIC — government dialog is conducted through periodic meetings. These occur twice per year at the governmental level (including the Prime Minister, and ministers of Finance, Economics, Foreign, and Justice ministry, and other representatives) and the director level of foreign companies to discuss and evaluate foreign invest-

ment problems. Plans for initiatives to improve the business climate are worked out, improved, and implemented based on recommendations of the foreign investor council.

3.1 *The operation of business with foreign capital*¹⁴

Investments generally are capital contributions made with the intent to increase the future value of the investment. Foreign direct investments mean that foreign citizens, legal persons, or governments participate directly in choosing the objects for investment, as well as controlling and managing them. Most investments of this type are executed by foreign companies (see 1st attachment).

On March 7, 2002, Green Liberty organized a seminar for the NGOs in the social and environmental sector to determine a positive or negative experience from the operation of companies with foreign capital in Latvia. Latvia has attracted foreign business investments primarily in the textile industry and merchandising sector, where the goal is gaining quick returns. The following observations have been noted regarding these investments:

1. *Worker rights offenses regarding:*

- Social guarantees.
- Employment security.
- Health insurance.
- Work paid in “envelopes” (unofficial wages).
- More frequent and hidden industrial accidents.
- Work hours are not observed (extra hours, holidays, female worker offenses (labor, children to 3 years of age).
- Work contracts are not always executed.
- Foreigners work without residency permits.

2. *Manufacturing and production related problems:*

- Production is exported to foreign markets (export is primarily based on cheap labor or natural resources and dependence on foreign markets is increased).
- Large orders must be filled in a short time.
- Irregular orders.
- Standardization of production.

3. *Enterprise leadership and control problems*

- The foreign firm’s in-country representation is charged only with execution of plans and policies from headquarters with no policy role.
- Good traditions cultivated in the firm’s home country are not always introduced into Latvian subsidiaries.

4. *Changing the consumption patterns:*

- Changing day to day consumption — offerings of imported consumption products overwhelms local production.
- The number of small stores has decreased in Riga’s center and supermarkets (as Rimi) are gaining monopoly status.

5. *Economic aspects:*

- Tax breaks are foreseen for a cellulose factory.
- A cheap labor force ensures large profits for enterprises.

These are real problems that do not foster sustainable development. These also can not be taken as unavoidable sacrifices of the transition period or the current market economy.

4 Economic Policy

Official documents such as these are examined:

- 1) Latvia’s long term economic strategy (the Ministry of Economy 2001) (further in the text, Long Term Strategy), that offers long term (20–30 year) development scenarios to achieve the goal of reaching a quality of life for the residents of Latvia that matches that of the developed nations
- 2) Mid Range Economic Strategy in the Context of Joining the European Union (the Ministry of Finance, the Ministry of Economy, the Bank of Latvia, 1998) (Further in the text as, Mid Range Strategy). That states mid term (3–5 year) economic policy direction to ensure sustainable economic development in conditions of unified market supporting Copenhagen Criteria¹⁵.
- 3) Strategy for European Union Integration (Republic of Latvia, 2000), which states decisions for acceptance of ground rules in EU policy matters. The strategy is fulfilled when Latvia becomes EU member.
- 4) Law On Foreign Investments in the Republic of Latvia” (in force from November 5, 1995), which has the goal of attracting foreign investment to the Republic of Latvia, to ensure the observance of the interests of the Republic of Latvia.

International economic environment

It is critical to pay attention to the external factors as these are largely defining the direction of Latvia’s development.

Long term economic strategy recognizes that, in the present economic order, economic and political power is owned by international organizations (World Bank, IMF, WTO) and transnational companies, while economic activity (production and marketing) is concentrated in Western Europe, North America, and South East Asia¹⁶. Strategy to benefit from such an economic order is seen as the responsibility of the individual country, with the uppermost consideration being its competitiveness.

However, the long term strategy does not mention that the public of less developed nations is directing matters of payment for ecological debts to these centers. This concept was first voiced at the 1992 gathering in Rio. The ecological debt for industrial nations has resulted from unaccountability of companies in using cheap labor and natural resources¹⁶.

Latvia’s place in this environment

Economic policy anticipates that the nation must take its place in the world and European market for goods, services, and capital, as the international economy dictates the tempo and terms of trade. As a result, this causes non-sustainable liberalization for purposes of competitive advantage to increase exports and to attract more foreign investment.

Latvia’s economic development

The dominant thought in long and mid term economic policy is about the economic necessity of rapid and long term growth that can be attained by transition to a new economy with its advantages — cheap mid and low qualified work force, advantageous geographic condition and natural resources. Such a policy can not be considered sustainable. It is not based on fundamental sustainable economic principles — diversity of economic activity, local self-sufficiency, and national economy based on innovation. Long term policy anticipates that investment projects are economically based so that Latvia may:

- Create large and economically effective farms in the agricultural sector;
- Become an industrial satellite for multinational manufacturers.

This kind of attitude does not speak to the ambitions of sustainable development, but only considers immediate economic benefits. As a result, it points to the strategy adopted by South Korea, Taiwan, and Mexico as positive examples though the results achieved by development of these nations do not support the reality of conditions in those countries. They became the industrial satellites of companies from foreign nations. The consequences have been profound human rights and environmental offences in the production facilities of these companies.

Localization

Long term strategy is explained as a specialization — in exports, anticipated mass production with low value-added for the producing foreign company's owned factories, using cheap labor and resources, and regionalization. This is completely in contradiction to the conception of localization held by social organizations which is the basis for a sustainable economy small-scale production for the local market sufficient to meet local demand for production and employment.

4.1 Foreign Direct Investment Policy

The long term strategy includes two classic fundamental economic assumptions that explain the necessity of direct foreign investment:

- 1) Latvia's economic growth rate is too slow. Therefore increased FDI is needed to speed up the rate of economic development.
- 2) Foreign companies represent not only the potential for large capital investment but also the potential for:
 - The introduction of modern technology in the economy, state of the art manufacturing management, and access to the global market;
 - Stimulation of research work (laboratories, research centers), and increase the rate of technological advancement;
 - Furthering the creation of industrial clusters as well as small and mid size enterprise development¹⁸.

A goal of mid range economic policy is to attract large amounts of investment, and the liberalization of the investment climate. The primary policy direction for mid-term was/is for Latvia to join the Organization for Economic Cooperation and Development (OECD) Multilateral Agreement on Investments. It must be concluded that the mid range policy is not a sustainable one. With signing of the MAI (1995), the country would lose its ability to protect the interests of its residents. The secretly prepared agreement provided multinational companies the greatest rights yet. Among them, the right to sue the government in cases where, for example, in the area of environmental protection, a company is forbidden from bringing in production materials that contain toxic ingredients. The work of social organizations and several industrialized country government objections led to the termination of negotiations in 1998. Still, resumption of negotiations on the agreement are possible (or may have already occurred?) in the new WTO framework or OECD itself.

Flows of capital

The current foreign investment climate is very liberal; foreign investors ascribe to the national regime principle. Foreign investors can freely repatriate their income and or/investments. As a result, Latvia is not safeguarded from possible flows of speculative capital threatening stability. Economic stability is one of the basic principles of sustainability.

Environment

Long term economic strategy posits assumptions that, in the future, demand will grow for a quality environment — organic food, clean air and water, and, in time, the mindset will change favoring investments in envi-

ronmental protection. These are basic human rights which must have served the base of the fundamental values of any development strategy.

However, it is significant that statements can be found in the strategy whose holistic meaning are in contradiction with the rest of the text:

- “Quality of life is not only goodness of products that can be consumed but also clean air, water, biodiversity, etc..”;
- “Environmental protection and preserving biodiversity is a fundamental prerequisite for a nation's balanced development”;
- “In modern economy social well being and harmony are not only a consequence of economic growth but also one of the most important prerequisites”;
- “To develop Latvia's national economy, investing the national territory as a resource for development of international economic activity, it is necessary to create factories that meet environmental requirements, integrating environmental protection requirements in sector strategies. Where possible biomass and other renewable resources should be used to increase production.

Currently, the following are forecast in normative acts:

–30% tax rebate from the calculated income tax for those enterprises that produce high technology products or software and are certified by ISO 9001 or ISO 14001 standards, or are pharmaceutical products that are certified in accordance with normative acts as meeting the requirements of Good Production Practices¹⁹ (Law on Corporate Income Tax, 18th paragraph, 2nd point).

– Natural resource tax rebate for tax payers that finance projects whose goal is to decrease environmental pollution or natural resource consumption, furthering technological improvements or environmental protection initiatives, for such a sum that is required to realize such a project (Law On Natural Resource Tax”, 16th paragraph, 1st point).

– Tax exemptions and rebates for those enterprises which voluntarily realize programs for managing packaging (Law On Natural Resources Tax” 16.1 paragraph).

4.1.1 Incentives for investors²⁰

“It is a fallacy that Riga is full of supermarkets. There are still many places, areas, and streets where to purchase goods on a normal level, it is necessary to travel at least two or three kilometers...In Riga, there is 6 times less retail store area per resident than in developed European countries. This means that there are still great possibilities.”: Rimi Latvia executive director Uldis Lebedevs²¹

• The national regime principle applies to foreign investors — this is a legal regime in which foreign investors are subject to the same kinds of rights and responsibilities as legal and physical persons resident in the Republic of Latvia (Law On Foreign Investment).

• For the most part there are no restrictions on foreigners regarding ownership control of Latvian enterprises.

• In most cases, if subsequent legislative acts of Latvia worsen investment conditions, foreign investments adhere for ten years to those legislative acts that were in effect at the time that the investment was executed (Law On Foreign Investment 8th paragraph, 4th point). This law also ensures the protection of foreign investments.

- A foreign investor can freely:
 - Repatriate profits following payment of taxes
 - Repatriate investment following settlement of all debt obligations (Law On Foreign Investment 11th and 12th paragraphs).
 - No taxes are held for gross profit remitted to enterprise headquarters by branch operations in Latvia.
 - Latvia's Development Agency.
 - Investment policy anticipates tax breaks:

- The enterprise is given a tax rebate on its corporate income for a sum that equals the foreign taxes it has paid (Law On Corporate Income Tax” 16th paragraph, 1st point).
- Foreign investors can obtain duty and VAT tax relief on imported resources that are imported as foreign investments that are not expected to be resold (Law On Foreign Investment 13th paragraph).
- Excise tax relief on exported goods for which tax has been paid on raw materials used in their production (Law On Excise Tax, 8th paragraph, 2nd point).
- Goods that are imported to be used in further processing are relieved of VAT tax (Law On Value Added Tax 6th paragraph, 2nd point).
- The Standard VAT is 18%.
- The Government’s Freeport initiative ²² (duty tax exemptions, VAT, and excise taxes exemption) and the creation of a special economic zone (80% of income tax relief and up to 100% fixed estate tax relief) with an effective term of 2017.
- Creation of a technological park.
- Foreign companies can take part in government owned enterprise privatization.
- Foreign legal or physical persons can be the only Latvian registered enterprise founders.

4.1.2 Favorable Business Conditions Presented by Foreign Investors²³:

- Strategically important geopolitical locality which ensures accessibility to EU and NIS markets with the potential of the not yet saturated Baltic regional markets.
- Accessibility of natural resources.
- Relocation of operations to gain greater returns on investment.
- Accessibility to a professional and well-educated work force.
- Overall positive attitude towards foreign investment by influential power centers and the general population.

4.1.3 Restrictions for Foreign Investment

Change to the fundamental law over time has clearly shown that there is a tendency to prevent any norms that could ensure that foreign investors heed local resident interests or needs.

The 22/08/96 Law On Foreign Investments excluded the sixth paragraph 4th point that was in the first redaction of the law that was adopted on November 5, 1991., which anticipated the protection of the interests of the Republic of Latvia. Respectively, decisions about the foreign investments referenced in this paragraph, must consider:

- 1) The investment’s impact on the economy of the Republic of Latvia especially as relates to:
 - Creation of new jobs.
 - Processing of local raw materials and use of local services.
 - Export of the Republic of Latvia’s products.
- 2) The investment’s impact on increasing labor productivity, technological development, improving production quality, and diversifying the range of goods produced in the Republic of Latvia.
- 3) Impact of the investment on competition in the related area.
- 4) The possibility of specific foreign capital to gain dominance in the economy of the Republic of Latvia.

5) The investment’s impact on the competitiveness of Latvian production in the world market.

6) The investment’s impact on the ecological situation.

Currently investors seeking to get a 40% reduction of income tax as provided by the Law On Corporate Income Tax” 17th paragraph must take into consideration points like those listed below:

- Anticipated impact on regional development.
- Number of jobs that the project is planned to create.
- Planned use of modern technology and its introduction into the production process.
- Planned production of high technology products and the introduction of competitive technology suitable for export.
- Planned links with local enterprises (production and service consumption domains and collaboration with subsidiary enterprises).
- Anticipated impact on the environment.
- Planned exploitation of local resources (for example, material and natural resources).

While this could be a strong motivation for attracting responsible corporate investment, such a tax status can be claimed only for larger projects (where the investment is greater than 10 million lats). Questions are also raised by the Regulations of CM NR.410 which governs the order by which proposals for tax relief for investment projects are prepared, submitted, and evaluated, as submitted by in-country enterprises as well as non-residential permanent representatives. Based on the ruling, information about proposed projects is confidential with restricted access. The evaluation committee is primarily represented by the economic sector that could have a decisive role in decision making. Committee meetings are closed.

The 22/08/96 Law On Foreign Investment annulled the language of the first redaction of law in the 3rd paragraph, which stated that foreign investors can not gain control over enterprises which function in the following areas:

- State security.
- Narcotic preparation and distribution.
- Weapon and incendiary preparation and distribution; securities, currency notes, coin, and postmark preparation.
- In the field of mass information.
- In the field of public education
- Extraction of all natural renewable and non-renewable resources, including resources of the continental shelf.
- Fisheries in interior waters which are under the jurisdiction of the Republic of Latvia.
- Game hunting management.
- Harbor management.

Restrictions are still in place for wood product exploitation, raffles, gambling, and the domains of electronic public communication (radio, television, cable television, cable radio [radio re-broadcasting], satellite radio, satellite television, computer television, tele-text, radio data systems, and other broadcast systems):

- In firms that work with wood product exploitation, there can not be a mixed enterprise whose business activities are controlled by foreign investors. Foreign investor control of business activity, as interpreted according to this law, is the foreign investor’s rights to vote or otherwise state the method and direction of business activity

(Regulation of CM Nr. 96, adopted on April 4, 1996);

- Foreign investors are not permitted to gain control of mixed enterprises which operate lotteries or gambling organizations and their upkeep. The foreign investor's ownership share of the capital stock of the joint venture enterprise can not exceed 49%. (Law On Lotteries and Gambling Games 2nd paragraph, adopted on June 16, 1994).
- Foreign investment in businesses (stock companies) that engage in business activity in the public electronic Broadcasting cannot exceed 20%. (Radio and Television law, 3rd paragraph, 8th point, adopted August 24, 1995).

The Law On Foreign Investment no longer anticipates barriers related to natural resources.

5 Conclusions and Recommendations

- The government's policy goal is to liberalize the investment climate and ensure the security of investments.
- A fundamental law has been adopted about attracting foreign investment in Latvia and other normative acts that state conditions for attracting investments.
- A joint-stock company has been formed whose goal is to attract FDI. This organization has rights to submit recommendations for changing legislation that affects FDI.
- A foreign investor lobbying group is operating whose recommendations are being acted on by the government to launch an initiative to improve the business climate in Latvia.
- Matters of corporate accountability and environmentally friendly production as a norm for business activity are starting to be debated outside of the economic and political elites as evidenced by occasional press publications.
- Good initiatives are underway such as business education for ISO 14001 introduction.

Problems

- As a result of liberalization of foreign investment, important norms were excluded from the governing law that provided for:
 - barriers for foreign investments in such domains as mass information facilities, natural renewable and non renewable resources, continental shelf resource extraction, inland water fisheries, hunting, and harbor management.
 - As well as protection of the interests of Latvia (referenced in 4.1.3.).

Although these norms, in their narrowest understanding, (foreign investors are not allowed to gain control of joint venture enterprises that pursue business activity in the electronic public broadcasting domain, wood processing, or lottery and gambling organization) are included in other laws, there are no comprehensive laws that encourage the formation and operation of businesses that follow sustainable development policy.

- Information accessible only through payment from Latvian government registered enterprise data bases does not further general public awareness. Low income people do not have access to this kind of information for their decision-making. Therefore a subsidiarity principle is difficult to follow.
- Contradictions in political documents which result in questions:

1) Does sustainable economic growth mean growth in quantity or quality?

2) Does the mentioning of sustainable development in the introduction of strategies imply that everything else is based on economic growth?

Recommendations

1. To encourage an open and honest policy that integrates the interests and needs of the elite and the public.
2. *Company sustainable business activity.* Signing of the OECD Declaration on International Investments and Multinational Enterprises that includes principles that anticipate social responsibility and environmentally friendly company operations covered in related normative acts²⁴.
3. *Company awareness of the sustainability of their operations.* Make binding the international principles "Sustainability Reporting Guidelines"²⁵ that emerged in 2000.
4. *Attracting responsible business investments.* Encourage responsible business activity with discounts and anticipated advantage (tax relief, government procurement) help. Promote ethical investments and attract investments from responsible corporations.
5. *Investment for sustainable projects.* Investment in parking garages and supermarket buildings in Riga's center should be reoriented to investment in public transport and its development²⁶.
6. *Stability of financial markets.* To study currency operations or more known as James Tobin's concept Tax introduction necessity and possibilities in Latvia. In theory a tax of 0.5% of dealt sum would be applicable for any transaction with currency in such a way as to not disturb market related clearing or capital gains, however it would be large enough to disallow a rush of speculative finance²⁷.

1. Attachment. The largest foreign investments and investors in Latvia²⁸:

Nation	Investment²⁹ (LVL)	Investor³⁰
1. USA	138,422,858.26	K-one Inc., K-two Inc., Itera International Energy L.I.c., Pbr Hotel Ltd., Aquachart Inc., Orbitex Forwarding, Gb Baltics Llc., McDonald's Restaurant Operations Inc., International Finance Corporation, Woodison Trading Llc., Triumph Enterprises Inc., Baltic Fund 1, L.p., Griffin Trade Llc, Norbiton Assets Inc., Inex Infotrade Inc., System Experts Llc, Knightsford Corporation Llc, Rowel Agency Llc, Euronordic Brokers Ltd, Cme International, Inc., B.t. Capital Ltd, Vancouver Insurance L.I.c., Non-ferrous Castings L.I.c., Wagner Star International, L.I.c., Oregon City United Llc., Latvian Gateway Corp., Procter & Gamble Eastern Europe, Inc., Cresta Finance Llc., Trimont Ventures Corp., Visarine Investments L.I.c. Lort Finance Llc., Ht Trading Inc., Balant Trade Corporation, Agromax, Trell Llc, Elegant Express , Inc., Centroform Inc., Saratoga Commercial Llc, Multitrade Financial Group Llc., Lasania Capital Llc, Inter Expert L.I.c, Incom L.I.c, Lion Heart L.I.c., Financial Consulting Group L.I.c., Tasko Enterprise L.I.c., Business Capital International Llc., Erkort Ltd., Techno Export/import L.I.c., Seatech Technologies Co.ltd.
2. Denmark	122,464,047.80	Tilts Communications A/s, Pindstrup Moseburg A/s, Hydro Texaco A/s, Latvian Investment Group Aps, Investeringsskand For Oslandene, Thorhild Kristensen Properties A/s, Baltic Partner, The Danish Investment Fund for Central & Eastern E, Nordea Finance Finland Ltd., Sampo Enterprise Insurance Company Limited, House of Prince, Abl Holding, Colas Danmark As,
3. Sweden	111,334,003.29	Tele 2 Aktiebolag, Telia Aktiebolag, Scandinavian Airlines System Denmark-Norway-Sweden, Baltic Beverages Holding Ab, Aga Ab, Skanska International Holding Ab, Hebeda Tra Ab, Swedfund International Ab, Volvo Truck Corporation, Modo Paper East Ab, Boksia Invest Ab, Skanska Central Europe Ab, Korsnas Aktiebolag, K.g.f. Konfektion Aktiebolag, Swedgiro Ab, Pattyranie & Co Ab, Ica Baltic Aktiebolag, Ncc Ab, East Imwest F.Bergman Ab, Stocholm School of Economics, Bt Industries Ab.
4. Germany	98,868,122.26	Gebr. Knauf Verwaltungsgesellschaft, Norddeutsche Landesbank Girozentrale, Vereins- Und Westbank A.g., Glasseiden Oschatz Gmbh., Ruhrgas Ag, Readymix Ag, Preussenelektra Ag, Koelnische Rueckversicherungs-gesellschaft, Ergo Europa Beteiligungsgesellschaft, Sia Handels Gmbh, Zus Rohstoffe Trading Gbmh, Danzer Furnierwerke Gmbh & Co Kg, Ergo Europa Beteiligungsgesellschaft Ag, Readymix Beton Aktiengesellschaft, Drig Auslandsinvestitions-gmbh, Paulman Licht Gmbh, Baltika Holzindustrie Gmbh, Buchel & Co, F.w. Langguth Erben Gmbh & Co.Kg, Impex Beteiligung Gmbh, Verlag Heinz Heinse Gmbh & Co.Kg
5. Russia	73,345,271.58	Transnefteprodukt Ao, Gazprom, Mosbiznesbank, Njuvent Ooo, Gosudarstvennij Komitet Rossijskoj Federaciji Po U, Kuzneckije Ferrosplavi Oao, Balt-market International
6. Norway	61,832,300.00	Linstow Senterutvikling As, Statoil Asa, Linstow International As, Varner Tekstil As, Linstow Asa, Investa A/s, Narvesen International As, Findexa Holding As
7. Finland	59,193,476.37	Fortum Oil and Gas Oy, Nordea Bank Finland Plc, Kesko Oyj, Thomesto Oy, Oy Rudus Ab, Abb East Ventures Oy, Ab Chips Oy Ltd., Rautakirja Oyj, Sampo Plc, Kesko Food Ltd, Suomi Mutual Life Assurance Co, Skanska Oy, Vaasan Leipomot Oy, Tamro Medlab Oy, Melia Oy, Oriola Oy, Cultor Ltd., Tikkurila Paints Oy, Stora Enso Packaging Oy, Gnt Baltic Holding Oy, Kemira Agro Oy, Vaasan & vasaan Oy, Suomen Rehu Oy
8. Estonia	56,749,018.57	Hansapank As, Rakvere Lihakombinaat As, Neotrust, Talinvest Ltd., Eesti Buss, Hipo, Beta Sustems, Elme Messer Gaas, Microlink, As Magnum Medical, Pepsico Estonia Ltd., Famar-desi, Pro Kapital, E.I.I. Kinnisvara As.
9.Great Britain	44,138,639.01	Shell Overseas Holdings Limited, Reportapex Limited, Bsw Europe Limited, Sappo Company Ltd, European Bank of Reconstruction and Development, Overseas Credit Management Limited, Ed & F Man Sugar Ltd., Camberly Commerce Limited, Ballantine Investments Limited, Danton Eximtrans Limited, Electrotech (europe) Limited, london (uk) Limited, ollis International Ltd.
10.The Netherlands	37,506,197.11	Finhold Limited, Geit Bv, Belegginmaatschappij Geit B.v., Bombadil Holding B.v., Hydro Central Europe B.v., Bpb Gypsum Bv, Marga B.v., Cc Beverages Holdings li B.v., Koninklijke Philips Electronics N.v., Lukoil Chemical B.v., Edon International B.v., Talfin Amsterdam Holding, Kpmg International Investments B.v., Oriflame Eastern Europe B.v., Lantzov Holding B.v., Swedwood Holding B.v.

Environmental Policy Integration in the Sectors

Integrating environmental protection requirements into all policy decision making procedures is a precondition for sustainable development. In actuality, this means a change in the execution model for all political sectors. The Rio Declaration that was accepted in 1992 mentioned many principles which point towards the necessity of integrating the requirements of environmental protection into other sectors to attain sustainable development.

The Rio Declaration states that, in order to achieve sustainable development, environmental protection must become an integrated part of the development process. It cannot be considered in isolation.

It is also fundamental to internalize environmental costs emphasizing the necessity to include environmental costs in economic transaction instruments.

National institutions must work to encourage internalization of environmental costs and the use of economic instruments that are based on the idea that polluters must take on the cost of pollution, taking consideration of the public interest, and not in so doing deforming international trade and investments.

For Latvia, the time following Rio was primarily directed towards the national transition to market economy management principles, with the initial steps to EU integration, and accession to many important international treaties and conventions. In this way, the Latvian parliament ratified the Kyoto Protocol in 2002. Considering Latvia's drop in industrial production and resulting reduction of emissions, the rate of emissions has markedly decreased due to the economic transformation in comparison with 1990 levels. Thus Latvia's fulfillment of its obligations as a Kyoto Protocol signatory will neither decrease the emissions contribution of greenhouse effect gasses nor effect the integration of environmental policy in sector policies.

Since 1992 many legislative acts have been passed in Latvia that are directed towards environmental protection and nature conservation which point towards the necessity of integration of environmental protection elements into sector specific policies.

In 1995, the Environmental Policy Plan was approved for Latvia. **"Integration of environmental protection policy into all spheres of life"** is stated as one of the primary environmental protection policy goals which would foster creation of a base for social and national sustainable development. The Policy Plan supports global environmental policy principles and is the basis for further development of environmental protection policy in Latvia. The implementation of environmental protection policy is effected by the Environmental Protection Action Program.

Currently there is little progress towards environmental policy integration. Environmental protection measures are, for the most part, realized through the publishing of regulations and the formulation of norms that define the maximal allowable influence on the surrounding environment from industrial and other economic activity and the allowable rates of flow and concentration of pollutants.

The European Union integration process fundamentally impacts the furthering of sectoral environmental policy integration. In this context significant documents include the Accession Partnership, which defines short and mid term goals which Latvia must attain to achieve integration into the EU. The fact that the Accession Partnership has a subsection on environmental protection where it is shown that in the

middle term Latvia has already begun integrating environmental policies into sector policies must be considered positively. Though, the 2001 is stated as the term for starting work for environmental policy integration, unfortunately the process has not been given political priority.

So far, a national sustainable development strategy has not been developed and the requirement for integrating environmental protection aspects into sectors is currently not going beyond national environmental protection legislation. Government policy declarations do not give environmental protection matters high priority. Hence there is little fundamental progress towards policy integration. As an EU candidate nation, Latvia has taken the responsibility to observe EU Sixth Environmental Solution program principles, in which environmental policy integration is mentioned as a priority. In this context, Latvia is also influenced by the European Union Cardiff process that is underway, whose goal is to attain environmental policy integration in all economic sectors.

In this section we examine some of the economic sectors which traditionally cause the greatest pressure on the environment. The analysis is on progress towards integration of environmental policy requirements into the sector's governing policies and their incorporation into programs allows conclusions to be drawn that apply to the overall integration of environmental requirements in Latvia. The analysis depicts sector development in the period from 1992 examining environmental policy elements, goals, and the impact of the EU integration process. In the same way, economic instruments that foster integration of elements of environmental policy into sector policies are examined.

1 Energy

In comparison with 1990, there has been a noticeable decrease in greenhouse effect case emissions in Latvia. This has happened due to noticeable decrease in electrical energy consumption and increases in the import of cheap electrical energy. It is positive that the rate of electrical energy growth lags GDP growth. Furthermore there have been fundamental decreases in losses from power plant transformers, transport lines, and distribution webs.

With respect to renewable energy resource use, Latvia has good potential for gaining energy from regenerative energy resources, especially wood, peat, and wind, none of which are currently used to a great extent for electricity production. Currently locally produced resources comprise approximately half of available resources for energy production from Latvian hydroelectric energy systems (HES) and thermo-electric energy centers (TEC) the greater portion of which is from hydro-resources. Peat mills and wind energy produce only a fractional amount. As a public service the state-owned public utility Latvenergo purchases .5% of its total generated power as regenerative electricity. Heat energy production primarily uses imported fuels — residual oil and natural gas.

Considering both Latvian integration into the EU and the global economy as a whole, Latvia under the impact of its international relations is controlled by increasingly growing environmental protection and safety demands in the energy sector. This also applies to issues relating to the integration of elements of environmental protection policy into sectoral policies. Consideration of these requirements is also related to decreasing electrical energy production levels.

Latvia signed the Energy Charter Protocol in 1994 and this was ratified and accepted into law in 1995. This became a fundamental document for regulating economic activities in the energy sector. In accordance with this agreement, one of three demands for Latvia is to ensure measures that would be directed towards realization of environmental protection initiatives for energy related domains.

The *Energy Policy* developed by the Latvian government in 1996 stated the necessity of a step-by-step decrease in environmental pollution, considering the economic potential of energy services. This was recognized as one of this policy's strategic directions. The *Latvian National Energy Program* was developed between 1996 and 1997 and was approved by the Cabinet of Ministers in 1997. Included measures provide for security of stable energy resources for Latvia in quantity and quality at the lowest possible cost while **reducing the impact on the surrounding environment**, while, at the same time, decreasing ineffective energy resource use and the share of primary energy resources as a percentage of national imports. In defining the total scope of actions needed to assure energy supply security and quality, the Program also stressed the necessity of ensuring the sector's least possible impact on the surrounding environment. The program was developed with a 15 year horizon and must be renewed every five years; however its realization has stopped due to insufficient financial resources.

In 2001, the Cabinet of Ministers accepted the Energy Policy for the Electrical Energy Sector. This policy document mentioned that primary goal of energy policy in the electrical energy sector is to promote the balanced and *sustainable growth* of the economy. However, this document does not provide a definition of what is required for sustainable growth. On the whole, market forces are considered the optimal electrical energy market regulator. Still, significant confusion results from the referenced policy instruments which state the necessity of coordinating the interrelated prices of environmental protection with energy extraction, transportation, and usage. Further in the text though, it is mentioned that the Economics Ministry, which is in charge of the energy sector, together with the Environmental Protection and Regional Development Ministry, must, every year, develop an evaluation of the impact of the structure of primary energy consumption on the nation's economic, environmental, and social situation. It is a positive sign that the sector policy mentions the necessity of encouraging regenerative and local energy resource use, though economic exaggeration is not allowed! The policy defines the need for a renewable ("green") energy component for all of Latvia's overall electricity consumption balance, so that social, economic, and technical use can be balanced and renewable energy use stimulated.

The energy sector as a whole is fundamentally impacted by the harmonization of normative acts with EU demands. The *Energy Law* accepted in 1998 includes EU directive demands related to the energy sector. Though one of the requirements is to ensure energy efficiency, in practice, most attention is directed towards liberalization of this sector.

The sector development plan does not have concrete goals developed for what forms of energy resource use should be encouraged.

To encourage small HES development and electrical energy production from renewable energy resources, the *Energy Law* defined applicable rules and stated tariffs at doubled the rates offered for power from large HES for surplus electricity generated by small HES. In practice, an argument has become apparent that doubled tariffs that stimulate small HES development are often in conflict with preserving bio-diversity. This example strengthens the conviction that all decisions prior to acceptance must be comprehensively evaluated so as to choose the optimal solution for the environment.

The other key economic instrument is the excise tax on petroleum products. This instrument, though currently not fully used for the interests of environmental protection, is effective because Latvia's petroleum products (residual fuel oil for example) are widely used for fuel.

Conclusions and Recommendations

Conclusions:

In the 1990s market mechanisms stimulated a broad range of energy efficiency measures in the energy sector. Overall, the energy sector has placed much emphasis on development of economic incentives, though this is not always effective for safeguarding the level of environmental protection. Although requirements have been developed to stimulate sustainable development and decrease environmental impact decrease have been developed for most policy documents applying to the energy sector, the practical significance of this is quite small. Many programs and initiatives are not realized because there is a shortage of funds for implementation.

Recommendations:

Key policy documents governing the development of the energy sector need to define goals for the middle and long term to increase the share of renewable energy as a percentage of total energy consumption. In these policy documents, the meaning of the idea, "environmental impact decrease" must be precisely defined.

2 Transportation

The transportation sector is the main sectoral policy which must be improved because the transport sector impacts both the natural environment and human health.

The transport sector makes up a significant share of Latvia's gross domestic product (15–16%) and has had a tendency to increase its share over years. An especially important area is the transit sector as the greatest amount of cargo traffic is through transit and international traffic — **promotion of transit traffic** has been considered one of the priorities for development by the government. Currently, in Latvia, the transport infrastructure is greater than necessary for local needs and the services are used primarily by eastern-western transit traffic. Latvia has a comparatively well developed transport web: three primary harbors, a broad system of rail and highways, crude and refined petroleum product pipelines, and an international airport. This defines the Latvian transport and transit policy.

Similarly to other EU and CEE nations, most cargo and passenger traffic in Latvia uses highway transport. Cargo traffic turnover ton-kilometers from year to year increases, on average, 14–17%. The greatest increase is found in international traffic. Cargo turnover for density of international rail traffic is almost 80%, while highway traffic is 60% of service transit flow. Passenger traffic is primarily internal. Since the early 90s, there have been continuing decreases in passenger numbers and only in 2001 was there a small but noticeable increase (1–2%). The problems result from loss-making passenger traffic services.

Harbor management makes up a large share of overall turnover in the transportation sector. The biggest harbors (Ventspils, Riga, and Liepaja) work primarily with cargo transit transshipment. Over half of the total freight is crude oil and petroleum-derived products. Fertilizer and wood products in combination consist of more than one tenth of the total harbor turnover.

Rail traffic in recent years (2000–2001), has experienced a noticeable increase in cargo traffic, following decreases in 1998–1999. Cargo traffic has increased due to increased cargo transit (in total, transit comprises 4/5ths of cargo traffic). Internal traffic continually decreased in the 90s, while traffic flow on primary highways grew by 3–5%/year. Due to the comparatively short transport distance (maximum of 300 km), local cargo traffic is dominated by highway traffic. Rail traffic accounts for only 6%.

Compared to 1992, in the second half of the nineties, the private automobile count in Latvia noticeably grew with a greater than three fold increase. It must also be acknowledged that the number of traffic accidents on national highways is fairly high in comparison with EU countries and has increased by 12% as compared to 1995.

Although no means of motorized transport are environmentally friend-

ly, some have less environmental impact than others. Thus development and expansion of such means of transport should be promoted with national policy.

In 1995, the *National Program for Transport Development* was put into force for 1996 to 2010. Besides this, in 1999 a Middle Term program for 2000–2006 was prepared and revised. The long-term program goal is to follow up with upkeep and development of a sustainable, effective, integrated, balanced, and multi-modal national transport system. Many strategic tasks are mentioned to reach the goals: maintain and develop the transport infrastructure, support and further all methods of transport for cargo and passenger traffic, create an effective cargo and passenger system, develop international traffic, further transport corridor work, integrate with the European transport system, improve and maintain a high traffic safety level, create, within EU requirements, a harmonized system of transportation legislation and complete the institutional regulatory system. One of the Program's sub-programs is Environmentally Friendly Transport System Creation. This states the necessity of creating a transport system in which transport availability and economic and social development would be balanced with environmental possibilities. Greater emphasis, however, is applied to the creation and organization of the transport infrastructure. In the middle term, the strategic infrastructure development goals are related to already begun structural changes which are directed towards Latvia's further integration into the European transport system.

It can be seen from the referenced measures that transport development is primarily related to transport infrastructure development. Besides the fact that one of the goals of the program is a sustainable transport system, aspects of environmental protection are not mentioned as strategic goals.

Also among the fundamental normative acts must be mentioned the 1998 *Railway Law* and the, *Railway Traffic Law* that went into effect in 2001.

None of the planning documents mentions the necessity of internalizing so called external costs to reflect the cost of environmental degradation in payments for use of highway and rail transport resources. The current pricing system does not reflect strategic goals for environmentally friendly transport system development.

It must be acknowledged that, within the framework of the Baltic Sea-region regional cooperation and Baltic Agenda 21, Latvia has taken on the initiative to develop a regional sustainable transport development program.

Heightened noise levels are one of the problems caused by this sector. However, currently it is not being effectively dealt with. The capital city of Riga, with the highest transport density, has an especially heightened noise level.

In the context of EU enlargement, the (ISPA) fund financing is important for the transport sector. Within this context, a fundamental document is the ISPA strategy for the transport sector. Though, on a national scale this does not create the greatest part of the financing for the sector, the realization of this project is a political priority and matching funding has a necessary impact on national and municipal budgets. Along with this, in concordance with ISPA strategy for the transport sector, this financing must be directed towards upkeep of important European traffic webs that are included in the Transport Infrastructure Needs Assessment (TINA) web. Though one of the ISPA goals is to demonstrate the facilitation of sustainable mobility, to realize such, financing only goes to highway improvement and building projects that are important for Europe and included in the TINA road web, or are connected to this web. First of all, this stimulates increased transit flow on highways that increases extra pressure on the surrounding environment, and secondly, decreases financing for local regionally important road upkeep and promotes health risks. Also, previously, the greater part of financing was directed only towards primary highway development, basically meaning ViaBaltica.

Still, as a positive fact, it must be acknowledge that, among the goals being promoted by ISPA are long term development of railway and combined transport and compatibility and interconnection between modes of transport...

Overall, within transport sector regulatory legislation, competition policies have been developed and these follow liberalization market principles. Still, it is positive that subsidies are being provided for regular passenger transport with busses to the countryside, where the passenger flow is small. The grants use National Highway Fund resources. According to a 2001 Latvian Travel Association evaluation, the lack of financing has resulted in the critical disrepair of less important roads and bridges causing significant danger for traffic safety.

Similarly, subsidies are provided to unprofitable passenger routes for rail traffic, yet often the financing is insufficient. The mid-term *Transport Development Program* however shows that cross subsidies of rail passenger transport from cargo traffic must be stopped completely transitioning to public service contracts between the national/municipal governments and transport service providers. In the same way, the above-mentioned program determined that, to avoid further deterioration in the condition of highways that the "user pays" principle must be used. Full liberalization of the rail transport services market is mentioned as one of the goals of the program. Based on the current price policies in the transport sector and the generally accepted perception in Latvia about liberalization, it is clear that, in these circumstances, price setting will not include external costs of damage to the environment and human health.

Since fuel for the transport sector consumes non-renewable resources and this sector produces the greatest atmospheric CO₂ emissions for European nations, the fuel price policy is a sphere where attention must be directed towards economic instruments to promote sustainability.

In 1999, changes were made to the law *About Excise Taxes* to anticipate that transport vehicles brought into Latvia will have excise tax regulations that vary with the age of the car with older cars assessed the higher tax rates. Such a system was developed to discourage import of older automobiles into Latvia and to encourage the purchase of newer automobiles with smaller horsepower engines and less environmentally damaging gaseous emissions. This economic incentive did not work in practice. Latvian residents register their automobiles in the neighboring country of Lithuania, thus having completely the opposite effect of the intended policy.

Conclusions and Recommendations

Conclusions

In the early nineties, the economic system of Latvia changed. Latvia had a unique possibility to begin the creation of environmentally friendly transport policy. Unfortunately, economic transformation happened parallel to national policy deficiencies in this sector. The EU integration process and the financial framework with which it is connected are moving Latvia towards the Western European model and the increase of pressures on the environment.

Transport sector development occurs based on market forces. Latvia is following EU strategies by primarily financing renewal and upgrading of roads of European significance. The current financial schema for road financing is not directed towards sustainable development which ensures road safety. Though railways for passenger traffic are considered as unprofitable, in fact highway maintenance receives national financing which can similarly be considered as subsidies for highway transportation. It is positive that the need to create a multi-modal transport system has been developed in policy documents.

Recommendations:

The national transport sector development planning process must include environmental policy integration. Taking into consideration the impact of price on consumer choice, it is necessary to internalize transport external costs to include risks and damages to the public and environment. The current transport routes should receive subsidies for railway passenger traffic to financially encourage the use of this service. Bicycle paths and traffic routes must be created in large cities, especially the capital Riga.

3 Agriculture

The physical output of agricultural production decreased dramatically in the nineties. The deposited fertilizer amount decreased significantly by 90% and pesticide use by 88%, while the number of large farms decreased by 2.7 to 3 fold. Organic fertilizer production has also decreased and thus the rate of organic fertilizer use and agriculturally caused environmental pollution. Though the total pollution level is low, certain areas have noticeable point source pollution, such as locations of previous large-scale farms and fertilizer deposit areas. Latvia was given a unique opportunity to re-orient towards environmentally friendly agriculture with low fertilizer use in the early nineties. Still, with continuing economic growth from about 2000 renewed growth has become evident in the consumption of agriculturally used herbicides and fertilizers.

This, for example, compared to 1995 agriculture's share of GDP decreased from 8.9 to 2.5%. Employment decrease in the agriculture sector has been even more dramatic — from 20% employed in this sector in the early nineties, this percentage has dropped to 12–13% in 2002 and the trend is for even greater decrease. Key areas are — dairy farming, meat production, fruit farming, grain cultivation, and potato and sugar beet cultivation. There is also noticeable development in non-traditional or alternative employment methods, which in part create ecologically clean production. A positive effect is the growth in demand for organic agricultural production in local markets and generally among EU member countries, causing continuing growth of this sector. Here, it must be emphasized that large farms working with intensive agriculture and using much fertilizer and pesticides cause the greatest environmental impact.

The goal of subsidies is to attain internal market saturation with internally produced competitive goods and also to develop production of from segments with potential and a priority for exports. The allocation of subsidies is decided by the Agricultural Organization Cooperation Council. Nothing is mentioned about a priority for environmentally friendly agricultural methods or support for instances of environmental protection measures.

In October 2001, the *Agricultural Long Term Investment Program* went into force. The goal of this program is to further development of economically competitive sustainable capital influenced agriculture sectors.

Long term goals tied to the share of organic agricultural production of total agriculture output are not mentioned in the strategic documents.

Of the primary goals for Latvia's rural development are mentioned competitive farms, well developed fields, varied rich and sustainable rural environment development. Still, it has not been explained how to, in this case, interpret the idea of sustainable rural environment. Although, environmentally conservative agricultural methods are not specifically mentioned among the priorities, however, national support is anticipated in keeping with the plans for other sectors.

Latvia's integration with the EU and its adoption of the related legislative norms has fundamentally impacted the agricultural sector in the observed period. Following Latvia's acceptance into the EU the reality is that the national agricultural policy will be completely connected to the EU. Currently, as an EU candidate country, Latvia is already impacted by the EU Common Agricultural Policy. The primary goal of the EU integration process for the Latvian agricultural sector is directed towards fostering a modern economic sector that produces products competitive with other nations' products in terms of quality and production cost. In this regard there is the risk that promotion of lower production costs will encourage development of intensive agriculture and use of environmentally unfriendly agricultural methods.

Corresponding with EU pre-inclusion strategy and support for EU candidate nations, Latvia has access to the SAPARD program, within whose framework financing is available for improving rural infrastructure, investments in agro-businesses, rural economic diversification, and development of environmentally conservative agricultural methods.

However, the current SAPARD support program is directed towards backing large scale agricultural production and thus agricultural intensification similar to that in other EU countries. One of the SAPARD sub-programs is environmentally conservative agricultural methods, which include several sub-priorities among them: **organic agriculture**, bio-diversity, and conservation of country landscapes, as well as decreasing agricultural run-off. Unfortunately, in the SAPARD program framework, support is not available for the startup of organic farming. A positive aspect of the SAPARD program, however, is that there is support for measures to decrease agricultural land run-off. In the SAPARD program, it is stated that rural construction projects must conduct environmental impact assessments (EIA). This is valuable because the EIA is an effective instrument on a local level.

Latvia and the EU enjoy a free market agreement in agricultural goods, according to which there are no import tariffs for such traded goods. Here, it must be noted that, with the help of international trade that Latvia is heavily impacted by the EU Common Agricultural Policy and its priorities. Price support mechanisms for EU farmers and their consequent production prices often push Latvian farmers to move towards intensive agriculture, for example to increase intensiveness of fertilizer use. Imported production does not have adequate controls and there low prices do not further environmentally friendly farming in Latvia. Latvian agricultural policy and programs are dependent on the demands of the World Trade Organization and EU.

The current agricultural support system is created such as to encourage concentration of agricultural production, basing this on the necessity of increasing competitiveness. Distinct environmental indicators for the agricultural sector have not been defined, but a certificate system has been created for organic agricultural certification.

The *Law on Agriculture* includes a minimal national subsidy rate for agriculture which is not allowed to be less than 3% of the national budget. Backing for agriculture is available also through SAPARD financing. Combined these are the most important sources of support for agriculture. Agricultural subsidies have only a small part directed towards organic farming. In actuality, there have not been enough fiscal stimuli for farmers that use environmentally friendly agricultural methods. Internalization of environmental costs would be necessary to increase the economic stimulus for organic farming.

Conclusions and Recommendations

Conclusions:

The significance of agricultural production has decreased dramatically during the course of Latvia's economic transformation. Primarily due to economic considerations, inorganic fertilizer consumption has noticeably decreased, though in recent years there has been a tendency for renewed increase.

Sector policies and program documents do not separate environmental indicators. Agriculture and rural development policies are being created divorced from environmental protection policy formulation.

Current agricultural policy in Latvia is powerfully impacted by the EU Common Agricultural Policy that, due to subsidized production, encourages intensive (environmentally damaging) agricultural development in Latvia.

Recommendations:

Define environmental indicators for development of the agricultural sector. Foster environmental cost internalization for agricultural production, providing fiscal stimuli for those farmers that farm using environmentally friendly agricultural methods.

Latvia's Climate Policy

All of us impact the global climate with our daily activities. We: heat our homes, use electricity, drive in cars or use public transport, consume industrial, agricultural, and forestry products, and thereby increase waste. Then what have we done in the past 10 years to prevent climate change?

Latvia's emission of greenhouse effect causing gases (GHG) has sharply declined since 1990 due to economic downturn. Therefore climate policy is not considered a priority in Latvia. Not looking at this, climate change is an important environmental matter that is firmly integrated with all of the primary branches of economic policy: energy and transport, forestry and agriculture, industry and waste management. To develop Latvia's economy it is necessary to direct attention to development trends so that short term economic priorities do not result in large increases in GHG emissions and the emergence of associated environmental problems.

In February 2002, "Green Liberty" organized the seminar, "Public Participation in the Road to Johannesburg: Latvia's Progress to Preventing Global Climate Change." The goal of the seminar was to collectively evaluate Latvia's progress on the governmental and non-governmental level, to realize policies and projects for decreasing greenhouse gasses, and also to put forward recommendations and ideas for future solutions. The energy, transport, forestry, and agricultural sectors were examined as these have the largest impact on greenhouse effect gas emissions levels in Latvia (the waste management sector was also briefly examined).

The goal of this report is to provide Latvia's NGO evaluation about primary achievements and remaining problems in Latvia's climate policies and affected fields of activity, as well as to conclude whether the primary trends in each of these fields and climate policy as a whole is bringing greater or lesser improvement in key principles of sustainable development and the prevention of climate change as compared to 10 years ago. After a brief introduction to international and Latvian climate policy, the following section of this report contains the ZB seminar summary supplemented with the authors' insights. In Primary sustainable development goals are put forth for each branch and their relationship to global climate change is defined. Then we list the primary achievements and deficiencies towards achieving these goals in policy over the past ten years. Both the work of the government and NGOs is evaluated. The source of evidence of government level activity is information taken from the inter-ministerial work group's 2001 report "Latvia's Third National Report within the framework of the UN General Convention on Climate Change." In the last section, suggestions are made for future action by the government and NGO for achieving sustainable sector policies in and for the realization of a climate policy.

1 International Climate Policy

The 1992 signing of the *UN General Convention on Climate Change* (further referred to as the Climate Convention) at Rio de Janeiro and its coming into force in 1993 confirmed the importance of climate change at the international political level. The primary principle of the Convention was that industrialized nations are responsible for the majority of world GHG emissions and thus must take on a leading role in solving the problem and lowering emissions. The Convention recognized that the problem of climate change must be solved through a shared, yet respectively separated, principle of responsibility. The Convention defines various responsibilities for participating nations in general terms but does not provide concrete emission reduction target.

Its only defined goal was to stabilize industrialized nation GHG emissions to 1990 levels by 2000.

Member states³¹ first adopted a commitment for concrete emissions reduction targets with the signing of the 1997 *Kyoto Protocol* — for both individual nations and on an international level. Nations pledged a reduction of emissions by a measurable amount by 2008–2012, in relation to the base year. All nations have a base year of 1990 with the exception of CEE and newly developed nations, who were allowed to choose a different base year because emissions were decreased for many of them due to economic collapse prior to 1990. Latvia's base year is 1990. During the signing of the Kyoto Protocol there was much incompleteness, thus, to prepare for ratification, and allow for consensus about lacking elements, international discussions continued until 2001. For the Kyoto protocol to stay in effect, it must be ratified by at least 55 nations that account for at least 55% of global GHG. The US government lead by President Bush has declined to ratify the protocol but the European Union and other large nations of the world have begun the ratification process with the hope that the protocol could stay in effect until the Johannesburg sustainable development global Rio+10 conference this August (2002). Latvia is also preparing to ratify the protocol.

The signatory countries (Annex B Countries), target for total decrease in emissions from 2008–2012 is 5%. This does not even approach the Climate Convention's stated goal which is to stabilize the Earth's climate³². Targets for individual nations vary from an 8% decrease in emissions to an allowable 10% increase. All CEE nations have committed to emissions reductions ranging from 5 to 8%. Latvia has committed to decrease emissions by 8% from 1990 levels.

Four GHG gasses are included in the Protocol: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) and sulphur hexafluoride (SF₆), as well as two gas groups — hydro fluorocarbons (HFC) and per fluorocarbons (PFC). CO₂ is the most widely dispersed GHG gas but also has the lowest global warming potential. This is why emissions of other gases are compared to CO₂, and goals of decreasing GHG emissions are calculated in CO₂ equivalents.

The Kyoto Protocol includes three "elastic mechanisms" that allow industrialized nations to fulfill their requirements for decreasing GHGs with the lowest cost. These are the "Joint Implementation" (JI), Clean Development Mechanism (CDM) and International Emissions Trading (IET). JI is a mechanism with which nations that have taken on the responsibility of lowering gas emissions, can invest resources in projects for reducing emissions in other countries that have also taken on such responsibilities but where it is cheaper to decrease emissions. CDM is similar to JI; however investments are made in less developed nations that have not taken on responsibilities for decreasing gas emissions in support of the Kyoto Protocol. IET is directed towards development of a global market where one nation could sell its decreased gas emission to another nation that has overstepped its reduction target.

Western investors will find furthering Joint Implementation to be very attractive in Central and Easter European countries. In Latvia, 27 Jointly Implemented Pilot Projects (JIPP) have been realized. Currently the first JI project is getting underway in Latvia with funding from the World Bank's Carbon Fund. This project's objective is to collect GHG emissions from the city of Liepaja's solid waste thermal energy plant. At this time, an inter-ministerial work group has been assembled with the purpose of devising a national strategy and guidelines for Jointly Implemented Projects.

2 Latvia's GHG Emissions

Information and figures in this section are taken from, "Third National Communication of the Republic of Latvia under United Nations Framework Convention on Climate Change", Riga: MEPRD 2001

Due to the Latvian economic decline from the beginning of 1990, emissions have sharply decreased in comparison with the base year (1990).

This report covers direct GHG (CO₂, CH₄, and N₂O) and indirect GHG (NO_x, CO, non-methane volatile organic compounds (NMVOC) and SO₂. Hydro fluorocarbons (HFC) were not produced in Latvia in the reviewed period; therefore the 3rd National Communication does not contain their emissions data. The 1999 Inventory provides potential sulfur hex fluoride (SF₆) emissions from electrical equipment — 0.09 Gg CO₂ equivalents, but this is not included in estimates of total emissions equivalents.

The primary source of CO₂ emissions in 1999 was fossil fuel combustion — 97.9%. By sector this is composed as follows: energy — 41.3%; manufacturing industry and construction — 15.2%; transport — 27.7%; other sectors (agriculture, forestry, etc.) — 13%, and losses in transport and distribution — 0.8%. Other anthropogenic emission sources of CO₂ are industrial processes — 1.4% and tilling and liming of agricultural lands. CO₂ removals take place by green plants absorbing CO₂ in the process of photosynthesis. In 1999 forests in Latvia removed 5321.71 Gg CO₂. This is 5278.29 Gg less than in preceding years levels (–10 600 Gg). 2316.89 Gg CO₂ was emitted into the atmosphere.

Anthropogenic CH₄ emissions in 1999 were 123.62 Gg. Primary sources of CH₄ emissions in Latvia are solid waste disposal sites and enteric fermentation of livestock. Other important sources of CH₄ emissions are leakage from natural gas pipeline systems and combustion of fuel (wood).

Agricultural lands are the main source of N₂O emission in Latvia generating 84.2% of all N₂O emissions in 1999 (total: 4.01 Gg). Other N₂O emission sources are transport and biomass, combustion of liquid and other solid fuels in energy conversion and industrial sectors, on-site burning of wood harvesting waste and sewage sludge.

CO₂, CH₄ and N₂O may be expressed in the aggregate form in CO₂ equivalents, using their GWP values for the time horizon of 100 years (respectively, 1, 21 and 310). Figure 3.5 shows that aggregated emissions of GHG in 1999 have gone down by 16.8% compared to 1995. This is mainly attributed to reduction of CO₂ emissions (–27%). As a contrast, N₂O and CH₄ emissions have gone up by, respectively 7 and 28%.

Looking at the structure of GHG emissions by sector it can be concluded that in the period between 1995 and 1999 the share of energy sector emissions has dropped by 14 percent with increases of the shares of transportation and waste management sectors. Agricultural and industrial process emissions practically did not change their proportion.

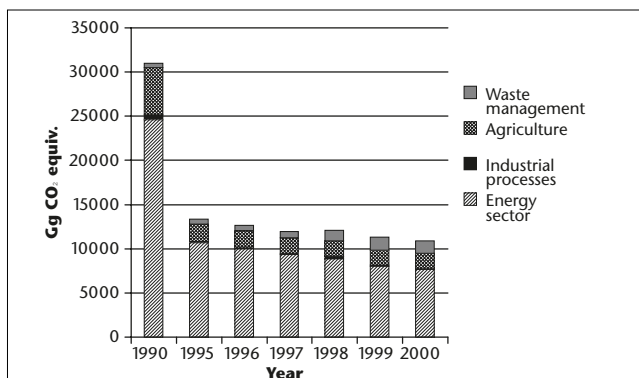


Figure 1. Share of sectors in aggregated GHG emissions in 1990, 1995–2000

GHG Emission Prognosis till 2020

Sector development scenarios were prepared on the basis of a long range economic outlook. In these scenarios separate measures were considered, which are described in the 4th chapter, "Policies and Measures". GHG emission reduction is not the primary objective of

these measures, but rather a side effect of their implementation. As a result, in many cases, it is not possible to evaluate the resultant GHG emission reduction. It is predicted that introduction of the measures will result in a stepwise growth of GHG emission reductions from 438.94 Gg/year in 2005 to 763.62 Gg/year by 2020.

A GHG emission baseline scenario is given for the purposes of comparison. Estimation of GHG emissions in the baseline scenario is based on the assumption that none of the measures described in Section 4.3 are implemented and the share of coal, peat, and oil resources in the consumption structure of energy resources continues to increase.

As can be seen in the GHG emissions forecast (see Figure 1.2), Latvia will be able to fulfill its international commitments per the Kyoto Protocol assuming that planned rates of economic development continue.

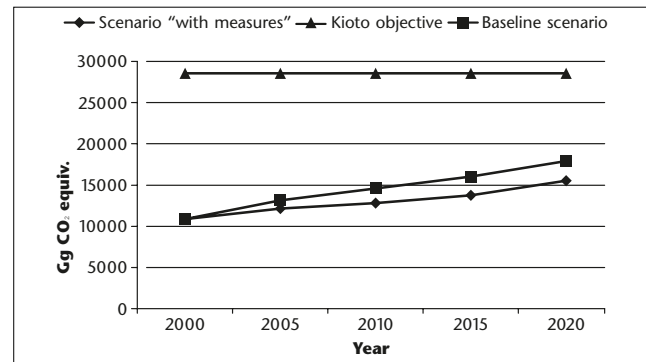


Figure 1.2 Aggregated GHG emissions in 2000–2020, Gg CO₂ equivalent

3 Climate Policy in Latvia

- 1992 Latvia signs the *UN General Convention on Climate Change*.
- 1995 Saeima ratifies the *General Convention on Climate Change*, and this stays in effect
- 1995 Latvia submits the First National Communication to the UN Climate Convention's secretariat³³.
- 1997 Latvia signs the *Kyoto Protocol* and commits to decrease greenhouse effect gas emissions by 2008–2012 to 8% below 1990 levels.
- 1998 Latvia's Environmental Protection and Regional Development Ministry cooperates with other ministries and institutions to develop Latvia's Climate Policy Plan.
- 1998 Latvia submits the Second National Communication to the UN Climate Convention's secretariat.
- 2001 Latvia prepares and submits the Third National Communication to the UN Climate Convention's secretariat.
- 2002 The Cabinet of Ministers approves the Strategic Concept for realization of the Jointly Implementable Projects (2002–2012) as provided in the *Kyoto Protocol*.
- 2002 The Cabinet of Ministers approves draft legislation about the UN General Convention about Climate Changes in ratification of the *Kyoto Protocol*.

Latvia has participated in international climate talks since the signing at the Climate Convention and has fulfilled all official obligations. However, climate matters are not the priority of the Latvian government which has not devised an active long term climate strategy. Latvia's Climate Policy Plan is handled in current and planned legislation relating to various sectors (energy, agricultural, transport, waste treatment, forestry). The impact of legislation on forecast levels of Latvian GHG emissions is examined but new climate specific policies are not being developed. Until now, due to insufficient resources, Latvia has focused more on fulfilling international requests than creating an active climate policy. Many JI projects implemented in Latvia reflect investor nation initiative and interest more than that of Latvia itself.

Although Latvia's emission levels have decreased and there is little question that it is capable of fulfilling its anticipated Kyoto Protocol commitments, the energy-emissions intensively of its economy, as measured by emissions per unit of GDP, significantly exceeds Western European standards (just like other CEE nations). Even if Latvia's emissions do not overstep allowable levels in 2012, it is important for Latvia to not permit rapid increases in emissions. World experience shows that undertaking reduction of emissions *after* economic growth costs more therefore it is advantageous to foster timely reduction in the rate of emissions growth through introduction of cleaner technologies. Thus it is important to participate together with other world nations to increase energy efficiency and decrease emissions.

Latvia's accomplishments and deficiencies in the implementation of climate policies are covered in greater depth in section 4.6.

4 Evaluation: Sector Goals, Primary Achievements and Deficiencies

On February 1–2, 2002 Latvia's NGO representatives gathered for a two day seminar to discuss the Latvian government's progress in realizing climate policy since signing the Climate Convention. The goal of the seminar was to evaluate not only how much Latvia's GHG emissions have decreased but how much policies and projects in other sectors help or hinder sustainable approaches to the climate change problem.

Work groups examined energy, transport, forestry, and agricultural sectors, as these sectors are the primary sources of GHG emissions in Latvia. First, the group participants identified primary goals for halting climate change in each sector. Following this, the participants decided how much has been done on the government and the NGO levels towards achieving these goals. Though no work group in the seminar focused concretely on waste management problems, these are included in the report as an important component in halting climate change.

4.1 Energy

The energy sector is the largest source of GHG emissions in Latvia. In 2000 this sector was responsible for 50% of all emissions. The primary goals for a sustainable and climate friendly energy sector would be:

Goals and indicators

1. Facilitate use of local and renewable energy resources

Latvia has great possibilities for using wind energy, wood (including chips and wood processing waste) and peat, as well as solar heating of collected water in the summer. Latvian geothermal resources and the potential for exploiting sea wave energy should be more thoroughly studied. It is important to back local technology production and exploitation of local resources (boilers and filters) and encouraging public education in this area.

2. Decrease total energy consumption and energy intensity (energy consumption per unit of gross national product): increase energy effectiveness.

In this domain, it is critically important to direct measures and policies towards efficient use of electrical and thermal energy. Energy efficiency measures should be fostered. Greater use should be made of cogeneration in thermal energy production as well as other progressive technologies such as heat pumps. In energy distribution heat conduits need, renovation and boilers need to be remodeled or replaced. Important end-use measures are heating for buildings and housing, use of more efficient lighting and electrical apparatus, and improving industrial efficiency. It is important to educate governmental agencies, enterprises, and residents on more rationally using and conserving energy, — unplugging electrical appliances, etc.

3. Observe environmental protection within all energy domains

The combined energy system puts great pressure on the surrounding environment. Using renewable energy resources, increasing energy efficiency, and reducing consumption will reduce this pressure but it is important to consider environmental protection in a wider context. For example, in using wood as an energy resource it is important to con-

serve biodiversity and not plant extensive monocultures. In sighting small hydroelectric stations, one must consider fish migration, etc.

Primary Achievements and Deficiencies

1. Local and renewable energy resources

+ On the governmental level, over the past 10 years, renewable energy consumption has increased considerably to 28.8% in 2000. The relative amount of wood and wood chips for energy production has greatly increased and many new small HES have been built. This has been largely accomplished as a result of the government policy to pay double tariffs for use of small alternative energy power stations. Two cogeneration stations have also begun operating and the potential for widening use of cogeneration is being examined.

– A broad study has been conducted of the potential for wind energy. Notwithstanding the good possibilities for using wind energy, only a few WES (Wind Energy Stations) have been erected. Immediately prior to lifting the double tariff, 11 small WES permits were granted, though they only have one owner. This circumstance has made wind energy infamous and the government has done nothing to attempt to remove the double tariff on the basis that these 11 WES compose one large wind park. This circumstance could badly hurt public perceptions about alternative and renewable energy.

+ The project to extract energy from solid waste landfills in the form of CH₄ gasses is commendable. Such projects should also be initiated for other landfills.

– A coal power plant is planned to be built in the future. This would increase atmospheric pollution and GHG emissions. It would be more worthwhile to invest resources in introducing cleaner technologies with renewable resources.

2. Energy Consumption, Intensity, and Efficiency

+ In Riga and other local governments, district heating conduits have been repaired, insulated and improved, increasing efficiency.

+/- Energy efficient technology has been introduced in dairies and bakeries. However, these have primarily been pilot projects. Similar measures are necessary in other areas of industry.

+ World Bank financed school insulation projects and other energy efficiency projects in public buildings.

– Only individual pilot projects for insulating residential housing. There is little government support available for increasing energy efficiency in residential housing. Success in this area relies on credit and private financing. However many residents are not able to get credits and must personally finance such improvements.

+ Effective educational campaigns; energy efficiency labeling of household electrical appliances. The NGO project and information campaign, "Latvia's Volunteers for Energy Efficient" supporting use of window insulation.

– Environmental NGOs are not particularly involved in energy matters. Broader public information campaigns are necessary.

3. Environmental Protection

– Though using small HES as an alternative to burning fossil fuels helps to decrease GHG emissions, these can be harmful to fish migration and biological diversity.

+ Several NGOs joined forces to study rivers with the most important fish migration routes to protect them from construction and renovation of small HES.

4.2 Transport

The number of personal transport facilities in Riga has more than doubled since 1990. Emissions from the transport sector are the most rap-

idly growing source of GHG and thus even more attention needs to be focused in this area.

Goals and Indicators

1. Public Transportation and the Priority of Rail

The city center must be primarily for public transport, with a good system of stopping points around the city's periphery and near bridges. Electrical transport should be given priority (tramways, trolleybuses, electrical trains). Passenger train rail routes should be maintained and developed. It is also important to widen the role of trains in transporting freight.

2. Minimizing and Controlling Vehicular Transport

Private passenger and freight transport must decrease to limit environmental pollution and traffic congestion (which results in greater pollution than free flowing traffic). This means that, if possible, the operating condition of vehicles must be controlled. Use of newer and cleaner automobiles needs to be encouraged. Technical inspections need to be stricter. Fuel must also be more environmentally friendly and tariffs and duties for fuel must be structured to encourage less automobile use and more use of public transport.

3. Development of Bicycling and other Methods of Alternative Transport

Bicycle transport must be compatible with other transport methods (allowable to bring bikes on trains, etc.). Good bicycle paths are necessary, as are places to lock and rent bicycles. It is also necessary to educate the public about the benefits of bicycle riding and auto drivers to respect road laws. Along with bicycle transport, walking zones need to be developed and other alternatives to auto transport should be encouraged such as water travel and horse use for tourists, etc.

Primary Achievements and Deficiencies

1. Public Transport

- +/- Riga has begun public transport optimization. Many trams have been remodeled. However, overall in the last 10 years the number and frequency of routes has diminished.
- Passenger train traffic has dramatically decreased. Also freight transport by rail has decreased.

2. Auto Transport

- +/- There are new technical inspection places and stricter rules, resulting in more new autos on roads, yet most cars in Latvia are more than 10 years old.
- The Bioethanol industrial project did not get governmental sponsorship and thus the possibility of this materializing is less realistic. The capacity for constructing such an enterprise and the potential for market development should be evaluated.
- The number of cars and passengers continue to increase. City planners look for solutions in building new bridges and tunnels, but this would not really provide a solution. People's consciousness about air pollution and climate change must be framed in this direction.
- None of Latvia's NGOs works concretely and actively with transport issues.

3. Bicycle Transport and other Methods of Alternative Transportation

- +/- The first bicycle paths have been developed, but much money that would have been better spent on improving comfort and convenience, was spent on expensive red coloring. There exist no other practical alternative methods of transport.
- Overall there is very little emphasis or support for encouraging bicycle transport.
- + The NGO "Bicycle Group" actively works to further the causes of bicyclists, as well as to develop and popularize bicycle tourism.

4.3 Forestry

Forestry is an important aspect of climate policy as trees can process CO₂ and other greenhouse effect gasses. Forestry wastes can also play an important role in the energy sector. The volume of GHG emissions that Latvia's forests absorb has decreased twofold since 1990³⁴.

Goals and Indicators

1. Forestry Residue Usage

The residue from forestry can be used for composting and afterwards as fertilizer, to produce thermal energy, and creating various eco-products. The thermo energy sector should work to increase the respective weight of wood residue usage and also put energy into updating boiler technologies and local technology production.

2. Untapped Agricultural Lands Reforestation, Energetic Forest Planting and Increasing Forest Growth Productivity

New forests can be planted on otherwise unusable land for the purpose of fixing CO₂. This helps to protect forest breadth growth and limit excessive logging.

In areas where there are not enough forest byproducts for producing thermo energy, agriculturally unused land can be used to produce energy from rapidly growing trees. Cutting and burning these trees emits almost as much CO₂ as they fix when growing, therefore this doesn't have a large impact on the atmospheric CO₂ balance. However, it is important to not grow large monoculture stands or use chemicals for growing trees.

3. Protecting Old Growth Forest or Using in Non-Thermo energy Applications

It is unclear at what age trees begin releasing the CO₂ they have absorbed. However, ancient forests have intrinsic worth. They host considerable bio-diversity and are often home to protected species. They should not be cut to meet thermal energy needs in climate protection schemes. CO₂ can be decreased in other ways without cutting down objects of such worth. The old trees that are cut should be used in crafts and construction to preserve their value rather than as fuel to simply be burned.

Primary Achievements and Shortcomings

1. Exploitation of Forestry Byproducts

- + As already stated, the percentage share of wood and wood chips of total heat energy produced in Latvia has increased. Still, there is widespread use of logs for combustion even though unused forestry byproducts are available in the vicinity. Either suitable technology is not available to burn the forestry byproducts or it's not economically advantageous to gather and use them.
- +/- Byproduct eco-technologies (HoFi) are beginning to emerge. However forest owners and consumers need to be educated about their potential and they need to be popularized and financing needs to be made available for their implementation.

2. Reforestation

- +/- A voluntary reforestation program has been announced but, as of yet, no government support has been available. This is anticipated as a subprogram financed by the EU Special Accession Program for Agriculture and Rural Development (SAPARD)

3. Old Growth Conservation

- Deforestation rates have increased. Specific guidelines have not been issued for conserving old forests and trees. Increasing forest productivity is to some extent in contradiction with the goals of biodiversity. Various benefits should be considered in forestry.
- All too often wood is not usefully exploited in furniture and building construction but simply burned as firewood.
- + The NGO World Wildlife Fund is organizing, Forest Days, to

educate private owners about their rights and responsibilities as forest owners. Such events should be expanded more.

4.4 Agriculture

Agriculture currently contributes approximately 15% of Latvia's GHG emissions, primarily from livestock. Currently there are no stated policies for reducing agricultural GHG emissions.

Goals and Indicators

1. Promoting natural organic farms and popularizing good farming practices

Natural or organic farming should be given priority as in such, all waste is put to use for other purposes and thus atmospheric methane gas emission is not increased. In such farming, chemicals which contain GHG are not used. A Sustainable agriculture network should be developed, organic farming courses be made available, and consumers need to be educated about various methods of agriculture and their respective advantages.

2. Agricultural Waste Management

Agricultural waste must be recycled or they can be used to generate energy (biogas and biomass). Eco-technology should be introduced for run-off water clean-up.

3. Financial and subsidy mechanisms for supporting sustainable agriculture and rural development diversification.

Subsidy and development project resources (PHARE and SAPARD) must first support thriving small organic farms as these will be sustainable and environmentally friendly. In allocating resources, it is important to pay attention not only to economic and profitability indicators but more towards environmental protection and sustainability indicators. Large monocultures for livestock management, horticulture and other sectors should be discouraged. Farmers must be given opportunities to farm and receive adequate income with environmentally conserving methods. Non-traditional branches of agriculture should be popularized.

Primary Achievements and Shortcomings

1. Organic Farming and Popularization of Good Practices

- Farm development programs are primarily focused on increasing productivity of dairies and pork farms. This increases the number of livestock and results in greater GHG emission from both livestock and fertilizer use.
- + Green Market. Organic farmers themselves have begun organizing and advertising their products and agricultural methods. Public interest in organically grown products has dramatically grown.
- Minimal governmental support of organic farms and environmentally friendly methods of agriculture. Financing terms directed to benefit large farms. There are major bureaucratic hurdles.

2. Agricultural waste management

- +/- An animal waste management system is planned to satisfy EU directives. This initiative has not begun and is being introduced primarily due to the EU, rather than conviction that it is necessary.
- +/- There are large waste management and environmental housekeeping projects but
- there is not support for small projects or introduction of eco-technologies for waste management to small-scale farms.

3. Subsidies

- + There will be more money for financing agricultural programs through SAPARD resources.
- Organic farmers and small scale farmers are included in SAPARD

programs only on a formal level. In reality, necessary bank/credit policies financing terms and bureaucratic conditions are so involved in these projects that it is not advantageous for small farms to apply. Credit terms should be eased and subsidies provided for small farms. Farmers also are insufficiently educated and informed about these matters.

4.5 Waste management

During the waste decomposition process, methane is disassociated resulting in increased GHG emissions. This problem is especially apparent in older waste storage facilities.

Goals and Indicators

1. Decreasing waste density

The first precondition for a sustainable waste management system is to decrease the amount of waste produced from industry and consumers.

2. Waste separation, acquirement, and processing

Most waste should either be re-used (glass bottles, packaging, compost), or recycled (paper, plastic bottles, etc.), thereby decreasing raw material and energy consumption and the need for waste storage facilities.

3. Proper Use of Waste dumps and storage facilities

Waste which can not be recycled must be stored under suitable sanitary and safe facilities where dangerous materials cannot leach into groundwater. Methane should be gathered and used for energy production. Organically separable waste should be separated from non-organic materials so that they are not stored at the same dump.

Primary Achievements and Shortcomings

1. Decrease in waste

- + Industrial waste has decreased due to the contraction of the industrial sector.
- Household waste has increased due to more packaging and single-use products.

2. Separated waste pick-up and processing

- + The Green Dot has begun to be actively used by the public, producers, and packagers for return and reprocessing of waste.
- There have been significant problems with waste separation and processing in the past ten years with several incompatible initiatives.

3. Proper Use of Waste dumps and Storage Facilities

- + In Liepāja and Gētlīņ a modern waste facility has been developed and GHG are being captured for producing energy.
- Slow movement towards the development of a new waste storage facility.

4.6 Overall Climate Policy

The above-mentioned sector policies impacts on GHG emissions and climate changes must be coordinated with an integrated climate policy that is not disconnected from other sectors but rather would become an irrevocable constituent of all sector policies.

Goals and Indicators

1. Cross-sector institutional coordination

Considering the strong relationship between climate policies and previously mentioned sectors, there must be a permanent coordination board that provides recommendations for developing sector policies and JI project ideas and oversees their execution. It is important to

actively involve the public and NGOs. The responsible ministry must coordinate submission of monitoring reports to the UN Climate Convention's secretariat and authorize and supervise Jointly Implemented Projects, and ensure that other sector policies are in compliance with the goals for preventing climate change.

2. Active Climate Change Mitigation Policy

Introducing active climate policies doesn't mean just complying with the Climate Convention and the Kyoto Protocol. Though Latvia will not have a problem to fulfill its international commitments, it is important to actively work to not increase GHG emissions so that decreasing later will not be necessary. This will also enhance Latvia's visibility in the domain of international environmental policy and positively influence other environmental indicators (air and water pollution).

3. Need for Tough Criteria for Jointly Implemented Projects

The most important previously mentioned sector goals should be directed to be the primary JI project priorities. The JI mechanism is controversial internationally because it does not encourage nations with the highest GHG emission levels to decrease emissions within their own borders but instead enables them to invest money in relatively cheaper projects in other nations. As a result, it is important that the recipient nation (Latvia) achieve a greater decrease, if possible, in emissions and creates opportunities for decreasing pollution that otherwise wouldn't be there. To ensure good projects, it is important to work out strong criteria that help in reaching national sustainable development priorities, if possible greater GHG decreases, increasing environmental quality, and a fair price for decreasing GHG³⁵. When the international emission market begins it will be just as important that Latvia invest acquired resources in sustainable projects. Thus criteria will also need to be developed for using these investment resources. Latvia should have no fear of scaring off investors with tough criteria, but should work with other Eastern European nations so that all can ensure good projects that follow similar criteria.

Primary Achievements and Deficiencies

1. Cross-sector Institutional Coordination

- In the past ten years there has not been good cooperation between ministries and an institutional system was not developed. Until now, all climate policy matters are coordinated by one or two people at the MEPRD Environmental Protection Department by summoning extraordinary inter-ministerial work groups to examine specific issues,
- + Inter-ministerial work groups are meeting ever more frequently to discuss climate issues. Cooperation is improving. A permanent inter-ministerial council is foreseen to develop strategy for JIP. Also the number of workers will be increased in the responsible ministry (most believably MEPRD). The work group also includes an NGO representative.

2. Active Climate Change Mitigation Policy

- Sector policies in the above mentioned sectors are not being developed pursuant to decreasing GHG or mitigating climate change. It is unlikely that this will change as long as Latvia is in compliance with Kyoto Protocol obligations. Therefore it is important to encourage greater understanding of climate change and related problems in all sectors on both an expert and general public level.
- + In April 2002, the Cabinet of Ministers accepted a JI conception which calls for the development of an active JI realization strategy. The strategy foresees national criteria for good JI projects and the active search for investors for such projects.

3. Strict Criteria for Climate Change Projects

- Government criteria were not worked out for Jointly Implementable pilot projects. This was a lost opportunity to set and achieve government priorities.
- + The 27 JI Pilot Projects implemented in Latvia provided good experience for introducing such projects and the parties involved are now more prepared to state their criteria.

+/- Latvia signed the first JI project with the World Bank's Carbon Fund before finalizing criteria. Liepāja's waste management project is a good one, but \$6.38 USD/ ton CO₂ is a comparatively cheap price, considering that the government and local government took large loans for implementing this project and Carbon Fund resources will only pay for a small part.

+ JI criteria will now be developed. These should state Latvia's needs and interests as concretely as possible thereby simplifying the project approval process and ensuring good projects.

5 Conclusions and Recommendations

Overall, Latvia's sector policies in the past ten years have not been directed towards climate protection. The energy sector is the only one that has more or less been active in decreasing emissions through energy efficiency measures. Agricultural emissions have stayed the same while transport and waste management emissions have grown and forest GHG fixing has decreased. Still, in the past year more attention has been directed towards climate policy and Latvia has undertaken ratification of the Kyoto Protocol and chosen to actively pursue JI projects for decreasing GHG. Left undone is to start creating Latvia's economic development and sector policies to forestall future GHG growth.

Sector Policies

1. Integrate GHG stabilization as a basic principle in all sectors. This principle could be incorporated in Latvia's sustainable development strategy.
2. Put greater effort in the energy sector on actively increasing energy efficiency and the use of renewable energy sources. Energy efficiency improvement is especially needed in the housing sector. Little has been done to date and this would best help residents understand its significance.
3. The transport sector is currently most critical for climate policy. The government must rapidly use economic and legal means to state limits for personal transport. Concurrently public transport should be made more attractive, comfortable, and cost effective. Some environmental NGO must rise to the responsibility to increase public understanding of the environmental issues relating to transportation.
4. Fixing GHG must become one of the primary values related to forestry. Governmental policy related to forest conservation and NGO actions for popularizing this idea as part of other forest initiatives can strengthen this value.
5. A fundamental aspect of waste management is that it is in the interests of residents to decrease the volume of waste and to separate waste, however the government and local government must structure processing and management systems for this to be effective.
6. Increasing public awareness about all referenced problems is fundamental as only with public support will the government manage to introduce new legislation and policies which can only be effective with public participation.

Overall climate Policy

1. On the governmental and ministerial level sector sustainable development goals must be combined with climate policy goals, rather than considering climate policy as an unrelated and unimportant topic in Latvia. Also, environmental NGOs should unify on integrating other sector problems with climate issues.
2. Latvia's government should not fear stating strong criteria for Joint Implementation projects.
3. Latvia should coordinate criteria and development of priorities with other CEE nations as all of these nations have similar problems with insufficient capacity. There is strength in unity.

Agriculture and Food Policy

Agriculture is one of the most important branches of human life as it is the base for all food production and supplies the staples for other industrial branches. Agricultural production, in comparison with other economic activities, requires large areas of land and thus has significant impact on environmental quality. 35.8% of Latvia is agriculturally usable.

The origin of the modern environmental protection movement is often considered to be marked by the publishing of Rachael Carson's 1962 book, "Silent Spring". This book spoke of environmental pollution with pesticides and, consequently, the impact of industrialized agriculture on the environment and its resultant non-sustainability.

In 1999 the EU Agricultural Board reached agreement on the following points: Sustainable agriculture ensures a natural base for preserving agricultural productivity and agricultural production's future competitiveness and positive impact on the environment. Farmers' economic, environmental, social, and cultural achievements in service must be recognized and farmers must be paid accordingly. Agriculture has an important role in maintaining employment in rural areas as well as through the supply chain for all food and non-food agricultural products. Agriculture not only produces food and other products but is multifunctional, impacting the environment and farm landscape and having a fundamental role in ensuring the livelihood of farm regions.

Miguel Altieri, founder of agro-ecology, writes that the goals of sustainable agriculture are to ensure the self-sufficiency of food production, protecting the natural resource base, and guaranteeing social equity and economic vitality. In this section we will evaluate how well Latvia's agricultural policy's supports Altieri's stated goals.

1 Sustainable Agricultural Policy

Though sustainable development is mentioned in several places in the primary Latvian Agricultural policy documents (*Agricultural law, 2002, agricultural development program, 1997, agricultural development concept, solving farm problems and farm development concept 1998, Latvia's farm development program*, as well as the 2001 *agricultural report*) the term itself is nowhere defined.

Sustainable agricultural systems are examined only within the guidelines for good agricultural practices in Latvia. Also, those guidelines primarily point to economic factors (how to produce more and higher quality crops, market competitiveness, stable production levels, and economic agility — the ability to react to market changes). However, these fundamental criteria also state that production processes should have a positive relationship with basic natural resources and foster long term balance between economic, ecologic, and social needs. Sustainable agricultural production must also further resolve social problems in rural areas: employment for residents and maintenance and development of infrastructure, cultural environmental, and road and communications networks.

The guidelines state that sustainable agriculture must become an integral component of the government's agricultural policy. Among others, a mandate of agricultural law is to create preconditions for economic stability, environmentally conservative and socially oriented agricultural development, balanced use and conservation of land, water, forest, and other natural resources, development of the rural cultural historical environment, and preservation of rural employment.

Still, in practice, there is noticeable movement towards development of

conventional intensive large-scale farms. These farms have, for example, large complexes for livestock with their significantly greater environmental impact. Heeding conditions of good agricultural practices is not related to governmental supports such as subsidies. As of now, subsidies that have been granted have not considered environmental factors. Agricultural development in the 2002 program are expected to include environmental criteria in subsidy programs, as well as preparing programs for decreasing agriculturally caused pollution.

The SAPARD program's financial support is anticipated for studies of developing support systems for environmentally conservative agricultural methods, completion of environmentally conservative agricultural support mechanisms, support for scientific research of rural biodiversity, popularization of environmentally conservative agricultural, preparation of agro-environmental training methods, and application of these methods in training classes. Though these are valuable goals, this program plan is currently not in effect.

The intensity of agricultural land use and agro-chemical usage has noticeably decreased in the 1990s, facilitating increase in biological diversity. In 2000, 19% of agriculturally usable lands were not used. According to the Ministry of Agriculture proceedings for this statistical data, nearly half of farms do not use agricultural chemicals and almost 80% farm extensively. The lowest usage of chemical fertilizers and pesticides was in 1995 but after this the extent of usage has rapidly increased. Pesticide usage in 2000 showed 100% growth over 1999 levels and 250% over 1995 levels. During this time, grain production showed only slight increase and sector added value has a tendency to decrease. It must be concluded that agrochemical usage does not particularly increase production but is easier to understand to be a product of increasingly greater commercial campaigns (for example agricultural technical sale and leasing without percentage for purchasers of Roundup agro-chemicals). Large farms are not capable or do not want to use environmentally friendly pest fighting methods. As a result with regular usage of pesticides, the amount and density of such pesticides must always be increased

The Intensification of agricultural production is matched by decreased agricultural employment. Currently 14% of Latvia's workforce is involved with agriculture. Since farming is, to a large extent, the only source of livelihood and for many a way of living in the countryside, this trend should never be considered sustainable.

Facilitating increased agricultural productivity causes smaller farms, to be left fallow. Small farms can ensure not only employment but also preservation of traditional farm landscapes. Small farms can also be more easily retooled for environmentally friendly methods of agriculture. These farms have more difficulties with subsidies and attaining credit.

Saving genetic agricultural resources is not ensured. The situation is better in animal husbandry where the preservation of disappearing varieties of genofunds is being encouraged. In 2000 subsidies were given for 95 cows. Preservation of local varieties of cultivated plants has been left to drift and some of those have already disappeared.

Conclusions and Recommendations

What has happened?

Following the Soviet Period agricultural practices shifted from intensive production to extensive production. Guidelines have been worked out for good agricultural practices.

Greatest Problems

The country is not ensuring its own food supply.

Agricultural and farm development policy is being created separately from environmental policy. A tendency is emerging for intensive use of agricultural chemicals and high energy input agriculture. Environmentally conservative agricultural systems are not a priority for government environmental policy.

Recommendations

Environmental indicators must be developed for agricultural activity.

Agricultural subsidies must be integrated with environmental initiatives, which must be oriented towards employment, food supply protection, and the preservation and development of the rural cultural environment. Export subsidies need to be eliminated. Environmental impact assessments should be conducted on subsidies and other agricultural programs.

Environmentally friendly agricultural systems must be popularized and receive governmental support.

Local and traditional plant and animal types must be preserved both in scientific collections and in agricultural production.

Governmental policy must be worked out to limit agricultural chemical use.

Specific taxes must be introduced for pesticides use and resultant collected monies should be used for support of environmentally friendly agriculture. Unethical agrochemical ad campaigns should be banned.

Guidelines of Good Agricultural Practice should be popularized and introduced into practice.

Small and mid-level farms should be encouraged and the number of jobs for agricultural workers should be maintained. Small farms should have access to credit on favorable terms.

The development of a direct market between farmers and consumers should be encouraged.

2 Organic Farming

One form of sustainable agriculture is organic farming — an agricultural method that is based on allowing for natural self regulating processes and increasing the soil's organic activity while not allowing chemically synthesized industrially produced chemical fertilizers and pesticides or genetically modified organisms and usage of such products. A tendency towards sustainability is observable in the integrated design of organic agriculture, humane, environmentally friendly and economically sustainable agricultural systems. The association of Latvia's organic farming organizations has determined these objectives:

- Maximally closed production cycles, rejecting as much as possible use of fertilizers and animal feed purchases and sales.
- Conservative natural resource (energy) usage.
- When possible, supporting the natural needs of domestic animals.
- Conservation of surrounding environment, maintaining diversity of cultivated plants.
- Production of high quality food products.

2.1 Condition Summary

Farmers themselves perceive that organic farming is finally gaining serious consideration. This is attested by the text of the 2001 Agricultural Ministry annual report which states, "Organic agriculture in Latvia is expected to have an upsurge." Latvian farmers learned of

organic and biodynamic agriculture in 1989. In 2001, 219 certified organic farms (2000 had 82) were in production using organic farming methods. The primary sectors are grain, vegetable, dairy, and bee keeping. These farms together account for .2% of the total count of farms and use 10,549 hectares of land. In comparison, Austria, Sweden, and Finland, employ these methods in approximately 10% of agro-businesses. Estonia and Lithuania have approximately 1%.

There is a noticeable contradiction — Latvia boasts of its clean and ecological agricultural production, especially compared to Western nations but, in truth, organic agriculture only accounts for .57% of agriculturally usable land. This is in comparison with 1999 figures of 8% in Switzerland, 2% in Europe as a whole, and 1.4% in Estonia. In the 1990s, this area grew by 25%/year (from 890 thousand hectares in 1993 to 2900 thousand hectares in 1998).

The goal of the European Commission is to farm at least 10% of total farmable land with organic methods by 2006. In the 1999 conference about organic agriculture in Austria, some Eastern European government representatives expected that 10–15% of their nation's farms would be organic by 2010. Latvia has not decided on such goals. The Agricultural Ministry only forecasts that Latvia could have 400 certified or in-transition-to organic farms by 2006.

2.2 National Policy

Latvia does not have specific legislative acts that are related to organic agriculture. Since 1998, Ministry Cabinet rulings, "organic agriculture product cycle and regulations for cycle certification" have been readied but those still have not been accepted even though the Agricultural Law stated that they would be passed by May 2002 and the term has already been moved several times.

The 2002 Agricultural Development Program acknowledges: "In time, when public confidence decreases for genetically modified agricultural products, as well as due to various veterinary diseases, interest will increase in organic agriculture products." The Program anticipates: continuation of support for EU requested inspections and the creation of a governmental control service; continuation of development of organic agriculture production's economic base; talks with the EU about Latvia's inclusion for EU written organic agriculture product exports to Third countries; beginning of two-way communication with separate national responsible institutions about Latvian produced organic agricultural product export. By 2004, an organic agriculture support mechanisms completion is anticipated, organic agricultural scientific research support, encouragement of Latvian produced organic agricultural product exports, development of a system for organic agricultural seed cultivation, and completion of an organic agricultural education and consultation system.

Latvia's food and sustenance implementation plan for 2002–2007 acknowledges that the foundation for secure and healthy sustenance is sustainable, environmentally friendly agriculture. The implementation plan outlines goals for developing and achieving an organic agriculture development strategy, furthering the extent of provided subsidies, facilitating a balanced growth of organic agriculturally produced products, and creating a sustainable environmentally friendly system of agricultural normative acts. Organic agriculture is also mentioned in the National Program for Biodiversity, as a positive example that should be popularized.

2.3 Subsidies

In actuality, organic agriculture itself subsidizes the nation. It is estimated in Great Britain that an organically farmed hectare of land, without agricultural production, per year, provides the society with 105–175 euro worth (primarily nature protection and soil condition improvement), while conventionally farmed hectare lands have a 40 euro loss. Still, in the current system, in which the greatest percentages of environmental costs are not internalized, there is increased necessity of financially supporting farmers that work with organic agriculture. Denmark was the first nation in Europe which, in 1987, introduced a national support program for organic agriculture. In 1996, already all EU nations, with the exception of Luxembourg, support organic agriculture.

Denmark was the first nation in Europe to, in 1987, introduce a national support program for organic agriculture. By 1996, all EU nations, with the exception of Luxembourg, support organic agriculture. Western European and Lithuanian experience shows that, with national support, organic agriculture will flourish.

Latvia's National subsidy program, "About National Support for Supporting European Union Production Quality Requirements", from 2001 provides for subsidies for organic agricultural producers. In 2001 and 2002 100 thousand lats were dedicated to this purpose. This sum is not enough to develop this branch. Compared to this, the neighboring nation of Estonia, was given almost three times more — 288 thousand lats. At the same time, subsidy terms are defined in such a way that often, or even always, they are not attainable or it is not worthwhile to gain them.

In the SAPARD 3's program plan, "Environmental Improvement", 3,717,296 Euro are allocated to support organic agriculture, but this program is still not operational.

Latvia does not provide support for farmers that transition to organic agriculture. Other countries provide greater support for farmers in transition to organic agriculture. This transition time is financially the softest for farmers as production noticeably falls for some time, yet it is not possible to sell production as organic products for increased prices. Furthermore, at this time new agricultural methods must be mastered.

The terms for organic agriculture subsidies do not differ significantly from conventional agriculture. Farms to 10 ha, of which Latvia has 55%, in one crop's field size, are smaller than stated sizes for which subsidies could be secured. For example, fruit growing subsidy terms specify a minimal garden area that is too large for farmers, with their own power, to be able to manage, using organic pest control methods. Land that is left fallow is not included in the area eligible for subsidy. Green fertilization is becoming increasingly important with the increasing popularity of vegetarianism: Farmers who do not raise domestic animals must be ensured of supplies of green fertilizers. Small fields also help to fight against soil erosion and pests. The subsidy law must be re-examined: Large areas can not be demanded as a precondition for receiving subsidies but rather to ensure that organic crops that are produced can be sold. Subsidies should be paid for the results of all planting, not just the saleable harvest.

In granting subsidies, it must be considered whether the cultivated acreage corresponds to the number of farm animals or whether there are too many animals.

2.4 Certification

From 1990 organic agriculture has been certified. At first, only the international biodynamic product goods mark, Demeter, and organic product label OCIA were used as Latvia's Green certificates to mark environmentally friendly products. From 1998, the product label, Latvian Eco-product has been in effect. From 2001, the social organization "Environmental Quality" has certified organic farms according to EU standards. The certificate can be secured after a two year long transition period. National supervisory and control functions are executed by the Food and Veterinary Agency, but a separate organic agriculture control institute should be created.

From 1999 to 2001 a cooperative project with Denmark called the Inspection System for Organic Agricultural Production and Marketing in Latvia was in effect.

Since 2000 no organic agricultural product labeling has been in use when the Demeter certificate cost was increased to the full price which farmers can no longer afford even though there are no such local certificates available.

Organic seed production has so far not been developed in Latvia. A governmental organic agriculture seed cultivation program has been worked out and strengthened. In keeping with this program, governmental non-profit scientific business, the Skriveru Scientific Center was granted resources for soil processing techniques and seeding

machines were acquired for preparing farms for cultivation of local breeds of organic seeds.

Lack of government support is evident but also the low level of knowledge of farmers and potential buyers prevents many Latvian farmers from getting their certification even though, in actuality, the farm may be using organic agricultural methods.

There are various foreign preparations in the list of allowed organic agriculture substances. If local preparations are used, this production can not be exported as organic. To gain EU permission to use local preparations, it is necessary to expend much time and money that farmers currently do not have. Government support is needed to gain permission for use of local preparations. Foreign preparations that are used should also have to go through biological quarantine.

2.5 Product Processing and Distribution

In preparing for EU statement, its guidelines are being adopted that are causing problems for food processing. The greatest troubles for organic farmers are the anticipated disallowance for selling non-pasteurized milk and derivative products. This disallowance is in complete contradiction with the whole idea of organic farming.

Following EU guidelines, bakeries can not use wooden bowls or troughs, but these are fundamentally important for gaining quality taste. Special permissions are required to allow vegetables to be pickled using traditional recipes and technologies. Farmers are demanding that an impartial laboratory be used to assay the dangers of traditional technology. Funding should be provided for this in the budget national budget.

Livestock breeders also face problems with the requirement to slaughter animals in specific slaughterhouses. A slaughterhouse is a stressful environment which decreases the edible value of the meat from such slaughtered animals. Possibly free-range cattle should be more counted as wild animals which are shot instead of slaughtered and their bodies brought to the slaughterhouse.

Organic production requires processing and marketing businesses which do not also serve normal production. For example, it is necessary to have cooperative refrigeration to preserve the production from certified fruit orchards and food distribution cooperatives. Unfortunately, farmers do not have money for creating cooperatives. Government support is most necessary in the beginning for cooperatives formed through unification of small organic farms but it is supplied only later.

2.6 Education and Science

Organic agriculture is a knowledge intensive field. It is important to perform scientific research and ensure practicing farmers receive continuing education.

Rural areas lack educated workers. Only 16% of students in agricultural vocational schools study agriculture. There is lacking coordination between ministry (MA, MEPRDD, and IM) education program development and insurance of ability to receive education.

Supplementary coursework in organic agriculture is offered by three agriculture vocational schools. Latvia's Agricultural University (LAU) offers an optional course in organic farming. Organic agriculture is not part of the standard curriculum.

Organic agriculture should be included in the basic curriculum for all agriculture schools. LAU should prepare organic agriculture specialists who could perform scientific research work and act as consultants for farmers. Currently, such specialists are rare in Latvia. Scientific research must be developed for organic agriculture and the most appropriate methods must be explained that are suited to local conditions.

2.7 Social Organizations

In 1995, the Union of Latvian Organic Agricultural Organizations was

founded. Farmers themselves view that, until now, this organization's work has been primarily formal; education and lecture organization. LOAOU has ensured connections between farmers and the MA as well as popularized organic farming. Currently, the LOAOU is reorganizing and its future plans include the organization of cooperatives. The new president, Dz. Kreišmane is the dean of the LAU agriculture faculty.

In Kurzeme, an organic agriculture union has been organized. The Organic Farmer Green Market was founded as a subsidiary of the Environmental Protection Club. The journal, *Vides Vēstis*, is an EPC and initiative in addition to its organization of the Green Market; it regularly publicizes materials about organic agriculture and is currently considered its most active spokesperson.

Conclusions and Recommendations

What has happened?

The nation and purchasers have become aware of the existence of organic agriculture.

The number of certified organic farms has noticeably increased.

Subsidies have been introduced to promote organic agriculture.

An annual market for organic products has been founded.

Greatest problems

There is no legislation governing organic agriculture.

There is not a clear national strategy and policy for the development of organic agriculture.

Farmers are not supported in the transition period.

The terms of subsidies have not been worked out for supporting the specific requirements of organic agriculture.

The problem of processing and marketing has not been solved for organic agricultural products.

There is no biodynamic agriculture certificate.

Certified organic seed production has not been developed.

EU standards do not allow usage of traditional technologies.

Recommendations

The government must develop an organic agriculture development strategy and state goals for how large of organic land area or number of farms must be reached in a defined timeframe. Legislation must be cleared up.

Agricultural certification must be encouraged. Farmers in transition to organic farming as well as newly formed organic cooperatives need to be supported.

Creation of organic product processing businesses must be promoted.

Both farmers and consumers must be educated on the subject of organic agriculture.

The conditions for granting subsidies must be revised to be applicable to realistic conditions and the needs of organic agriculture.

Scientific studies must be conducted.

Support of local preparations for the protection of organic crops must be included in the roster of Latvian and EU permitted preparations.

Professional education possibilities for agricultural vocational schools and the LAU, as well as continuing education must be ensured and supported.

Alternative methods of distribution of organic products must be encouraged.

3 Genetically Modified Organisms

There are many reasons to doubt the safety of genetically modified (GM) agricultural crops: herbicide resistant vegetation treating the impact of use of broad spectrum herbicides on the environment, pesticide generating vegetation creates a long term impact on beneficial insects and soil processing organisms, pests develop long term immunity, genetic pollution of wild vegetation and non-modified crop vegetation (especially in organic agriculture), foods derived from genetically modified organisms (GMOs) may have long term impact on human and animal health, etc.

Due to these factors, it must be recognized that sustainable agriculture can not be connected with GM vegetation (or animal) cultivation.

There is no evidence of GM plants being cultivated in Latvia, or whether GMOs have been dispersed in the environment. In 2000 the regulation Genetically Modified Organism Usage and Dispersal Conditions was accepted. This states overall requirements for limiting GMO dispersal (for example, microorganism use in laboratories), knowingly dispersed in the environment (in growing fields) and propagation in the market. The goal of the regulation is to limit damage to the environment, human health, animals, biodiversity, and property.

The base for Latvia's regulations is the EU directive 90/220/EEC which, in 2001 was replaced by a stronger 2001/18/EC directive. In the new directive, the necessity to heed the principle of caution, ethical principles, consultation with the public, definite responsibility for environmental damage, the necessity to weigh potential long term consequences, GMO interaction with the environment and with other GMO, to perform monitoring of these consequences, as well as emphasize that genetic modification of human beings is strictly prohibited. However these requirements are not in Latvia's current regulations.

The Law about Environmental Protection states that people and organizations have the right, on all levels in governmental and municipal institutes to acquire information about GMO distribution and usage so as to state their opinion and participate in environmental protection related decision making. Regulations governing GMO usage and distribution do not specify clear requirements to inform the public nor do they provide for public participation in decision making relating to GMOs.

To allow performance of the above mentioned work with GMOs it is necessary to gain permission from the Environmental Protection and Regional Development Ministry or the Welfare Ministry. The permission for GMO distribution in the market is given for seven years. The Genetically Modified Organism Monitoring council, which is situated in the Latvian Food Center and consists of scientists and ministry representatives, examines requests and recommends that the ministry issue or reject permits. The Center's responsibilities include coordination of GMO monitoring, consulting with consumers and controlling agencies, leading damage control efforts in response to accidents and emergencies, and informing the public about GMO circulation.

Latvia is the only Baltic nation not to sign the Cartagena Protocol on Bio-safety to the Convention on Biological Diversity which regulates work with GMOs.

To attempt to prevent GMO field testing, local residents have the potential to propose environmental impact assessment procedures according to the Law about Environmental Impact Assessment. The patent law states that animals, plants, and their species are not patentable but allows for patenting of genetically modified microorganisms.

Latvia's position on the WTO multilateral agricultural negotiations regarding GMOs is to continue to examine biotechnology and the impact of gene engineering on product safety and related risk factors, as well as to consider the possibility of introducing obligatory guidelines about utilization of genetically modified organisms.

Conclusions and Recommendations

What has happened?

Normative acts have been adopted on the circulation of genetically modified organisms.

Greatest problems

MC directives regarding GMOs have not been implemented, and their execution is not controlled. Public information mechanisms are not clear and consultation with the public is not anticipated.

Recommendations

The use and distribution of genetically modified organisms must be regularly controlled. Violators of regulations must be punished.

Revisions are needed to the regulations for genetically modified organism usage and distribution making public inclusion in decision making obligatory and defining mechanisms for public participation. The regulations also need to state responsibility for environmental damages (including unintentional), make obligatory environmental impact and socio economic assessment for GMO distribution in the environment, introducing other requirements as specified in the EU directives 2001/18/EC.

Latvia must accede to the Cartagena Protocol on Biosafety to the Convention on Biological Diversity.

Public discussions must be encouraged about the utility of GMO cultivation, ethics, and other matters. NGOs must be involved in efforts to inform the public.

Farmers, especially those that work with organic agriculture methods, must be ensured that their production will not be polluted with GM plant pollens.

Latvia must express support for nations which have forbidden GM crop cultivation or GM food imports if their actions have resulted in international trade conflicts.

The GMO free zone concept must be popularized. Must look for ways how Latvia together with Lithuania and Estonia and the Baltics could be advertised as a GMO free zone.

A moratorium must be declared on the cultivation of GM plants until issues with environmental pollution, impact on health, economic liability, and labeling are resolved.

4 Food Policy

One of the preconditions for considering agriculture as sustainable is its ability to ensure the nation's residents with quality foods. Currently in Latvia, the total amount of agricultural production does not satisfy demand. In 2000 self-sufficiency of milk products was 96%, buckwheat was 58%, pork 58.9%, fruits 30.4%, honey 57.8%, and vegetables 39% of the national consumption. Furthermore, vegetable production in Latvia continues to decrease. In 2000, total production of vegetables was 18.7 smaller than in 1999. At the same time, a World Health Organization study shows that only 60% of Latvian residents consume the recommended amount of fruits and vegetables.

In 1992, Latvia Accepted the World Nutrition Declaration and the World Nutrition Action Plan. Currently, in Latvia a Food and Nutrition Action Plan for 2002–2007 is being worked out. This is being done, "to define Latvia's course to achieve sustainable agriculture, safe food and assurance of adequate health for residents of all ages and social groups". In the plan it is stated, "Three prerequisites for a healthy society are: high quality food, safe food, and nutritionally complete food which is based on access to local agriculture for each resident." The plan states the necessity to:

- Develop and popularize practical and understandable recommendations for changing life styles, including the choice of foods with

complete nutrition.

- Develop education, and the organization of food services systems for social care establishments according to principles of a healthy diet.
- Promote ways for poor and needy residents, including families with many children, pensioners, people with special needs, etc. to have access to safe foods and a healthy diet based on recommended amounts of nutrients.
- Encourage the development of sustainable organic agriculture.
- Encourage agricultural development according to the principle, "local products for local consumption".

These postulates can only be agreed to and hoped that they will be introduced into life. Currently, 60% of residents mention price as their primary criterion of choice for groceries. This often means purchase of imported products of low quality and poor nutrient content.

In the 1990s, large changes occurred in meals provided to students. On the one hand, students were given the possibility to choose. On the other hand, often these choices were narrowed to include only low value groceries: pastries, sodas, etc. School must be the place where students gain theoretical and practical knowledge about a healthy diet and its environmental and social impact. Affirmative action is necessary to change unhealthy student eating habits. For example, access to, and advertising for low quality and unhealthy groceries must be limited. In 2000, Latvia had 100 schools in the Health Promotion School Web which address this problem. Still, governmental level work is necessary for this issue.

4.1 Organic Agricultural Products

In 2000, the quantity of certified organic agricultural production increased two-fold compared to 1999. Still, the demand for organically produced products is not currently being met.

There are some supermarkets where organic products can be purchased: honey, sprouts, and herbal tea. Organic products can also be purchased in some other stores. In Riga, there is the "Ecostore" in which organic products can be purchased, but, for the most part the store provides Eastern goods from which only the smallest portions are organically produced. Farmers also complain that the store is not interested in local goods with low prices. Food for several restaurants is prepared with local organic products. Overall, still, finding organic agricultural products is not easy for the average purchaser while farmers have difficulty selling their organic production.

In fall 2001 the Environmental Protection Club's journal, "Vides Vēstis", with the Riga City Council, sponsored the organization of the Green Market eight times in Riga's Center. This Green Market provides a place for farmers to sell their organic and biodynamic products. The market gained wide acceptance from the purchaser's side. In 2002 the Green Market is expected to be established as an annual market tradition. The Farmers Union also supports the creation of a permanent place for selling organic products in the Riga Central Market. Some supermarkets want to create special shelves for organic products. Creation of similar markets is being considered in Cēsis, Madona, Liepāja and Daugavpils. "Vides Vēstis" has also taken on a mediation role between farmers and purchasers that can, once per week, receive bread and other organic products. Several times a subscription type service has been attempted with direct communication between producers and consumers, but these have not proved successful.

All interested groups recognize that the lack of organic product processing businesses and distribution systems are among the greatest problems.

4.2 Genetically Modified Foods

In Latvia, groceries which are produced from GMOs must be labeled as such. The product label ingredients list has written behind the ingre-

dients name, in parentheses, or on a note behind the ingredient list that it is, “produced from genetically modified...”, specifying the specific product name. If the food product does not provide an ingredient list, the label must nevertheless state that that it was produced from GM products.

Grocery products do not have to be specifically marked if they do not have GM protein or DNS or if none of the ingredients are comprised of more than 1% GM materials or if the GM products are there as a result of chance. In such a circumstance, the producer, packager, or importer responsible for the goods, abiding by labeling requirements, must demonstrate that they have carried out measures to prevent GMO introduction in the food products that they sell. GM grocery spices and flavor enhancers must demonstrate the specific factors for how these differ from traditional flavorings. The presence of non-common materials or those that can impact health or might cause ethical objection must also be shown. Regulations for Genetically Modified Organism usage and Distribution” state those products whose content can be, but are not always GMO, as well as products in which there could be GMOs but it is not proven, must be labeled stating, “this product may contain genetically modified organisms”.

MC regulations governing GMO turnover went into effect on October 15 2000. Licenses for sale of such products had to be received by July 1 2001. By May 2002, the licensing board had not received a single request and there were no products in the market where it would be shown that they might have GM ingredients. Consequently selling, any grocery products, which have GM ingredients is illegal. It is noteworthy that inspections conducted by other European countries give definite evidence of the existence of such GM products in their distribution systems. The Latvian Food Center has a laboratory available in which it is possible to determine the presence of GM ingredients in products, but due to insufficient financial resources such analyses are not conducted. GM food issues have also not been referred to the National Consumer Rights Protection Center for the same reason.

In 2001, it was possible to buy local rape-seed oil, soy meat substitute, and possibly other products labeled as GMO free. According to SKDS (“Sociāli korelatīvo datu sistēmas” a Latvian statistical research firm) data, in 2000, 72% of surveyed Latvian residents did not agree with the assertion that marketing of GM fruits and vegetables must be allowed.

Conclusions and Recommendations

What has happened?

GM food labeling regulations have been accepted.

A Food and Nutrition Action Plan is being worked out.

Greatest problems:

The nation has not secured a self-sufficient food supply.

Unhealthy and low quality foods are increasingly consumed especially by children.

The existing GM food labeling regulations are not complete and their adherence is not controlled. GM grocery products are not labeled as such.

Recommendations:

Foods, which do not contain genetically modified ingredients and pesticide residue — among which are those produced with organic agriculture methods — must be available for all social sectors.

National and local government dependent institutions, especially schools and hospitals, must have food prepared primarily from local products with preference given to organic agricultural products. Vegetarian and vegan options should always be provided.

It must be ensured that all grade school children eat school lunches.

Advertising directed towards children that promotes unhealthy and

low quality foods (junk food) and the selling of such products in schools must be prohibited.

Alcohol and cigarette ad-campaigns in which purchasers are promised a reward, such as beer drinking competitions and similar concepts must be prohibited

Organic agriculture products must be freed of VAT.

Local produced groceries, fruits, and vegetables must be popularized as part of the diet.

Adherence to regulations for genetically modified organism use and distribution must be regularly monitored and those overstepping the regulations must be punished.

GM animal feeds as well as meats, and dairy products that are produced must be labeled accordingly.

Graphic labeling needs to be developed of GM ingredients found in groceries (similar to, for example, environmental labeling). International GM food labeling standards should be encouraged.

Abbreviations

UN — United Nations

CEE — Central and Eastern Europe

NRT — Natural Resource Tax

EPT — Environmental Protection Tax

EEC — European Economic Community

EM — Economic Ministry

EU — European Union

FM — Finance Ministry

HES — Hydroelectric Station

ISPA — Instrument for Structural Policies for Pre-accession

EIA — Environmental Impact Assessment

SC — Sustainable Consumption

SCPM — Sustainable Consumption and Production Model

JI — Joint Implementation

JIPP — Joint Implementation Pilot Project

LDA — Latvian Development Agency

LEA — Latvian Environmental Agency

NETCO — Northern Environmental Technology Corporation

OECD — Organization for Economic Co-operation and Development

SAPARD — Special Assistance Program for Agriculture and Rural Development

SEZ — Special Economic Zone

TES — Thermo-Electric Station

NGO — Non Governmental Organizations

MC — Minister Cabinet

GHG — Greenhouse Effect Gasses

UNEP — United Nations Environmental Program

EPC — Environmental Protection Club

EPF — Environmental Protection Fund

EMS — Environmental Management System

MEPRD — Ministry of Environmental Protection and Regional Development

WBCSD — World Business Council for Sustainable Development

WRI — World Resource Institute

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