Multi-Stakeholder Communication and Coordination -- Cases in point from North West Russia

by

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Declaration

I declare that this Master of Sciences thesis work is my own work and it has not been submitted in any form for another degree or diploma at any university or other institute of tertiary education. The findings, interpretations, and conclusions expressed within this thesis work are entirely those of the author and should not be attributed in any manner to the Department of Urban and Rural Development/Swedish University of Agricultural Sciences, nor as official expressions of the Unit of Environmental Communication.

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Abstract

For the last fifteen years the Swedish International Development Cooperation Agency (SIDA) provided financial support to environment and development initiatives in the Baltic Sea region (BSR). One of these initiatives, the "Agriculture and Environment in Leningrad Oblast" program (AELO), was pointed out as successful in establishing a multi-stakeholder pilot activity in North West Russia (NWR).

This thesis work is taking the reader on a research enquiry through the second phase of the AELO program, named "Agriculture, Environment and Ecosystem Health in North West Russia" (AEEHLO), exploring the interactions between multi-stakeholder processes with communication and coordination, based on the concept of "Multi-stakeholder platform" (MSP) as a "space for change". For this, Soft System Methodology (SSM) methods and techniques are used to appraise the second phase program's communication and coordination imprints and its MSP.

The quest for program communication and coordination is interesting because of the complexity of the human interactions involved and because of the program's structural uncertainty as it is in a constant development flux. The evidence material for this research is based on secondary data, focus group discussions, oral interviews, a multi-stakeholder program meeting, and all this wrapped in the SSM enquiry process used for navigation. As emergent of this work is the hope to bring home contribution to the knowledge area of multi-stakeholder processes and platforms governed by communication, negotiation, and coordination.

The results of the research show that the success of the AEEHLO program as a multi-stakeholder platform depends on the ability of its stakeholders, from the authority and non-authority side, to collaborate in mutual sharing and understanding, and in collaborative definition of interrelated issues. Another result is that AEEHLO as a program can be viewed as a "space for change" in which coordination and collaboration between the stakeholders generate a spirit for commitment to take actions, and as a try to resolve pressing environmental and social issues by fostering an atmosphere of constructive and focused manner of work.

Communication and coordination in the context of the AEEHLO program should be considered in broad terms. In this regard, coordination, to which communication is linked, means coordinated use of resources such as information, and financial or professional experience. The research findings also show that communication and coordination at the AEEHLO program act as a mechanism for bringing Swedish and Russian stakeholders together to work on environmental and rural development issues, issues which cannot be single-handed by one of the stakeholders only.

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1. Introduction

1.1 Background

For nearly fifteen years the Swedish International Development Cooperation Agency (SIDA) has provided financial support to agri-environment and rural development initiatives in the Baltic Sea region (BSR)[1]. An important point of entry for such SIDA-funded initiatives is the consideration that agriculture is a major source of land-based pollution which needs to be addressed in order to meet the ecological objectives of the Helsinki Commission (HELCOM) Baltic Sea Action Plan[2]. Additional reasoning is the trend of climate change and increasing demand for food and bioenergy as causing intensification of agricultural activities. In North West Russia (NWR), for example, where the focus of this research rests, following the total collapse of agriculture during the 1990s, now there is again an upward trend towards increase in agricultural expansion and production. Such overall intensification of human activity in the BSR puts a constantly increasing pressure on the Baltic Sea ecosystems (Agriculture, Environment and Ecosystem Health in North West Russia. 2008).

The "Agriculture and Environment in Leningrad Oblast" (AELO) program in NWR is one example of a SIDA-funded initiative to smoothen the impact of human activity in the BSR, coordinated by the Swedish University of Agricultural Sciences (SLU). This initiative spanned from November 2003 to April 2005 and was restricted to the NWR Leningrad oblast (LO) and to the adjacent region of Olonets in the Republic of Karelia. The program philosophy was guided by the notion that the output of local agricultural practice contributes to eutrophication and disruption of ecosystems in the Baltic Sea, especially in the Gulf of Finland. Such understanding is thought to be evidenced by the leaching of nutrients and the use of chemical pesticides by agriculture which pollute NWR in-land and Baltic Sea waters. In attempt to improve control of pollution from agriculture and to improve sustainability the AELO program was aimed to establish a multi-stakeholder pilot activity acting as a basis for developing an agri-environment cooperative initiative with NWR (Agriculture and environment in Leningrad Oblast. 2003). Following a project mid-term evaluation in 2005 the AELO program was marked as successful in fulfilling its intermediate objective and as emergent of the initiative was a solid body of knowledge, operational partnerships and extensive networks capable of enabling a project second phase (Agri-environmental project in Leningrad Oblast. 2006). Next, in 2006, SIDA and SLU decided to merge together already existing activities in NWR. This led to the backing-up of an agro-environment and rural development program titled "Agriculture, Environment and Ecosystem Health in North West Russia"

[1] In this context the Baltic Sea region stands for the countries that have access to the Baltic Sea: Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, North West Russia, and Sweden

[2] This is an ambitious action plan drafted by HELCOM to rescue the Baltic Sea marine environment

(AEEHLO). This 2006 - 2008 program[3] comes as the second phase of the AELO project. The "new" program again covers activities in LO and in the neighbouring region of Olonets in the Republic of Karelia through six projects. Central for this program is the coordination of activities between the six projects and the work of the local authorities and international partners. Additionally the six projects are integrated with the "Baltic Sea Regional Project" program (BSRP), managed by HELCOM[4].

This thesis work is taking the reader on a research enquiry through the second phase of the AELO program, AEEHLO, exploring the interactions between multi-stakeholder processes with communication and coordination, based on the concept of "Multi-stakeholder platform" (MSP) as a "space for change". For this, Soft System Methodology (SSM) methods and techniques are used to appraise the second phase program's communication and coordination imprints and its MSP.

2. Literature review

2.1 Project management approaches in the international development realm

The international development effort is less reflected by project management literature (Anton H. & Kovac J. 2000). This effort is put in an international development realm which is complex and based on local contexts. In this realm, the goals of the international development projects are likely to deal with social and economic development issues. This realm has three main characteristics: 1 there are multiple stakeholders with a range of objectives, 2 the environment is complex and problems are "messy", and 3, there are multiple sources of finance and resources, leading to powerful external stakeholders, in particular, suppliers of resources. In this realm, the development projects can be characterized as "aid funded, and donor mediated" (Franks T. 2007). The performance measurement of such projects is a demanding task because of the involved interrelated issues and perspectives of the donors and stakeholders alike. This is in contrast with the "hard systems thinking" applied in engineering or construction projects, which focus on strictly defined goals and the stakeholders' perspectives are usually not taken into consideration (Moriarty G. 2008). Secondly, the international development projects are politically charged because of the involved social, ecological and economic impacts. It is indeed worth noting that the international development projects take a range of forms, from large "hard systems thinking" physical construction works, through institutional change projects, to small-scale community development initiatives, often in combination (Franks T. 2007). This diverse nature of projects demands accountability from

[3]A decision was taken by SIDA to extend the project activities of the program till June 2009
[4] The GEF-BSRP is part of an international effort to combat the environmental degradation of the Baltic Sea

the implementing organizations which need to be transformed into "learning organizations" to fulfil such a demand (Britton B. 1998). Then, there are demanding local contexts of the host countries under which such projects have to be implemented (Blunt P. & Jones M. 1992). The complexity of the local contexts is also demanding as there are cultural differences between local stakeholders and project implementers, contesting objectives of the project stakeholders, specific socio-political environments, etc.

Three main ways can be identified by which development projects are delivered. A common approach is to deliver support by using host government's agencies under a bilateral agreement with the international donor. Another approach is to use an "implementing partner" of the international donor, and finally, a third approach is to use a contracted professional organization (Smillie I. 1995). As already mentioned, there is a trend of increasing volume of international development support and the response to this increase are new demands put forward at the international development projects (*Ibid.)*. Such demands can be summarized as an increasing level of project accountability and performance requested by the program stakeholders (Raynard P. 2000). To reflect on such demands, new, more sophisticated project management and monitoring & evaluation systems need to be developed and implemented (Morgan P. 1999). In this regard, project accountability, promoted through transparency (Raynard P. 2000) and based on participation, communication and information dissemination, can be described as "the means by which individuals and organizations report to a recognized authority, or authorities, and are held responsible for their actions" (Hulme & Edwards. 1995.). On the other hand, project performance, promoted by responsive project management decision-making (Dickinson T., Saunders I., Shaw D. 1997) based on informed management decisions and coordination, can be viewed as a way to involve "balancing demands for efficiency and effectiveness" (Crawford P. 2001 (unpublished)).

Finally, it is important to consider the nature of the project approaches used in international development. In this regard, the international development effort exhibits in extreme form an imbalance of power between the sources of finance (the international financing institutions) and the recipients (national government, agencies, "beneficiaries") which have strongly influenced the way approaches to project management have been developed. Many of these approaches are by no means perfect and they are being continually refined. In addition they are often applied more in theory than in practice. Such project approach development efforts run from conceptualising the project and go through such techniques as problem-tree analysis, the logical framework, the participatory appraisal, etc. (Franks T. 2007).

It can be summarized that to operationalize project approaches in the international development realm, it is necessary that they enable the development of project structures which are flexible, supported by communication and coordination, and appropriate to the local context. Such project approaches have to support a space which to empower the involved stakeholders to come together, express their concerns and as a result to come up with a common action strategy. These project approaches also need to demonstrate that they respond to the demands for accountability and performance, and that they enable organizational learning. For this alternative project approaches like the participatory monitoring & evaluation approaches are needed.

2.2 Command/control project approach

Designing and managing poverty alleviation projects in Africa, for example, have undergone a long road. Since Independence, African governments invested in development projects to improve the social and economic conditions of their populations. Such projects were mostly financed by external assistance, and planned, implemented and evaluated within the conventional "Project cycle" framework based on the command/control project approach (Baum W. C. & Tolbert S. M. 1985). Under this approach, projects are "time bound" in relation to precise starting and ending dates, focus is put on the project implementation rather than on its operation, there are precise indicators or project's inputs and outputs, and budgets that have precisely defined and controlled line-items. Additionally, extensive use tends to be made of foreign consultants, and many such projects are planned with central government agencies in the capital, rather than with beneficiaries in the field. The principle advantage of this command/control project approach is that it provides a logical framework and sequence within which data can be compiled and analyzed, investment priorities established, and project alternatives and sector-policy issues devised. The principle limitation of this approach is caused by the contrasting nature and context of the poverty alleviation projects:

- Poverty projects tend to be small;
- As reaching the target groups is a major concern, social analysis will have equal or greater importance than conventional economic analysis;
- These projects involve changing human behavior, based on knowledge about their social and psychological needs;
- Due to the innovative and experimental nature of many projects, a flexible approach is often needed to allow the precise objectives of the project to evolve over time. Therefore it is not justified to define the project's objectives and implementation schedule at the beginning;

- The success of many projects depends upon a high degree of community acceptance, as beneficiaries will be required to commit time and resources, take risks, and make changes in the organization of their economic or social activities. And a participatory approach is required to actively involve beneficiaries in project planning and implementation;
- There is an emphasis on local capacity building and community responsibility, which requires a participatory approach, which requires greater flexibility with respect to the project implementation schedule and project finances (Bamberger M., Yahie A. M., Matovu G. 1996).

2.3 Participatory project management approach

The development paradigms of the 1960s and 1970s were derived from the legacy of colonial rule, especially from the planning systems of the late 1930s and the post-World War Two period. These paradigms were top-down or command/control-based in which development was something governments did for or to people, and the language was military-bureaucratic, applying terms like "objectives", "targets", "strategies", "capability", etc. There was little stakeholder involvement of those undergoing development, a fact which can be attributed as one of the causes of the difficulties of effort for development to improve the lives in the "developing" world. The participatory development movement arose as a reaction to this realization (Chamers R. & Conway G. 1992).

In a practical context, in Africa, there has been recognition that successful poverty alleviation projects require a reorientation of the conventional command/control approach with more emphasis given to an open-ended “learning process” approach. Under such a “learning process” or “participatory” approach, beneficiaries and program management alike share resources and knowledge, while building the institutional capacity which allows the poor to analyse their needs, initiate their own efforts and stress on their demands. The essential demands put on the participatory development projects include:

- Focus on the disadvantaged in rural areas;
- A basic needs orientation;
- The creation of awareness among the poor;
- Implementation of small-scale poverty projects;
- Mobilization of local resources such as land, labor, ideas and experience, plus indigenous knowledge of specific local conditions;
- Capacity building and strengthening for local institutions to establish an effective local-level “delivery” system.

It is widely accepted now that the participatory approach shall complement rather than seek to replace the conventional command/control development project approach. The conventional approach is likely to continue to play an important role in those activities that span over large areas (e.g. projects dealing with physical, social, and economic infrastructures, environmental protection, soil and water conservation, irrigation and sanitation, and national level administration), or that require a high degree of specialization (e.g. higher education).

The participatory approach provides a number of advantages. For example, this approach helps the creation of an effective local-level "receiving" system that makes it easier to work with rural and urban populations. It encourages cost-effectiveness and efficiency in project design and implementation, owing to contributions made by participants of their own ideas, labor, knowledge, etc. Then, it promotes a more equitable distribution of benefits. The participatory approach enhances project sustainability and promotes self-reliance, which increases community control over resources and community engagement in the planning and implementation of broader development activities. Finally, stakeholders at the local level acquire a direct and active stake in the organized self-development of their social and economic domains, which leads to a social and political stability. (Bamberger M., Yahie A. M., Matovu G. 1996).

It can be summarized that the participatory approach attempts to deal with issues of ownership, communication and sharing of knowledge, and contesting and consensus seeking between stakeholders as to how, by whom, and against what criteria a project is to be measured. The participatory approach focuses on the process of collective enquiry, analysis and reflection, and creates the conditions for shared learning that are linked forward into action and future planning. As the participatory approach focuses on organisational and institutional capacity building it provides a basis for sustainable development beyond the life of a particular project initiative. The participatory approach also recognises the diversity and plurality of views, and values local knowledge alongside other forms of scientific and technical knowledge found in the command/control approach. In contrast to the command/control approach the participatory approach is more likely to capture the complexity and richness of project effects through the use of creative, generative tools and techniques than standardised techniques of assessment. As already presented, the participatory approach values local knowledge, especially through the use of non-standardised measures, and challenges the conventional data collection and analysis. In this regard the conventional concepts of validity and reliability of data are being questioned as methods are combined in new ways and experts interact more with local people. In fact, the adoption of participatory methods requires the acceptance of new, less rigid standards of credibility of information, and an appreciation of when information is "good

enough" for the task at hand. The language of participation and the participatory approach obscure an ambiguity about the nature of participation and its different forms. The extent to which it is achieved in practice remains a contested issue. Scaling up processes, especially in cases where participatory monitoring & evaluation is being introduced into projects that themselves are not participatory, is a challenge. Experience suggests that it is best to start small and create opportunities for participatory approaches to be tested before they are introduced more widely. This can be helped by having a "high level champion" who can create the space for experimentation. Participatory evaluation & monitoring is also not an easy option. Opening up assessment to a wider range of stakeholders may create or expose conflicts. It requires resources of time, human resources and finances. A participatory process requires greater coordination, administrative effort and long term commitment. Evaluators or investigators need skills of facilitation, negotiation and conflict resolution, as well as a range of personal qualities, attitudes and behaviors appropriate to evaluation as an empowering process (Franks T. 2007).

2.4 The Logical Framework Approach: Linking the command/control and participatory project approaches

The Logical Framework approach (LFA) has been extensively used by international development agencies as a project planning and appraisal tool for nearly 40 years (Cracknell B. 2000). The approach was developed in 1969 by the US Agency for International Development to support project design and appraisal (*Ibid.*). This approach rests on Peter Drucker's concept of "management by objectives" (AusAID. 2000). The outcome of using the LFA is the production of a 5 x 4 matrix known as "logframe". In itself, the logframe is a tool for analyses and communication of project strategies. The vertical axis of the matrix presents a hierarchy of preconditions or assumptions based on the cause-and-effect logic, something known as the project's "vertical logic". The horizontal axis of the matrix defines the means by which the project's progress can be verified and is known as the project's "horizontal logic".

The LFA approach assumes that certain key questions are brought up and that certain weak points are considered and analyzed. The purpose of this is to ensure that decision-makers are provided with accurate and relevant information. In other words, the LFA approach supports a systematic and logical analysis of project interrelated elements. Furthermore, the LFA approach supports the project design by considering the linkages between the project's elements and external processes. When LFA is used as a monitoring and analysis tool, it can provide a view of the effects of the project on external, or environmental, processes. When expressed as a

project planning matrix, LFA can also be viewed as a vehicle for communication and creation of a common understanding between project stakeholders and project decision-makers.

On the other hand, the LFA approach is often criticized for being too rigid. The approach is also criticized for treating people as targets and rather than subjects, including:

- focusing too much on problems rather than on opportunities and visions;
- being used too rigidly, leading people into a command/control approach to project design;
- limited attention to problems of uncertainty where a learning or participatory approach to project design and management is required; and,
- a tendency for poorly thought-through sets of activities and objectives, giving the appearance of a logical framework when in fact the key elements of the analytical process have been skipped. (Wageningen University's MSP portal).

Despite these criticisms and provided due attention is given to the participation of stakeholders and it is not used too rigidly, the LFA approach remains a very valuable tool for project planning, management, and evaluation. In this regard, various groups and facilitators have integrated an extensive range of participatory planning methodologies and tools with the basic LFA framework and sophisticated planning workshops have been developed (*Ibid.)*.

For instance, as a response to such criticisms participatory points of consideration are being integrated into the LFA approach. As Figure 1 shows, in step 1 Situational Analysis of the LFA, Participation analysis, participatory considerations can be built in by asking who are the stakeholders, what stakes do they have and how do they interact with other stakeholders. In step 2 of the Situational Analysis, Problem analysis, it is possible to ask whose problems count, what are the causes and effects, etc. In step 3 of the Situational Analysis, Objectives analysis, participatory considerations such as whose objectives or aspirations are taken into account, what are they, what needs to be done, can be considered. Then in step 4, Alternative Analysis, it is possible to ask whose options and what, how benefits are shared and by whom, etc. Similar participatory concerns can be followed in the LFA's project planning matrix too.

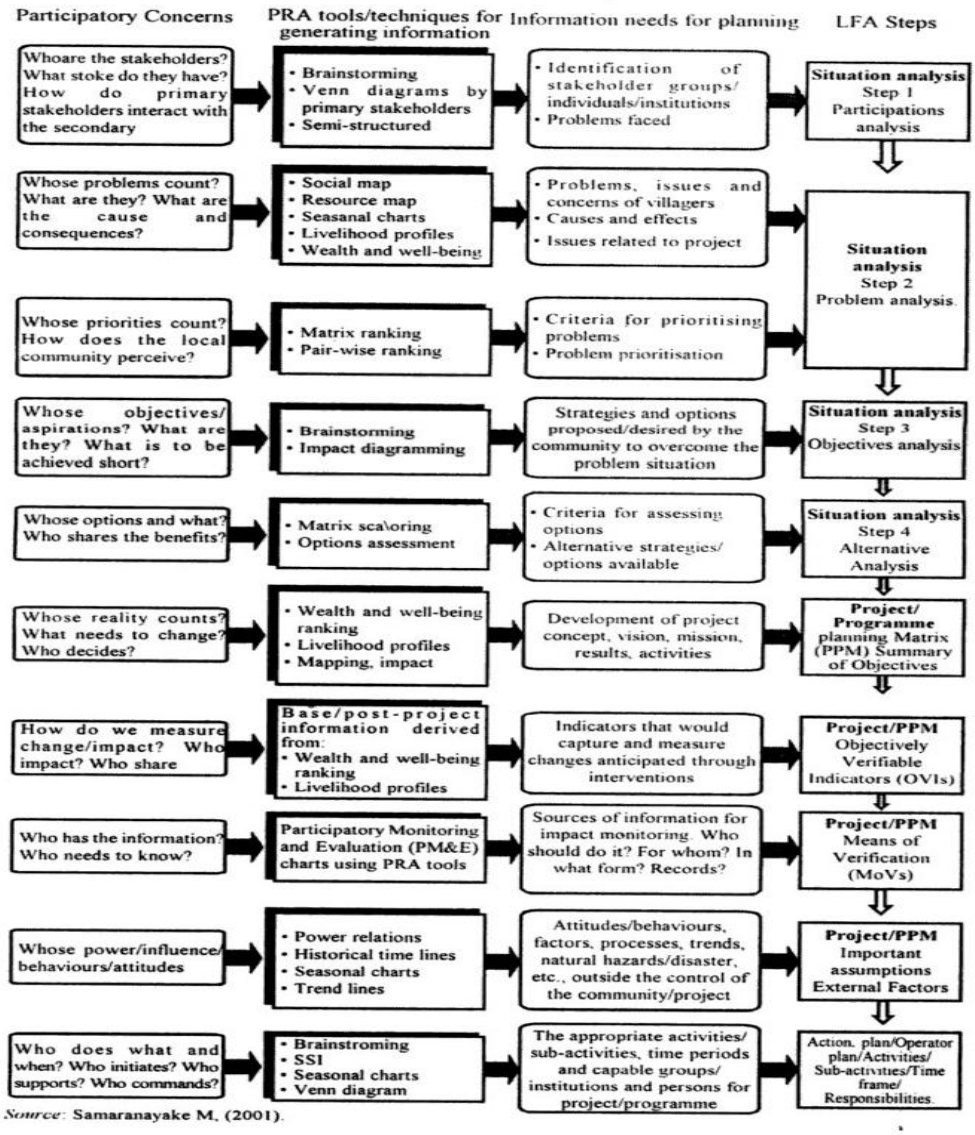

Figure 1 LFA linked with participatory concerns

2.5 Alternative participatory approaches driven by communication and coordination

The recognition that development-based participatory project management approaches are needed for resource management rests on the assumption that development requires a more flexible and evolving process to planning for change, based on communication and coordination. It is the communication and coordination component which establishes the bridge between the institutions at the policy level with the local level where stakeholders are empowered and enabled to act. The implication for the project development effort itself is that detailed action descriptions cannot be used as an effective vehicle to move a project ahead. To move a project ahead it is recognized that the action descriptions vehicle needs to be replaced with a vehicle driven by participatory-based partnerships and cooperation which identify and implement its own, not externally imposed, project goals. In fact the result of involving the

partnerships and cooperation vehicle makes the project responsive and flexible to environmental changes and at the same this posse a challenge to develop participatory and systems-based monitoring & evaluation processes based on communication and coordination to allow for ongoing learning, correction, and adjustment.

The question that needs to be answered is how to establish effective collaborative project management approaches? The answer to this question rests on the assumption that when developing and implementing a project a due attention shall be given to both the project tasks and to the project processes, which if combined should meet the needs of local stakeholders. To this end, tasks can be defined as the activities that need to be carried in order to achieve the project goals. And the project processes is about how project stakeholders work and maintain relations needed to fulfil the project tasks, as part of achieving the project goals. In this sense the achievement of the project goals can be viewed as a two-fold issue in which both the project tasks and the project processes need to be merged together, that is, the tasks and processes are intervolved.

As an idea the project monitoring task is concerned with collecting data to answer questions, and project evaluation is about using the collected data. It is namely the project evaluation, viewed as a realm, in which learning occurs, questions get answered, recommendations made, and improvements suggested. In this line, project monitoring should be viewed as the anchor or the foundation on which project evaluation can rest.

According to Marisol Estrella in her book *Learning from Change: Issues and experiences in participatory monitoring and evaluation* the participatory evaluation methodology emphasizes on who is measuring and on who benefits from learning about these changes. In developing such a methodology clarifications of participants' expectations and agreement between them on methods, responsibilities and timing is a key factor. In the participatory approach mode the stakeholders should be involved in all the phases of the project. Concepts like "participation, learning, flexibility and negotiation radically affect the design and implementation of monitoring & evaluation by adding layers of complexity".

This issue is further reflected by Irene Guijt, Marisol Estrella, and John Gaventa in their book *Learning from Change: Issues and Experiences in Participatory Monitoring and Evaluation*. In it, they argue that any form of organizational effort needs to know how effective their efforts have been, and who should make such judgements, and based on what? To answer these questions they propose a participatory monitoring and evaluation (PM&E) approach which involves local people, development agencies, and policy makers deciding together how progress should be measured, and results acted upon. They also argue that this stakeholders

bringing-together is a demanding task which should rest on communication, negotiation, and mutual trust.

In his paper *Towards improving the role of evaluation within natural resource management R&D programmes: The case for learning by doing* Will Allen elaborates on an evaluation process which rests on participatory and systems-based evaluative processes to allow for ongoing learning, correction, and adjustment by all parties concerned.

Finally, in his paper *Action evaluation: Integrating evaluation into the intervention process* Jay Rothman comes forward with a methodological approach for defining, promoting and evaluating the success of conflict resolution initiatives (Participatory Evaluation and Monitoring. No date).

2.6 The multi-stakeholder process approach and the "Multi-stakeholder platform" concept

According to Tim Evans, Assistant Director General of the World Health Organization (Evans. 2009), there is a trend of change in the nature of negotiations concerning international development issues. Evans argues about the importance of "ensuring an inclusive process that engages the views of diverse stakeholders. The era of "command and control" leadership … is increasingly a relic of the last century – a new era of "steer and negotiate" leadership is upon us." Such a leadership style or multi-stakeholder management approach revolving around a "steer and negotiate" process enables shared learning and collaborative action among all stakeholders. In fact, it involves stakeholders to dialogue about and agree on directions for development and is the kind of innovative approach that is needed to deal with the demands of increasingly complex development issues.

Minu Hemmanti and her colleagues (Hemmanti, et al. 2002) note that among civil society actors "there is a widening split between those who seek to engage with other stakeholders and those who define their role outside the conference room." Civil society representatives often have concerns over co-option, of losing independence, and being in a situation where the political and economic power of other participants in a multi-stakeholder process might divide civil society or dilute the strength of its voice and its advocacy for change. However, as Hemmanti argues, an essential part of any multi-stakeholder process is dialogue, and that dialogue leads to real opportunities for change. "Learning to engage in dialogue means to move from hearing to listening. It means taking one step beyond fighting, beyond adversarial, conflict-based interaction… Dialogue is the foundation for finding consensus solutions which integrate diverse views and generate the necessary commitment to implementation. It can form the basis to take us one step beyond talking towards common action" (*Ibid.*).

The multi-stakeholder process approach is about change and transformation. It seeks to shift some decision-making power to stakeholders and to put higher demands for accountability and efficiency on the project donors, it promotes better governance and encourages innovative and responsible project practices. This approach supports the collaborative shaping of the project agenda based on dialogue, learning about what solutions are possible, and working together to encourage change *Ibid*.).

From theoretical stance MSP is a form of stakeholder participation where stakeholders come together to communicate and make decisions on a particular issue (Steins N. & Edwards V. 2009). In other words, MSP, as a decision-making body (voluntary or statutory), comprises different stakeholders who perceive the same resource management problem, realise their interdependence for solving it, and come together to agree on action strategies for solving the problem (Warner J. 2006). In this sense, MSP acts as "space for change" where actors unpack the meaning of certain message or resource management problems, "contest" their worldviews, and as a result an action strategy is ideally formulated based on properly channelled communication and coordination. The consideration about MSP as a "space for change" is further elaborated in section 2.7 *Social learning based on communication, negotiation and coordination in the MSP viewed as a "Space for change"*.

According to Warner the theoretical background of MSP rests on the idea of Habermas about communicative rationality. According to this idea people work together by creating a platform in which they work together without considering the "politics or institutions" they belong to (Warner J. 2005). Warner further points that according to Giddens stakeholders can be viewed as individuals, groups or institutions who are affected by policies, decisions and actions of the system, creating the "stakeholder society" (*Ibid*.). Gidden's definition of "stakeholder society" (Giddens A. 1998) encompasses the combination of stakeholders in the water resource management who aspire to achieve a better society. This definition rests on the assumption that the actors who are "involved in water resource development, management and planning, including public sector agencies, private sector organizations and non-governmental organizations and external (such as donors) agencies" come to work together (Warner J. 2005). According to Barney such a combination of stakeholders rests on an assumption in which the stakeholders are inter-dependant and inter-related in a network (Barney D. 2004). From the definition of MSP, there comes the connotation of platforms which are based on networks of stakeholders. On this point Warner argues that "platforms suggests a form of institutionalization, networks do not" (Warner J. 2005). Quoting Blomquist and Schlager Warner further argues that the network should be viewed as a flexible structure which is not restricted to the time and geographic domain and that the network brings

stakeholders together, even by communication technologies as the telephone or the Internet (Warner J. 2005). According to Castells this poses a challenge for those societies with difficult access to such technologies (Castells M. 1998). It is important to note that in MSP the decision-making and management structures distribute power equally to all involved stakeholders, who in this line, also share resources together. This is however based on a mutual consensus which is based on collective learning. (Warner J. 2005). On this point Röling and Woodhill suggest that mutual sharing is perhaps the most fundamental and hard to reach component (Röling N. & Woodhill J. 2001). This puts relevance to the assumption to consider MSP as a "space for change" as in this space stakeholders can come together and overcome the problem of water resource management, a consideration which is based on communication, negotiation and coordination of resources, as implied by Röling and Woodhill (*Ibid.*). They further this by proposing the argument that the interaction or participatory approach, on which the MSP concept rests, provides the stakeholders with such a "space" in which they can represent their own interests and perspectives as needed to "reach compromise and engage in constructive concerted action" (*Ibid.*). Here, it is important to focus on the use of the word "participation" as the MSP concept should be viewed as a vehicle for management of natural resources in which stakeholders not only interact but also engage in a dialogue based on communication and negotiation about interests and perspectives, which ultimately leads to social learning (Ibid.; Warner J. 2005).

2.7 Social learning based on communication, negotiation and coordination in the MSP viewed as a "Space for change"

Within the agricultural extension practices[5] of the past communication processes were promoted as "advisory communication" of individual senders and receivers, who were exchanging knowledge in a linear fashion, with no explicitly planned feedback mechanism (Leeuwis C. & Van den Ban A. 2007). This communication approach was defunct on the outset the transmitted message was considered as having a fixed, context-free, meaning. In reality the message receiver interprets messages within a specific context and this causes misunderstandings as the receiver's interpretation of a message is very likely to be different from that of the sender. On a more fundamental level the root cause of such plausible misunderstanding of messages lies in the fact that the receiver's message interpretation is based on person- and context- based frames of reference and prior knowledge which differ from

[5] According to Wikipedia "Agricultural extension" was once known as the application of scientific research and new knowledge to agricultural practices through farmer education. The field of extension now encompasses a wider range of communication and learning activities organised for rural people by professionals from different disciplines, including agriculture, health, and business studies" (Agricultural Extension. Wikipedia article. URL: http://en.wikipedia.org/wiki/Agricultural_extension. Accessed: January 17, 2009).

those of the sender. This frame of reference and the corresponding prior knowledge rest in the so-called "mental space" or "sphere of thinking" within both the sender and receiver. It has been increasingly recognised that for a message to come across and to be understood by the receiver it had to enter into the "mental space" of the receiver, who has to be prepared to listen as well send (Dervin B. 1981; Röling, N. & Engel P. 1990). More recently, in an attempt to mend this "ill communication" situation, the communication approach started to be considered as one in which the communication parties construct meanings together (Leeuwis C. 1993; Te Molder H. 1995). In this way the meaning of messages is unpacked by the communication partners within a certain context. As the context is dynamic so is the nature of the message itself, i.e. the nature of the message is not neutral. This unpacking of the meaning of messages is done purposefully and unconsciously in the process of communication or interaction between actors, who "negotiate message meaning" within a "space for change" called "discursive space" while interacting with each other and their environment in the "inter-actional space". In this sense, the "discursive space" connects the sphere of thinking "mental space" with the sphere of doing "inter-actional space". In this, the role of the "discursive space" is to act as a platform for the actors who can come together and "contest" worldviews by deconstructing and constructing storylines from their "mental spaces". This "contest" rests in the difference in the corresponding "socio-institutional" and "bio-physical" spaces within the "discursive space". Thus, the "space for change" emerges from human interaction and negotiation, and hence is inherently dependent on communication and the development of overlapping discourses.

This argument is further elaborated by Schuurman according to whom when "multiple realities" meet and contest, including potentially conflicting social and normative interests, and diverse bodies of knowledge, then it is also necessary to consider whose interpretations or models prevail over those of other actors and under what conditions. This is an important consideration as it points to the need to consider how to coordinate and guide a mutually shared form of "multiple reality" in which power gaps are balanced (Schuurman F. J. 1993). In his lecture "Creating Space for change: A perspective on the Sociology of Development", Long suggests a departure from deterministic and centralistic thinking on development. As an alternative he proposes an account which focuses on dynamic processes by which stakeholders engage in shaping in a space the outcomes of processes of development, focusing on the interplay and mutual determination of external and internal factors and relationships (Long N. 1984).

Hence, if communication and coordination are considered as prerequisites for knowledge creation when "multiple realities" meet and contest, then the "space for change" can be

viewed as a room in which actors can become interrelated through networks of interest and through the sharing of certain knowledge frames. In this sense, this argument is central for this thesis work as it links together the concept of "multi-stakeholder platform", regarded as a "space for change", and being governed by communication, negotiation and coordination.

3. Preparations for the research enquiry

3.1 Aim

This research enquiry focuses on the 2006 - 2008 AEEHLO program and its demarcation that follows the activities within its six projects in NWR. During the planning phase of the research enquiry it was acknowledged that the exploration of communication and coordination aspects require an understanding of an aspect of reality that is shared among program stakeholders by using Soft systems thinking and Soft System Methodology (SSM). The reason behind the use of Soft systems thinking and SSM is explained in section 3.2 *Systems Thinking and Soft System Methodology and its stages*. The goal of the research enquiry is to bring home a piece of understanding on communication and coordination in general which can be used as a starting point in other projects. To give deepness to the research the concept of MSP, described in section 2.6 *The multi-stakeholder process approach and the "Multi-stakeholder platform" concept,* and the linked communication and coordination aspects, described in section 2.7 *Social learning based on communication, negotiation and coordination in the MSP viewed as "Space for change"*, are used as a general framework. It is also hoped to bring to the surface the importance of setting multi-stakeholder platforms, which are capable to nurture learning and self-organization.

The research enquiry's point of departure is an AELO mid-term evaluation recommendation which has to be realized during the 2006 - 2008 AEEHLO program, namely "…It is proposed that platforms are established to enable increased dialogue and interaction between those responsible for the different outputs. These platforms could be hosted and fostered by "a process management group… This would include designing and implementing an ongoing, internal participatory monitoring and evaluation; and serving as the reference group focusing on integration, learning and communication" (Agri-environmental project in Leningrad Oblast. 2005).

3.2 Systems Thinking and Soft System Methodology and its stages

In *Systems Approaches to Management* Jackson explains that the "systems movement" consists of professional societies, academic groups, and so on, which promote systems thinking. Jackson further explains that the term "systems thinking" is a general term used to describe theories,

methodologies, etc., which are based on systems ideas and concepts. Taking a step further, he explains that "applied systems thinking" refers to a part of the systems movement that is primarily concerned to promote the use of systems thinking for "problem solving". For this reason, the applied systems thinkers are interested in systems methodologies which can provide principles for the use of systems models, methods, tools and techniques in practice. This argument is continued with the explanation that systems thinking cannot be considered as a separate discipline, such as chemistry, or biology, because systems thinking cannot be delimited to a particular area of reality (Jackson M. C. 2009). If the word "epistemology" is used in a broad sense it can be regarded as a way to designate a particular way of looking at, or thinking about, the world. In this sense, systems thinking can be viewed, not strictly academically, as a kind of epistemology for looking at a world of "messy" situations that are connected by a web of complex relationships. They are complex or "messy" because in this world, natural and human situations are inter-related in a non-linear way and in such a way that with a change in one part of the situation a change occurs in other parts. These inter-relations are also complex because they can be described differently and in contrast by people involved in the situation. Hence, by engaging in systems thinking the expected result should not be finding an optimal, one-to-one solution to a problematic situation, but thinking about iterative improvements which are acceptable to all. Therefore, to deal with "messy" situations a way or methodology is needed which is not prescriptive or directive, but rather one which can help us to learn in the "messy" situations. Such a methodology is the Soft System Methodology.

This research enquiry adopts SSM to equip it with conceptual and methodological tools needed for the understanding of human activities, such as coordination and communication. SSM supports the unravelling of complex problems in problematic situations. The involved problematic situations are complex because in a given situation we might not be sure what to do or do not know who is involved, who the stakeholders are, and what their worldviews of the situation are. Hence, an organized way that to help us think through such a situation is needed. This implies that SSM can be used to learn in an organized, yet not prescriptive, way about people involved in situations, the way they perceive reality and relate to other people and to the given situation.

SSM was developed in the 1970s by Checkland and his team at the Department of Systems and Information Management at the University of Lancaster. Initially, SSM was presented as a 7-step model (Figure 2) which to help its user make sense of, and intervene in, human activity systems. However, SSM started to be considered as well as a methodology which is flexible, not so prescriptive, and as one which aids its user to make sense and learn in the studied problematic situation.

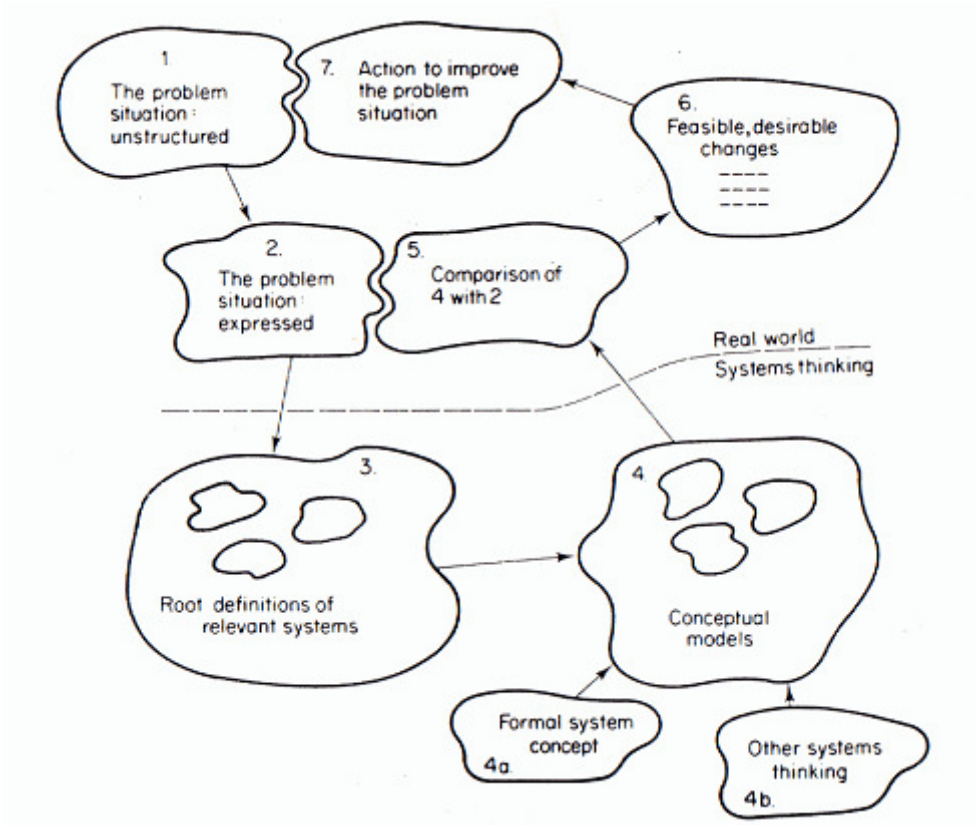

Figure 2 A roadmap for Soft System Methodology enquiry (Checkland P. 1981)

Stages 1 and 2 "The problem situation" (*ibid)*

In stages 1 and 2 of SSM an attempt is made to build up the richest possible picture, not of the "problem" but of the situation in which there is perceived to be a problem. This is done by collecting as many perceptions of the problem situation as possible from a wide range of people with roles in the problem situation. This not only ensures that a balanced view of the situation is captured, but it also enables the selection to be made of a viewpoint (or viewpoints) from which to further study the problem situation in the next stages.

Research activities should identify what roles seem relevant to the problem situation, what roles people regard as significant and what are the norms of behaviour associated with the different roles. It is also important to try and understand the values that different people in the situation hold and the different value sets that might apply to the same situation. They should examine elements of structure and process and the relationship between the two, the climate of the situation. They should attempt to identify elements of what are referred to in everyday language as social and political systems. It is also important to look at structures and processes associated with the exercise of power in the situation, and the related roles, norms and values in order to examine how power is gained, legitimized, held, exercised and passed on. Even if this is not relevant to the problem situation it is important to understand what might be

desirable and feasible. The end product of this stage should be an account of the situation which is as neutral as possible.

Stage 3 "Developing a root definition"

A root definition is formulated by choosing a particular outlook(s) on the situation and then writing a concise explicit statement which describes the nature of the situation in the language of a system, "what the system is". The only criteria for choosing an outlook or perspective is that it is "relevant" to the problem situation. It does not imply that the choice of system is necessarily desirable or a system that should be designed.

Any particular root definition will be only one of many meaningful descriptions of the relevant system and will be based on a particular Weltanschauung (world-view). This perspective should be made explicit. It is not a would-be neutral account of the world.

In preparing root definitions it is better to explore several possibilities. It is often useful to prepare root definitions based on the perspectives of the main roles in the situation either expressed by the people in the situation or supplied by the analyst.

Stage 4 "Building a conceptual model"

In stage 4 a conceptual model is made of the activities that must exist in the system defined in the root definition, "what the system must do in order to be the system named in the definition". The system is often pictured as an entity that receives some inputs and produces some outputs, in other words a system that performs a transformation process. When making a conceptual model you ask yourself: what activities in what sequence need to occur in order to do the transfer? How the activity should be done, should be debated latter unless there are particular constraints in the root definition. Sometimes sub-systems for the different activities are also illustrated.

As part of building a conceptual model it is important to indicate the information flows needed if the linked set of activities were to be carried out efficiently including: content, source, and frequency. This may entail modelling an information and/or planning system to serve the main activity system modelled. It is important that first a model is developed and agreed on for the activity system before modelling begins for a linked information or planning system. This applies whenever one system serves the purpose of another which includes all information, planning and (quality) control systems.

It is important to recognise that a conceptual model is not a state description of any actual human activity system nor is it a normative model of what should be. It is used in the next stages as a tool for generating debate.

Stage 5 "Comparison conceptual models with real world"

In stage 5, the models from stage 4 are brought into the real world and set against the perceptions of what exists there. The purpose is to generate debate with concerned people in the problem situation. As part of this one asks**:** Are activities present in the real world? How well are they done? Then alternatives suggested by the models are discussed. The outcome might be to suggest changing how things are done "how's" or introducing new activities "what's".

Stage 6 "Define desirable and feasible changes"

The purpose of stage 6 is to define possible changes that are arguably desirable and feasible having regard to the situation under examination and given the prevailing attitudes and power structures. This should be done as a debate among concerned participants. The changes can be of three kinds: procedural changes (how activities are done within the structure), structural changes (organisational groupings, responsibility); or attitudes (changes of influence, learning, values and norms). These are listed from, generally speaking, least to most difficult.

Stage 7 "Action to improve the problem situation"

In stage 7 action is taken to improve the problem situation based on the results of stage 6. The end product of this stage is a new problem situation that can again be tackled using the methodology in a cyclical fashion.

Soft System Methodology stages used in the research enquiry

For this research enquiry SSM is used with two expected outputs. Firstly, the methodology is used as a guidance which helps the exploration of the AEEHLO program as a multi-stakeholder platform and for reflection on its communication and coordination processes. Secondly, the methodology is used as a conceptual tool which to guide learning.

This research enquiry has three legs, following Stage 1 and Stage 2 of the SSM cycle. **Leg 1** (Stage 1 of SSM) is about conducting a "finding out" cycle which to help the initiation of a perception or understanding of the AEEHLO program. This finding/extractive cycle is to rest on reading program documentation, conducting oral interviews, and participation in focus group discussions and group meetings. The outcome of this Leg should be a description of the learning about the AEEHLO program. During **Leg 2** of the journey (Stage 2 of SSM) a focus is to be put on the AEEHLO program as a whole and on its projects, individually, trying to

identify the following:

1 Individuals and groups (Stakeholders)

2 Their themes of concern (what do they do; what is the objective of their work)

3 Stakeholders' corresponding worldviews (why they do what they do)

4 The historical context helping to understand the present

5 Key human activities

6 Decision making structures (management organization)

7 Environmental factors (legal/political) of the present, including environmental constraints

8 Qualitative and quantitative data related to features of the situation that bear on the projects' themes of concern

The outcome of this Leg is the preparation of projects' synthesis reports (see the Appendices section) supported by rich pictures and CATWOE analyses. This is going to be based on the interactions between the AEEHLO program with its customers.

During this leg certain SSM terms are used for the development of the synthesis reports and the rich pictures:

Climate: Describes what happens when structure and process (definitions follow) interplay. That is, what is the quality of relationships between structures and processes; how well things work together, and what is the resulting emotional response. In other words, this is the match /mismatch and sense of ease/unease arising from interactions between structure and process in a situation. It helps for the understanding of the emotional charges and motivations, why they exist, and what conflicts are occurring, over what or whom.

Decision making structure: Describes the management organization of stakeholders working together.

Environmental factor: This is a specific factor from the environment and can be of legal/political, etc., nature.

Human activity: This is the theme of activities found in a project Logical framework.

Primary task: This is a project specific goal or immediate objective.

Process: It defines how things are done and by whom within the constraints of the structure. These are the activities of people involved in a project.

Structure: This is a durable physical, biological, or social pattern or organization. Example: physical and biotic properties, organizations and institutions as part of a community. Laws, political institutions, established reporting relationships, traditional formal leadership patterns, past alliances or alienations from the past which influence

dialogue between groups in the current situation.

Theme of concern: Defines what stakeholders do; the overall or development objective of the project.

Transformation statement: It designates basic features of an improved situation related to a theme of concern and primary tasks. It can also be designated as project outputs.

Worldview: Defines why stakeholders do what they do.

Terms used for the development of the CATWOE analyses:

Customers:

Who is on the receiving end?
Who are the winners and losers?

Actors:

Who are the actors who "do the doing"?

Transformation process:

What is the process for transforming inputs into outputs?
What are the inputs? Where do they come from?
What are the outputs? Where do they go to?
What are all the steps in between?

World-view:

What is the bigger picture into which the situation fits?
What is the real problem that is worked on?
What is the wider impact of any solution?

Owner:

Who is the real owner or owners of the process or situation?

Environment:

What are the broader constraints that act on the situation?
What are the ethical limits, the laws, financial constraints, limited resources?

Leg 3 is used as an opportunity to crystallize discussions, conclusions and recommendations about the two research questions based on the gained learning about and understanding of the AEEHLO program. This leg is based on section 2.6 which describes the assumptions and considerations behind the concept of MSP, and on section 2.7 which is devoted to the consideration of MSP as a "space for change". As an outcome this third leg rests on the conceptual framework proposed under section 3.4 *Conceptual framework*.

To support the research enquiry secondary data research is used as a method to learn about

a situation. In this regard, secondary data sources are useful in constructing social realities and versions of events (May T. 2001). This method should be helpful to gain a holistic view of the program situation, particularly with the range of available information sources that describe the program as a MSP and the underlying processes. Program related documents, such as Terms of References, progress reports, and so on, are used for further reference.

Oral interviews and focus group discussions are used as a way to gather practical wisdom (observations and opinions of professionals in the field). The aim of this is to strengthen the understanding on the link between program's inputs and outcomes. These two types of interviewing should help in the collection of information regarding issues of specific interest or a more general discussion intended to collect general perceptions of program stakeholders. Both closed and open-ended questions are used. The answers to these questions form the basis for eliciting the synthesis reports in Leg 2, developing first hand understanding of the program's environment and processes, which are situated within the MSP governance processes, from a stakeholders' point of view.

In regard to the technical organization either recording of conversations or taking of notes is used in open discussions. A second interaction with stakeholders is also planned. However, there is a concern that it might not contribute to a repeated learning cycle as the second interaction is still going to be extractive. This means that most likely a second interaction might be perceived as time-burdening and not contributing. In regard to informants only stakeholders within the AEEHLO program are targeted.

Workshops and stakeholder meetings are basically conducted with a purpose for creating an environment for interactive learning (Brooks-Harris J. E. & Stock-Ward S. R. 1999). In this sense the researcher plans to attend to a program stakeholder meeting organized as a workshop. During this workshop a focus is put on the interactions and interchange of knowledge among participants.

3.3 Research questions

The overall focus of the research enquiry rests on the following two main research questions which are elaborated and linked to the conceptual framework presented in section 3.4 *Conceptual framework* :

(1) Does the program act as a "space for change"?,

(2) How the program is supported by communication and coordination?

3.4 Conceptual framework

The conceptual framework (Figure 3) on which this thesis rests is based on a United Nations framework used as a tool for MSP process design. Specifically, this UN framework is applied in Leg 3 of the research enquiry to find out how the AEEHLO program acts a "space for change", and to analyze how this "space" is supported by communication and coordination. This framework rests on an assumption made by Sampson, according to which "the most important thing about people is not what is contained in them but what transpires between them". In this regard, this framework is used as a starting point for the consideration to see how a multi-stakeholder program, viewed as a "space for change", allows what "transpires between" people to be a constructive contribution to sustainable development (Sampson E. 1993). It further rests on the multi-stakeholder process approach introduced in section 2.6 *The multi-stakeholder process approach and the "Multi-stakeholder platform" concept*.

From the literature review presented in sections 2.6 (MSP) and 2.7 ("Space for change") it can be assumed that the functioning of MSP as a "space for change" is dependant on the nature of linkages that underpin the MSP, namely, its stakeholders forming networks, the processes of expressing and aligning a "multiple reality", and the accompanying institutional arrangements. Such linkages are complex and multi-layered, mutually enforcing, and difficult to isolate. This basic embedded nature of the underpinning MSP linkages is brought out in Figure 3.

The conceptual framework in figure 3 shows questions, issues and challenges which need to be addressed when designing a multi-stakeholder process, and the interrelationships among them. The purpose for the use of this framework is to study the AEEHLO program as a MSP and to realize how its "space", and communication and coordination aspects, affect it. The aim is not to find an "optimal mix" of questions, issues or challenges needed for a MSP construct, but to find how they help a program to act as a "space for change" which is governed by communication, negotiation, and coordination.

The five basic stages or components of this framework are the context, the framing, the inputs, the dialogue, and the outputs. The relationships between these five components or stages rest on the assumption that the MSP can be viewed as a decision-making body which operates in a context, in which stakeholders come together and frame together a collective "multiple reality", based on inputs from the context and from within the "space" of the program, and are governed by dialogue, which results in a collaborative action strategy and outputs to be delivered.

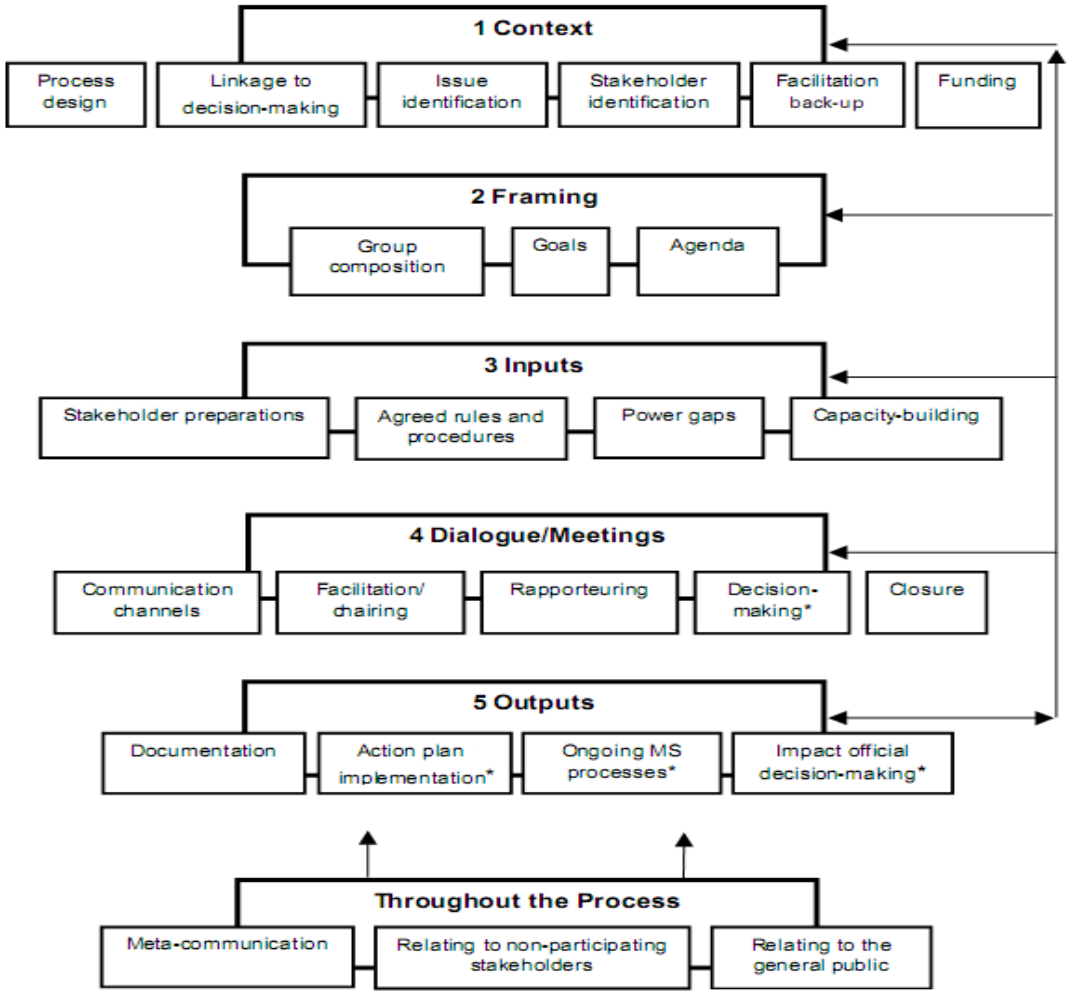

Figure 3 Analytical framework (Minu Hemmati, M. et al. 2002)

Analyzing how MSP acts as a "space for change" and how this space is supported by communication and coordination involves several levels of considerations. Firstly, it is important to consider how MSP was designed. It also demands an understanding on who and how initiated the MSP and who and why participates in it. That is, who are the stakeholders and what are their roles, responsibilities and ways for making decisions; what issues they come together to address and what are their objectives, activities and timeframes for completion; how the outcomes of the activities will be sustained; what are the rules and procedures for communication and coordination, and how information is gathered and disseminated, etc. These questions rest on the important consideration that MSP was designed and operationalised in a collaborative effort. Another matter of attention is how MSP responds and adapts to external processes' changes, and if this is based on a vehicle of consultations and coordination within the MSP. As the MSP can be considered as a space, it is also relevant to consider if the atmosphere within the MSP enables learning and interaction, based on communication, which to reconcile stakeholders' differences so that they are empowered to come up with mutually agreed action strategies.

These considerations from figure 3 are crystallized and used as sub-questions to the two main questions presented in section 3.3 *Research questions*, as part of Leg 3 of the research enquiry:

Research question 1: "Does the program act as a "space for change"?"

Designing the AEEHLO program and its sub-projects

1 How was the AEEHLO program designed as a MSP and by who?

2 Where there consultations with stakeholders on the design?

Identifying the issues to be addressed in the AEEHLO program

Who identified the issues and how?

Identifying relevant stakeholders

Who identifies relevant stakeholders and how?

Setting the goals of the AEEHLO program and its sub-projects

Who sets the goals and how?

Implementation process

1 Is implementation being decided/planned/conducted?

2 By who?

Closing

1 How and when does the AEEHLO and its projects conclude?

2 Who is making the decision for closing?

Structures/institutions

Secretariat? Facilitating body? Board/forum?

Facilitation

1 Who facilitates in the AEEHLO program?

2 What is the role of the facilitating body?

3 How does the facilitating organisation work with stakeholders?

4 Does this include secretariat services?

Funding

1 How is funding provided and by whom?

Research question 2: "How the program is supported by communication and coordination"?"

Preparatory process

1 How is the dialogue being prepared?

2 Is the preparations within the projects being coordinated somehow?

Communication process

1 How is the communication conducted? (face-to-face, phone, email, etc.)

2 Are there power gaps between participating stakeholders and how are they being addressed?

Decision-making processes

How are decisions taken and by whom?

Structures/institutions

Secretariat? Facilitating body? Board/forum?

Facilitation

1 Who facilitates in the AEEHLO program?

2 What is the role of the facilitating body?

3 How does the facilitating organisation work with stakeholders?

4 Does this include secretariat services?

Documentation

1 Rapporteuring from meetings; summarising outcomes; publication of documentation – by who, when, and how?

Relating to not-participating stakeholders

Do others know about the program? Can they feed into the process and how?

Relating to the general public

1 What kind of information about the AEEHLO program and its sub-projects is available to the public?

2 Using what channels?

3 Who is providing this information?

4 Can the public comment/ask questions/feed in, and how?

3.5 Limitations and opportunities

In answering the research questions, as part of a conceptual framework, six project cases are examined within one program in which Russian and Swedish parties work together under a Russian institutional and cultural context. This might pose a limitation while illuminating issues related to communication and coordination because there is no plan for findings validation by means of a comparison study in which different types of programs, parties and contexts, come together. Another limitation might be that the findings of the thesis work are not critically reflected by program stakeholders. This limitation makes it impossible for a re-work. Nevertheless, it is felt possible to generate new insights into the nature of a situation of program communication and coordination, and that the research findings can be useful in program planning efforts. Another possibility is that by undertaking different interactions with the stakeholders the researcher can engage with them in a process of mutual understanding and learning. This is believed to trigger reflection and new understanding of gray areas of uncertainties.

4. Research enquiry process

4.1 Starting the process

What follows is a presentation of the methodological steps and outcomes of the gained learning experience during the fist leg of the journey or Stage 1 of the SSM enquiry process. This learning experience is based on interactions with the thesis supervisor, the AEEHLO project coordinator and a project manager, and with program stakeholders, project documentation, internet search, and on the researcher's own reflection. Following is a description of a research enquiry process which dwells in MSP, and in the communication and coordination aspects of the AEEHLO program.

4.2 Mind-set

Embarking on a soft-system study is a demanding endeavor which engages a mind-set capable of learning to see and reflect on situations from different perspectives. In this regard, the researcher found himself in an advantageous position because of prior theoretical and practical understanding and competence of using the soft-system approach. This prior experience made the entry into the AEEHLO program realm swifter. The entry started in September 2008 after an invitation of the thesis supervisor for participation in an assessment study of the second-phase AEEHLO program. This assessment study was formally requested on behalf of SIDA by the Project Coordinator at SLU Grants Office. The researcher's role was based on two broad objectives. The first one was the analysis and assessment of the change

which AEEHLO program made following the first programming phase. And the second objective was to follow up on the potential of using SSM in doing the assessment of coordination and communication within the AEEHLO program. This second objective became the point of departure of this thesis.

4.3 First steps

Research work was done from home in the period of project assessment and thesis writing. The communication with AEEHLO program stakeholders was mostly in person. E-mail and telephone communication was also used due to the distances. The travels to meet stakeholders in Latvia and in Russia were arranged by the thesis supervisor, and by the SLU Grants office. This, combined with the constant support of the thesis supervisor, made the researcher's personal association with relevant AEEHLO stakeholders go easy. Most importantly, the researcher did not enter the program as an expert proposing solutions, but rather as a person who is there to learn. Additionally, the project manager at SLU Grants office and the AEEHLO project leaders gave access to documentation and information that was felt as needed. Thus, from the very beginning the researcher benefited from a personal network of contacts with project members from the AEEHLO program.

4.4 Interactions

The first interaction with program stakeholders took place on September 24, 2008, when the thesis supervisor organized a focus group meeting with the AEEHLO Program Coordination Unit (PCU) members, in Riga, Latvia. This meeting initiated the problem analysis for this research enquiry as part of the thesis work. The PCU meeting addressed issues such as definition of roles within the PCU, links between the work of the PCU with the AEEHLO projects and the impact of this work on decision-makers, the networks which PCU maintains, the occurring change, etc. This set the scene for definition and characterization of issues related to communication and coordination, identification of a system of interest, determination of recommendations for prospective project activities in North West Russia, etc. The meeting itself took approximately two hours.

Individual meetings with AEEHLO project leaders were held in Uppsala and in Stockholm in the period from October to December 2008. These meetings were based on a scheme of research enquiry which the thesis supervisor devised for the focus group meeting in Riga. However, this research enquiry was adapted to reflect better on the perspectives of the project leaders. The duration of these individual meetings was approximately two hours each.

On December 3, 2008, a second meeting was held with the PCU members in Saint

Petersburg, Russia. During the meeting it appeared that the available time for discussion was not enough. Another problem was the limited number of occasions on which the PCU members meet together themselves. At the same time, the project coordinator at the SLU Grants office had previously articulated the need to have prepared an evaluation report by February 2009 which to include lessons learnt as an input to another project which was under preparation at that time. A possibility was discussed with the PCU members to clarify questions by email. The idea was mutually accepted and a deadline was set for February 2009. On the next day, the researcher participated in a LO Steering Group (SG) meeting. This meeting was an opportunity to observe how the program stakeholders interact with each other. This observation also helped the researcher to see the overall program environment and some emerging patterns.

Following the trip to Russia, there were meetings with project leaders in Sweden, one telephone interview was made, and clarifying questions were posted via email to the PCU members and to project leaders.

4.5 Discussion

The AEEHLO program assessment work set the stage for learning and reflection. The learning process started with a list of mental notes which the researcher made prior to start interaction with program stakeholders. This list included questions such as how to communicate and manage discussions involving messages which can be understood differently? How to create a space in which issues can be discussed and a shared understanding and new ways of doing things can possibly emerge?

The learning process was based on an enquiry process with stakeholders and on reading program documentation. This process followed a general scheme: 1 read about program history and make online search, 2 schedule meetings with program stakeholders by email or phone, 3 prepare a list of questions for the meetings, and 4, attend the meetings.

It was found beneficial to read about the projects before attending meetings. In this regard, project application reports, status reports, project websites, textbooks, etc., were consulted. Following interaction with stakeholders it was found that albeit useful written materials are not sufficient alone to grasp a rich understanding of program aspects. In this regard written information is useful for the systematization of program facts which can be further elaborated in a meeting.

The stakeholder meetings gave the floor for description of situations from the perspective of stakeholders. This experience returned with a rich understanding on projects' aspects. Indeed, what was sought after was perceptions about how the projects fit into the AEEHLO

program, whether relevant bridging points between them exist, or do not exist, etc. To streamline this, a conceptual "break down" was made in the form of themes (objectives, activities, outputs, management strategy, communication strategy, etc.). Following this conceptual framework the themes were introduced to the project stakeholders who were asked to elaborate their understanding on each theme. The role of the researcher in these meetings was to guide the conversation by moving from one theme into another. This was done by posing lead questions which would eventually reveal bits of the person's perception on how some project part is functioning. Collecting such perceptions and using triangulation gave a rich understanding on how coordination and communication within and between the projects and the program function. As to whether it is possible to trigger learning in stakeholders based on interaction, the researcher believes in one's self-reflection ability. This means that learning does not only mean getting to know new things or facts but also re-thinking of previous actions or ways in which things were done. Of course all is dependant on how much people are open to explore and make sense of what they already know.

From the beginning of the research enquiry it was stressed that people have different, possibly contradicting, views about situations, and that a safe way-out of this was to suspend own biases and drawing of conclusions before hearing the whole program story, said from the stakeholders' point of view. In fulfilling this step it was necessary to establish first a rapport with the stakeholders. With one or two exceptions the researcher had almost no prior contact with program stakeholders. This means that an approach was needed which to make the researcher grow towards them. It turned out that with common sense and consideration it was possible to establish the necessary rapport. In short, this approach followed a scheme in which the researcher was starting the interaction by explaining who he is, from where and which institution he comes from, the purpose of the enquiry, etc. Due to cultural differences it was thoughtful to mind the body language, eye contact, face gestures, etc. Another acknowledged form of bias is the possibility to move the discussions in a direction that to reinforce own understanding of facts. To avoid such bias the researcher tried to listen reflectively on what was being said. This means that there was the need to move back and forward the discussion before understanding about facts could be made. This was usually the case when it was hard to hear well a comment or due to uncertainty of what was said. Finally, it was found important to make a proper planning of discussion points which match the available time for discussion.

It was found that that the approach for getting answers by email was counter-productive in the end. One aspect of the problem was the time-burden on program stakeholders. Another problem was the fact that by devoting time to answering questions the respondents were probably getting nothing back, keeping in mind that this was a form of second round of

interaction in an extraction mood of research enquiry. This means that at this initial stage it is not productive to have formal structured interviews and questionnaires because of uncertainty about which issues are problematic or need further clarification.

4.6 Stand of research enquiry

This section presents the researcher's enquiry experience in Leg 1. Here, focus is put on gathering written information and on meeting with program stakeholders. The goal of this leg is to form a sense of program facts and to broaden the researcher's understanding on different AEEHLO program aspects. The main outcome is learning about the program based on stakeholders' perspectives and reflections.

The findings of Leg 2 of the research enquiry reflect on what was learnt as part of Leg 1 or Stage 1 of the SSM enquiry process, expressed in the form of project synthesis reports, rich pictures and CATWOE analyses. These synthesis reports are enclosed as appendices and should be considered as evidence material.

5. Evidence and interpretations regarding the AEEHLO six projects

The evidence and interpretations presented in sections 5, 6 and 7 are based on Leg 3 of the research enquiry. This section 5 *Evidence and interpretations regarding the AEEHLO six projects* has the objective to present interpretations and sub-conclusions about the two research questions based on the gained learning about and understanding of the AEEHLO six projects. Accordingly, the same objective is followed in Section 6 *Main Discussions* and section 7 *Conclusion*, which are dedicated to the AEEHLO program as whole and reflect on the literature material review presented in section 2 *Literature review*. The focus of this thesis is concentrated in sections 6 and 7, as they consider AEEHLO as a whole and relate to its MSP imprints as found in literature.

5.1 Discussion: SFP project

5.1.1 *Does the SFP project act as a "space for change"?*

The project has been designed with three main units: the farms, the partners, and the funders. The project's primary tasks focus on providing recommendations about storage and use of technological solutions at several pilot farms in LO. The provision of financial support encourages farmers to invest in the modernization of their farms, introduction of housing and milking technologies, and the purchase of agricultural machinery and equipment.

The evidence suggests that there is a facilitation group, which is the Leningrad Reference Centre (former Centre for Agrochemical Services, CAS).

There is no evidence about who (and how) identified the issues. However, it is not excluded that the issues have been identified on a program level. There is also no evidence about who (and how) identified the relevant stakeholders and participants. It is not excluded that the relevant stakeholders and participants have been identified on a program level.

The goal has been defined on a program level as to research eco-friendly ways for storage and use of fertilizers at diary and pig farms and at poultry factories, and, providing recommendations about storage and usage of technological solutions at several pilot farms in LO. The evidence suggests that there is also the possibility to develop goals over the course of the MSP from an informing process into a dialogue with farmers who introduce modernization techniques in their farms. The project also provides advisory services to adjust technological process at the farms.

The implementation process is based on four interacting levels: funders, the Russian Priority National Project (RPNP), partners and farms. Funders provide economic inputs to the project. The RPNP gives economic support for the application of new technologies in the farms, and partners provide facilitation, technical support and information dissemination.

During the implementation of the MSP, the impact of funding on the project's processes is reflected by the project's outcomes in terms of quality of the provided services and applied technologies. This project is funded by SIDA, the Finnish Ministry of Environment, the World Bank and by other Russian sources. Additionally, the RPNP is providing funding directly to the farmers who apply new technologies for the modernization of the farms. There is no evidence for the ending date of the project.

5.1.2 *How the SFP project is supported by communication and coordination?*

In general the dialogue preparatory process is an important step for the implementation of communication and coordination in MSP. In this specific case, evidence shows that Swedish and Russian experts prepare recommendations for the pilot farms and organize seminars and meetings with representatives of agricultural enterprises of LO. The Scientific Research Institute of Mechanization and Electrification of Agriculture is responsible for the provision of information and advice for the implementation of sustainable farming practices.

The power and cultural gaps between different stakeholders are a frequent issue in the implementation of a MSP. In this specific case, gaps between different stakeholders can also be identified. For example, between farmers and project stakeholders. The filling of such gaps has been considered by including the Farmer's Union, which provides help with the establishment of contacts with interested farms and for the dissemination of information to its members. Other mechanisms of communication are: 1 Swedish and Russian partners provide

recommendations for the pilot farms; and 2, Seminars and meetings are organized with representatives of agricultural enterprises of LO.

The Leningrad Reference Centre (former Centre for Agrochemical Services, CAS) is the temporary project office host and plays a facilitating and supporting role. There is no evidence for a secretariat body and for publication or documentation. However it is expected for a provision of documentation to be made to the farmers, distribution of reports for the dissemination of information, summary of meetings and seminars, and for a synthesis of project's outcomes.

In general, the implementation of a MSP includes also non-participating stakeholders who can feed into the process. In the specific case, other stakeholders who can benefit from the multi-stakeholder process are representatives of agricultural enterprises of LO who are involved in meetings and are informed about made recommendations.

There is no evidence about the provision of information to the public. It seems that the main channels for communications are established: 1 between the Farmer's union members; and 2, between Swedish/Russian expert, farms and agricultural enterprises in LO.

5.1.3 Sub-Conclusions

The SFP project as a "space for change" includes a mechanism for integration and the possibility to develop goals over the course of the MSP from an informing process into a dialogue with farmers who want to modernize their farms. The project also provides a "space" for a shared worldview in which farmers apply sustainable farming practices which are both environmentally friendly and which stimulate the modernization of their farms. In terms of communication and coordination, the project shows the effort to fill cultural and language gaps between stakeholders. For example, the Farmer's Union can be seen as a platform used to manage the information flows between the project stakeholders and farmers.

5.2 Discussion: IPM project

5.2.1 *Does the IPM project act as a "space for change"?*

From the evidence it can be seen that the multi-stakeholder process in this project was designed by adapting the Swedish forecasting and warning systems for use in LO and in the rest of NWR. All Russian Institute of Plant is responsible for the coordination of the project. There is no evidence for consultations with stakeholders on the project design.

There is no evidence for a facilitating body in the project. At the program level, the facilitator should be the PCU. Important structures are the Service in LO for the collection of information about signs of diseases and pests in main fields of crops and the Laboratory for

Forecasting and Diagnostic.

There is no evidence for who defined the issues to be addressed in the MSP. It seems that the main issue has been defined at a program level. The main issue is the presence of pest and disease problems in crops. The project's task is to reduce the impact of pesticides on flora, fauna and drinking water in LO by maintaining an updated pest management program.

There is no evidence for who (and how) identified the relevant stakeholders and the participants in this project, but it is not excluded that the stakeholders have been identified at a program level.

It is not evident who set the goals and how. However, the primary goal is clearly defined as to update and improve pest management recommendations, validation and implementation of forecasting methods, development of a database, and provision of information on how to minimize pesticide effects.

The implementation of the project involves the Regional Plant Protection Station in Saint Petersburg, which consists of ten forecasting and diagnostic stations. The service is collecting information about signs of diseases and pests in main fields of crops. The information is then transferred to a Laboratory for Forecasting and Diagnostic. The project also plans for validation and implementation of forecasting methods and the development of a database, pest management recommendations, and the provision of information on how to minimize pesticide effects.

There is no evidence about the project ending date. However, the project may be considered closed when all project's outputs are delivered: Chemical use recommendations, forecasting methods, creation of a database and information on methods. There is evidence about a decision-making structure formed by SLU and All Russian Institute of Plant Protection (VIZR) at Pushkin.

Another aspect of a MSP implementation is the impact of funders on the project's processes, structures and outcomes. Based on previous work in NW Russia, the Department of Entomology at SLU has been able to form working relationships with Russian institutions. They saw the idea of participating in the AEEHLO program as an opportunity to get funding needed to continue with their work together. (Comment by an AEEHLO program stakeholder).

5.2.2 *How the IPM project is supported by communication and coordination?*

The type of MSP and the nature of the provided information by the project require an approach which allows for a prompt answer to the necessities of the farmers as fluctuations in pests and diseases may hurt the agricultural practices of farmers. For this reason, a warning and

information system has been adopted. The State Plant Protection Stations organizes warning and information systems via "signal points". At each station the advisor has direct contact with farmers and gives advice concerning the use of pesticides.

The analysis of the communication processes shows that communication moves on two different levels: at a technical level and at a public level. On the technical level, accurate information concerning current pest disease level is provided. The users of this information are agricultural producers and farmers who need to implement pest management practices on their lands. In this case, the communication is face-to-face. On the public level, general information is provided with the aim to diffuse the produced knowledge to protection advisors, farmers, and the public. In this case the communication channel is implemented through the Internet.

Considering the project's decision-making process, based on the evidence material, it can be concluded that the All Russian Institute of Plant Protection has the coordination role and researchers from the Institute contribute on their own time (A comment by an AEEHLO stakeholder).

There is no evidence for a facilitation group and secretariat services. However, it is not excluded that facilitation is conduced by SLU or from the All Russian Institute of Plant Protection. On the program level, the facilitation role should be exerted by the PCU.

The production of documentation is another important outcome of the project, and in general, of a MSP. In this project, documentation includes recommendations on how to minimize the negative impact of pesticides and on how to construct biobeds, which shall lead to a minimized pesticide leakage into water bodies.

The implementation of a MSP includes also non-participating stakeholders who can feed into the process. In this project, the implementation of the recommendations for main pests leads to an increased chemical treatment precision and the information produced is used to raise the awareness among plant protection advisors, farmers, and the public.

Information on how to minimize pesticide effects is produced as an output for the public. It is important to define what kind of information is available to the public and via which channels it is conveyed. The project develops an Internet-based database and provides information to the public through the Internet with a bilingual website. However, from the gathered evidence, it is not defined if the public is allowed to contribute by means of feedback mechanisms such as comments and questions.

5.2.3 Sub-Conclusions

The evidence suggests that the IPM project is based on a Swedish forecasting and warning systems experience transferred into a Russian context. Another suggestion is that the project

consists of Swedish and Russian partners. One of these partners is responsible for the project coordination on the local level. On a program level, the PCU is responsible for coordination. As a "space for change", the project is based on a clearly defined decision-making structure. The main project funding comes from SIDA. Even though it is unclear how the project goals were set, the primary goal is clearly expressed and it seems that the project stakeholders try to fulfill it. IPM is supported by communication on a both technical and public level.

5.3 Discussion: HARMOBALT project

5.3.1 *Does the HARMOBALT project act as a "space for change"?*

Designing a MSP is a process where the main components have to be defined and interconnected within a network of inter-related stakeholders. The evidence shows that the project was designed by Swedish and Russian partners during an inception period from May to December 2006. Two main agreements defined the cooperation and relationships between SO "St. Petersburg CGMS-R" and SLU in the project HARMOBAL. The second agreement was between SIDA and SLU according to which SLU makes SIDA funds available for HARMOBALT. However, there is no evidence for consultations with stakeholders on the design in the research findings for the project.

The main decision-making structure inside the project is for coordination and communication. There is no evidence for a facilitation group in the project. However, it is planned for the creation of a forum for the harmonization of BSR water monitoring and modeling approaches and methodologies.

It is not clear if the issues to be addressed in the project have been identified at the program level or on a project level. The main theme of concern is up-scaling of modeling activities, harmonization of monitoring methods, and modeling and assessment of nutrient loading from land to the Baltic Sea and the impact of counter measures. There is no evidence about who identified the relevant stakeholders in the project and how.

The main goal of the project has been defined on a program level as "harmonization of methods for monitoring, modeling and assessment of nutrient loading from land to the Baltic Sea and effects of counter-measures". There is no evidence about the possibility to develop goals over the course of the project (informing process, dialogue, exchange of views).

In general, depending on the type of MSP, the process requires defining of how implementation will be planned, decided and conduced (and by whom). In this case, the project activities have been planned by Swedish and Russian project partners during an inception period. A final project plan has been produced in January 2007, with all the details about the project activities. As part of the AEEHLO program, the project activities are

coordinated with those of the other projects and towards the LO SG by the PCU. The communication structure concerns communication with authorities, internal communication and communication with the public (or external communication). The project ends in March 31, 2009.

Another aspect of a MSP is the impact of funders on the project's multi-stakeholder process, structures and outcomes. The research findings show that SIDA is funding the HARMOBALT project and, according to an additional agreement, SLU makes SIDA funds available for HARMOBALT. SLU is responsible to provide consulting services. "St. Petersburg CGMS-R" provides Russian co-funding for the project, and SO "St. Petersburg CGMS-R" is responsible for monitoring and modeling activities in the Luga river basin.

5.3.2 *How the HARMOBALT project is supported by communication and coordination?*

There is no evidence for a preparation process with consultations within constituencies, papers, initial positions, etc. The communication process has been organized on different levels. The communication with the authorities is based on seminars detailing the project's progress with participation from environmental assessment authorities on the oblast level and authorities responsible for the HELCOM PLCs reporting. The internal communication is based on mailing lists and website. The communication with the public is based on publication of results on the website and additional meetings with end-users.

It is not clear who is acting as facilitator on the project level. It is not excluded that somebody from the two main partners (Swedish and Russian partners) may act as facilitator. On a Program level, the PCU should have the role of facilitator.

The communication in a MSP also involves production of internal documentation. In this case, the project leader is responsible to communicate the project's progress and information to project partners. There is also the HELCOM PLCs reporting, the publication of results on the website, etc.

The structure of a MSP also includes relation to non-participating stakeholders who can feed somehow on the project's outcomes. It is known from the evidence that the project communication results at different levels (authority, internal, public). Additionally, the project wants to create a common understanding for the causes of environmental disturbances. Different organizations can benefit with knowledge on pollution counter-measures which would in the end benefit river stakeholders.

The external flow of information via different channels to the public is a way to integrate the MSP with the general public. From the provided documentation on the project, it is known that to maintain communication with the public facts and details about the project will

be published in the project website. Additionally, media and end-users representatives will be invited to open project meetings.

5.3.3 Sub-Conclusions

The research findings suggest that the HARMOBALT project brings together Swedish and Russian partners. The project tasks were discussed in a collaborative way and their nature can also be viewed as a form of project collaboration. As a "space for change", the project is based on communication and coordination structures, which can also be considered as a structure for decision-making. Furthermore, the project stakeholders share a common project goal or worldview. The project's tasks themselves were developed in a collaborative fashion and the project activities were agreed upon. The HARMOBALT project and its activities are also coordinated with other projects.

HARMOBALT is supported by communication and coordination based on which the project is linked with the local authorities, end-users, general public, and project stakeholders themselves.

5.4 Discussion: Olonets project

5.4.1 *Does the Olonets project act as a "space for change"?*

Designing the MSP process includes a definition of links to decision-making, stakeholder identification, facilitation, organizational back-up and funding. The process started in 2004, when the Ministry of Agriculture for the Republic of Olonets requested to WWF to study the possibility for a project on beef production. The project has been designed including as main components the World Wide Fund for Nature (WWF) and the Baltic Fund for Nature (BFN). The project is conducted by the BFN and by a local project co-ordinator hired full-time by the WWF, who is responsible for communication and interaction with local stakeholders.

The main institution is the BFN, with a role of coordination and preparation of an action plan covering local needs in co-operation with the Olonets SG. The Olonets SG is the facilitation body responsible for project management and project integration with the activities of similar projects.

There is no evidence for who identified the main issues (and how). It is not excluded that the main issues has been defined at the project beginning, with the study requirement by the Ministry of Agriculture for the Republic of Olones to the WWF.

There is also no evidence for who identified the stakeholders and participants. However, from the gathered evidence it seems that the Ministry of Agriculture for the Republic of Olonets identified as a stakeholder the WWF.

The goal has been identified by the Ministry of Agriculture for the Republic of Olonets. But, there are no details about the possibility to develop the goals over the course of the MSP (informing processes, consensus-building processes and dialogues).

The process is funded by SIDA. It is not immediately clear who specified if there are other sources of project funding and what impact funders have on the project processes, structures and outcomes. There is no evidence for the project ending date.

5.4.2 *How the Olonets project is supported by communication and coordination?*

In general, the dialogue preparatory process is an important step for the implementation of communication and coordination in a MSP. In this case, however, there is no evidence of a preparatory process (consultation within constituencies, papers, initial positions etc.)

The structure of the project can be seen as an open network involving different levels of communication and coordination: communication with authorities, internal communication and international communication. A bottom-up approach regulates the communication between stakeholders, and the BFN maintains contacts with the Russian reference group to ensure exchange with the Ministry of Agriculture of Karelia, SLU, and with the Karelian Academy of Science. Communication with Swedish and Russian authorities is conducted to ensure coordination with other activities of SLU and GEF projects. The LO SG is integrating the activities with other international projects (Väinameri, SLU agricultural projects, the BSRP) using an international reference group.

The BFN is responsible for decision-making and prepares an action plan covering local needs in co-operation with the SG.

The project has a SG acting on internal and international level and is composed by the WWF, BFN, Karelian Academy of Science and Ministry of Agriculture of Karelia. This group is responsible for coordination, facilitation and integration with activities of similar projects through an international reference group.

One of the main tasks of the project is the dissemination of knowledge, capacity-building and experience. There is no research evidence, but it is expected that there is a publication of documentation and reports on meetings, summary of outcomes and recommendations, etc.

The implementation of a MSP includes direct and indirect relations with non-participating stakeholders who may feed into the process during and after the project. In this project the outcome of the project will produce work opportunities and job diversification and dissemination of knowledge, capacity and experience.

Communication channels characterize the type of interaction that a MSP wants to establish with the external environment. The development of eco-friendly agricultural practices requires

the involvement of consumers, farmers, meat producers and marketing people. The project includes communication with the public using a direct channel: two cow stalls are used as demonstration points and as a model for beef production and manure handling and storage.

5.4.3 Sub-Conclusions

The Olonets project clearly shows how a project can be used to link decision-making stakeholders with sustainable rural development. The project comes as an open structure in which a central authority combines effort with non-government organizations. As a "space for change", the program is supported by coordination and it is based on an action plan, which reflects on local needs. Furthermore, the SG provides a central facilitating support.

Communication and coordination is an important domain in Olonets from the very beginning, when the project was at a preparatory stage. This project is a demonstration of how a project can act as a bottom-up driven communication space where internal, institutional and international levels of communication and coordination co-exist.

5.5 Discussion: EHSA project

5.5.1 *Does the EHSA project act as a "space for change"?*

The research findings show that the project's processes were designed in 2004 by the BUP and Envirovet Baltic networks. These two units agreed to cooperate in the development of an educational package on ecosystem health and sustainable agriculture.

From the gathered evidence it is found that the project Management SG has members from the Baltic University Program (BUP), Collegium for Development studies at Uppsala university (KUS), SLU, and from the University of Illinois. The SG group has a BUP secretariat which coordinates a network of researchers, experts and teachers from institutions from the BSR and the Great Lake Region (GLR) in the USA. Another important institution is the KUS which acts as a forum for dialogue on development and aid issues.

It is not explicitly found who (and how) identified the issues. It is known that there is a forum for dialogue on development and aid issues at UU. The KUS is also conducting research and preparing reports on the development issues.

It is also not explicitly found who (and how) identified the relevant stakeholders. It is known that during the 2004 agreement between BUP and Envirovet Baltic networks, with the formulation of the educational package, authorities and officials in cooperation with local universities were identified.

The provided evidence is not describing explicitly who sets the goals (and how). However, the research findings show that the project planning started during a stakeholder meeting in

September 2005 at the Lithuanian Veterinarian Academy. The project is designed with two decision-making structures (steering and communication), a forum (KUS) and a wide network of participants which includes, among others the BUP and Envirovet implementing the educational package, KIPKA being responsible for the arrangement of seminars and training courses and acting as the coordinating link with the BSRP project, and, Immanuel Kant State University of Russia and Saint Petersburg State University hosting the BUP in the respective cities. Finally, there is no evidence for funders, impact of funders on the project's processes, structures and outcomes.

5.5.2 *How the EHSA project is supported by communication and coordination?*

As mentioned, the evidence shows that it is not clear how the preparatory process has been conducted, and if there have been consultations within constituencies, papers or initial positions made.

From the collected evidence it seems that the communication decision-making structure is based on two tiers. The first tier, internal communication, is based on Management SG meetings, on meetings by the Reference group, and on meetings during seminars and training courses. Further, communication is based on e-mail, telephone, and mail. The second tier, external communication, is important for the spread of information on the project progress within the BUP network. This information is spread by the use of the BUP Secretariat newsletter.

The project has two decision-making structures: project steering and project communication. The first structure is about project steering. The EHSA project director from the BUP is the main responsible person for the steering, co-ordination and supervision of the whole project. The project senior advisor from the KUS is responsible for the production of the quarterly Newsletter, editing work and supports the work of the EHSA project director. The local co-ordinators are responsible for local arrangements of activities and assist in the co-ordination with the BSRP project.

From the research findings a facilitation body is clearly identified in the Management SG with members from the BUP and from the University of Illinois. The SG also includes a secretariat that is coordinating the network of researchers and is also offering services (production of books, movies, website, course materials, etc.).

The project is providing documentation as books, films and DVDs, and a project website. Additionally, information is disseminated by the Baltic 21 Newsletter and by newsletters in the GLR.

The research findings show that other stakeholders can feed into the project's processes:

students, scientists, educational institutions, committees, centers and municipalities.

Since the main theme of the project is the diffusion of knowledge about sustainable agriculture, the communication with the public is another important point. The information to the public will be provided as books, movies and project website. Responsible for the production of such material is the Management SG. Information is spread by the use of the BUP Secretariat newsletter. There are also contacts with the media, and the project is presented at seminars at the Swedish Royal Forestry and Agriculture Academy.

5.5.3 Sub-Conclusions

The project can be seen as a wide and open network of participants where the main flows are cooperation and information. As a "space for change" the stakeholders share the view that by providing knowledge about environmental problems it is possible to improve the management of land and land use. In this sense, the project as a network generates and spreads information inside and outside its structures using different ways: meetings, development of educational packages, courses, books, movies and other material. From the gathered evidence it seems that there is a well defined decision-making structure acting on two levels: steering and communication. As a "space for change", the network is structured on different levels of cooperation: international cooperation between universities, and internal cooperation between research groups, etc.

5.6 Discussion: PCU

Based on the collected evidence the communication and coordination aspect of the AEEHLO program is based on the functioning of the PCU as a mechanism that aligns project's processes with environmental conditions. This evidence also suggests that the PCU was created with the aim to gain a fast view of the progress of each project needed by the Swedish project coordinator. Such a view is needed so that the project coordinator can understand the current environment and underpinning local processes under which the projects operate. In this regard evidence suggests that the PCU is not only a mechanism for advice giving but also a mechanism for program steering and learning.

The PCU members monitor the progress of each project and in case of change notify the Swedish project coordinator accordingly. Based on discussions with project participants it was concluded that there is at times a missing feedback between the PCU and some of the projects. Another observation is that the PCU members request data for dissemination of information to the end-users, the general public, etc. Additionally, the PCU members act on direct requests made by the Swedish project coordinator.

It can be summarised from the collected evidence that the PCU consists of 3 core team members (5 PCU members in total) who individually or in pairs are responsible for the communication and coordination in the AEEHLO program. When a piece of information from a project or from outside the AEEHLO program reaches a PCU member it is synthesized in a certain way, then aggravated to include information coming from another project or from somewhere else, this done for the purpose of status reporting, for instance. It is not directly evident how the incoming information is actually processed.

Finally, the PCU supports the SLU Grants office which has information storage, information processing, and decision-making functions. The SLU Grants office also has the main coordination function in the AEEHLO program. It sets the speed at which the program development proceeds and it synchronizes project activities.

5.6.1 Sub-Conclusions

It can be concluded that the overall AEEHLO program coordination is based on the supervision of the Swedish project coordinator which is supported by the PCU and the projects.

6. Main Discussions

6.1 *Does the AEEHLO program act as a "space for change"?*

AEEHLO is a program which provides assistance and consultation of technical nature funded by SIDA financing and Russian in-kind contributions. The program works together with the Committee of Agriculture and Fisheries and the Committee of Environment and Natural Resources, as official LO government agencies, which is in line with the argument of Smillie (Smillie I. 1995) when describing ways by which development projects are delivered. This is also in line with the argument of Steins and Edwards about MSP (Steins N. & Edwards V. 2009) according to which AEEHLO can be described as a form of stakeholder participation where stakeholders come together to communicate and make decisions on a particular issue. This point is further elaborated by Warner (Warner J. 2006) according to which AEEHLO can be viewed as a decision-making body, comprising stakeholders who perceive the same resource management problem, realise their interdependence for solving it, and come to agree on action strategies.

Evidence suggests that AEEHLO does not replace or duplicate the LO government agencies' management functions and does not challenge their legal status. On the contrary, AEEHLO aims to strengthen the participating Russian institutions, enhance international collaborations, and identify the lack of institutional collaborations by proposing a way to

organize such a type of work. AEEHLO addresses multi-related issues, which become the starting points around which the six AEEHLO projects gravitate. This is in line with the argument of Franks (Franks T. 2007) according to which the realm in which AEEHLO operates is complex and based on the local Russian institutional and social context. This argument is also confirmed by the aim of AEEHLO to strengthen participating Russian partners by fostering international collaborations, etc., in social and economic development issues. As the case with AEEHLO shows, there are multiple stakeholders with own objectives, the environment is complex and "messy" and financing is provided by SIDA and by in-kind Russian contribution. In contrast to Franks' argument, AEEHLO cannot be classified as "aid funded, and donor mediated" as both SIDA and SLU do not strive to replace or duplicate management functions, or replace the legal status, of the local authorities. On the contrary, they seek to provide assistance and consultation, and to actively engage and work together with Russian partners on the policy and non-policy level.

As a continuation with the argument of Franks about project forms (*Ibid.)*, AEEHLO has a structure similar to a corporation with a Swedish project coordinator responsible for overall coordination, a LO SG responsible for steering, coordination, and follows up on program activities in LO, and six projects with specified functions and geographic areas of operation. One of these projects, the PCU and its program coordinator, is responsible to coordinate and support the remaining four projects in LO and to monitor the project that is in Olonets, in the Karelian Republic. This is a point which matches what Dickinson, Saunders, and Shaw, argue as being responsive project management decision-making (Dickinson T., Saunders I., Shaw D. 1997). According to Blunt and Jones (Blunt P. & Jones M. 1992) PCU can be regarded as a mechanism which to ensure accountability and that AEEHLO can function as a "learning organization". This is further explained by referring to the arguments of Raynard (Raynard P. 2000) and Morgan (Morgan P. 1999) according to which the PCU can be considered as a project management and monitoring & evaluation system that links together AEEHLO with its stakeholders and thus demands for efficiency and effectiveness are balanced (Crawford P. 2001 (unpublished)), based on participation, communication, and information dissemination. It is also import to note that based on the evidence material AEEHLO follows the participatory project management approach. This claim is supported by the argument of Bamberger, Yahie and Matovu (Bamberger M., Yahie A. M., Matovu G. 1996) according to which AEEHLO and its stakeholders participate in a "learning process", sharing resources, knowledge, and capacity building (Bamberger M., Yahie A. M., Matovu G. 1996).

An important task for a program that acts as a space for six projects is that they share a common ground or worldview. As evidence suggests, there is a shared understanding stating

that agricultural and other non-point pollution sources in rural areas are the major sources of nutrients to the Baltic Sea. In this regard, AEEHLO can be viewed as an expression of the argument of Evans (Evans. 2009) according to which AEEHLO comes as a multi-stakeholder process revolving around a "steer and negotiate" process that enables shared learning and collaborative action among the AEEHLO stakeholders. The second point is that AEEHLO provides a platform of diverse stakeholder groups bringing them together in an international partnership formed as an institutional framework. This assumption is also validated by the research findings as there was a stakeholder kick-off meeting in Saint Petersburg on January 24, 2007 during which a protocol of intention was signed with the LO authorities. Further, there are rules and principles guiding the collective actions in the form of project descriptions based on the logical framework approach tools for program design, monitoring and evaluation. It must be stressed that LFA was used as a vehicle for communication and creation of a common understanding between the AEEHLO stakeholders and program decision-makers. This comes as a direct response from the previous program, AELO, as AEEHLO has an increased number of involved stakeholders, and end-users, which puts relevance to the program's communication and coordination role, a role which LFA was used for. It is also evidenced that AEEHLO establishes numerous bridges with its end-users through its projects, which encourages collective actions at the local level by providing a "space for participation" of local stakeholders in project decision-making. AEEHLO also tries to provide a "space for collaboration" with institutions, again on a project level, and with LO committees' officials integrating them in the LO SG following certain procedures. As an outcome of these developments it can be assumed that in AEEHLO the importance of implementing a form of a participatory project management mechanism was recognised. As evidence for this can be considered the fact that each of the AEEHLO projects are driven by participatory-based partnerships and that the PCU ensures that the projects are enabled to implement their goals. Further, PCU ensures that there is an overall cooperation, communication and coordination between the projects, which makes them responsive and flexible to environmental changes, and able to "learn". This point is a demonstration of how the action description vehicle for program management can be replaced by a vehicle driven by participatory-based partnerships and cooperation described in section 2.5 *Alternative participatory approaches driven by communication and coordination*. This point is also in line with the ideas of the participatory monitoring and evaluation (PM&E) approach proposed by Irene Guijt, Marisol Estrella, and John Gaventa in their book *Learning from Change: Issues and Experiences in Participatory Monitoring and Evaluation*. According to this approach, based on communication, negotiation, and mutual trust, the PCU can involve end-users, project stakeholders and LO authorities deciding together how the AEEHLO progress should be

measured, and results acted upon.

There is no evidence that the collaborative governance was challenged by groups that are more economically or politically powerful than other groups. This is in response to the statement made by Minu Hemmnati (Hemmnati, et. al. 2002) warning that "civil society representatives often have concerns over co-option, of losing independence, and being in a situation where the political and economic power of other participants in a multi-stakeholder process might divide civil society or dilute the strength of its voice and its advocacy for change". In this regard, the projects are governed by Swedish and Russian project leaders, there is a neutral Swedish project coordinator and the authorities in LO make their own appointments to the LO SG. As the Russian project leaders come from local institutions there is no evidence if they represent the interests of all the similar institutions or those of the local end-users.

As evidence suggests, it can be tricky to transfer consultative services from one country to another that is more inclined into technical or engineering solutions, suggested by a program stakeholder. This can result in project outputs that have an insignificant impact on the local processes. However, in the AEEHLO program, there is a mechanism in the face of the PCU which ensures that attention is given to the development of the local processes and that these developments are reflected by the project operations. Continuing on this line, the evidence suggests that efforts are made to find synergies between the AEEHLO projects and with other projects and institutions, which operate on a Baltic Sea level.

6.2 *How the AEHLO program is supported by communication and coordination?*

The gathered material suggests that AEEHLO and its projects are distributed in space, both in LO and in Olonets in the Republic of Karelia. The program is also distributed in time as the six projects have different starting points or had previous working experiences in the Russian context. The coordination of the AEEHLO projects as a task was so organised that each project can benefit from the experience of the partnerships and respectively to contribute to the program as a whole. This is in contrast to the "advisory communication" of linear exchange of information without a feedback mechanism described by Leeuwis and Van den Ban (Leeuwis C. & Van den Ban A. 2007). In fact, the AEEHLO communication and coordination aspect can be considered as an iterative process in which the program stakeholders construct meanings together as suggested by Leeuwis and Te Molder (Leeuwis C. 1993; Te Molder H. 1995). This is further supported by the gathered evidence suggesting that AEEHLO is based on a communicated sense of uneasiness related to environmental problems of the Baltic Sea and rural unemployment in NWR. This is an important point which is in line

with the issue of "multiple reality" proposed by Schuurman (Schuurman F. J. 1993) because it indicates that AEEHLO can be viewed as a space where "multiple realities" meet and contest based on the communication and coordination activity of the PCU. In fact, this makes AEEHLO a "space for change" where its stakeholders are interrelated through the networks of the six projects and through the sharing of certain knowledge frames, forming a room for knowledge creation.

Based on the collected evidence the AEEHLO program can be viewed as a coordinated structure which consists of different institutions and authorities in which stakeholders are engaged in problem-solving activities grouped as projects. This "coordinated structure" is in line with the definition of Giddens (Giddens A. 1998) about the "stakeholder society" which encompasses stakeholders aspiring to achieve a better society. On this point, the argument of Barney (Barney D. 2004) can also be used to further explain how and why the AEEHLO stakeholders are inter-dependant and inter-related in a network, collectively described as AEEHLO. For this it is important to refer to Warner (Warner J. 2005) who describes networks as flexible structures which are not restricted to the time and geographic domain. When this is used to reflect on AEEHLO it is seen that indeed the AEEHLO projects are spread both in LO and in Olonets, and that they have started within different time-frames. In this sense, the warning of Castells (Castells M. 1998) about disempowering stakeholders due to a lacking access to technologies does not hold true in the case with AEEHLO where stakeholders come together and communicate by telephone and have access to the Internet.

Coordination in AEEHLO is not based on static rules or procedures. To make coordination a dynamic arrangement the PCU was formed. This formation of the PCU supports an emergent and adaptive process of coordination which to support the AEEHLO projects to align with the local processes by providing information to the projects and engaging stakeholders in a dialogue. As a response to the warning of Röling and Woodhill (Röling N. & Woodhill J. 2001) about the need for mutual sharing it must be noted that the role of the PCU can be viewed as one ensuring that the AEEHLO projects and their stakeholders are enabled to mutually share information and resources. In this line, the communication and coordination approach of the PCU provides a space for multiple perspectives to be shared during organised meetings, production of reports, and dissemination of information to the general public to be made. This is an important point which complies with the assumption that a MSP, or AEEHLO, can be viewed as a "space for change" as the AEEHLO stakeholders can come together, communicate, negotiate and coordinate the use of resources, something in line with the argument of Röling and Woodhill (N. & Woodhill J. 2001). This is further supported by evidence, showing that coordination in AEEHLO viewed as a space takes both vertical and

horizontal dimensions. The vertical dimension comes from the coordination of project activities when reported in status reports or presented to the Swedish project coordinator, or during LO SG meetings. The horizontal dimension comes from the coordination of activities between projects. In this sense the research evidence presents a clear link of how communication and coordination of resources and information are interrelated.

6.3 Comparison of the LFA and MSP project approaches used in the AEEHLO program

LFA follows a logical approach where cause-effect relations are used for defining issues. On a project level the cause-effect logic is applied for activities' implementation. According to Cacayan "the successful implementation of activities leads to the achievement of the results. Consequently, the achievement of the results leads to the realization of the project purpose. And the realization of the project purpose contributes to the realization of the overall objective" (Cacayan et al. 2005). In LFA the cause-effect logic is helping to avoid confusion in the singling of problems and in the implementation of activities.

In MSP the cause-effect logic is not a core idea. Edward Sampson (1993) said "that the most important thing about people is not what is contained in them but what transpires between them, that is in the space between them." MSP is about learning. People participate in a process with intent to follow agreed ground rules and procedures. Participants put forward their views listening or integrating others' views. The definition of the problem depends on the stakeholders. They have to agree on the problem and the problem has to be mutually agreed. Collaboration helps to avoid confusions on the process. MSP offers a dynamic view where the view of the system of interest is process-oriented and the platform deals with issues developing over time.

If compared with MSP (Table 1), the LFA matrix does not have such a dynamic view, being a tool which provides a snapshot in time, a static view in an instant of the ongoing process. For this reason, completing the matrix must be approached as an iterative process. The role of stakeholders in MSP and in LFA is different. In MSP all the stakeholders are always involved in the same degree. In LFA there is a Logframe which helps to indicate the degree of control the stakeholders might have over the various levels of the activity implementation. "In a project context, the partners should have considerable direct control over inputs, activities and outputs, but can only be expected to exert influence over the achievement of the activity's component objectives and outcome through the way in which outputs are managed. Activity implementers usually have no direct influence over achieving the goal, and can only be

expected to monitor the broader policy and program environment to help ensure the activity continues to be contextually relevant and the benefits likely to remain sustainable." (AUS Guideline. 2005).

Table 1 General comparison of the LFA and MSP participatory project approaches

Aspects	MSP	LFA
Approach	Dynamic	Static (with iteration)
System	Space	Matrix
Events	Process	Cause-effect
"Space for change"	Collaboration	Logic

6.4 Use of the LFA approach in AEEHLO

In literature the LFA approach is known to contain nine steps. The gathered evidence suggests that LFA has been implemented without following the usual 9-step formulation, but using a matrix which is objectives-oriented. In AEEHLO the LFA is applied using the objective analysis (the fourth step). For each identified objective, Actions, Stakeholders, Policy measures, assumptions and risk, have been identified. The resulting LFA is defined as a "Tentative LFA for Sida supported activities within the Baltic Sea Regional Project (BSRP)" (Programme for Swedish Technical Assistance (2006-2008) within the Baltic Sea Regional Project (BSRP) – Agricultural Pollution Control, Coastal Zone Helcom, ICES, World Bank/GEF, NEFCO, Sweden, and Finland. Management and Rural Development – North West Russia. 2006).

It appears that the implementation of LFA in the AEEHLO program was based on a two-step approach. In the first step, on a program, or AEEHLO, level, LFA was applied by using the objective analysis (the fourth step), as a core LFA concept. It is supposed that the idea behind this was to use LFA as a tool for communication within the NW Russian context and with stakeholders. Then, as evidence suggests, each of the projects has their own complete LFA matrixes, which bring together projects' stakeholders to operate under different agreements.

It can be summarized that the idea behind the application of LFA in AEEHLO was to aggregate and synthesize the six projects, forming together the AEEHLO program, and at the same time, to provide a "space" on the project level by adopting the multi-stakeholder participatory approach, establishing a sense of ownership on this level. In conclusion, it should

be indicated that it seems that the combination of the LFA and the MSP approaches provides a "space for change", which is flexible, yet institutionalized.

7. Conclusions regarding AEEHLO

7.1 *Does the AEEHLO program act as a "space for change"?*

As suggested by Habermas and his argument about communicative rationality (Warner J. 2005) it can be concluded that the success of the AEEHLO program as a multi-stakeholder platform depends on the ability of its stakeholders, from the authority and non-authority side, to collaborate in mutual sharing, understanding and definition of interrelated issues. This success is dependent on collaborative work along program activities which are implemented by joint actions, and that there is a comprehensive monitoring and evaluation on the processes which are impacted by the program. The overall sense from the gathered evidence is that the AEEHLO partnerships have a positive impact on the local processes in LO and in Olonets. Another understanding from the collected documentation and discussions with stakeholders is that it is the people and not the institutional structures or processes who determine, and subsequently appraise, the outcomes of the AEEHLO program.

In overall, the AEEHLO program can be viewed as a "space for change" in which collaboration and coordination between the stakeholders generate a spirit for commitment to take actions and a try to resolve pressing environmental and social issues by fostering an atmosphere of constructive and focused manner of work. In this sense, the AEEHLO program acting as a "space for change", should be considered as a collaborative platform, which is there to work hand in hand with the local authorities and to assist them in their delivery of services to the society. This is an important point because the success of AEEHLO depends heavily on the political and social climate of NWR.

The overall conclusion is that in order for the AEEHLO program to function as a "space for change" its members have to share a common goal or worldview of desirable and feasible future state of present pressing environmental and social issues. Such a goal needs to be based on principles that can guide joint actions and learning. A second conclusion is that the AEEHLO program is able to adapt to the changes in the local processes in order to have a positive and well-thought impact on them. This is important because through proper alignment within the local interrelated processes it should be possible for new knowledge to be formed. A third conclusion for the functioning of the program and its collaborative arrangements is that resources are present. Another point is that as a "neutral space" the program needs to differentiate itself, as an identity, from official policy making. The selection and participation of stakeholders should be made a deliberate act, which ensures that the

selected stakeholders represent different parts of the society in which the program operates. When developing the program activities there must be a very clear link between inputs and outputs. This link has to be action driven and based on communication and coordination, and, if needed, on negotiation. From the very beginning, the program should be able to show to its stakeholders the positive outcomes of their collaboration work on the issues they tackle. Such a demonstration can be based on a periodical monitoring and evaluation.

7.2 *How the AEEHLO program is supported by communication and coordination?*

As a platform which brings together stakeholders, the AEEHLO program links together end-users, stakeholders and authorities. In this regard the AEEHLO program can be viewed as a think tank which establishes a communicational and feedback mechanism between the project stakeholders, local end-users and official authorities. With the communication and dissemination channels which the PCU and each project establish, the AEEHLO program can be viewed as a space which spreads ideas both within the program platform and inside-outside. In this way the program can be viewed as a mechanism for two-way communication, and for information and knowledge sharing.

Coordination in the context of the AEEHLO program should be considered in broad terms. In this regard, coordination means coordinated use of resources such as information, and financial or professional experience. Another way of consideration is to view coordination at AEEHLO as a mechanism for bringing Swedish and Russian stakeholders together to work on environment and rural development issues, issues which cannot be dealt single-handed by one of the stakeholders only.

Communication and coordination in AEEHLO support the exchange of knowledge and information between Swedish and Russian experts, and between Swedish and Russian policy makers. In this regard, the AEEHLO communication and coordination aspect provides a space in which different inputs can be brought together. Having such communication-coordination space it is possible for the stakeholders to develop effective solutions reflecting local conditions and processes, which in the end results as a positive output or impact on local processes. This space can also be viewed as a way to avoid having a top-down decision-making structure driven by a command/control approach. The gathered evidence also suggests that the AEEHLO communication and coordination mechanisms support the overlapping and duplication of activities in the projects. There is also evidence that the communication-coordination mechanism involved the project stakeholders in the initial project development and this increases the sense of ownership on a project level. It is also important to note that the present AEEHLO program is based on partnerships which were already formed in the past

based on information sharing and coordination activities of Swedish and Russian experts.

On the use of SSM in this research

Following the use of the SSM enquiry approach for this research it can be concluded that this approach supported the researcher to undergo a participatory research enquiry which provided a holistic view on the AEEHLO program, by addressing various levels of complexity. This approach also supported learning in a practical, program context. The used tools, such as rich pictures, and CATWOE analyses, became a solid platform on which the synthesis reports in this work rest. In their own, these reports gave a rich pool of knowledge from which it was possible to make discussions, draw conclusions, and propose recommendations. As learning is an iterative cycle, and in fact, this research is based on the first 2 stages in the SSM enquiry, it has to be said that the results of the research work are not static, nor validated by project stakeholders.

Further research

During the writing of this work the researcher came upon the ideas of Habermas in *The Theory of Communicative Action* concerning cybernetics. In this regard, the researcher is interested on following on an idea to consider research which to study the possibility to develop an iterative and participatory form of project monitoring and evaluation. In this, the researcher wants to draw on the idea of considering a program as an autopoietic system, a concept promoted by Maturana in *The Tree of Knowledge*, which is capable on learning, following the steps of *The Fifth Discipline* of Peter Senge.

8. Recommendations

1) Develop a "Common Vision" document for collaborative work arrangement, that to be based on a shared understanding among the stakeholders of the issues to be addressed and underpinning principles guiding the collaborative work.
2) Initiate as early as possible a consultative process with the local authorities and develop together the program framework so that it matches local processes' dynamics and ensures an official authority acceptance of the project presence locally. Effort needs to be put on the separation of the program as an entity from official decision-making.
3) The presence in the program partnership should be balanced and representative of stakeholders who are directly and indirectly affected by local processes that the program tries to affect.
4) If the program is conduced at several locations, develop a Unit at each location which to be supported by a coordinator. This coordinator should be responsible to represent

local interests within this location and acts as a mechanism for monitoring and responding to changes in the local processes. The work of this coordinator needs to comply with principles of the "Common Vision" and ensures that local program activities match this vision.

5) Develop a funding mechanism which channels funding centrally from the authorities and from the program itself, and stimulates local businesses to contribute financially by finding incentives for them to contribute and participate. Such a funding mechanism needs to be well balanced and to safeguard a fair voice representation.
6) Establish and apply communication and coordination practices in which the communication flows in a top-down and bottom-up direction.
7) Establish a mechanism for project monitoring which is based on a two-way communication about the achieved results and provides a space for changes that may be necessary.
8) Establish a coordination mechanism which brings together projects tasks which fit project context and program. These project tasks can be structured into packages so that synergies can be found between them on a program level. Further, the coordination mechanism can be linked with communication mechanism which to support the implementation of the project tasks.
9) Establish a self-controlling mechanism which to guide the work of the body responsible for overall project management and steering.

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Acronyms

AEEHLO: "Agriculture, Environment and Ecosystem Health in North West Russia" program

AELO: "Agriculture and Environment in Leningrad Oblast" program

BFN: Baltic Fund for Nature

Bioforsk: Norwegian Center for Soil and Environmental Research

BSR: Baltic Sea region

BSRP: "Baltic Sea Regional Project" program

BUP: Baltic University Program

CATWOE: Soft system stakeholder framework

EHSA: "Ecosystem health and sustainable agriculture educational programme for North-western Russia, Belarus and Ukraine" project

GLR: Great Lake region in the USA

HARMOBALT: "Harmonization of methods for monitoring, modelling and assessment of nutrient loading from land to the Baltic Sea and effects of counter-measures" project

HELCOM: Helsinki Commission

IPM: "Integrated Pest Management, especially forecasting and information systems for main pests, diseases and weeds in field crops in North West Russia" project

KIPKA: Kaliningrad Institute of Agribusiness

KUS: Collegium for Development Studies at Uppsala University

LFA: Logical Framework Approach

LIU: Local Implementation Unit

LO: Leningrad oblast

LRF: Swedish Farmers' Union

MSP: Multi-stakeholder platform

NWR: North West Russia

PCU: Program Coordination Unit

RPNP: Russian Priority National Project

SFP: "Sustainable Farming Practices" project

SG: Steering Group

SIDA: Swedish International Development Cooperation Agency

SLU: Swedish University of Agricultural Sciences

SO "St. Petersburg CGMS-R": State Organization of Saint Petersburg Regional Center for Hydrometeorology and Environmental Monitoring

SSM: Soft System Methodology

UU: Uppsala University

WWF: World Wide Fund for Nature

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Kevin, it is true that with hope, determination and hard work good things do happen. A special and cordial thank you for giving me the way to be where I am now.

Viveka, your trusting me and giving me a part-time job to support living in a foreign country cannot be forgotten.

I am in great debt to my father, Николай, and to my grandfather, Кено. Татко, thank you for being patient and for staying with me day and night, anytime, I needed you as a friend and father. Дядо, I follow you in your steps and I will carry on with our work as a family on natural resource protection and management. Мамо, баби, thank you for instilling a life-long interest in books and knowledge in me.

A word of affection goes to my precious wife, Isabella. Every time I am good or down you are next to me, sharing it with me. Working on similar water-related issues but using different approaches you shaped my outlook on the processes described in this work. I also want to thank your, now mine, dad, Gennaro, mom, Maria Rosaria, and sisters, Annamaria and Ilaria, for growing, nurturing and having such a cheerful person as you, Isabella!

I dedicate this thesis to my father, grandfather, and to my wife.

Appendices

The findings presented in this section are based on Leg 2 of the research enquiry. This second Leg has two objectives. The first one is to identify and describe the AEEHLO program and its projects in SSM terms. This objective is a continuation of the learning from interaction with stakeholders and reading of program documentation in the previous Leg. The second objective is now to present the identified actors, structures and processes in the AEEHLO and its projects, as well as, to provide a description of their relationships using synthesis reports, rich pictures and CATWOE analyses.

Appendix 1: AEEHLO program synthesis report

Stakeholders describe the AEEHLO program (Figure 4) as one of the Swedish contributions under SIDA financing to reduce eutrophication of the Baltic Sea. SIDA assistance was requested by SLU and its Russian partners. Stakeholders further pointed that this assistance is of technical nature in the field of environmental and sustainable development. The rationality behind this assistance is three-fold. The first one is to provide assistance to Russian program partners in their work on improving the environmental conditions and to help them minimise poverty in rural areas. The second one is to provide a framework for Russian and Swedish cooperative work aimed at the restoration of the ecological balance of the Baltic Sea. The final rationality is the exchange of experience and establishment of cooperation between the West and East (Programme for Swedish Technical Assistance (2006-2008) within the Baltic Sea Regional Project (BSRP) – Agricultural Pollution Control, Coastal Zone Helcom, ICES, World Bank/GEF, NEFCO, Sweden, and Finland. 2006). In other words, AEEHLO was planned to provide interventions on the farm level, regional modelling and monitoring of nutrient leakages, support to policy dialogue and policy development, etc. As an expected outcome was the creation of competence and awareness for agri-environmental issues among diverse stakeholders (*Ibid*.). Geographically, AEEHLO is focused on NWR, Leningrad and Kaliningrad oblasts, and in the Republic of Karelia. Although the focus is on NWR there are federal authorities and methodological institutions in Moscow which also participate. Their interest is mainly to disseminate the methodological experiences gained from the NWR to other Oblasts of Russia (Programme for Swedish Technical Assistance (2006-2008) within the Baltic Sea Regional Project (BSRP) – Agricultural Pollution Control, Coastal Zone Helcom, ICES, World Bank/GEF, NEFCO, Sweden, and Finland. 2006).

The AEEHLO worldview or common ground is the notion that agricultural and other non-point pollution sources in rural areas are the major sources of nutrients, triggering eutrophication of the Baltic Sea. (*Ibid.)* In this sense, Sweden is co-ordinating its assistance

within the BSRP through technical assistance funded by SIDA. This technical assistance includes direct environmental investments, human and financial resources and an institutional framework bringing stakeholders together in an international partnership. From SSM point of view the agricultural production climate in NWR and in the Baltic States of Lithuania, Latvia and Estonia is one describing recovery from the economic collapse of the mid-1990s and is presently growing. In this regard, AEEHLO was planned to safeguard the incorporation of environmental management and investments in the expansion period (*Ibid.)*.

Specifically, the AEEHLO theme of concern or development objective is conceived as one to "save and enrich the Baltic Sea ecosystem and its potential for social and economic development" (Programme for Swedish Technical Assistance (2006-2008) within the Baltic Sea Regional Project (BSRP) – Agricultural Pollution Control, Coastal Zone Helcom, ICES, World Bank/GEF, NEFCO, Sweden, and Finland. 2006).

According to the transformation statements or immediate objectives the program aims is to strengthen participating Russian institutions, to enhance international collaboration, and to identify the lack of institutional or collaborative co-operation, in which case it has to propose a way to organise such collaborative work (*Ibid.)*. This collaborative work is split within six thematic areas or projects over a period of three years. The first thematic area is about environmental management systems and farm practices and the project is titled "Sustainable Farming Practices" or SFP. The second thematic area is about integrated pest management and early warning systems and the project is titled "Integrated Pest Management, especially forecasting and information systems for main pests, diseases and weeds in field crops in North West Russia" or IPM. The third thematic area is about environment surveillance, assessment and modelling and the project is titled "Harmonization of methods for monitoring, modelling and assessment of nutrient loading from land to the Baltic Sea and effects of counter measures" or HARMOBALT. The fourth thematic area is about sustainable grassland management in Olonets, Karelia and the project is titled Olonets. The fifth thematic area is about ecosystem health and sustainable agriculture in higher education and the project is titled "Ecosystem health and sustainable agriculture educational programme for North-western Russia, Belarus and Ukraine" or EHSA. The sixth thematic area is about authorities' policy exchange co-operation. This sixth thematic area was transformed into a project group titled Program Coordination Unit or PCU. Each of these six thematic areas (*Ibid.)* has its own statements or objectives, which however are complementing to each other:

- Expanding the awareness about and use of sustainable farming practices, comprising of sound management of land and surface water resources
- Demonstrating socio-economic progress in farming and rural communities through

better management of local resources

- Demonstrating successful protection of habitats and biodiversity in the agricultural landscape
- Expanding strategy development (policymaking) of authorities, institutions and interest organizations like farmer's unions
- Expanding the regional co-operation, exchange of experience and joint actions between EU and non-EU countries in the Baltic Sea region

The decision making structure or the management organization of the programme is based on the co-ordination of a group of actors co-operating under different agreements, working on thematic areas or projects. In this sense, AEEHLO can be considered as a device for change or "space for change". As experience from the previous NWR program AELO shows it was planned for the "new" AEEHLO to be driven again by a participatory multi-stakeholder approach which was found functional under the Russian institutional context (Agri-environmental project in Leningrad Oblast. 2005). This approach was based on the Logical Framework approach tools for program design, monitoring and evaluation. The idea behind this was to make the AEEHLO program a robust platform able to sustain and operate under unstable and changing organizational settings. Furthermore, it was believed that the combination of participatory multi-stakeholder platform and LFA tools was to establish a strong ownership at the project and program level. Previous experience also suggested that the AEEHLO multi-stakeholder platform could be made solid, yet flexible, by increasing the number of involved local stakeholders and end-users (Programme for Swedish Technical Assistance (2006-2008) within the Baltic Sea Regional Project (BSRP) – Agricultural Pollution Control, Coastal Zone Helcom, ICES, World Bank/GEF, NEFCO, Sweden, and Finland. 2006). In this regard it was planned that AEEHLO program would involve a number of stakeholders, the most important of which would be farmers, the Farmers' Union and other farmer interest groups, officials at authorities, advisory services, methodological institutes, educational facilities, politicians, etc. AEEHLO was also planned to be actively cooperating with local authorities such as the Committee of Agriculture and the Committee of Natural Resources, and with consumer organizations. On a project level (*Ibid.)* the projects were planned with their own management structure and with a lead local Russian partner or responsible organization and a project leader collaborating with a Swedish project partner.

The Committee of Agriculture and Fisheries, the Committee of Environment and Natural Resources, Finnish Ministry of Environment and SLU on behalf of SIDA also formed a LO SG (*Ibid.)*. In this regard, the LO's two committees, from Russian side, and SLU, from Swedish side, were the main partners steering AEEHLO and being responsible for the co-

ordination and follow-up of program activities in LO. As a strategy of SIDA for environmentally related support within the Baltic Sea agricultural sector, SLU was involved for overall coordination of Sida's support in NWR. There was also a Russian programme coordinator responsible for coordination of the projects in LO and for reporting to the LO SG and to the project coordinator at the SLU Grants office. In Kaliningrad, similarly to Leningrad Oblast, the management structure was based on a Local Implementation Unit (LIU) located at the Kaliningrad Institute of Agribusiness (KIPKA). The LIU had to be in contact with local authorities, NGOs and research and educational institutions. It was to report to the project coordinator at the SLU Grants office. No Steering Group was planned for Kaliningrad (*Ibid.*).

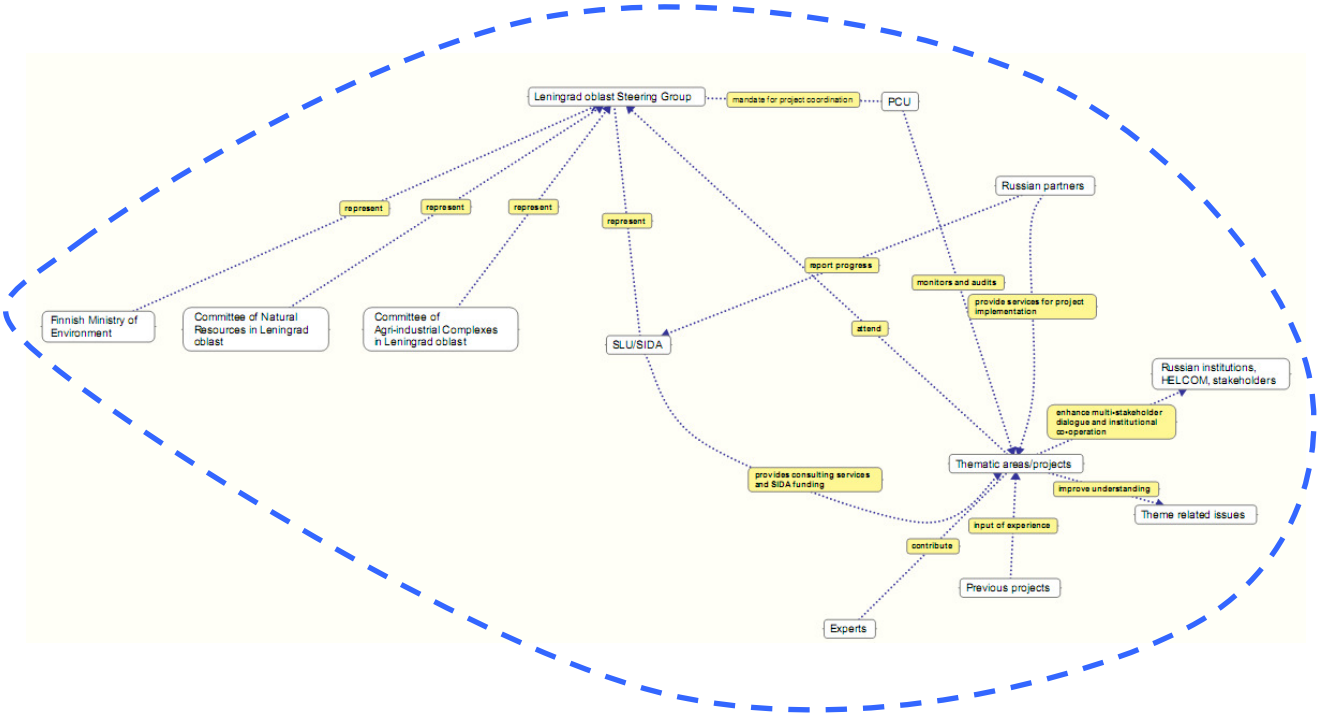

Figure 4 AEEHLO program rich picture

Appendix 2: SFP synthesis report

The project "Sustainable Farming Practices" (SFP) comes as a follow-up of the AELO project. This project is funded by SIDA, the Finnish Ministry of Environment, the World Bank and with Russian sources (Figure 5).

The project theme of concern is to find a balance in the increasing number of agricultural products made by enterprises in LO that to be both economically feasible for them to produce and at the same time to be environmentally-friendly. The project primary tasks are to find environmentally-friendly ways for storage and usage of organic and mineral fertilizers at diary

and pig farms and at poultry factories. Hence, the project core primary tasks focus on providing recommendations about storage and usage of technological solutions at several pilot farms in LO. These farms also participate in the Russian Priority National Project (RPNP) in the sphere of "Accelerated development of livestock breeding". As part of the RPNP these farms invest in the modernization of their farms, introduce housing and milking technologies, purchase agricultural machinery and equipment, etc. The project core primary tasks are also directed at the CJSC cattle-breeding farm "Krasnoozernoye", LLC "Faeton-Agro" ("Udarnik" farm) and CJSC cattle-breeding farm "Rapti". In this direction, the project provides advisory services that support the farms' management and specialists in the use of Environment Management System and adjusting technological process to this system.

The involved project partners (Table 2) are the Swedish Scanagri/Niras, the Russian Leningrad Reference Center, Academy of Management and Agri-business, Scientific Research Institute of Mechanization and Electrification of Agriculture, Federal State Territorial Plant Protection Services of St. Peterburg, North West Russian Scientific Research Institute of Agricultural Economics and Organization, Farmers' Union, State Agrarian University, Saint Petersburg State University, District Committee for Agriculture, Vselvologskij Agricultural College, and the Besedkij Agricultural College.

The Leningrad Reference Center (former Center for Agrochemical Services, CAS) is the temporary project office host and plays a facilitating and supporting role. The Academy of Management and Agri-business plays a supporting role hosting the Russian program coordinators and has the responsibility to disseminate information and for awareness-raising. The Scientific Research Institute of Mechanization and Electrification of Agriculture is responsible for the provision of information and advice for the implementation of sustainable farming practices. The Federal State Territorial Plant Protection Services of Saint Petersburg is involved in issues related to pesticide management. The North West Russian Scientific Research Institute of Agricultural Economics and Organization provides agricultural economists and is responsible for agricultural credits. The Farmer's Union provides help with the establishment of contacts with interested farms and for dissemination of information to its members. Additionally, Swedish and Russian experts prepare recommendations for the pilot farms. Additionally, they organize seminars and meetings with representatives of agricultural enterprises of LO. One PCU member is responsible for SFP.

This synthesis report is based on an interview with the SFP Swedish project leader and on the November 2006 Sustainable Farming Practices Inception report (Sustainable Farming Practices. 2006).

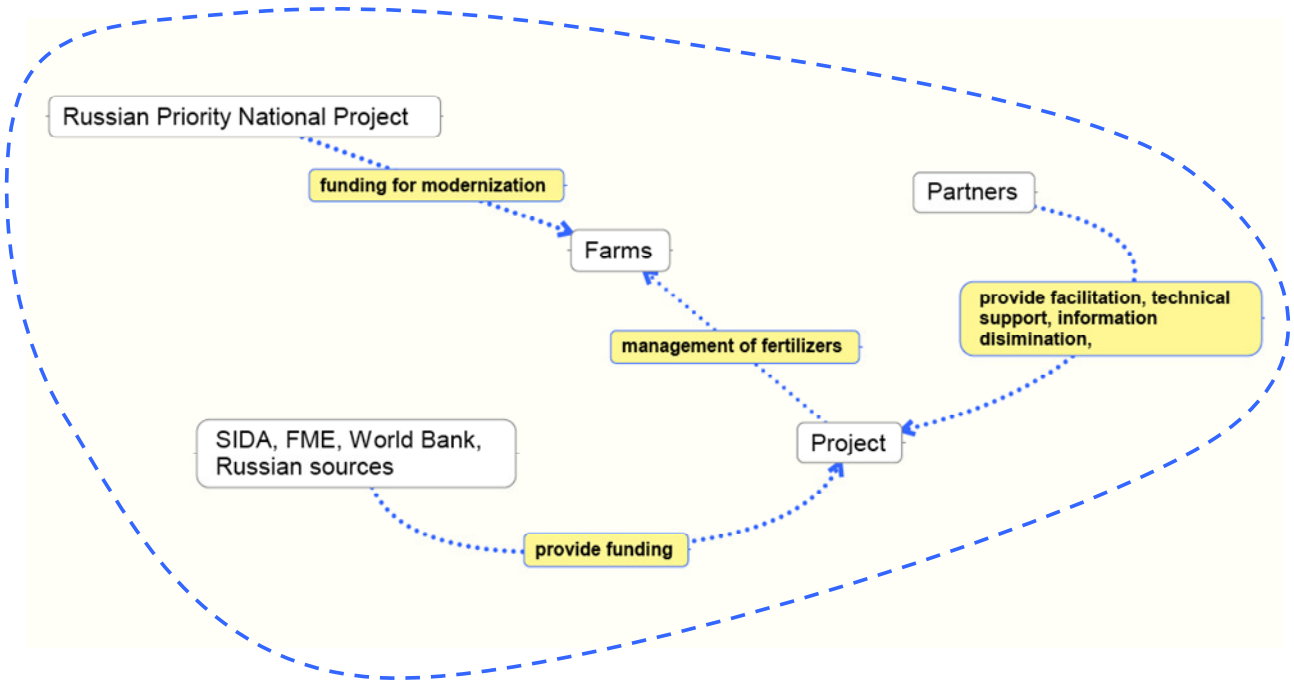

Figure 5 SFP program rich picture

Table 2 SFP CATWOE analysis

Project 1: Sustainable farming practices – SFP	
Environment	Awareness of increasing pressure from legislation to reduce impacts on the environment, and awareness to some extend of the increasing interest from consumers for better food quality.
Transformation	
Inputs	Development of technological solutions for handling
	Provision of financial support to farms
	Improved knowledge of farm specialists
	Established EMS group
	Established demonstration farms
	Enhanced awareness of sustainable farming practices
Outputs	Technological solutions for handling
	EMS
	Financial support to farms
	Demonstration farms
	Awareness and knowledge of sustainable farming practices
Worldview	Farmers and agricultural authorities in Leningrad oblast requested support in environment management. They are interested in applying more efficient technologies and know-how to benefit their farms and the environment.
Clients	Agricultural producers and private/family farmers
	Farmers union and agricultural producer groups
	Teachers and students at agricultural schools
	Agricultural advisers and specialists
	Agricultural and environmental specialists of municipalities
	Consumer interest groups
	Authority representatives
Owners	SLU: Grants office/SIDA
	Finnish Ministry of Environment
	World Bank
	The Committee of Natural Resources and Environmental Protection of Leningrad Oblast
	The Committee of Agriculture and Fisheries

Table 2 SFP CATWOE analysis (continued)

Actors	Scanagri/Niras
	Leningrad Reference Center
	Academy of Management and Agri-business
	Scientific Research Institute of Mechanization and Electrification of Agriculture
	Federal State Territorial Plant Protection Services of St. Petersburg
	North West Russian Scientific Research Institute of Agricultural Economics and Organization
	Farmers' Union
	State Agrarian University
	Saint Petersburg State University
	District Committee for Agriculture
	Vselvologskij Agricultural College
	Besedkij Agricultural College

Appendix 3: IPM synthesis report

The "Integrated Pest Management, especially forecasting and information systems for main pests, diseases and weeds in field crops in North West Russia" (IPM) project (Figure 6) is limited to the area of NWR, specifically, to LO. Due to similar climate conditions which NWR and Sweden share there are similar pest and disease problems in crops. Hence, it is thought possible to successfully adapt Swedish forecasting and warning systems for use in Leningrad oblast and to the rest of NWR.

The different activities in the project are carried out together with the All Russian Institute of Plant Protection and the regional State Plant Protection Stations in Leningrad oblast, Karelia, Pskov and Novgorod regions. In these regions State Plant Protection Stations organize warning and information systems via "signal points". At each station the advisor has direct contact with farmers and gives advice concerning the use of pesticides. In the project, the All Russian Institute of Plant Protection has the coordination role and researchers from the Institute contribute on their own time.

The project environment rests on the legacy of the developed in 1957 USSR Forecasting and Warning Service. The All-Union Institute was once responsible for receiving phytosanitary information from the territory of the USSR and then for creating forecasts for crop pests and diseases which were forwarded to the Ministry of Agriculture in Moscow. Presently, the Institute is responsible only for research in pest management and the rest of the Service collapsed. The number of plant protection activities decreased too. As a result, there is a lack of incoming phytosanitary information from the oblasts and the Moscow Ministry of Agriculture cannot make proper estimations for the necessary amount of pesticides for the country. As a result farmers need information on pests dynamics in NWR, otherwise their agricultural practices are hurt by fluctuations in pests and diseases. In this sense, the Service in LO rests as an important project structural element. This Service centers around the Regional Plant Protection Station in Saint Petersburg, which consists of ten forecasting and diagnostic

stations. Forecasting specialists inspect main fields of crops and look for early signs of diseases and pest outbreaks. The collected information is then transferred to districts by the Forecasting and Diagnostic Laboratory. Even though the Service provides information of diagnostic and warning nature there is a lack of available information and implementation of plant protection methods. As a result it is necessary to develop new forecasting methods and warning and information systems. There are also agricultural producers and farmers with no agricultural education who need advice on how to implement pest management practices on their lands and information about how much pesticides to use.

The project partners (Table 3) share the worldview that in order to minimize the impact of pesticides on the flora, fauna and drinking water, it is necessary to maintain a pest management program which is updated. Having such a management program it is possible to increase agricultural yields and to make lean the use of pesticides. As experience shows, such a management program has to be able to forecast damage by pests and diseases. The result of a working pest management program is to have eco-friendly and cost-effective agricultural practices. Aside from the technical side of providing accurate information concerning current pests and diseases, it is also necessary that it is used to raise the awareness among plant protection advisors, farmers, and the public. As already explained, the plant protection services in NWR have undergone a long road of transformations. As a result, the Russian plant protection services deteriorated and that led to harmful environmental and economic consequences. Presently, it is a challenge to build a modern sustainable agricultural system based on existing infrastructure. The present Russian land use is split between collective farms, small-scale farms and individual land ownership. The difficulty of properly maintaining land use stems from fluctuations in pest diseases and pests, and from the lack of information about such fluctuations in all NWR regions. Hence, the IPM project theme of concern is the contribution to a Russian, predominantly NWR, sustainable agriculture which to utilize integrated pest management programs. Hence, the program is planned to provide input which to improve the use of pesticide advisory services in NWR and to increase the precision of pesticide use. There is also an effort to minimize the adverse impact of pesticide contamination on the Baltic Sea as well as on local surface and ground water. The project primary tasks can be summarized as update and improvement of pest management recommendations, validation and implementation of forecasting methods, development of a database, and provision of information on how to minimize pesticide effects. As an outcome of the project primary tasks it is expected to achieve several transformations. It is expected that recommendations for main pests, diseases and weeds will be implemented and that the result will be an increased chemical treatment precision. The second expected outcome is that the State Plant Protection Stations

and farmers are going to implement forecasting methods for main pests and diseases with a resulting avoidance of unnecessary application of chemicals. Then, it is expected that it is possible to develop a database which is Internet based. The final transformation is that after project end it is expected that there will is available knowledge on how to minimize the negative impact of pesticides and on how to construct biobeds which shall lead to minimized pesticide leakage into water bodies. One PCU member is responsible for IPM.

This synthesis report is based on an interview with the IPM Swedish project leader and on an IPM report (Integrated Pest Management, especially forecasting and information systems for main pests, diseases and weeds in field crops in North West Russia. No Date).

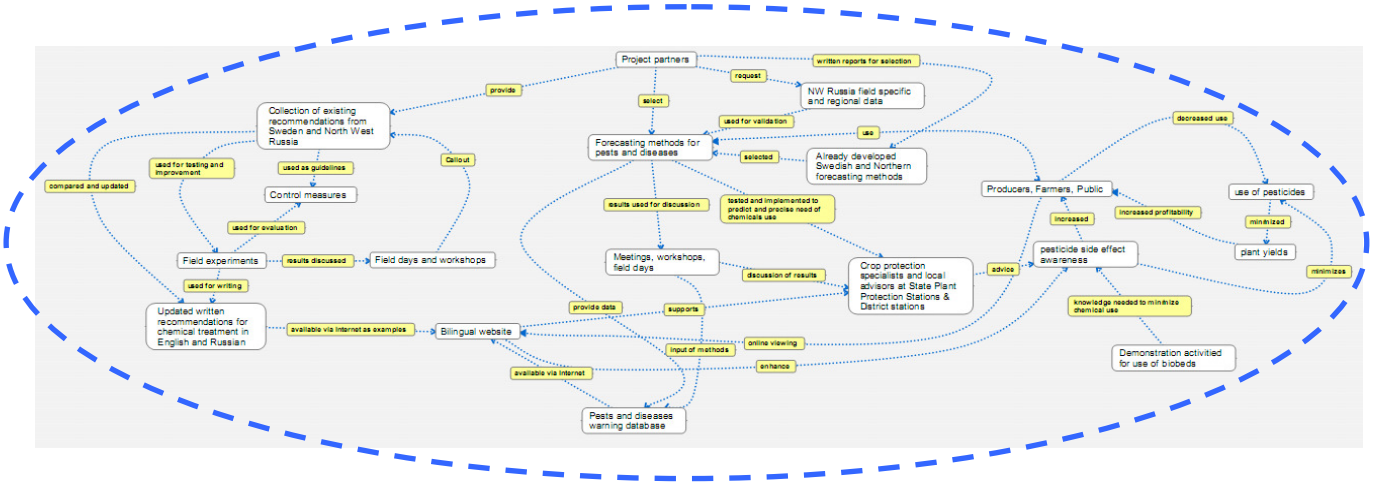

Figure 6 IPM program rich picture

Table 3 IPM CATWOE analysis

Project 2: Integrated pest management, especially forecasting and information systems for main pests, diseases and weeds in field crops in North West Russia	
Environment	Pesticide residues are an environmental problem impacting the quality of drinking water and also affecting the ecosystem performance enhancing eutrophication in surface waters.
Transformation	
Inputs	Contribution to sustainable agriculture and integrated pest management programs
	Improvement of advisory service
	Improvement of pesticide use precision
Outputs	Chemical use recommendations
	Forecasting methods
	Database
	Information on methods
Worldview	Regional authorities in Russia comprising the Federal Ministry of Agriculture, the Leningrad, Pskov, and Novgorod oblast have requested co-operation in the field of integrated pest management and early warning systems. The request is based on earlier co-operation for implementation of forecasting, warning and information systems capable to increase plant yields and limit the unnecessary use of pesticides.

Table 3 IPM CATWOE analysis (continued)

Clients	Crop protection specialists
	Advisors
	Agricultural producers and farmers
Owners	SLU: Grants office/SIDA
	The Committee of Natural Resources and Environmental Protection of Leningrad Oblast
	The Committee of Agriculture and Fisheries
Actors	
Direct	**Swedish University of Agricultural Sciences, Department of Entomology**
	Swedish Board of Agriculture
	All Russian Institute of Plant Protection (VIZR) at Pushkin
	Regional State Plant Protection Stations in Leningrad oblast and other State Plant Protection Stations in Novgorod, Pskov, Karelia
	The Center of Research Methodology & Extension and International Relations at the Academy of Management and Agribusiness in Saint Petersburg
	Saint Petersburg State Agrarian University
Indirect	Representatives from Ministry of Agriculture in Moscow
	Russian fytosanitary center (Moscow)

Appendix 4: HARMOBALT synthesis report

The "Harmonization of methods for monitoring, modelling and assessment of nutrient loading from land to the Baltic Sea and effects of counter-measures" (HARMOBALT) project is the second phase of modelling and monitoring activities in the SIDA funded AELO project (Figure 7). The final project plan from January 2007 details the project activities. The project started in January 2007 following an inception period between May and December 2006. During this inception period the Swedish and Russian project partners coordinated and planned project activities and financing. The project will end in March 31, 2009.

The head of the State Organization of Saint Petersburg Regional Center for Hydrometeorology and Environmental Monitoring (SO "St. Petersburg CGMS-R") and the SLU rector signed an Agreement to regulate the cooperation and relationships between SO "St. Petersburg CGMS-R" and SLU in the project HARMOBALT. In this project SLU and SO "St. Petersburg CGMS-R" are the main project partners. SLU is responsible to provide consulting services. Additionally, there is an agreement between SIDA and SLU according to which SLU makes SIDA funds available for HARMOBALT. SO "St. Petersburg CGMS-R" is responsible for monitoring and modelling activities in Luga river basin. It also provides Russian co-funding for the project. PCU is assigned with the right to monitor and audit the implementation of the contract agreement between the two organizations. According to the Agreement SLU has exclusive rights for the results of the project and SO "St. Petersburg CGMS-R" is entitled to use the project's results for their own needs. Both SLU and SO "St. Petersburg CGMS-R" can use1 the results only after a written consent is received. The results are not classified or confidential. Any possible disputes are settled by mutual agreement or in

compliance with Russian legislation.

The project has Swedish, Norwegian and Russian partners. The main Swedish project partner is SLU and two of its departments (Table 4). The department of Environmental Assessment is responsible for the project in general and for modelling on the river basin scale. The department of Soil Science, with its Division for Water Quality Management and modelling, is responsible for simulation of nutrients loss from arable land. Then, Scanagri and the Swedish Farmers' Union (LRF) are responsible for monitoring of nutrients losses from agriculture. Similarly, the Norwegian Center for Soil and Environmental Research (Bioforsk) is also responsible for monitoring of nutrients losses. From Russia, the main project partner is the Committee of Natural Resources and Environmental Protection of LO, which has an overall responsibility for project tasks at the regional level. SO "St. Petersburg CGMS-R" has the overall responsibility for regional monitoring and modelling on the river basin. The FGU Leningradski Reference Center (former Chemical Agricultural Services, CAS) is responsible for monitoring of agricultural run-off on the watershed scale. There are also other Russian project partners. The Saint Petersburg public organization "Ecology and business" and the North Western Hydrometerological Service are responsible for reporting pollution levels to HELCOM. The Saint Petersburg State Hydrological Institute is responsible for examination of modelling on the river basin. The Saint Petersburg State Agricultural University participates with examination and modelling of nutrients losses from agriculture. There are also Russian experts who are trained and involved at the federal level to help modelling on the regional and local level.

The HARMOBALT project theme of concern is up-scaling of modelling activities, harmonization of monitoring methods, and modelling and assessment of nutrient loading from land to the Baltic Sea and impact of counter measures. HELCOM modelling guidelines, as an example of methodological approach for harmonization, are also used in the project. The project partners share the worldview that it is expensive and practically difficult to measure distributed loads of nutrients and other substances from land to sea. However such a distributed view, which to track such spatial and regional variability in loads, is necessary when developing measures in relation to natural and human activities. Therefore, specific models are needed for up-grading of the results from monitoring in small catchments up to a regional or river basin level.

The primary tasks can be summarized as related to improved basis for future pollution load compilations (PLCs) to HELCOM, to provide a forum for harmonization of BSR water monitoring and modelling approaches and methodologies, and to improve public awareness of water pollution triggered by water pollution. Specifically, the core primary task is to establish a

monitoring system for the Luga river basin in LO. According to the transformation statement the outputs of HARMOBALT are the determination of relevant data required for modelling and development of a Data co-ordination center for compilation and storage of the data, appointment and training of a river basin group of modellers, and improvement of the existing monitoring practice at the river basin level. As a result of these transformations it is hoped to strengthen and increase the capacity of Russian institutions in monitoring and modelling so that they can participate effectively on a regional, national and international level. Additionally, the project is to provide a space for multiple institutional co-operations and to create a common understanding for the causes of environmental disturbances. Specifically, different organizations can benefit with knowledge on pollution counter-measures which would benefit river stakeholders. To achieve these transformations the project needs to develop sense of ownership for the monitoring network and model system used directly and indirectly by organizations on a regional and national level. Another important parameter is the successful merge and harmonization of used and currently developed modelling practices on a regional, national and Baltic Sea level.

Two decision making structures or management structures can be identified in HARMOBALT: a coordination and a communication one. The LO SG guides the whole AEEHLO program. As part of the AEEHLO program, the HARMOBALT project activities are co-ordinated with those of the other projects and towards the LO SG by the PCU. The communication structure consists of three tiers. The first tier is about authority communication which is maintained by seminars detailing project progress, with participation from environmental assessment authorities on the Oblast level and authorities responsible for the HELCOM PLCs reporting. The second tier is about internal project communication. This communication is based on a mailing list and on a project website. The project leader communicates project progress and information to project partners. The third tier is about communication with the public, or external communication. To maintain communication with the public facts and details about the project are published in the project website. Additionally, media and end-users representatives are invited to open project meetings. One PCU member is responsible for HARMOBALT.

This synthesis report is based on an assessment report (Harmobalt. 2007) and on the "Harmobalt agreement document" (Harmobalt. No Date.

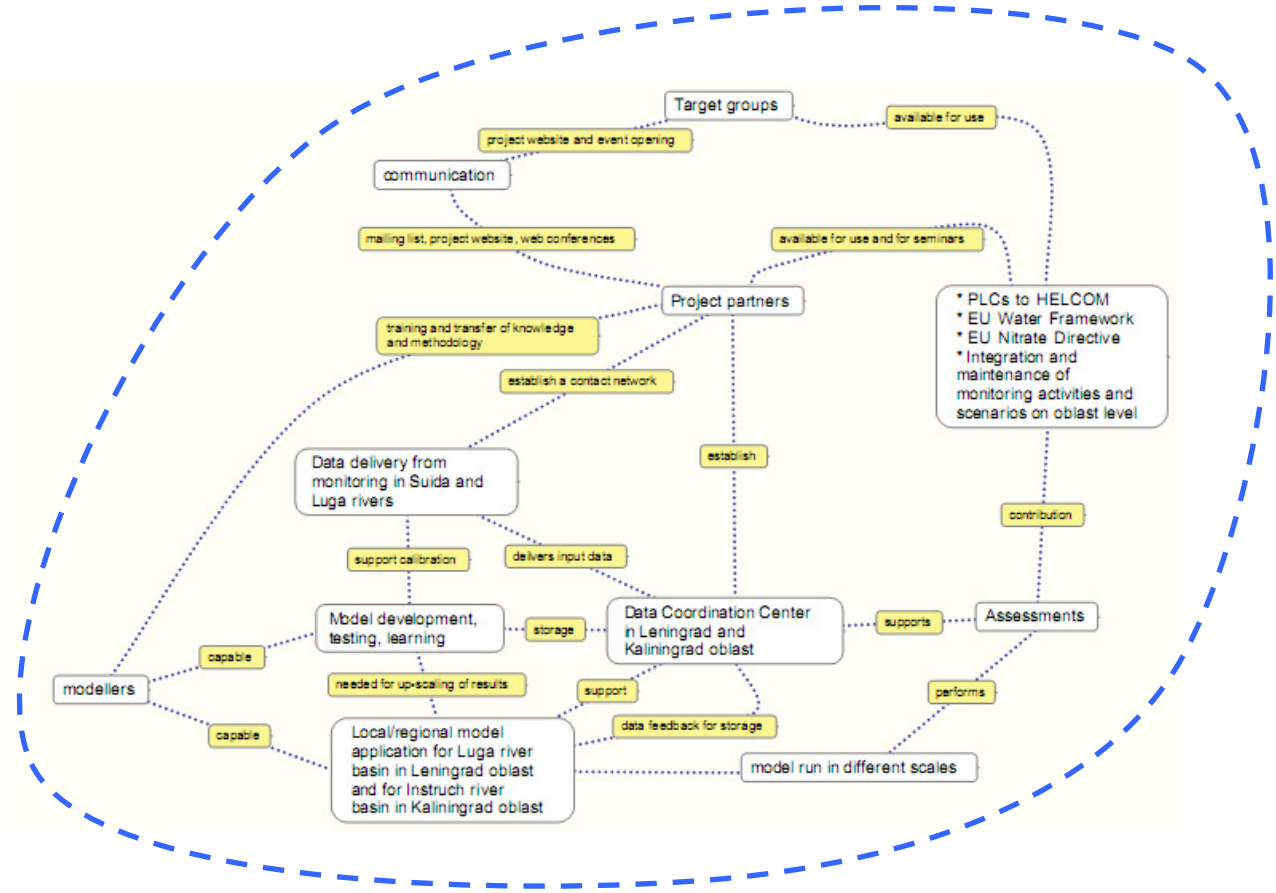

Figure 7 HARMOBALT program rich picture

Table 4 HARMOBALT CATWOE analysis

Project 3: "Harmonization of methods for monitoring, modelling and assessment of nutrient loading from land to the Baltic Sea and effects of counter measures - HARMOBALT"	
Environment	Agricultural pollution loads on the Baltic Sea are difficult to assess with high accuracy. Accuracy and quality of assessment are important, as minor errors have a major impact on results when scaling up to Baltic Sea Region scale.
Transformation	
Inputs	Improvement of pollution load compilations (PLCs) to HELCOM
	Provision of forum for harmonization of approaches and methodologies
	Public awareness raising
	Establishment of a monitoring and modelling system for Luga river basin
Outputs	Relevant modelling data
	Appointment and training of a group of modellers
Worldview	HELCOM and environmental authorities in the Baltic States and Russia has requested a continued support in environmental surveillance, assessment, and modelling of non-point source pollution from agriculture.
Clients	National government agencies and local and regional state administrations
	National and local institutions which need access to monitoring data and information
	International community, researchers and the public
	HELCOM pollution load compilations (PLCs) prepared by Russian authorities
	Committee of Environmental Protection and Natural Resources
Owners	SLU: Grants office/SIDA
	The Committee of Natural Resources and Environmental Protection of Leningrad Oblast
	The Committee of Agriculture and Fisheries
Actors	
Swedish partners	SLU: Department of Environmental Assessment and Department of Soil Sciences
	Scanagri
	Norwegian Center for Soil and Environmental Research (Bioforsk)
Russian partners	The Committee of Natural Resources and Environmental Protection of Leningrad Oblast
	State Organization of Saint Petersburg Regional Center for Hydrometeorology and Environmental Monitoring (SO "St. Petersburg CGMS-R")
	FGU Leningradski Reference Center (former Chemical Agricultural Services, CAS)
	Saint Petersburg public organization "Ecology and business"
	Northwestern Hydrometerological Service
	Saint Petersburg State Hydrological Institute
	Saint Petersburg State Agricultural Unuversity
	All-Russian Scientific Research Institute of Agricultural Chemistry
	Soil Institute

Appendix 5: Olonets synthesis report

In 2004 the regional Ministry of Agriculture for the Republic of Olonets requested the World Wide Fund for Nature (WWF) to study the possibility for a project on beef production (Figure 8). The project had to be based on the restoration and grazing of semi-natural grasslands, assembly and education of a network of farmers, development of breed of beef cattle, construction of manure handling system, and capacity building in meat processing and marketing of "green meat". "Green meat" is a WWF concept central to meat from cattle grazing outdoor on semi-natural grasslands. The grasslands can only be treated with natural manure and no artificial fertilizers, lime, or chemical herbicides can be applied. The beef meat has to be marbled and come from animals at least 20 months of age and weight between 240

and 360 kg. Based on this request, WWF and the Baltic Fund for Nature (BFN) decided to initiate the Olonets Grazing Project.

The Olonets project is a nature conservation project operating in the southern part of the Republic of Karelia. It co-operates with similar projects in NWR and in Baltic countries and with the Ministry of Agriculture, Fishery and Food of the Karelian Republic. The project environment is complex. The project area has a high level of unemployment, poverty and a bundle of environmental problems. On the other hand, the project area has the potential for production of "green meat" based on outdoor grazing. The project theme of concern is central to sustainable agricultural practices in South-Eastern Ladoga area, which to involve jobs creation, sustainable management of grasslands, and a reliable supply of agricultural products. The primary tasks can be summarized as safeguarding the management of grasslands in Olonets based on a holistic approach which involves grassland management and monitoring systems, animal ethics, manure handling, minimized use of transportation, product processing and marketing. Specifically, the project core primary tasks focus on environmentally friendly agricultural practices based on experience from traditional grassland management practices. The achievement of this involves the engagement of consumers, farmers, meat producers, and marketing people. For this, a network is established and supported between interested small-scale private farmers and the state farm "Iljinskoe". There are also two cow stalls used as demonstration points and as a model for beef production and manure handling and storage. Another important core primary task is the spread of education and outreach of experience. The outcome of the project transformations is the long-term sustainable management of grasslands, production of quality "green meat", animal ethics, regionalism, work opportunities and job diversification, and dissemination of knowledge, capacity and experience. Another important outcome is the replication of the project experience and impact on future policies of agriculture and rural development in the rest of Russia and in areas with similar climate conditions. The project also has outreach to other areas in Europe through the involvement of the WWF Baltic program and its network, One Europe More Nature Program and Agriculture and Rural Development policy program.

The project is conducted by the BFN and by a local project coordinator hired full-time by WWF (Table 5). This local project coordinator is responsible for communication and interaction with local stakeholders. The project also has a SG composed of WWF, BFN, Karelian Academy of Science, and the Ministry of Agriculture of Karelia. This group is working as the project management board and holds regular meetings. Another important role of this group is the project integration with the activities of similar projects (Väinameri, SLU agricultural projects, the BSRP) through an international reference group. Additionally, the

BFN prepares an action plan covering local needs in cooperation with the SG. Specific for this action plan is that it is updated in a bottom-up fashion based on communication with the stakeholders. The BFN also maintains contact with the Russian reference group to ensure exchange with the Ministry of Agriculture of Karelia and with the Karelian Academy of Science. The project has established communication channels with Swedish and Russian authorities to ensure its sustainability as well as coordination with similar or related activities of SLU and GEF projects. Two PCU members are responsible for Olonets.

This synthesis report is based on several interviews with the Swedish Olonets grazing project leader and on the "Olonets Grazing Project" project proposal (Olonets Grazing Project. No Date).

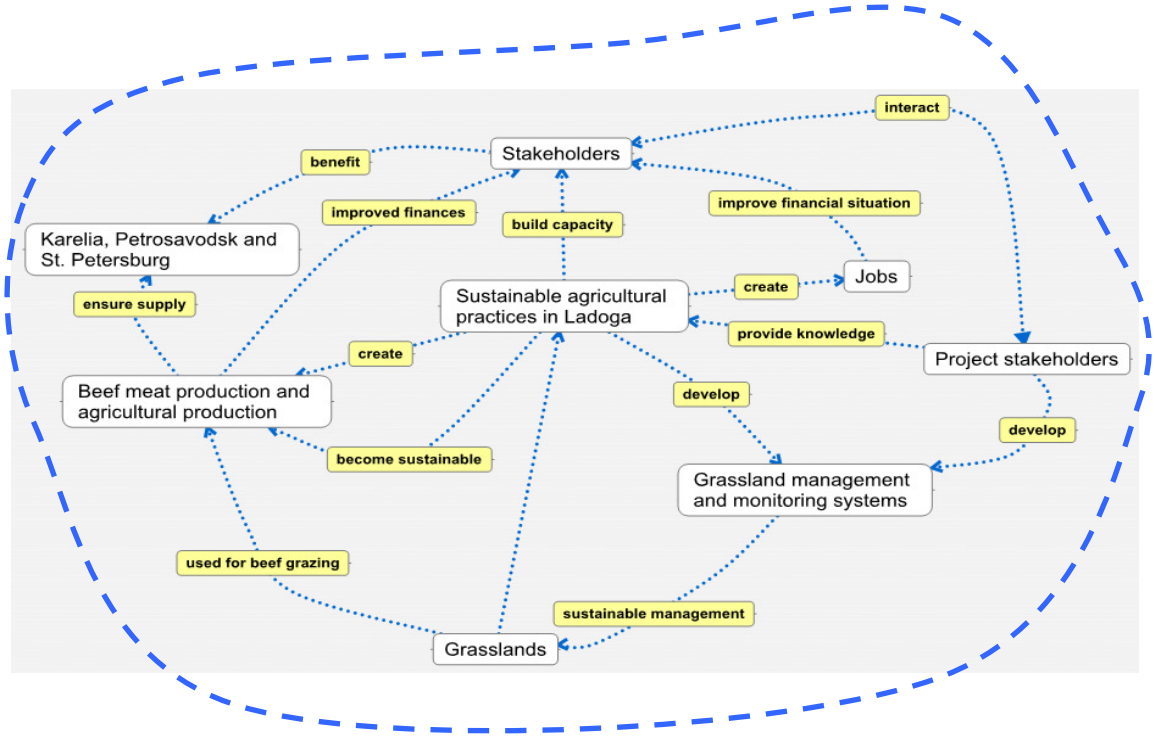

Figure 8 Olonets program rich picture

Table 5 Olonets CATWOE analysis

Project 4: The Olonets Grazing Project: Sustainable Agriculture and Poverty Alleviation through Grassland Management	
Environment	Olonets suffers from unemployment, poverty and environmental problems, but has the potential for production of "green meat" based on outdoor grazing.
Transformation	
Inputs	Knowledge on grass-land management practices
	Establishment of manure handling, urine storage and handling facilities
	Development of production and marketing
	Enhanced outreach
Outputs	Improved grass-land management
	"Green meat" production
	Dissemination of knowledge, capacity and experience
	Job diversification
Worldview	The agricultural administration of the Republic of Karelia and local partners in Olonets district requested support to ensure sustainable agricultural practices in the South-Eastern Ladoga area (southern Karelia). This presents the need for creation of jobs, sustainable management of grasslands, and a supply of agricultural products for the Republic of Karelia, and in Petrosavodsk and for Saint Petersburg.
Clients	Farmers and entrepreneurs in Olonets
	District authorities
	Local meat producers
Owners	SLU: Grants office/SIDA
	The Committee of Natural Resources and Environmental Protection
	The Committee of Agriculture and Fisheries
	Ministry of Agriculture of the Republic of Karelia
Actors	
Direct	WWF Sweden
	Baltic Fund for Nature (BFN)
Indirect	Farmers' network in Olonets
	Olonets' district administration

Appendix 6: EHSA synthesis report

In 2004 the Baltic University Program (BUP) and Envirovet Baltic networks agreed to cooperate in the joint development of an educational package which to focus on ecosystem health and sustainable agriculture and be offered in these two networks (Figure 9). This educational package targets authorities and officials in cooperation with local universities. The project link is spread within the BSR but the link to NWR is strong as the project is developed in cooperation with institutions in Leningrad and Kaliningrad oblasts. The actual project planning started during a stakeholder meeting in September 2005 at the Lithuanian Veterinary Academy. The project environment takes on the notion that the Baltic Sea is affected by environmental problems from different sources. A step to prevent pollution from agriculture and related activities in rural areas from reaching the Baltic Sea is to increase the knowledge of environmental problems that to improve the management of water and land use. To gain such an understanding and to implement it into the management of water and land use, it has to become a natural ingredient in higher education in the BSR and in the Great

Lake region (GLR) in the USA. The project started in August 2006 and ends in the spring of 2009.

The project theme of concern is the transfer of knowledge about sustainable agriculture in higher education based on the ecosystem health concept. To facilitate such transfer BUP and Envirovet Baltic organize seminars and training courses and develop an educational package in EHSA. This transfer of knowledge is directed towards teachers, students, experts and administrators in Leningrad and Kaliningrad oblasts in Russia, Poland, Estonia, Latvia, Lithuania, and in the GLR. For instance, in the BSR, this educational package can support universities to align to the Bologna process by providing updated and comprehensive materials covering knowledge on sustainable management. In Russia universities also want to include the educational package as part of their curricula. Furthermore, after municipality authorities became responsible for controlling the environmental aspects of farming it their lack of updated competence becomes evident. Therefore, the educational package supports building new competence and knowledge needed in the work of municipality officials. The educational package has the goal to include issues with activities in agriculture and in areas related to ecosystem health, rural development and land use, sustainable agriculture, and ecosystem management. Another outcome is the development of books, films and DVDs, and a project website which to provide educational materials and information to project members and the public. As an important input for the development of the project is the experiences gained from the BSRP, with which this project is coordinated.

BUP is a network of 190 universities and institutions of higher education in the BSR. The program, founded in 1991 at Uppsala University (UU), Sweden, operates by producing courses on sustainable development, studies of the BSR, its environment and its political changes (Table 6). The Envirovet Baltic is a network of environmental health scientists and educators from the USA and countries from the BSR. This network was found in 2001 by the College of Veterinary Medicine at the University of Illinois, the SLU Centre for Reproductive Biology in Uppsala, and by scientists from universities in the BSR. This cooperation between BUP and Envirovet brings together agronomists, veterinarians, nature geographers, biologists, chemists, animal scientists, wildlife biologists, public health professionals, economists, business and policy experts, etc. The Collegium for Development Studies (KUS) at UU acts as a forum for dialogue on development and aid issues at UU, learning centers, companies and organizations like SIDA, and experts. KUS also conducts research, teaching, and prepares publications on development issues. KIPKA is responsible for the arrangement of seminars and training courses and acts as the coordinating link with the BSRP project. The Immanuel Kant State University of Russia is host for the BUP Center and it arranges contacts within

Kaliningrad oblast and deals with issues related to the BUP network and educational package. There is also a LO coordinator at the Saint Petersburg State University. This university also holds the BUP Center for NWR. This BUP Center is responsible for the contacts within NWR and deals with issues related to the BUP network and educational package.

The project primary task is to collect and produce knowledge from the BSR and from the USA. As a result it is expected to achieve a collection and transfer of knowledge through a series of seminars and training courses. This knowledge is also to be used for the development of a new educational package. The package consists of modules. The first module is about basic level information and is to be obligatory before studying the other modules. This module can be used by general studies students, administrators from ministries, government offices or municipalities, advisors and managers. The other modules are directed at students studying agronomy, veterinary science, public health, nature geography, biology, wildlife management, etc. These modules are going to be published in books as well. The creation of this knowledge for the development of the educational package is believed to lead to collaboration between scientists, educational institutions, committees, centers and municipalities.

The project has two decision making structures: project steering and project communication. The first structure is about project steering. The project leader from BUP is the main responsible person for the steering, coordination and supervision of the whole project. The project senior advisor from KUS, is responsible for the production of the quarterly Newsletter, editing work and supports the work of the project leader. The local coordinators are responsible for local arrangements of activities and suppoty the coordination with the BSRP project. They also promote the EHSA project locally. The input from the GLR is coordinated by Envirovet Baltic. BUP and Envirovet Baltic develop jointly the educational package. A Reference group is formed to follow on the project development. It is represented by SLU, SIDA, and the Baltic Sea Foundation. The BUP secretariat, KUS and the University of Illinois form a Management SG which is responsible for the project management and coordination of the production of the educational package, production of course materials, books, movies, and project website. Hence, the BUP secretariat coordinates a network of researchers, experts and teachers from institutions from the BSR and the GLR. The project Management SG has members from the BUP, KUS, SLU, and from the University of Illinois. To support the presentation of the study material several seminars and training courses are organized. At the completion of the preliminary version of the educational material, a conference is to be held to review, edit and modify the course material. The start of the courses is preceded by teachers' conferences to make the teachers familiar with the course material. The communication decision making structure is based on two tiers. The first tier,

internal communication, is based on Management SG meetings, on meetings by the Reference group, and on meetings during seminars and training courses. Further, communication is based on e-mail, telephone, and mail. The second tier, external communication, is about the spread of information on the project progress within the BUP network. This information is spread by the BUP Secretariat newsletter. Additionally, information is disseminated by the Baltic 21 Newsletter, by newsletters in the GLR, and by the project website. There also are contacts with the loal media, and the project is presented at seminars at the Swedish Royal Forestry and Agriculture Academy. One PCU member is responsible for EHSA.

This synthesis report is based on an interview with the Swedish EHSA project leader and on the EHSA project proposal (Ecosystem Health and Sustainable Agriculture Educational Programme for North-Western Russia, Belarus and Ukraine. 2006).

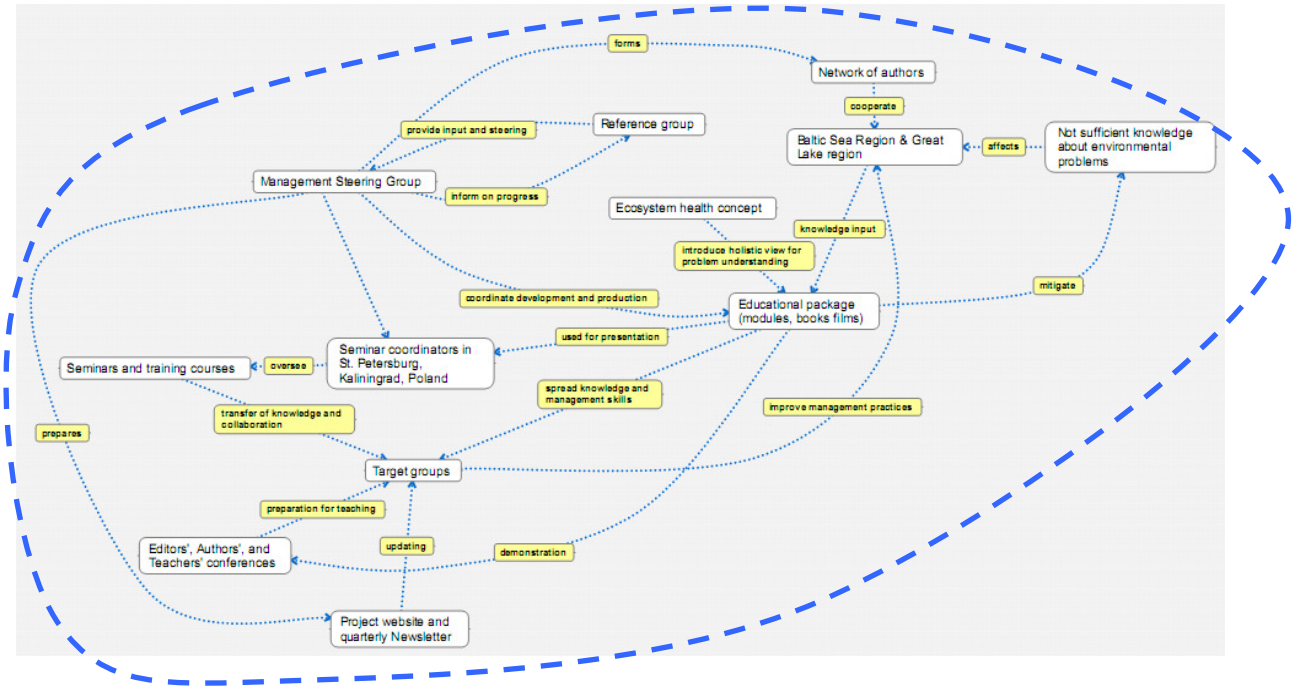

Figure 9 EHSA program rich picture

Table 6 EHSA CATWOE analysis

Project 5: Ecosystem Health and Sustainable Agriculture in education	
Environment	Pollution from agriculture and related activities in rural areas in the Baltic Sea region can be minimized by providing knowledge of environmental problems that to improve the management of land and land use.
Transformation	
Inputs	Collection of knowledge
	Collaboration between researchers, experts and teachers
Outputs	Production of an educational package
	Production of books and educational films
	Organization of a series of seminars and training courses
	Instituional strenghtening
Worldview	
Clients	Teachers
	Experts
	Researchers
	Students
	Professionals and administrators
Owners	SLU: Grants office/SIDA
	The Committee of Natural Resources and Environmental Protection of Leningrad Oblast
	The Committee of Agriculture and Fisheries
Actors	
Direct	Baltic University Program (BUP)
	The Envirovet Baltic
	Collegium for Development Studies (KUS) at Uppsala University (UU)
	Kaliningrad branch of Saint Petersburg State Agrarian University in Polesk
	Kaliningrad Institute of Retraining Specialists and Agribusiness (KIPKA)
	Immanuel Kant State University of Russia
	Kaliningrad State Technical University
	Kaliningrad Regional Children Center for Ecological Education and Tourism
	Agricultural College in Gusev
	Mechanization of Agriculture College in Ozersk
Indirect	Saint Petersburg State Agrarian University
	Academy of Management and Agrobusiness
	Saint Peterburg State University
	Saint Petersburg University of Cinema and Television
	Saint Petersburg University of Refrigeration and Food Technology
	NGO "Baltic Fund for Nature" (BFN)
	Center of Agrochemical Services, CAS

Appendix 7: PCU synthesis report

According to the Terms of Reference document for the PCU, SLU and the LO SG provide coordination of five inter-related projects and their activities on the LO level. (Program Co-ordinator (PC) and Office Manager (Part-time) for the Program Co-ordination Unit in Leningrad Oblast, Russian Federation. No Date). The sixth project, the Olonets grazing project, which is not located in LO but in the Republic of Karelia and thus is not directly coordinated by the PCU, is present on the LO SG meetings.

According to the Terms of Reference (*ibid*) the PCU is reporting to SLU and to the

projects. The PCU consists of five part-time members: the Russian program coordinator, a research and education coordinator, a communication and outreach coordinator, a translator, and an office manager. The overall duties of the Russian program coordinator are to be responsible for and supervise the works of the PCU and the LO SG, and to report to the SLU Grants office project coordinator. In general, the Russian program coordinator is hired by SLU through the Center for Transboundary Co-operation in Saint Petersburg.

Central for the work of the PCU is the Project Coordination and Communication Plan (Project Co-ordination and Communication Plan (PCCP). 2007). The goal of this Project Coordination and Communication Plan is to establish contacts among the AEEHLO projects for better in-project coordination and for the establishment of external relations, communication and outreach activities. According to the Plan this goal can be achieved by coordination and communication actions and tools. Central to the Coordination actions and tools are listed as pivotal the meetings of the LO SG, project partners' meetings, information sharing platforms such as a program website and an email list, monitoring and evaluation, and ongoing monitoring of the institutional environment. Then, central to the Communication actions and tools are listed the following items: stakeholders' mapping and meetings, learning by the use of the information sharing platform (program website and the email list), media work, and thematic project publications.