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**System for Environmental and Agricultural Modelling;
Linking European Science and Society**

**Specification of complementary participatory methods
for SEAMLESS-IF**

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General information

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Executive summary

The aim of this report is to describe situations where interactive work methods are needed and to suggest suitable participatory methods to enable the use and user involvement in SEAMLESS-IF. Interaction with users and stakeholders are needed for two different purposes. First during different stages of the development of the SEAMLESS-IF itself and second as interaction with users and stakeholders needed as a standard procedure in the situation where an assessment is to be set up within SEAMLESS-IF. The report is organised according to two main perspectives. The first concerns the interaction taking place during the development of the Seamless-IF. The second concerns the interaction taking place when the IF is applied after 2008. Under each of these perspectives prime users and so called other users are considered separately. Participatory methods suitable for the different situations are recommended together with a protocol which gives advice on a step-by-step procedure to follow.

1 Introduction

The aim of this report is to describe situations where interactive work methods are needed and to suggest suitable participatory methods to enable the use and user involvement in SEAMLESS-IF. Interaction with users and stakeholders is needed for two different purposes. In the first instance it is needed for the development of SEAMLESS-IF itself. The second type of user involvement refers to the interaction needed between the users of the IF (i.e. organisation that order an assessment) and stakeholders that might be needed in the situation where an assessment project is to be set up using SEAMLESS-IF.

All along the development process of SEAMLESS-IF information is needed. To support the development of the IF interaction is constantly on-going in meetings with groups or individuals to identify potential users, to uncover user requirements, to choose relevant members for the User Forum, to develop test cases, to identify the most relevant indicators, to develop the software in a user friendly way, etc. Many interviews have been made and meetings were held with information providers, by participants in the different work packages so far, and the user involvement in the development process is expected to increase as the product develops.

The initial stage of an assessment can vary substantially depending on the organisation that orders it. An organisation within the European Commission will most likely have a rather pre-set problem already formulated. A lobby organisation or regional development project might engage in a problem formulation process that is much more open.

In both cases to make assessments using such a comprehensive system as SEAMLESS-IF will require quite extensive work to establish an assessment procedure, which includes the formulation of scenarios, formulation of questions, choosing of databases, and linkages to existing assessment tools. In the first case the dialogue will primarily be between the ordering organisation and the team performing the assessment and in the latter case the problem definition might be the result of a dialogue including stakeholders at various regional levels. The report recommends some participatory methods suitable for the different situations together with protocols which describe the procedure to follow.

The report is organised according to two main perspectives. The first concerns the interaction taking place during the *development* of the Seamless IF. The second concerns the interaction taking place when the IF is *applied* after 2008. Under each of these perspectives *prime users* and so called *other users* are considered separately¹.

¹ For definition of the concepts prime users and other users see Glossary, page 29.

2 Participation during the development of SEAMLESS-IF

During the development of SEAMLESS-IF (2005-2008) user involvement will be needed for a broad range of issues concerning the capabilities and function of the integrated framework, e.g. development of the impact scenarios in *test cases* (mainly test case 2), selection of *indicators* to be used, evaluation of *test results*, and development of the *user interface*. The questions raised will be addressed both to prime users and national and regional representatives. Although interactive methods used for development of a user friendly interface will not be described in this report.

2.1 Participation by prime users during development

As far as prime users are concerned this interaction will to a large extent take place in the User Forum, but also through direct contacts with officers in DGs. The forum will consist of 5 – 10 people from DG Agriculture, DG Environment, the JRC and the EEA. Participation of JRC and EEA has been suggested by the DGs, since these may be among the organizations that will carry out assessments eventually made using SEAMLESS-IF.

The User Forum meetings will be held every 6 months, starting October 2005. At these meetings, scientists from SEAMLESS will have a chance to receive input on different aspects of development of SEAMLESS-IF. In the first meeting the intension is to collect opinions on the definition of the impact scenario in the test case.

Following the successful presentation of the Animated Narrative Demo at the previously held information meetings, a more elaborate animated narrative demo will be presented at the next User Forum meeting. The advantages of an animated narrative demo are that a vision of the “end-product” is a simple and efficient way to communicate our development of the framework. The forthcoming versions of the animated narrative demo will be developed in parallel to the Demo version in WP1 and will thus contain important parts of the work in WP1, which in turn in an integrated manner reflect the issues of the other WPs.

The Policy Officers, not to mention the Heads of Units of the DGs have a tight time-schedule and need to make priorities. Early in the project it may be difficult for them to see what they gain from participating in the development of SEAMLESS. However, we believe that also in this process the animated narrative demo will provide a useful and clear means of dissemination and feed-back.

Once the members of the users forum are convinced that SEAMLESS-IF, with the help of their input, will be a product that can facilitate their work from 2008 and onwards we believe that their involvement will increase. We also anticipate that the contacts we by then have, will allow us to be connected to other key people within the prime user organizations to help us on specific issues. These consultations will make use of shifting methods and be arranged as consultations in person or over the phone, e-mail contacts and larger group meetings. See Protocol 5.1 in Section 5.

An example of prime user consultation, the usefulness and response of which remains to be evaluated, is the consultation on environmental indicators distributed to policy officers in DG Agriculture and DG Environment by e-mail in July 2005.

2.2 Stakeholder participation during development

Motive for interaction and recommended participatory methods

It is anticipated that the validity of impact scenarios used in the test cases will be of better quality if they are furnished with input from regional stakeholders. Therefore the prototype will be built in interaction with prime users at the EU level and refined for the regional level in interaction with national and regional authorities and/or interest organisations. From the regional level it will be valuable to have input on the following issues: *sustainability issues that will become critical* as a result of a new policy and the behavioural changes it will induce in the region, selection of *indicators* and *evaluation and improvement* of test results and tool. At the following stages national and regional interaction will be needed:

A. Defining critical sustainability issues

The situation is anticipated to be the following: A given policy change will according to the models in the IF result in certain changes in agricultural behaviour in a region. The task to which input from the region is needed would then be to identify which sustainability issues that in turn would become critical as a result of the new behaviour.

A possible interactive situation could be portrayed as in the following example: There will be a drastic trade liberalisation for dairy products, the most likely behaviour of the farmers in this particular region are twofold; a number of the farms will close down and farmers engage in other labour market activities others will intensify their dairy production. Associated impacts of such changes on the environment as well as on the socio-economic conditions within the region are unknown. Ideally an assessment study would refer to the most critical issues including the specific characteristics of the region. The region may be particularly prone to water erosion and pollution; rural settlements may be remote with difficult access to labour markets etc. Regional representatives should be asked to give suggestion of likely economic, ecological, social effects relating to sustainability that could occur in the region. These critical issues would be considered in the assessment but first indicators have to be identified, which will be supported by the information about critical issues.

For critical issue definition by help of stakeholders, it is recommended to follow instructions in protocol 5.2

B. Selection of indicators and target values

Given the specific questions that will be assessed, consultation with stakeholders is needed to find the indicators and suitable target values that best will describe the simulated impacts of a scenario. Indicators also have to be practical and useful measurements in regional policy. For further description of this situation see PD 2.6.1.

For indicator selection by help of stakeholders, it is recommended to follow instructions in protocol 5.3

C. Evaluation and improvement of the tools

The test results have to be evaluated both by scientists and regional stakeholders, as the plausibility of the results is best judged at regional level. The scientists also need information about the appropriateness, compliance and effectiveness of concepts and their application in relation to the specific needs of regional users. It is also important to reveal if and how the

needs can diverge between users in different fields e.g. agriculture or environment or in different functions like policy-makers, implementation agencies, interest groups.

To make evaluation really valuable it shall be followed by suggestions for improvement of the IF in a collaborative re-design process. Dialogue among the end-users and stakeholders of the IF is viewed as a mechanism for exchange of arguments that enable these actors to reach consensus on how to improve the performance of the IF.

For evaluation of tools and test case results and to formulate suggestions for improvement by help of stakeholders, it is recommended to follow instructions in protocol 5.4

3 Participation when applying SEAMLESS-IF after 2008

3.1 Prime users

For a problem formulation procedure at a DG, the following situation is anticipated when an assessment is ordered from a unit within a DG after 2008. The purpose is primarily to make ex-ante analysis of forthcoming or expected policy changes but could also be to facilitate implementation or to make an ex-post analysis of policy decisions. Today ex-post analyses are more frequent. The DG unit in charge of the work will probably have a rather pre-set idea of what questions they want to have assessed. These questions will have been formulated at the DG and grown out of the political process. The Commission and especially DG Agriculture are by regulation engaged in an intensive consultation process with special committees. These advisory, management and regulatory committees include representatives of the member countries' various national authorities. Within the agriculture sector there are for instance 20 administrative committees that deal with tasks within a specialised area, like agromonetary questions, lambs meat, dairy products, olive oil, cereal, sugar etc. Only the number of meetings held within these administrative committees amount to 350 – 400 per year (Swedish Board of Agriculture 2005). The purpose of this "comitology" is to make the political and administrative process run efficiently by giving national opinions a voice in the process. It is these interests that will be considered in the problem formulating stage when an assessment project is formulated.

The next step is to decide whether this assessment can be done in-house or has to be performed outside the DG. It is possible that some prime users eventually will gain expertise to manage assessments by help of SEAMLESS IF in house. But at the moment we judge it more likely that the task will be assigned to a group of researchers or consultants outside as this is the way that DGs mainly work today.

There will be one or several officers from the DG in charge of the specific project set up for an integrated assessment problem. They will support and closely follow the assessment made but do not perform the work. When the assessment is decided upon it is advertised in a "call for tender" and consultants normally compete to get the contract on the assessment.² In such a call for tender the assessment is specified in detail, and it could also be that the preferred tool is indicated in the call. In a situation where SEAMLESS IF is the preferred assessment tool, the number of agencies that hold this competence is likely to be quite few at the outset.

In the calls the questions to be assessed are defined, but the selection of indicators etc. is continuously discussed with the ordering unit. Whether the consultant will be authorised to perform any stakeholder interaction while building the scenario and setting the parameters for the assessment is uncertain. If this is an ex-ante assessment the ordering DG might not want the ideas that are to be tested in the assessment widely spread among possible stakeholders. There could also be constraints on engaging in a time consuming stakeholder interaction. Our guess is that the scenario and the problem formulation most likely will be a matter between the DG and the consultant. If further information is needed, the ordering unit will supposedly make use of their regular system of committees and other experts in their international net work, to get further input. It is therefore not likely that they will engage in interaction with stakeholder groups at any level below national authorities.

As SEAMLESS IF holds the capacity to make ex-ante assessments it is possible that such assessments at the outset will be more openly formulated than ex-post assessments and that

² For illustration of a call see: http://www.eu.int/comm/dgs/agriculture/tender_en.htm

impact scenarios to be tested will have to be built from bottom and up. In this case we imagine that the consultant in co-operation with the DG officer in charge could be authorised to engage in stakeholder interaction to build scenarios and select indicators.

For further information and methods recommended in such a situation see Section 2.2 of the report.

3.2 Democratic participation when Seamless IF is used by interest organisations

Apart from being a tool used by the DGs for policy assessment we foresee that there may be uses of SEAMLESS-IF where it is of importance that stakeholders on several levels can participate in the problem definition and scenario building. This could be the case if the tool is used for solving problems on a regional and local level where a democratic process is essential and where representatives of the research community, policy makers, local stakeholders, interest groups and citizens need to act together.

This participation could be needed during scenario building by co-learning or assessing the impacts of different policies by making sure that there is consensus behind the scenarios and that the views of all parties are built in. For such assessment projects, democratic participatory methods apply. Further development of protocols to use in such situations will not be displayed in this report. The reader is referred to D 7.3.1 Chapter 9.

4 Brief overview of participatory methods

Participatory methods in SEAMLESS are defined as *methods to structure group processes in which participants play an active role and articulate their knowledge, values and preferences for different goals* (For an extensive report on participatory methods see D 7.3.1). The methods proposed to be used in SEAMLESS (D 7.3.1) can be illustrated in a graph according to the structure defined by van Asselt et al 2001. In this structure the participatory methods are placed according to the aim and usage of the method along two axes: the *motivation axis* which runs from *democratization* to *advising* and the *targeted output axis*, between *mapping out diversity* and *reaching consensus*.

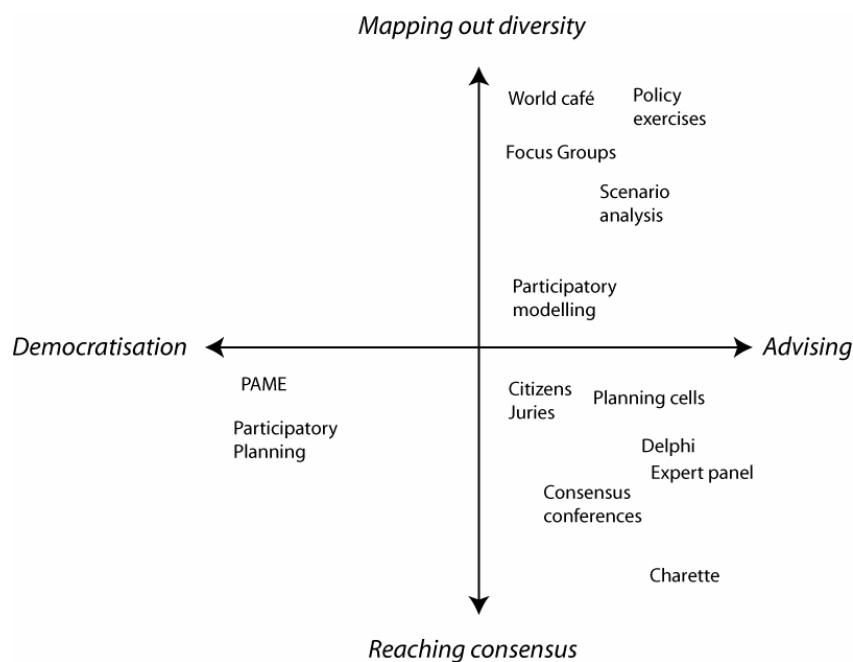


Figure 1. Overview of participatory methods displaying their suitability for different goals

Methods placed high on the vertical axis, *mapping out diversity*, are methods that seek to uncover a spectrum of options and information. They enable a group to disclose information or test alternative strategies in a permissive environment. Methods placed low on the vertical axis can be used for *reaching consensus* and are thus methods that seek to define one single option or decision. They enable a group to reach an informed decision on an issue.

On the horizontal axis methods placed to the left enable *democratisation* and enable the participants to use their own knowledge to tackle policy issues that directly concern them.

Methods to the right on the horizontal axis are for *advising* and can be used to reveal stakeholders' knowledge, values and ideas that are relevant for decision-making.

Participatory methods can be used for a wide range of reasons and for a wide scope of participants, from democratizing science and empowering the citizens to informing decision makers and using their knowledge to e.g. define plausible scenarios.

SEAMLESS-IF is designed to assess and evaluate policies and not for policy definition or policy optimization. Thus participation will primarily be by *experts* from different user groups, e.g. DGs, national and regional decision makers and not primarily by individual farmers or consumers influenced by a certain policy.

When the ordering units are organisations within the Commission we believe that the participatory methods that should be a part of SEAMLESS-IF will be found along the *advising axis* (Figure 1), horizontally between *mapping out diversity* and *reaching consensus*. Out of these methods, the ones which are relevant for decision-makers or experts are mainly: Participatory Modelling, Scenario analysis, Focus Groups, Delphi Methods, Expert Panels as they are "*Consultation*" methods. They are designed for obtaining information from stakeholders and to provide this information to the policy-makers (advising issue). They are useful for providing decision-makers with public values, assumptions, and preferences and substantive information to improve decisions. But they do not imply anything about what will be done with the advice received.

In short the above mentioned methods can be described:

Participatory modelling (D 7.3.1) refers to an active involvement of model-users in the modelling process. The method can help to build mutual understanding between scientists, policymakers and stakeholders. The participants are expert, managers and decision-makers from a number of institutions who have key roles to play in the problem assessed.

Scenario analysis (D 7.3.1) can be conducted by a group of scientists and experts that are engaged in a process to identify key issues and create explorative scenarios for a certain problem. The method aims at building contrast visions of future development among a systematic participation of stakeholders. The participants (20–25) should be people with a thorough knowledge of issues to be addressed and they should be affiliated to different organizations.

Conventional Delphi (D 7.3.1) Conventional Delphi method involves experts in an iterative survey. Each participant completes a questionnaire and is given feedback on the whole set of responses, this time providing explanations to views that diverge much from those of the other participants. In addition, each participant may change his or her mind on the questions during this process. This procedure is iterated and thus mounts to increased consensus from round to round. The key characteristics of the Delphi method is structuring of information flow, feedback to the participants and anonymity for the participants.

Expert Panel (D 7.3.1) consists of a group of experts who synthesise a variety of forecasts and research reports into a summary report which provides visions and possibilities for future possibilities or needs of a specified topic. Expert panels are particularly appropriate for issues that require highly technical knowledge and are highly complex.

Focus Groups (D 7.3.1) can be described as discussion groups with 6–12 participants that focus on a specific topic. Since a certain topic is discussed the group should be fairly homogeneous as far as the knowledge is concerned.

When the ordering organisations wish to build the scenario definitions and problem formulation in a democratic process among members the methods will be found on the democratisation and consensus axis. The methods relevant to use in that situation are identified as *Involvement methods* – like *Consensus Conferences* or *Future Search Conferences* which intends to empower stakeholders and offers the opportunity for deliberation among participants, assuming that power can be transferred from the responsible authority to the stakeholders. This is a method suitable for development programmes, and policy influencing projects.

5 Recommended protocols for user and stakeholder interaction during test cases

Participatory protocols are guidelines that serve as a step-by-step help to organize user and stakeholder participation. This section gives suggestions of participatory protocols to be used in the *test cases*. Table 1 provides an overview of where we foresee that participation is needed in SEAMLESS IP indicating purpose and motive of interaction, the participants and which protocols to be used.

Table 1. Check list for purpose, motive, participants and suggested protocols to be used during development of Seamless-IF

Purpose	Motive for interaction	Participants	Protocol
A To inform about SEAMLESS-IF and assess the <i>á priori</i> interest of potential users	To facilitate the diffusion of SEAMLESS-IF when available, and encourage to participate in the development.	Users (Prime and other)	Animated Narrative Demo (AND) I, II, III
B To define policies that SEAMLESS-IF should address	To make SEAMLESS-IF able to assess these policies	Users (Prime and regional) solicited by researchers	User Forum Protocol 5.1
C To define critical sustainability issues in regions (problem definition).	To make SEAMLESS-IF able to provide information needed by users, and to benefit from expertise of stakeholders	Users and stakeholders solicited by researchers	Protocol 5.2
D To get feedback on the relevance of indicators provided by SEAMLESS-IF for a given policy assessment (problem reframing).	To benefit by expertise of stakeholders, and to make SEAMLESS-IF able to provide information needed by users	Users and stakeholders solicited by researchers	Protocol 5.3
E To get feedback on assessment results (validation and revision).	To benefit from expertise	Users and stakeholders (considered as experts in their action domain), solicited by researchers	Protocol 5.4
F To get feedback on the interface.	To arrange the interface so that it'll be user-friendly	Users solicited by researchers	Interface testing techniques practiced in WP5

Participation by prime users during development of SEAMLESS-IF is described in Section 2.1 and instances when stakeholder participation is required in the test cases are described in Section 2.2. Below four protocols for how the interaction can be arranged are outlined.

5.1 Protocol for participation by prime users during the development of SEAMLESS-IF

Interaction with prime users in SEAMLESS will have to be designed depending on the reasons for interaction, the participants who will be involved and when during the development process interaction takes place. Each time of participation may be different from the previous, all depending on when in the development process of the integrated framework input is needed.

The different steps that need to be taken into account when designing participation by prime users can be illustrated by Figure 2, which distinguishes between form (design of meetings), content (type of issues discussed), internal context (institutional context of participants) and external context (the interests of the users). The four steps should not be viewed as a linear process but rather as an iterative process where all the parts need to be adjusted to each other in order to make the full circle of useful participation.

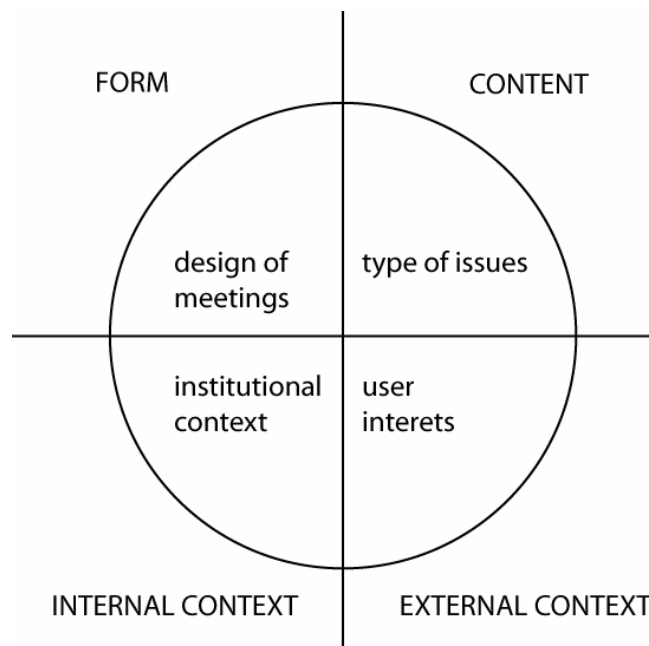


Figure 2: Overview of factors that affect the participation process.

Modified after Jonsson, A. & Alkan-Olsson, J, 2005

5.1.1 Define the type of issues that should be discussed:

Before arrangements are being made with the prime users it must be made clear within the project why participation is needed, what kind of input SEAMLESS-IP wants to have from the users, and which the appropriate timing is. At this stage some thought should also be

given to previous and future meetings, so that the current meeting fits in the series of meetings.

Examples of input that SEAMLESS could need during the development of SEAMLESS-IF are input on:

- the general usefulness of SEAMLESS-IF
- the general workflow in SEAMLESS-IF (e.g. by demonstrating the AND)
- the relevance and accuracy of results from the test cases
- the DEMO
- what issues should be covered by SEAMLESS-IF
- the interface and design of SEAMLESS-IF

5.1.2 Define the form of the meeting or interactive situation:

Depending on the issues that need to be discussed and the type of input that is needed during the different stages of development of SEAMLESS-IF, the participation can be designed in different ways, e.g.:

- User forum meetings
- e-mail consultations to several people
- personal e-mail/phone consultations
- interviews

Which form is the most suitable/feasible for a certain need must be discussed from several different viewpoints, also practical and financial. Some issues may require specific knowledge that only 1-2 people of the prime user group possess, and thus the consultation should be limited to these individuals. Other participants may have shown specific interest in other issues, and would be keen on being more intensively involved than others during certain stages of the project. The time and commitment of different users in the prime user group can vary considerably, and we must pay attention to not cause fatigue among those who are important to us but have limited time. It is not feasible to gather the full User forum more than twice per year, but additional consultation can be performed with certain individuals more frequently if needed.

5.1.3 Consider the institutional context:

Both the contents and the form of the meeting have to be adjusted to fit the interest of the users who will be present. Among the prime users in SEAMLESS we can distinguish two main user roles, *viewers* and *players*. Viewers are pure policy people who will only use the results produced by SEAMLESS whereas the players will also be able to use parts of the tool to set up assessments. In addition to the two user roles, the prime users represent different parts of the European Commission, and thus are more or less specialized towards environmental, agricultural or economical issues. If we want to keep the entire group and not loose participants we have to make sure that there is something interesting for every participant at every meeting. In case we need input on specialized issues, maybe only selected members should be involved.

The results of the meeting and the input received will depend on the interests, knowledge of the participants but also on their willingness to share their ideas. In addition, we must demonstrate our willingness to listen to and incorporate their ideas in later meetings.

5.1.4 Consider the stakeholders' interest:

We must consider why the participants have agreed to participate in a certain meeting. Are their aims different from the project's? The aim of SEAMLESS is to construct a tool that can be used by the EC for future policy assessment needs. What is the motive of the prime users? Are they there because they are personally interested and committed? Are they there because they see that SEAMLESS is a tool that can be potentially useful for them in their profession or are they there because they have been asked to by someone else? The meeting may have to be designed to meet the diverging needs of the participants.

5.1.5 Evaluation

After every time of participation the results should be evaluated. Questions to be asked are:

- Were the contents of the meeting suitable considering the participants? Why? Why not?
- Was the composition of users balanced?
- Did some interest dominate over others?
- How can the input from users be fed back to the project?

5.2 Participatory protocol for problem identification in test cases

The following protocols 5.1 – 5.4 include four parts:

Part 1 presents the issues of the discussions with participants

Part 2 suggests the participants

Part 3 presents how the participatory process should be carried out including the roles of the scientists in the process.

Part 4 describes how the results of the participatory process can be analysed and reported, and which feedback should be provided to participants.

5.2.1 Purposes, subjects for discussion and tasks

Purposes

- To inform national, regional and local users and stakeholders of the IF, about suggested future policy options
- To provide modellers with information on the diversity of views of potential users and stakeholders on the critical sustainability issues in the region that have been selected for test cases 1.

Subjects of discussion

- Capacity, stability, productivity, profitability, efficiency ... of agriculture

- Impact of agriculture on (erosion, fertility, pollution, biodiversity ...) and society (employment, services ...).

Tasks

- *Mapping* (individual perceptions) of critical sustainability issues.

5.2.2 Participants

- National and regional potential users of the IF in test cases
- Representative stakeholders of the tested policies and target systems in test cases:
 - national, regional and local interests groups
 - regional and local implementation agencies

To identify the relevant institutions to participate at each level, a stakeholder analysis will have to be pursued (see D.7.3.1 page 177).

5.2.3 Method

The aim of the interaction is to give the participants an opportunity to express their opinion about indicators to be used in the policy scenario to be tested (mapping). For this purpose a *Policy Delphi method* is the most appropriate (D7.3.1, section D).

Stage 1: Identify the diversity of views among the participants

1. *Inform the participants about Seamless-IF and the objectives and method of the participation exercise.* It is important that participants understands the aim of the Delphi exercise; otherwise they may answer inappropriately or lose interest.
2. *Develop the Delphi questionnaire.* Ideally, the questions posed should be specific enough to eliminate most irrelevant information.

Table 3: Example of how questions can be phrased in Delphi questionnaire

- | |
|---|
| <ul style="list-style-type: none">• How is the capacity, stability, productivity, profitability, efficiency etc. of agriculture?• What are the impacts of agriculture on environment e.g. erosion, fertility, pollution, biodiversity?• What are the impacts of agriculture on society, employment, services etc.?• Which are the 3 most important critical sustainability issues for this area?• Other comments |
|---|

3. *Test the questionnaire.* The questionnaire should be pre-tested, preferably in face-to-face interviews, with people who have not been involved in the design to identify and revise confusing phrasing.
4. *Transmit the questionnaire to the participants via e-mail.* Point out that the answers are anonymous.

Stage 2: Analyse the replies

See Section 5.1.4

Stage 3: Perform a group discussion

The meeting will include presentation of the results of the surveys and comments and reactions from the participants.

Stage 4: Prepare a report to present the conclusions of the exercise

The final report should include responses from the participants to the questionnaires and group reactions to the results of the mapping (stage 3). The questionnaires used are provided in an appendix.

5.2.4 Analysis and presentation of the results

- The analysis of the questions (stage 2) should reveal³:
 - Variations among the views of participants
 - Possible correlations between the expectations of the individual participants and their domain of work e.g. agriculture, environment and/or function as policy-makers, implementation agencies, interest groups etc.

- The analysis of stage 3 should reveal:
 - Variations among the reactions from participants to the results of the mapping stage
 - Links between individual reaction and working domain and function of participants

We suggest the results to be submitted to the participant as feedback on their contribution (see Stage 4).

5.3 Participatory protocol for problem (re)framing in test cases

5.3.1 Purposes, subjects for discussion and tasks

Purposes

- To inform national, regional and local users and stakeholders of the IF and in particular about the 1) Possible future policy options chosen for assessment. 2) the indicators that scientists suggest to use for the impact assessment of these policies.
- To provide modellers with information on: 1) the diversity of views of potential users and stakeholders on the indicators that SEAMLESS-IF should use for the impacts assessment of the policy options to be tested and the weighting system and

³ Examples of possible results can be found in PD 2.6.1 under 1.1.4

criteria to be used for the selection and aggregation of such indicators; 2) the common view that participants might share on the issues, i.e. an agreed list of indicators, selection criteria and weighting system.

Subjects of discussion

- Relevance and importance of indicators at different scales, regarding the interest domain and functions of potential users and stakeholders
- Weighting system and criteria for the selection and aggregation of indicators

Tasks

- *Mapping* (individual needs). Indicators that scientists suggest to use for the impact assessment of the tested policies (WP2) are parameters or values derived from parameters, which provide information about given phenomena. However, indicators may have significance as negotiation tools for policy-makers and interest groups in the policy formulation process and as management tools for implementation agencies. In addition, significance of a given indicator may vary with the importance of the phenomenon to the actor. *It is important that the process points out the diversity of the individual interests and preference.*
- *Reframing* (collective learning). Dialogue among the end-users and stakeholders of the IF is viewed as a mechanism for exchange of arguments that enables these actors to reach a consensus on indicators to be used for the assessment, as well as on criteria to be used for their selection and aggregation. *It is important that the process indicates which common reframing of the problem the participants can share.*

5.3.2 Participants

- National and regional potential users of the IF (policy-makers) in test cases
- Representative stakeholders of the tested policies and target systems in test cases:
 - National, regional and local interests groups
 - Regional and local implementation agencies

To identify the relevant institutions to participate at each level, a stakeholder analysis will have to be pursued (see D. 7.3.1 page 177).

5.3.3 Method

The aim of the interaction is to give the participants an opportunity to express their opinion about indicators to be used in the policy scenario to be tested (mapping) and to search for a common reframing of the problem. For this purpose a *Conventional Delphi method* is the most appropriate (D7.3.1, section D). In addition, such a method can be easily routinized.

Stage 1: Identifying the diversity of views among the participants

1. *Inform the participants about SEAMLESS-IF and the objectives and method of the participation exercise.* It is important that participants understands the aim of the Delphi exercise; otherwise they may answer inappropriately or lose interest.
2. *Develop the first-round Delphi questionnaire.* Ideally, the questions posed should be specific enough to eliminate most irrelevant information.

Table 3: Example of how questions can be phrased in first Delphi questionnaire

- | |
|--|
| <ul style="list-style-type: none">▪ Is this indicator relevant in test case 1/prototype 1?▪ Is this indicator relevant from your perspective?▪ Which are the 3 most important indicators from your perspective?▪ Give the main reasons/criteria for this selection/ranking!▪ Other comments |
|--|

4. *Test the questionnaire.* The questionnaire should be pre-tested, preferably in face-to-face interviews, with people who have not been involved in the design to identify and revise confusing phrasing.
5. *Transmit the questionnaire to the participants via e-mail.* Point out that the answers are anonymous.

Stage 2: Analysing the first-round of replies

See Section 5.1.4

Stage 3: Reaching consensus among the participants

6. *Prepare the second-round of questionnaire.* In this round the differences between the participants' views revealed after the first round are presented to all participants. They are now asked to explain the reason for the differences between their view and the view of others. In each round, this information and the reasoning behind is shared with the other participants (still maintaining anonymity).
7. *Ask the participants the second-round questions.* When asking for re-votes on an item, show the individuals their original votes.
8. *Analyse the second-round of replies.*

In typical Delphi method, steps 6 – 8 are repeated until stability in the results is achieved. The number of rounds that can be asked for depends on the commitment of the participants, and if needed iteration can be left out and step 7 can be followed by a group discussion.

Stage 4: Group discussion

The meeting will include four steps: presentation of the results of the surveys; comments and reactions from the participants; suggestion by the mediators (scientists) of a common list of indicators, selection criteria and weighting system (from the analysis of the surveys); and discussion of this suggestion.

Stage 5: Prepare a report to present the conclusions of the exercise

The final report should include five sections: responses from the participants to the first and second round questionnaires; group reactions to the results of the mapping (stage 4); the suggested list of indicators, weighting system and selection criteria (stage 4); group reactions to the suggested indicators and their management system; final agreements. The questionnaires used are provided in an appendix.

5.3.4 Analysis and presentation of the results

- The analysis of the first round of questions (stage 2) should reveal⁴:
 - Variations among the views of participants on:
 - the domains to be covered by the indicators, and the scales and dimensions expected for these indicators
 - the most important indicators
 - the threshold levels of indicators
 - the type of final information that the IF should provide
 - Possible correlations between the expectations of the individual participants and their domain of work e.g. agriculture, environment and/or function as policy-makers, implementation agencies, interest groups etc.
- The analysis of stage 3 should reveal:
 - Variations among the reactions from participants to the results of the mapping stage
 - Links between individual reaction and working domain and function of participants
 - The indicators, weighting system and selection criteria, suggested by the moderators
 - Variation among the reactions from participants to suggestions from moderators
 - Links between individual reaction and working domain and function of participants
 - Final agreements

We suggest the results to be submitted to the participant as feedback on their contribution.

5.4 Participatory protocol to get feedback on results

5.4.1 Purposes, subjects for discussion and tasks

Purposes

- To inform national, regional and local users and stakeholders about the IF, on the results that are provided by the IF, given the tested policy scenarios
- To provide modellers with information on:
 1. the diversity of views of participants on the results of an assessment, whether the results seem logical and possible given the assumptions made and whether the tools that are offered by the IF match their expectations.
 2. the common view that participants might share on improvement of the IF.

Subjects for the discussion

- Coverage of multifunctionality and sustainability issues
- Inconsistencies among indicators with respect to scenario definition
- Applicability and robustness of the developed and aggregated indicators, criteria and derived qualitative tools expressing the necessary features of transactions, as well as the characteristics of actors for implementing the policy to be assessed.

⁴ Examples of a possible organisation of topics can be found in PD 2.6.1, table 1.1.4

Tasks

- Evaluation of the results given by the IF. Expectations of potential users and stakeholders on the results that the IF provides depend on their professional functions. It is important that the process points out variation among the views of the potential users and stakeholders of the IF on the appropriateness, compliance and effectiveness of concepts and their application in the IF, in relation to their specific needs.
- Improvement of the IF. Dialogue among the end-users and stakeholders of the IF is viewed as a mechanism for exchange of arguments that enable these actors to reach consensus on how to improve the above subjects for discussion. The protocol aims at discovering novel ideas that are reasonably close to the ideal presentation that each potential users and stakeholder of the IF expects.

5.4.2 Participants

- National and regional potential users of the IF (policy-makers) in Test case 1
- Representative stakeholders of the tested policies and target systems in Test case 1:
 - National, regional and local interests groups
 - Regional and local implementation agencies

5.4.3 Method

The protocol has two main stages: *Evaluation* and *Redesign*. First feedback on the appropriateness, compliance and effectiveness of the information that the IF provides is invited (evaluation stage). There after suggestions from the participants on ways to improve the IF.

We believe that for such feedback a *Focus Groups method* is appropriate. Focus Group is a flexible participatory method that can be combined with different other techniques (e.g. video simulations, questionnaires, mood boards, product personality profiling, nominal group technique).

Stage 1: Evaluation

This stage aims at identifying participants' *individual* views on the appropriateness, compliance and effectiveness of concepts and use (results) in the IF, in relation to their needs. Work proceeds in the following steps:

- Inform participants of the objectives and method of the exercise
- Develop first-round questionnaires to get the individual views of participants on the appropriateness, compliance and effectiveness of concepts and use (results) in the IF. We suggest that such questionnaire should be 'comparison oriented', i.e. that it should ask the interviewees on how well the results that the IF provides match their needs (appropriateness), comply with their requirements (compliance), and are logical and possible given the assumptions made (effectiveness). The questionnaires should include the following material to support the interviewees in this comparison approach:
 - information on the needs and requirements that participants expressed during consultation on indicators (ref. Results of the previous protocol);

- information on the results that the IF provided in the test case (ref. Results of prototype 1);
- tables – with needs in rows and results in columns, in which the participants will be asked to put numbers – between 1 to 5, to indicate the appropriateness, compliance and effectiveness of the results that the IF provides.
- Test the materials and the questionnaire in face-to-face interviews for proper wording.
 - Transmit the materials and questionnaire to the participants (postal/ web survey) or preferably ask the participants in face-to-face interviews
 - Analyse the first-round replies (see Section 5.2.4)

Stage 2: Improvement

This stage aims at organizing exchange of arguments among the potential users and stakeholders of the IF that enables these actors to *reach consensus* on how to improve the appropriateness, compliance and effectiveness of the information that IF provides. This work proceeds in five steps:

1. Presentation of the – anonymous – results of Stage 1 (Evaluation)
2. Ask the participants to write down a list of ideas concerning the most important topic to be improved
3. Moderators collect all the ideas by asking the participants in turn to articulate their contributions briefly (each participant giving only one idea at time) and write them down for all to see.
4. Participants discuss the issues (appropriateness, compliance and effectiveness of concepts and use in the IF) by deciding on a selection of categories of the suggested improvements that emerge from the list.
5. Moderators circulate cards to give the opportunity to participants to rate the categories that are the most important to them. The results can be analysed immediately for key issues to be agreed upon by the participants. Consensus can be reached by a rating procedure.

The main benefit of the work schedule above is that it ensures input from all the members of the group. It is also designed to reach consensus at the end of the session, based on a rating procedure involving all participants. The technique is often used in industry to agree on a set of actions. Although the group consensus is not necessarily required for this application, it provides a means of creating a tangible output. The technique is beneficial in helping to reflect deeply on a topic, as the process of generating categories gives additional insight.

5.4.4 Analysis and presentation of the results

- The analysis of the Evaluation Process shall identify
 - Variations among the views of participants on *the appropriateness, compliance and effectiveness of the results that the IF provides*
 - Possible correlations between the expectations of the individual participants and their domain of work e.g. agriculture, environment and/or function as policy-makers, implementation agencies, interest groups etc.
- The analysis of the Improvement Work Shop shall identify:
 - Variations among the suggested improvements of the IF

- Links between the suggested improvements and working domain and function of participants
- Final agreements

References

Van Asselt, M. B. A. et.al. (2001) Building blocks for Participation in Integrated Assessment: A Review of Participatory Methods. ICIS Working paper, 101 - E003, ICIS, Maastricht, NL.

Jonsson, A. and Alkan-Olsson, J. (2005) Conference proceedings, 7th NORDIC ENVIRONMENTAL SOCIAL SCIENCE RESEARCH CONFERENCE (7th NESS), Göteborg University, 2005

Swedish board of Agriculture, EU kommitteér (2005)
<http://www.sjv.se/amnesomraden/handelmarknad/eukommitteer.4.7502f61001ea08a0c7fff60171>.

Glossary

<i>Animated Narrative Demo:</i>	A demo which shows an example of how the final outcomes and tools SEAMLESS-IF could be used to make an assessment. It demonstrates the workflow steps involved, the user interface and possible ways of viewing results for an example assessment with the aim of to giving potential future users some indications of what SEAMLESS-IF aims at.
<i>Other user:</i>	Potential users other than those described as prime, e.g. Lobby organizations, NGO:s, National and regional decision making agencies.
<i>Participatory methods:</i>	Methods to structure group processes in which participants play an active role and articulate their knowledge, values and preferences for different goals These methods refer to a specific type of methods to organise stakeholder involvement in assessment and decision-making processes, while interviewing is a standard social science technique that can also be used in the context of stakeholder involvement. Participatory methods are overall contexts or settings in which information is elicited.
<i>Participatory protocol:</i>	Creating protocols means choosing relevant participatory methods to deal with foreseen tasks. Each protocol makes a quick presentation of the generic goals it has been designed for, and of the relevant target public. Protocol sums-up the people resources needed to implement it, and gives explanations about each step: step goals, resource consideration (who does what?) step development (what is happening?) and step analysis method.
<i>Prime user:</i>	The prime users are identified as DG Agriculture and DG Environment and possibly other DGs, like Trade, Regional development and Economy and Finance. The idea of prime user as it has been put forward in the description of work rather implies the meaning of being prime in relation to the development of the tool.
<i>Stakeholders:</i>	all individuals and groups affecting and/or being affected by agricultural policy decisions and agricultural land use, e.g. farmers, consumers, food and transport industry at many different levels (e.g. farm to EU and international).
<i>SEAMLESS IF:</i>	An application which allows the evaluation of agricultural systems accounting for technical, environmental, economic and social indicators. One or more integrated frameworks will be the main deliverables of the integrated project

<i>Stakeholder:</i>	Stakeholders are defined as all individuals and groups affecting and/or being affected by agricultural policy
<i>Test case:</i>	Describing (relevant) aspects of the real world in a functional context to test SEAMLESS-IF. Within SEAMLESS two test cases have been defined.
<i>User Forum:</i>	A group of prime users who meet twice per year throughout the duration of the project to discuss different issues concerning the development of SEAMLESS-IF with relevant SEAMLESS participants.