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TALE

Towards multifunctional agricultural landscapes in Europe: Assessing and governing synergies between food production, biodiversity, and ecosystem services – TALE

Guidelines on the stakeholder process in TALE

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Guidelines on the stakeholder process in TALE

Content

1. Introduction / Background / Executive Summary

The TALE project shall analyze the pressure on natural resources that increases due to multiple competing demands for land. The resulting demand driven land use changes come at a cost in the form of trade-offs between food or bioenergy production, biodiversity conservation and other ecosystem services (ESS) like clean water, erosion control or soil fertility. By assessing and governing synergies between food production, biodiversity and ecosystem services, TALE will develop related strategies. Across Europe countries differ regionally with respect to biodiversity, landscape structure, structure of the agricultural sector, conflicts regarding the provision of ESS (e.g. production vs. soil protection or water provision) and with regard to preferences for particular ESS (e.g. provisioning vs. regulating or cultural services). Integrated approaches are required that cover a representative range of ESS over contrasting case study landscapes. Within TALE the ESSs are defined by a set of common indicators to be quantified in each case study region. By providing regional indicator assessments, TALE enhances the knowledge base on ESS provision across Europe. Common methods and tools are applied to allow for comparability and to enable the transferability of case study results and related implications to other regions in Europe.

Stakeholder participation is crucial to guide research towards societal knowledge demand and a successful dissemination of research results from biodiversity and ecosystem service studies. Funders and coordinators of BiodivERsA are quite clear in their perception on stakeholder integration: *"BiodivERsA partners recognise that research on biodiversity and associated ecosystem services is not only an environmental issue, but as much an economic, political, food-security and energy-security one. Being a cross-cutting subject, biodiversity research needs to promote interdisciplinarity, integrate a range of actors, reach academic excellence, and have a clear societal impact."* (Durham et al., 2014, p. 6).

In order to organize the stakeholder process in TALE and to facilitate comparability among the case studies, common guidelines are required. This report provides such guidelines by mainly covering i) the objectives of stakeholder participation in TALE and expectations towards stakeholders, ii) the stakeholders to be considered, iii) the operation of the stakeholder process including the group size and timing and finally iv) the monitoring and evaluation of the process. The guidelines mainly cover the management of the stakeholder process in the case studies. However, the management of the stakeholder advisory board of TALE is described in chapter 5. BiodivERsA provides a "Stakeholder Engagement Handbook" (Durham et al., 2014) to all project partners. It is a valuable tool in organizing the stakeholder process and the basis for our guidelines.

2. Objectives of and expectations towards stakeholder participation in TALE

A clear definition of objectives is a prerequisite to select stakeholders[1] and communicate the expectations of the project team. Furthermore, it is paramount to a meaningful stakeholder process and the foundation for monitoring and evaluation. Stakeholder participation in TALE shall pursue five main objectives, i.e. i) providing information on policy instruments and measures (see WP 1 Analytical framework) in the case study areas, ii) learning about and validating model results, iii) supporting the definition of land use scenarios, iv) stating stakeholder ESS and biodiversity preferences. Stakeholders v) shall also support the dissemination of results within their professional communities. To operationalize these objectives for the TALE project, we derive the following expectations on the stakeholder process:

- Support description of current policies, their objectives, applicability, and impacts

WP 1 aims at identifying and understanding governance structures at the regional scale and at identifying current policies in order to derive policy recommendations in WP 4. One task in WP 1 is the description of policy instruments and measures from regional to EU levels in all case study regions. Stakeholders shall support such description by assessing for example impacts and effectiveness of the policy instruments and technical measures applied (see WP 1 Analytical framework and templates) and also by revealing and interpreting objectives within legal documents and beyond. The latter may include debated but not formalized objectives of current and future policy reforms and hidden objectives. However, it shall not result in a documentation of stakeholder preferences, which is covered by WP 4 (see below). By revealing governance structures on policies in the different case study regions, stakeholders shall also experience alternative options to define, implement, and monitor land use policies.

- Support land use scenario definition

Land use scenarios are the basis for quantitative modelling in WP 2 and 4. The scenario definition approaches from shared storylines among all case studies and shall provide details on the socio-economic[2], technological, and bio-physical conditions for future agricultural production in each case study region.

- Learn about quantitative models and discuss results

In WP 2 stakeholders shall discuss quantitative model results to learn about the functioning of the models and the effects of land use scenario assumptions. It supports the validation of WP 2 models and enhances the capacity of stakeholders for activities in WP 4.

- Reveal stakeholder preferences on biodiversity and ESS supply

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[1] For a definition on this term see chapter 3.

[2] This includes environmental goals e.g. the implementation of Natura 2000, the achievement of the water framework directive objectives of all water bodies.

In WP 4 stakeholders will reveal their preferences on ESS and biodiversity in the case study region and compare it to the WP 4 optimization results. Stakeholders will also dicuss the land use requirements to achieve a particular ESS and biodiversity supply and thereby will learn about the synergies and trade-offs between land use, ESS, and biodiversity. Finally, stakeholders will discuss policy measures – based on WP 1 results – which appear appropriate to achieve preferred ESS and biodiversity states and corresponding land uses.

- Facilitate dissemination of results

The expectations of the TALE research team towards the stakeholder process go beyond supporting the research process itself. Stakeholders will be asked to disseminate the results within their professional communities and support the translation into policy discourses.

- Objective from TALE team perspective: stimulate learning and provide publishable results

The expectations of the TALE team on the stakeholder process are high such as expressed by the list above. Besides improving the results, the TALE team shall gain experiences from the stakeholder process to be shared among the scientific community via scientific publications. A further indication of the expectations of the TALE team is given in Table 1. It summarizes results on two questions asked during the TALE kick-off meeting in July 2015 in Leipzig. Expectations correspond to the list above but also indicate a priority setting towards sharing stakeholders' preferences on future developments and sharing local knowledge including quantitative data. According to the TALE researchers, the stakeholders may benefit from knowledge on future impacts of land use decisions, gain new visions and learn about good land use practices and effective policy design.

The case study teams may extend this list of objectives and expectations due to regional circumstances. For a list of more general benefits of stakeholder engagement in research projects, see Durham et al. (2014).

Table 1: Expectations towards the stakeholder process and expected benefits to stakeholders from the TALE team perspective (survey on 2nd July 2015)

Expectations towards stakeholders		Benefits to stakeholders
● Local knowledge on local hot-spot issues e.g. soil erosion - recreational spots ● societal & environmental conflicts ● Dissemination of results	A T	● Provide BROADER perspective on biodiversity/sustainability issues in the region ● Provide insights into the inter-connectedness of human activities & ESS supply (raise awareness)
● policy experiences in case study (and experienced conflicts/trade-offs) ● workshop on scenario development to have local developed/influenced scenarios ● (Maybe) Identify perceived trade-offs of ES/biodiversity/agriculture	N L	● Model results to "fill in" some of the (more qualitative) scenarios discussed for future rural development
● To know their preferences about future development ● To know to which extent policies are effective on the ground	E S	● Provide information on more broad future development pathways to which they could steer the future to ● Information on future impacts of current management practices and policies
Consult: ● data provision from cantonal offices ● development of land use /policy scenarios to be investigated in the Swiss case study (possibly)	C H	Inform: ● Stakeholder workshop at the end of the project presenting findings from the case study (ideally together with output from other selected projects conducted in the same study region) ●

Expectations towards stakeholders		Benefits to stakeholders
		publications (in French/German) in applied Journals
Information which management options /agri-environmental measures are feasible/realistic for scenario simulations/optimization runs an to what extent ● Stakeholders should be cooperative and open minded so that research results can be implemented ● Prioritization of relevant Ecosystem services ● Get an impression on what is relevant for them so that we can adjust our "work"	D E	● Model results might show how land management can be improved in terms of multiple ecosystem services ● Other perspective on their daily business - but needs an open mind (of the stakeholder)
● Additional information on impact of policy measures ● Additional information on implementation and governance of policy measures ● Ideas for innovative measures	W P 1	Exchange on "innovative" e.s "good practice" measures
Input on impact of policy measures and on governance issues	W P 1	Ideas for improving policy impacts and governance from best-practice-examples from other case study regions

3. Selecting stakeholders

Durham et al. (2014) suggest three stages in the process of choosing stakeholders, i.e. identifying potential stakeholders, analysing and prioritizing them, and finally trying to understand them in order to design the stakeholder process. In this chapter we suggest procedures for the TALE case study teams to advance through these steps.

"A stakeholder is any person or group who influences or is influenced by the research" (Durham et al., 2014). This rather broad definition as well as the list of possible stakeholders presented in Durham et al. (2014) need to be operationalized for each case study individually. The following list may provide the most relevant groups with respect to the TALE objectives:

- **Public authorities**, either administrative staff or policy makers, in charge of land use management and planning processes as well as land use related nature protection concerns at national, regional and eventually local levels such as
    - Ministries of agriculture and the environment
    - National and regional authorities in charge of the development of land use policies including CAP policies, land use and urban planning and zoning, public land improvement programs,
    - Environmental protection agencies
    - Mayors, local politicians and authorities in charge of land use planning processes.
- **Semi-public authorities** in charge of impacting land use policies and management
    - Agricultural interest groups
    - Agricultural extension services
    - Tourism agencies
    - Regional management authorities (e.g. LEADER)

- o Regional fresh water suppliers
  - o Hunting communities
  - o Non-governmental organizations (NGOs) in charge of environmental and nature protection issues
- Food and other businesses (e.g. tourism) depending on regional land use, biodiversity and ecosystem management
- Researchers of regional to national organizations
- Teachers at agricultural schools
- **Farmers** and land owners in the case study area
- Local residents with particular interests in land use, environment, and nature conservation issues

In TALE, we follow an ex-ante approach to the stakeholder definition by defining procedures and selecting stakeholders prior to the process kick-off (Durham et al., 2014). In a **first step**, each case study team develops a **list** of potential stakeholder groups based on the list above. Their experiences in the case study region will support this process. Applying the snowball technique (e.g. Mitter et al., 2014), i.e. revealing stakeholders via recommendation of others may help to complement the list. In some cases the categorization may not include organisations but individual persons.

Secondly, each case study team **categorizes** the stakeholders by describing their desired role in the research process along the objectives developed in Chapter 2 and by elaborating on their influence in governance processes and their own interests to be involved. The latter can be important in order to persuade them to participate and may also inform about their likely role and professional interests in the group. Annex I provides a template to be filled in by each case study group.

Finally, a **ranking** of stakeholders has to be made prior to an invitation to join the case study research group. The ranking is based on the likely contribution of stakeholders to the project expectations along two criteria, i.e. their interest in the results and their influence to implement results. Along these criteria, the case study teams will attribute each stakeholder to one of at least four levels of engagement with increasing intensity (see Figure 1).

Information from the categorization (see Annex I) should be sufficient to undertake such ranking. Although stakeholders may fulfil different roles in different project steps, we intend to maintain any stakeholder group throughout the whole research process. Consequently, the ranking takes into account the likely overall contribution of each stakeholder. It will prioritize stakeholders with high interest and influence. A limitation of participants in a **core stakeholder group** – around 5-10 persons appears a manageable number – may be necessary to ensure efficient processes in each case study. A major task of the core group is to participate in the two obligatory workshops (see below). The TALE team is aware that the choice of stakeholders determines process results. Consequently, the choice has to facilitate a broad representation of societal interests. Mitter et al. (2014) separated the stakeholder process into two groups, i.e. a peer group of only a few persons strongly involved in the process and an expanded group with limited required commitments to the project. In TALE, the case study teams approach from such procedure by defining both a core and expanded

stakeholder group. The **expanded stakeholder group** – mainly consisting of stakeholders with either low or high interest but low impact – may fulfil important roles in the process. However they may be informed about results or consulted only on an ad-hoc basis and may eventually never physically meet with the core group.
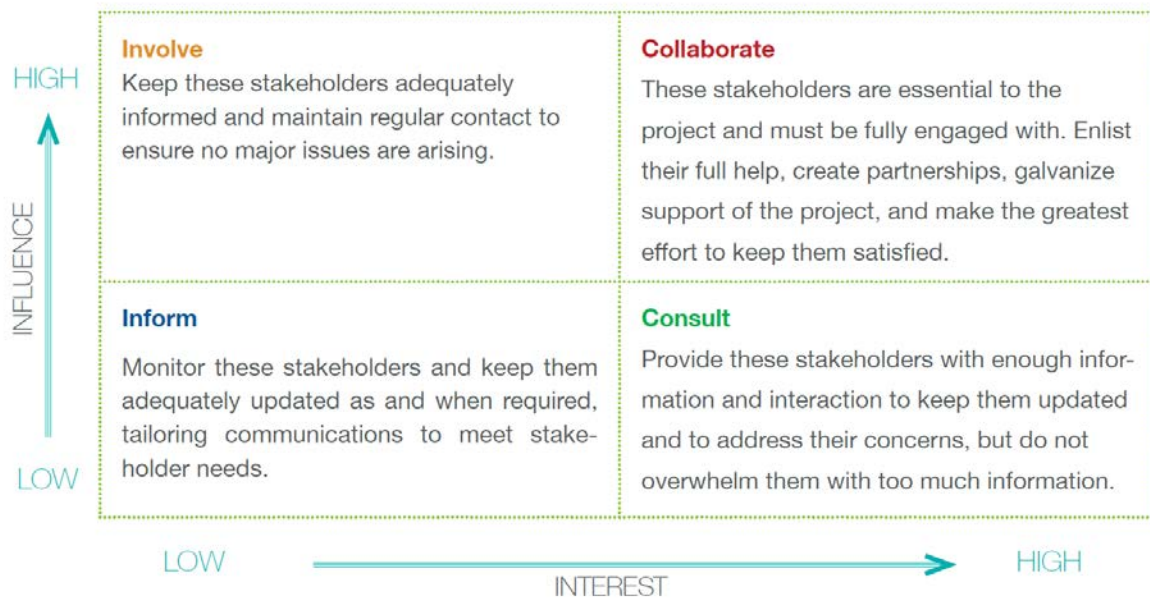

Figure 1: Categories of stakeholder interests and influences (Durham et al., 2014)**.**

The differentiation between a core and expanded stakeholder group shall raise awareness in the case study teams that the role of stakeholders is quite heterogeneous. In an early phase of the stakeholder process the case study teams may re-evaluate their initial categorization after clarifying the role, expectations and real impacts of a stakeholder (see next chapter). It serves to better understand the stakeholders, their relationship to each other and their revealed and hidden agenda. The stakeholder process will be kept flexible such that new stakeholders can be included in both groups if appropriate. In some case studies a limited number of available stakeholders may not allow such differentiation between a core and expanded group. In this case, only a core group will be defined.

4. Stakeholder process in the case studies

The operation of the stakeholder process in each case study shall be guided by several objectives:

- Derive high quality research results

- Facilitate comparison among case studies in TALE

- Assure a well-structured and attractive environment for stakeholders to enhance long-term communication between stakeholders and scientists even beyond the project, i.e. prevent stakeholder fatigue (for a discussion on this, see Durham et al. (2014)).

In this chapter, we define general processes to be maintained by each case study team due to the obligation to the consortium and the TALE objectives. The detailed structure of the stakeholder process is in the responsibility of each case study team and may vary due to the particularities of each case study including the stakeholder composition, research questions, or applied methods. Table 2 summarizes the stakeholder involvement according to the following sub-chapters along a timeline.

Table 2: Timeline on the stakeholder process in TALE including milestones and deliverables – details are case study specific

Task (see Guideline chapters)	2015	2016	2017	2018
	A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M
3. Selecting stakeholders				
4.1 Stakeholder expectations				
4.2 Description of policies		M.3.1		
4.3 Scenario definition		D.3.1		
4.4 Preliminary results discussion*		WP 2 modelling		
4.5 Preferences on ESS and biodiv.*			M.3.2.	M.3.3	
4.6 Dissemination'				M.5.3

* Case study stakeholder workshop   ' TALE workshop with experts and stakeholders

Figure 2 summarizes the major steps and expectations on the stakeholder process and its linkages to the work packages.
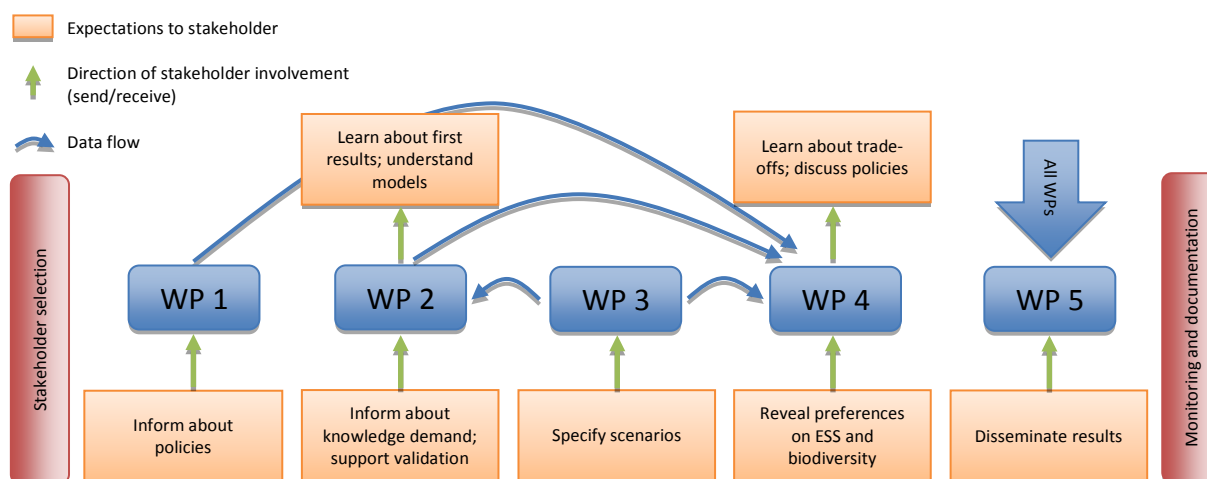
Figure 2: Information flow among work packages and expectations on the stakeholder process.

4.1   Stakeholder expectations and roles

In an initial phase of the stakeholder process, stakeholders from the core and expanded group will be confronted with the BiodivERsA and TALE objectives and the expectations of the project team towards the stakeholder process. Stakeholders will be asked to state their expectations on both the case study and overall TALE results, and to reveal their willingness to engage in the process. It is in the responsibility of each case study team to reveal, discuss, and eventually clarify contradictory or unachievable expectations. A moderated

group discussion, personal interviews, or a written survey may be appropriate methods to gather information. Results of this step will feed into a table presented in Annex II and are a prerequisite for the evaluation and monitoring of the stakeholder process (see section 4.7).

4.2　Description of policies (WP 1)

An early task in each case study is the collection and description of land use policies. Stakeholders will mainly support two major tasks in WP 1. They may complement the list of major policies collected and described by the case study teams according to the WP 1 Template 1. This is optional to each case study research team and subject to its competencies.

Secondly, stakeholders will support the description of major policies according to Template 2 of WP1 by revealing and interpreting objectives, their applicability, impacts, and effectiveness. It shall support the choice of policy instruments in WP 4. While this second step is obligatory to all case studies, the methodological choice is up to the case study team. A written or phone survey or personal interviews among both the core and extended group may be appropriate but other methods such as workshops, bilateral consultations or group meetings may be chosen as well depending on the preferences of the case study research team.

4.3　Scenario definition (WP 3)

The definition of land use scenarios is a major task in each case study. It shall support quantitative modelling in WP 2 and WP 4. Scenarios will be related to common TALE storylines with respect to major global to continental developments, but adapted to each case study. Each land use scenario in a case study needs to be coherent in itself but several contrasting scenarios shall represent a range of plausible futures. The scenarios will provide details on the socio-economic, technological, and bio-physical conditions for future agricultural production and land use in each case study region to serve modelling efforts in WP 2. The process on scenario development will be equal for all case studies in TALE to receive and share a set of comparable land use scenarios at the project level. However, there is different demand with respect to its use in WP 2 and WP 4 in each case study and the level of detail above a common baseline is to be determined by each case study team.

The scenario definition includes two major steps, i) **the development of storylines**, and ii) **the development of case study specific explorative land use scenarios along the common storylines**. Explorative scenarios cover a broad range of futures and help stakeholders and scientists to widen the scope of future options (van Vuuren et al., 2012). They can but need not to appear rather extreme compared to the current situation but should still be plausible with a certain likelihood to become reality. Further details will be given by the guidelines on scenario development. With respect to the storylines, the TALE team will develop 3 major storylines, eventually together with the stakeholder advisory board. This step at the project level enhances the comparability of case study results and facilitates the case study stakeholder process. The storylines will describe processes beyond the scope of local to regional stakeholders. Each case study develops detailed stakeholder-driven regional land use scenarios based on the common storylines. It includes the following steps:

1. The case study research team determines the parameters (e.g. share of urban areas, share of nature protection sites, change in farm prices, limitations on nitrate concentrations in ground water) required for the subsequent quantitative modelling in WP 2 and WP 4. These parameters likely go beyond the minimum standard to be defined over all case studies.

2. The case study project team delineates the storylines within regional contexts. Linking some of the current policies and land uses in the region to the storylines can help stakeholders to better understand how future conditions (determined by the storylines) may impact land use. For example, a maize dominated landscape may be the result of current policy support of agro-fuels. In a particular storyline such support can be missing, which may change crop patterns fundamentally. We use a common pool of examples for this step, so that each TALE case study team can benefit from the ideas of others. The case study teams are in charge of sending those examples (ideally in Month 11) to the WP3 lead, which will distribute it to all other case study teams.

3. Each case study team will contact the core stakeholder group and eventually also the broader stakeholder group to define at least one case study specific explorative land use scenario for each storyline. Stakeholders will be informed about i) the process of scenario development and its further use in quantitative models and, ii) the storylines. Different media such as posters, videos (see for example those from VOLANTE), etc. can be used and the examples developed under point 2 may be presented to facilitate this process. The case study research teams are free to choose procedures such as bilateral contacts or a workshop for the scenario definition but some stakeholder consultation in this step is obligatory. Each case study team has to decide on the level of detail and the range of parameters that describe each scenario. A minimum set of parameters will be given by the TALE team to facilitate comparability among the case studies. One of the minimum standards is the choice whether the particular land use scenario represents a land sparing or land sharing approach. Furthermore, land use will be defined in each scenario at least by describing changes in relative shares of different land use classes (i.e. %-shares of arable land, grassland, recreation area, infrastructure, etc.). Further land use definitions may include crop shares (i.e. %-shares of field crops and crop rotations), intensity levels (e.g. water demand, fertilizer application rates), the amount and distribution of landscape elements and the landscape structure. It may be difficult for stakeholders to define relative levels. Consequently, a case study team may want to approach from current land use and only determine changes.

   Each scenario shall be consistent to its corresponding storyline but likely is different to another case study due to local peculiarities. For example, a highly productive agricultural region may benefit from a liberalization scenario while a marginal area may lose. Such choices shall be taken by stakeholders.

4. The scenarios will be reviewed by the case study research team in an intermediate step in order to reveal inconsistencies between the land use scenarios and storylines as well as within each scenario. If necessary, stakeholders are consulted again to revise the land use scenarios.

4.4   Discussions on quantitative modelling results (WP 2)

Each case study team presents preliminary WP 2 results to stakeholders (core group or extended group) in a common workshop (obligatory). This intermediate step is important to facilitate mutual learning and to assure that stakeholders share a common vision and a sense of responsibility. Models will eventually be re-run and final results be developed. The workshop will be scheduled early enough in order to allow for alternative model runs if required. Intermediate results will be presented to the expanded stakeholder group to ask for comments and eventually support on results interpretation if appropriate.

Results are driven by the previously defined land use scenarios (see chapter 4.3). Stakeholders become aware of trade-offs among ESS and biodiversity and plausible future states of ESS and biodiversity subject to the scenario definitions. It is a useful preparation to the stakeholder engagement in WP 4. The workshop setting is up to the case study team. However, it should include the following components:

i)   explanations on the functioning of quantitative models including their major strength and weaknesses particularly with respect to the robustness of results,

ii)   a presentation of the model results, the main drivers, and the role of land use scenarios, and

iii)   discussions on the plausibility of results to the stakeholders.

The case study research team has to decide together with the workshop participants whether a second discussion round is required. If not, final results from the case study and eventually other case studies from TALE will be presented and discussed in the final workshop with the core or expanded stakeholder team (see chapter 4.5).

4.5   Preferences on ESS supply, biodiversity, and policies (WP 4)

Each case study applies optimization techniques to analyse synergies and trade-offs with respect to ESS supply and biodiversity. For most case studies, the UFZ multi-objective evolutionary algorithm MEA estimates the pareto frontier for a range of ESS and biodiversity indicators based on a land use map and land use constraints. It results from the combination of WP 2 models and land use constraints in each case study region. The land use constraints are equal to or derived from the land use scenarios from WP 3 (see chapter 4.3). Consequently, the more detailed the land use scenarios are (in terms of spatial explicitness, e.g. on a gradient from crop shares in a region to field-level cropping plans), the less flexible MEA will become.

Each case study team will organize a second obligatory workshop. The workshop setting is up to the case study team. However, it should include the following components:

i)   explanation of the MEA method, its major strengths and weaknesses particularly with respect to the robustness of results[3],

ii)   presentation of MEA (or alternative optimization) results to stakeholders,

iii)   discussion of trade-offs and synergies among ESS and biodiversity, and

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[3] Information on this is provided by the UFZ team and share among all case studies.

iv)   their underlying land uses. Group discussions appear appropriate to manage such process but the choice on communication tools is up to the case study team.

v)   Stakeholders shall reveal their preferences on ESS supply and states of biodiversity and will learn about the required underlying land use to achieve these preferred states. This process should be well documented by the case study research team in order to reveal and understand the underlying causes for the expectations. For example, it should show why a tourism manager expects different ESS in the region than a farmer does.

vi)   Once, preferences are settled, stakeholders will discuss policies to achieve the required land use based on WP 1 results.

To better exploit the knowledge gained from the individual case studies in TALE, the case study research and stakeholder team together decides whether or not to also discuss results from other case studies. This step is optional and subject to regional stakeholder demand. However, it has to be decided upon in the first (WP 2) workshop.

4.6   Results dissemination (WP 5)

Each case study team will develop at least one policy brief on the results in collaboration with stakeholders in order to facilitate the dissemination by the latter.

An important TALE output are the policies collected and described in WP 1. Each case study team ensures that these results are shared with all TALE stakeholders to facilitate mutual learning among the case studies.

To facilitate results dissemination in TALE, one final workshop will take place at the end of the project as part of WP 5. Experts and stakeholders will be invited independent from those in the case studies.

4.7   Monitoring and documentation of the stakeholder process

The case study teams are in charge of monitoring the stakeholder process continuously to prevent stakeholder fatigue wherever possible. Important questions include:

- *Sufficient representation of stakeholders:* Shall others be included?
- *Stakeholder background:* Do we correspond to their level of knowledge or do we communicate too simplistic or demanding?
- *Consideration of stakeholder needs:* Is there sufficient room for stakeholders to communicate their needs and are their needs taken into account?

Each case study team will evaluate the process after each step (steps are equal to the sub-chapters in chapter 4 of the guidelines) by asking itself as well as the stakeholders whether objectives have been met.

Each case study team is in charge of developing the stakeholder process along the guidelines and documenting major steps according to chapter 4 (see checklist in Annex III). The documentation shall include i) the date of the activity, ii) the participants, iii) the major activities, iv) results, and v) problems encountered. The case study research teams provide these documents immediately after each step to the WP 3 lead. They will be shared among all case studies to facilitate mutual learning as far as possible.

To further facilitate mutual learning, skype conferences on the major tasks in the stakeholder process will be held. They will be scheduled in advance according to the timeline in Table 2 and participation of the case study teams is voluntary.

5. The stakeholder advisory board of TALE

TALE established an Advisory Board (AB) with experts from regional and state agencies, NGOs and scientific institutions. These experts have a clear link to the practice and are familiar with science-policy interface and/or science society dialogue. They may also be part of a case study core or expanded group if appropriate. The members of our Advisory Board are a crucial part of the stakeholder engagement activities to support our objectives with regard to the development of science-policy and science-society dialogues in order to

1) orient the scientific work of the project along relevant questions of practitioners;
2) support stakeholders in decision making and
3) disseminate knowledge to the broader public.

5.1 Advisory Board Members' integration

The TALE project team envisages an active exchange with the Advisory Board Members. Examples for the exchange are:

- Receiving comments on the preliminary results, on drafts (such as scenario storylines) and on the further direction of the project activities related to the above mentioned aims;
- Attend project meetings and regional workshops;
- Provide input on relevant information and current issues in the case study regions;
- Where necessary, establish contacts with other relevant stakeholders in the case study regions;
- Act as multiplier of TALE activities and transfer results from the project to other stakeholder groups to be transferred into active decision making;
- Support the definition of scenario storylines.

The members of the Advisory Board have been asked for their key interests in the project in order to determine the extent to which they can and will actually contribute to the different tasks reflecting their preferences and background/expertise. Those are to be matched with the requirements of the project partners in the case study areas. Because of their diverse engagements in other projects, Advisory Board members shall not be overloaded with work in the TALE project or irritated by uncoordinated requests from different parties, but their expertise should be asked for where it is most relevant. To ensure this,

1) contact with the Advisory Board members shall be established via the coordination team (Prof. Dr. Martin Volk) only;
2) case study project partners will be asked to state their wishes / expectations regarding the potential integration of Advisory Board members.

5.2 Who are the Advisory Board Members?

TALE's Advisory Board comprises seven members from five countries (Table 3). They cover all fields of the TALE project: Three members are from agri-environmental administrations covering the regional as well as national policy level. One NGO representative is working at the European level but is also linked to the national and regional level in the country that he is representing. Moreover, we engaged a scientist with a history as an environmental NGO leader as well as two other scientists with experience in transferring scientific results into practise.

Table 3: Overview of Advisory Board members´ backgrounds

Name	Institution	Country	Background	Type of engagement
Zimmermann, Niklaus	WSL	Switzerland	Scientist	n.a.
Pedroli, Bas	Wageningen/Alterra	The Netherlands	Scientist	Be informed
Neudorfer, Thomas	Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW)	Austria	Politics/Administration	Comment on results, if applicable attending project workshops and if desired provision of expertise, especially in the area of agri-environment; supporting networking with relevant stakeholders.
Díaz Pineda, Francisco	Professor in Ecology at Universidad Complutense de Madrid and former President of WWF-Adena Spain	Spain	Scientist/former NGO representative	n.a.
Ingo, Zopf	Thuringian Ministry for Infrastructure and Agriculture	Germany	Politics/Administration	n.a.
Atance Muñiz, Ignacio	Ministry of Agriculture and Environment Management	Spain	Politics/Administration	I'd like to be regularly informed (and provide my personal feedback) and have the option to attend project meetings

Thurner, Andreas	Austrian Chamber of Agriculture	Austria	Interest group representative	We could take up a position as consultant at project meetings/discussion rounds and contribute with expert knowledge

5.3   What are the Advisory Board members expecting from us

In a questionnaire, we asked the Advisory Board members about how they would like to be engaged within the project (see the document "Summary of answers from AB questionnaires"). The answers differ in terms of their expectations and their commitment reflecting the different backgrounds of the experts. Some board members have a personal interest in receiving research results to integrate the knowledge in their daily work as a farmer, policy advisor or researcher (see Table 3).

In terms of active involvement, some members would like to become actively engaged by attending meetings and provide regular expert input; others expect only to be informed about the process and results. At least, all members expect meaningful results from the project and that they will be informed about it.

5.4 Concept for Advisory Board Members' integration

Based on our objectives towards the integration of the Advisory Board members and their preferences, the concept for the interaction with the Advisory Board is split into two parts:

1) Information:
   a. The board members will receive a TALE newsletter every six month, including information on preliminary results of the project. They are in turn asked to comment on the information if they would like to do so.
   b. Selected board members are invited to the annual project meetings (as we do not have the budget to finance the trips of all Advisory Board members, we will invite the board members from the host country and members who can specifically contribute to the topics to be discussed at the respective meeting).

2) Active engagement:
   a. Advisory Board members, who actively offered their support to comment, will be invited to provide input to selected project documents, such as scenario storylines, templates and project results.
   b. Board members are also invited to act as consultants in workshops and project meetings.

Based on a questionnaire of TALE partners, further forms of engagements can be identified and the above concept updated.

6 Concluding remarks

Research calls such as those in ERA-Net increasingly demand stakeholder processes in order to decrease the observed or assumed gap between science and practice. TALE has been designed to provide a mutual learning environment for both spheres. However, research in TALE will have different phases with changing degrees of stakeholder involvement. The presented Guidelines shall support the governance of the stakeholder process. They shall improve the comparability of results among the regional case studies and improve the efficiency of the stakeholder process while at the same time provide sufficient flexibility for each case study team.

7 References

Durham, E., Baker, H., Smith, M., Moore, E., Morgan, V., 2014. The BiodivERsA Stakeholder Engagement Handbook. BiodivERsA, Paris.

Mitter, H., Kirchner, M., Schmid, E., Schönhart, M., 2014. The participation of agricultural stakeholders in assessing regional vulnerability of cropland to soil water erosion in Austria. Reg Environ Change 14, 385–400.

van Vuuren, D.P., Kok, M.T.J., Girod, B., Lucas, P.L., de Vries, B., 2012. Scenarios in Global Environmental Assessments: Key characteristics and lessons for future use. Global Environmental Change 22, 884–895.

Annex I: Stakeholder mapping (Durham et al., 2014)

Stakeholder & institutional level	Category (see list in chapter 3)	Reasons to involve the stakeholder(s)	Why the stakeholder may want to be involved (interest)	How stakeholders may contribute to the implementation of results

Annex II: Stakeholder expectations and commitments

Stakeholder	Views on TALE	Expectations on case study and TALE	Willingness to engage	Capacity to engage

Annex III: TALE stakeholder process checklist

Note: Numbers are related to the Guidelines chapters, see also Table 2 for the timeline:

Task (see Guideline chapters)	2015										2016													2017													2018		
	A	M	J	J	A	S	O	N	D		J	F	M	A	M	J	J	A	S	O	N	D		J	F	M	A	M	J	J	A	S	O	N	D		J	F	M
3. Selecting stakeholders																																							
4.1 Stakeholder expectations																																							
4.2 Description of policies													M.3.1																										
4.3 Scenario definition															D.3.1																								
4.4 Preliminary results discussion*																			WP 2 modelling																				
4.5 Preferences on ESS and biodiv.*																											M.3.2. | M.3.3												
4.6 Dissemination'																																			M.5.3			

* Case study stakeholder workshop   ' TALE workshop with experts and stakeholders

3. Selecting Stakeholders (case studies)

☐ Develop a list of potential stakeholders

☐ Categorize the stakeholders according to Annex I

☐ Rank stakeholders and develop a core and expanded stakeholder group

☐ Invitation to the project

4. Stakeholder process (case studies)

☐ Inform stakeholders about project objectives and expectations

☐ Gather stakeholder expectations according to Annex II

☐ Consultation of stakeholders on policies (WP 1 Templates 1 and 2)

☐ Submit examples of delineated storylines to WP 3 lead

☐ Consultation of stakeholders on scenarios

☐ WORKSHOP: Discussion of quantitative results from WP 2

☐ WORKSHOP: Reveal and discuss stakeholder preferences, corresponding land use, and required policies in WP 4

☐ Develop policy briefs in WP 5

☐ Process monitoring

4.6 Dissemination (TALE team)

☐ WORKSHOP: final stakeholder workshop