

BiodivERsA

STAKEHOLDER ENGAGEMENT

Annexes & Templates



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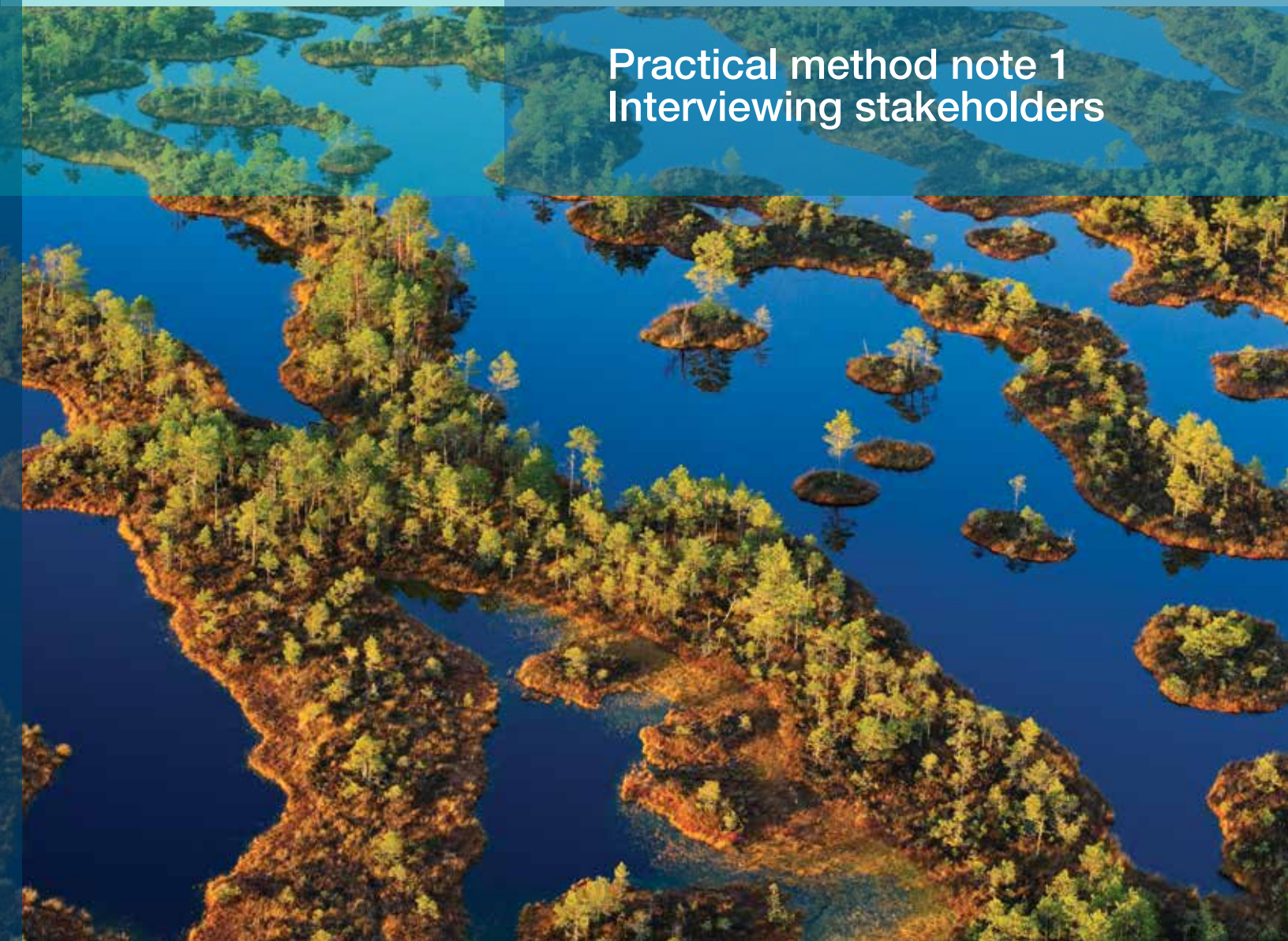


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Annex 1

Practical method note 1
Interviewing stakeholders





INTERVIEWING STAKEHOLDERS

Sensitive and effective interviewing lies at the heart of stakeholder engagement, and is widely used in biodiversity research. Broadly speaking, there are two types of interview commonly used in biodiversity research: structured interviews; and semi-structured interviews. *Structured* interviews are usually based on questionnaires, although an interviewer may be given a number of open questions to ask as well (where the answers will be in narrative form). As such, structured interviews are typically a data collection method, and their impersonal, stilted nature does not make them well suited to engaging with stakeholders in two-way dialogue. What follows focuses on semi-structured interviewing, which is harder to apply,

but if done well it has the capacity to engage stakeholders effectively in two-way dialogue.

Semi-structured interviews are a guided interviewing and listening tool in which only some of the questions and topics are pre-determined; other questions arise during the interview. The interviews appear informal and conversational, but are actually carefully controlled and structured. Using a guide or checklist, the research team poses open-ended questions and probes topics as they arise. Irrelevant questions can be dropped and new questions can be added as their importance becomes apparent

WHEN TO USE SEMI-STRUCTURED INTERVIEWS

The semi-structured approach is suited for doing scoping interviews at the preparatory or initial stages of a research project or during proposal development. They can be used to engage stakeholders in dialogue about potential research avenues and the issues and concerns most relevant to those likely to use the research. They are

also commonly used to collect qualitative interview data during the data collection phase of research, which is then transcribed and analysed using various forms of content analysis.

HOW TO DO SEMI-STRUCTURED INTERVIEWS

Becoming an effective interviewer takes practice, and comes more naturally to some personality types than others. Those who are naturally empathetic and outgoing in their personality typically find interviewing less daunting than others. However, many of the skills required can be learned easily, and honed with practice. The goal is for an interview to operate like a natural conversation. A successful interview will be highly engaging, and the person being interviewed will hardly even notice that they are being steered through the topics by the interviewer.

To use semi-structured interviews successfully, the following steps may be used:

1. The research team establish who they will interview (see [Part 3](#) on stakeholder identification in this *Handbook*).
2. The interviewer develops a checklist of the information they want to cover, to ensure nothing is missed. To develop a comprehensive and relevant checklist, it may be useful to brainstorm with colleagues, prioritise through discussion and



then check with key informants from the local community.

3. Interviewers can practice interviews with each other and/or with a few stakeholders that they already know, to become familiar with the questions, and get feedback on their two-way communication skills.
4. The context or setting of the interview is important. Take note of the surroundings – whether it is an inappropriate time (e.g. food cooking or children needing attention). Is the interviewee sitting comfortably, and level with the interviewer and not seated too far distant from the interviewer? Be careful to use body language that is open, friendly and non-threatening.
5. Before recording an interview, ask permission. For most research funders, it will be necessary to provide a consent form. Record what is said and if possible what is not said (e.g. awkward hesitation or tension). Record who said what, and check notes with a colleague afterwards if possible. Where possible, use a voice recorder, but if necessary, only take brief notes during the interview. Immediately following the interview, elaborate upon the notes. By using a recorder (whether it is a tape recorder or a colleague taking notes), the interviewer is free to maintain eye contact and guide a conversation through each of the points on the check-list in the order that is most natural.
6. Sensitive interviewing depends on sensitive listening and questioning. Give eye contact and have an open attitude to what the interviewee says. Ask open-ended, non-directive questions, and probe responses carefully until the answer is fully understood.
7. Cross-check the responses: try and distinguish between fact (can be substantiated), opinion (a personal or group view on a topic), and rumour (unsubstantiated information from an unknown source). Cross-check and verify information with other sources. This can often be done by probing within the interview, asking why their information differs from that provided by others. If appropriate (depending on the level of confidentiality assured), discuss the information with stakeholders so that they can challenge the perceptions of the research team.
8. The points on the interview check-list should be flexible. New points can be added as their importance becomes apparent. Irrelevant points can be dropped. If the person being interviewed turns out to be an expert on a particular issue, the whole interview may concentrate on that issue in order to gain a greater depth of understanding (the interviewer would then be using the person as a 'key informant').
9. The people being interviewed should be able to ask the interviewer questions as well.
10. After the interview, the interviewer should critically reflect on the experience: which questions were effective or not? How could the context, body language, questions, etc., be improved?
11. If possible, analyse the information at the end of each day of interviewing.

The following table provides some examples of good and bad practice when conducting semi-structured interviewing:

GOOD PRACTICE	BAD PRACTICE
Introduce yourself respectfully and develop rapport	Start questioning immediately without developing rapport
Find out if the person has time to participate, or if it is possible to arrange a time later on	Start questioning without finding out if the person has time
Find a place where everyone is comfortable	Remain standing or sit in a position above them (e.g. if they sit on the ground do not stay standing)
Use open, non-threatening body language and give eye-contact	Use closed (e.g. crossed legs and arms) or threatening (e.g. towering over or pointing) body language or avoid eye-contact
Use a recorder or note-taker	Take all the notes yourself – it will prevent you engaging effectively with people, and you may not be able to decipher them later
Where possible, visit the places you are talking about and continue the interview there – this is likely to provoke deeper and more relevant questioning and understanding	Miss opportunities to learn in greater depth, even if it means spending more time
Allow the conversation to develop as naturally as possible, but maintain direction so that points on check-list are covered	Structure the interview around the order of your check-list points, for example “Now I would like to ask you about...”
Identify people who are particularly knowledgeable on certain points, and gather more detailed information from them	Miss opportunities to gather more detailed information from certain people for the sake of always covering all check-list points
Use open, non-leading, unambiguous questions	Use closed, leading or ambiguous questions
Review and record notes each night while they are fresh in your memory, and check relevance of check-list	Leave notes until you cannot remember what they meant or discover you should have asked more about an important issue





CASE STUDY

EXPERIENCES FROM BIODIVERSITY RESEARCH

BENEFITS OF LISTENING

Semi-structured interviews can be used to meet a variety of aims in stakeholder engagement. In the BIOSCENE project, interviews were an essential preparatory step prior to workshops where stakeholders were involved in developing and assessing scenarios (see scenario analysis [practical method note 5](#)). Stakeholders with widely differing perspectives were deliberately sought, and during the interviews they had the opportunity to fully express their views and provide a narrative of their experiences of agricultural decline in mountain areas. Listening to each participant express their thoughts at the outset of the project reduced tensions during subsequent stakeholder workshops. The interview data also provided essential information for the construction of scenarios.

BODY LANGUAGE

The following example is from biodiversity research conducted with pastoralist communities in the Kalahari desert, Botswana. In the upper image, the interviewer (on the right) is duplicating notes despite having a note-taker with him (on the left). Neither is giving the respondent eye contact, and the respondent is looking at the page where the interviewer is writing. The interviewer's paper is acting as a partial physical barrier between him and the respondent, and the body language is closed – head down and arms in. The respondent is sitting in a position that is lower than the interviewees, so he has to look up to them and they are looking down on him. In the lower image, the interviewer (centre) is not taking notes and so does not have any kind of physical barrier between him and the respondents. The body language is open – the interviewer is giving eye contact and his hands and arms are open in a non-threatening and welcoming gesture. All of them are standing so the interviewer is on approximately the same level as the respondents.



Examples of inappropriate (left) and effective (right) body language during interviews.

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For further information on this report, contact:

Helen Baker (helen.baker@jncc.gov.uk) or Matt Smith (matt.smith@jncc.gov.uk)



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Annex 1

Practical method note 2
Organising stakeholder workshops



PRACTICAL METHOD NOTE 2



ORGANISING STAKEHOLDER WORKSHOPS

It is increasingly common for researchers to engage with stakeholders in workshops at various points in the research lifecycle/lifetime. When done well, workshops can be satisfying for stakeholders and an efficient means of engaging in dialogue with a range of different stakeholders. If done badly, workshops can waste time

and cause long-term damage to relationships. There are two key ingredients to a successful event: good preparation (considered here) and effective facilitation (considered separately in [practical method note 12](#)).

WHEN TO USE WORKSHOPS?

There are several points in the research lifecycle when stakeholder workshops might be used:

- * **Exploratory phase:** scoping ideas for future research with likely users, understanding the sorts of challenges stakeholders are facing that the research might be able to address and getting feedback on initial ideas for a future project.
- * **Initial research:** engaging with stakeholders in a workshop at the start of a new research project can be an important way to shape objectives and methods before it is too late to amend the project implementation plan and to ensure the outcomes of the research are as relevant as possible to stakeholders.
- * **Data collection and analysis:** some projects need to

collect data from stakeholders, and workshops may be an efficient means of doing this. There are also methods that can enable stakeholders to analyse the data collected during a workshop (e.g. see [practical method note 11](#) on multi-criteria method).

- * **Interpretation of results:** whether data comes from stakeholders or other sources, it may be useful to engage stakeholders in the interpretation of the findings, making links and contributions to issues or policies which might otherwise have been overlooked.
- * **Dissemination of findings:** end-of-project workshops (or conferences) are a common way of disseminating findings in an efficient way that enables interaction between the research team and stakeholders.

PLANNING WORKSHOPS

When planning an event, there are a number of practical and conceptual issues to be considered. Before planning an event, it is important to:

- * **Understand the context** in which it is necessary to work with stakeholders and likely users of research - who are the key people that should be involved (see 'stakeholder identification' in Part 3 of the Handbook), what are their interests and constraints, what might they want to get out of the workshop?

- * **Develop a process plan:** decide how many events of a particular type are needed with which groups of stakeholders, and integrate this with the research management and planning. For example, should workshops be preceded by conducting scoping interviews with key people to understand the context better, or should separate workshops be held with groups who are in conflict with one another before bringing them together?



The next step is to **develop an event (facilitation) plan**. Although this may be based around an agenda, it will need to be significantly expanded to provide more details to help manage the process, it is advisable to:

- * Provide detailed timings for each agenda item (including a breakdown for each activity within an agenda item) and assign members of the facilitation team to each activity, with someone designated as overall timekeeper.
- * Set clear aims for the event, and then tailor techniques to the aims as well as the interests and needs of participants.
- * It can be useful to start the event with ‘opening out’ techniques, followed by ‘exploring’ and then ‘deciding’ techniques to structure the dialogue.
- * It is useful to include a buffer in the timings (e.g. a long lunch break) that can be cut short, or a session that could be cut out if time is running short. This will prevent people feeling rushed, and allow sufficient time for the most important aspects of the workshop.
- * Create an equipment list for every planned activity.

Consider taking stakeholders to the field:

- * Workshop settings can make some stakeholders feel uneasy and exacerbate unequal power dynamics. Putting everyone in the field often puts those who are traditionally more powerful in a less comfortable place, and puts those not used to workshop settings at ease, making it easier to manage the power dynamics.
- * A field visit could be arranged as part of an event, for example a field excursion. Alternatively the entire workshop might be held in the field.

- * Consider how to record notes during field trips, so all important points are recorded. Wind noise and acoustics can make field recordings difficult to make out. It is advisable to take notes by hand, but be prepared for all weather (e.g. with a rain protector for paper). In particularly challenging conditions, it can be useful to have a second note-taker, so nothing is missed.

Consider practicalities:

- * Work out how many people will attend the event, so a room can be organised that is large enough to accommodate everyone.
- * With larger groups, it can be useful to split into smaller groups for certain activities to ensure everyone has a chance to discuss issues in depth:
 - * Are ‘break-out’ rooms required or will the room be large enough for small groups to work without disturbing each other?
 - * Should small groups be facilitated by someone or be self-facilitating? Dominant group members may offer to facilitate and then abuse this position by not allowing others to talk or not fully capturing their points in the notes.
- * How suitable is the venue in other respects? For example:
 - * Where conflict exists between stakeholders, the venue should be considered ‘neutral’ territory.
 - * Is the venue fully accessible to everyone (e.g. transport links, physical impairments)
- * Will the event be held at an appropriate time of day and week for the target audience?

ENGAGEMENT TECHNIQUES

There are a range of techniques available to facilitate two-way engagement between researchers and stakeholders; these are covered in greater depth in Part 5 of this Handbook. Broadly, these can be categorised as those suitable for:

Opening up dialogue and gathering information with stakeholders about issues linked to the research, for example:

- * Brainstorming (getting participants to think rapidly and express ideas in short phrases to come up with new and creative ideas).
- * Metaplan (participants are given note paper, asked to write down one idea and place it on the wall, ideas that are similar are grouped together to form idea clusters).
- * Listing techniques, such as carousel, where questions are arranged in different areas around the room and groups move round the different areas at timed intervals, this continues until they arrive back at their starting point. At the end of the exercise they can read what other groups have added to their initial ideas.

Exploring issues in greater depth with stakeholders, getting feedback on preliminary findings, for example:

- * Mind-mapping¹ techniques (also known as concept mapping, spray diagrams, and spider diagrams) can be a useful way to quickly capture and link ideas with stakeholders.
- * SWOT analysis encourages people to think systematically about the strengths, weaknesses, opportunities and threats as they relate to the issues being researched.
- * For issues that have a strong link to events for which timings cannot change or are beyond the control of the research team, or for project planning with stakeholders, timelines can be used to help structure discussion in relation to historical, planned, or anticipated events.

Closing down options and deciding on actions based on research findings, for example:

- * Ranking can be used to place ideas in rank order. Getting consensus amongst participants for a particular ranking can be challenging, but the discussions it stimulates may be revealing.
- * Prioritisation differs from ranking by enabling participants to express the strength of their feeling towards a particular option rather than simply ranking an idea as better or worse than another idea (e.g. by assigning markers such as sticky paper 'dots' or stones [if working outside] to different ideas or options).
- * Multi-Criteria Decision Analysis (see [practical method note 11](#)).

CASE STUDIES

EXPERIENCES FROM BIODIVERSITY RESEARCH

ENSURING WORKSHOP ACTIVITIES ARE STIMULATING

It is important to ensure that as well as meeting the needs of the researchers, workshop activities are designed in such a way as to keep stakeholders stimulated and engaged with the research. The FORCE project (see [Appendix 1](#) of the *Handbook*) held workshops with Caribbean communities to understand the relationships between coral reefs and livelihoods. Feeding back research results was an important component of the workshops, but researchers ensured that presentations were kept short (about 15 minutes) and were interspersed with a range of other activities which involved mixing up stakeholder groups to encourage interaction between individuals with different interests, and exercises which involved physically moving around the room to maintain focus and engagement.

VALUE OF FIELD EXCURSIONS AND DEMONSTRATIONS

The FIREMAN project held a successful series of field discussions and demonstrations alongside talks and indoor workshops. The project involved stakeholders to inform research on the effects of fire regimes on biodiversity under a changing climate in different European ecosystems. Stakeholders attended talks which were held in a lecture theatre format. Researchers felt that many of the stakeholders were inhibited about getting involved in the discussions as lecture theatres and classrooms are viewed as the territory of University scientists. As part of the stakeholder events, stakeholders were taken to demonstration plots in the field to observe recent prescribed burns and areas of past and planned future burns. Many of the stakeholders involved spend much of their time carrying out practical field management and in this environment were stimulated to become fully involved in discussions about the relationship between fire and biodiversity, presenting researchers with challenging questions. Researchers suggested that the inclusion of the field visits was an attractive element that motivated stakeholder attendance. Two stakeholders involved in the project echoed the value of discussing management issues away from 'sterile' workshop rooms. One who had been involved in several other research projects reported an experience where a significant conflict, that had arisen and threatened the future of a partnership between stakeholders on a moorland research project, had been largely diffused by a carefully organised field-based meeting between the parties concerned.



Stakeholder field demonstration in Sweden as part of the FIREMAN project.

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For further information on this report, contact:

Helen Baker (helen.baker@jncc.gov.uk) or Matt Smith (matt.smith@jncc.gov.uk)

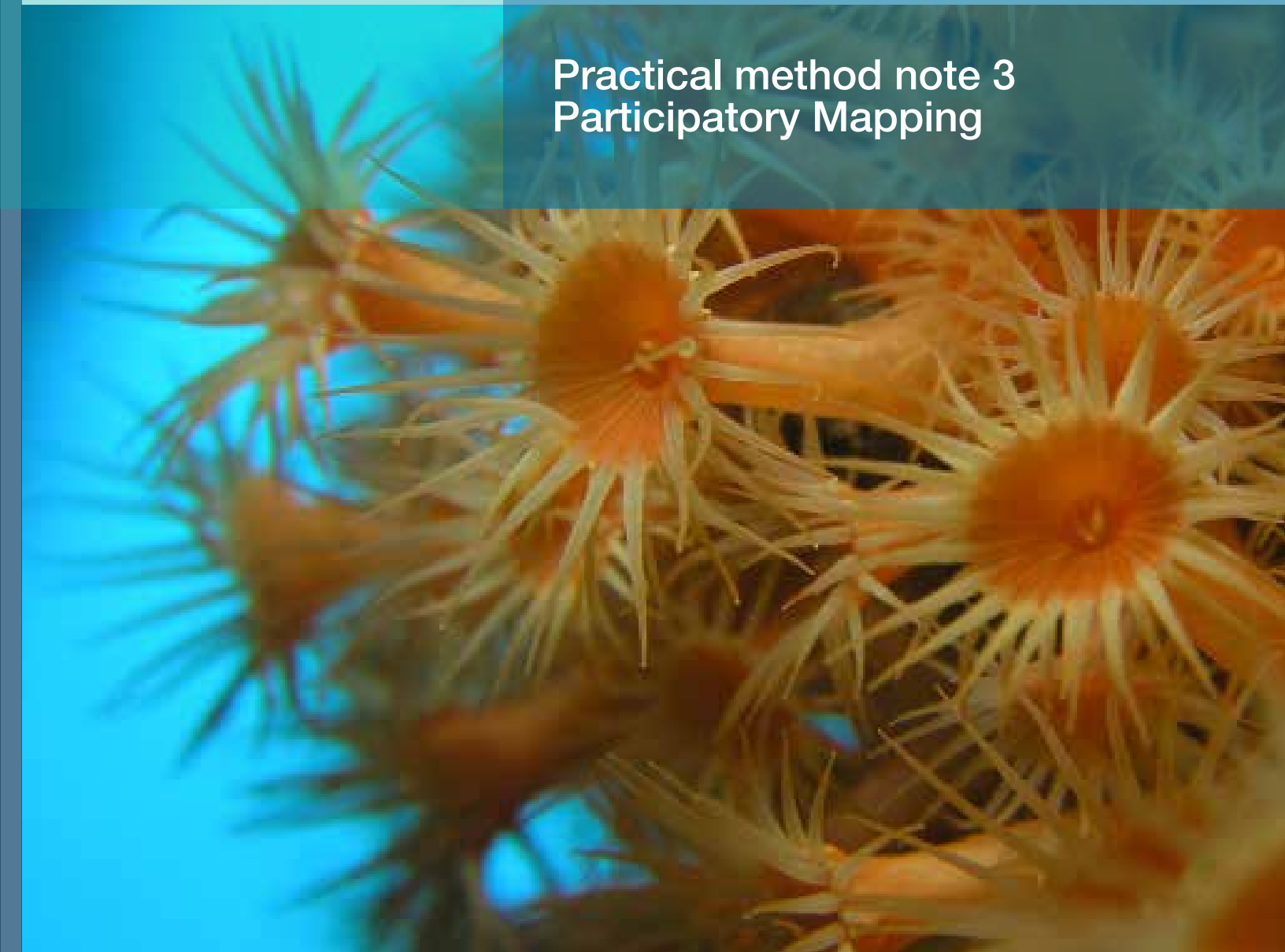


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Annex 1

Practical method note 3
Participatory Mapping



PRACTICAL METHOD NOTE 3



PARTICIPATORY MAPPING

Creating a participatory map is a technique that can be used to explore how different groups of stakeholders perceive connections between people and places across landscapes and over time. It empowers stakeholders to express the issues and places that are most important to

them as a group, and through discussion can lead to new insights into the way those issues and places interact, and the ways that different groups perceive the same issues and places.

WHEN TO USE PARTICIPATORY MAPPING?

Participatory mapping can be a useful ice-breaker for research teams who want to begin work with a new group of stakeholders, and can produce a tangible output from an initial workshop. It may be used during project planning to help identify locations for sampling, or to stratify a

sampling strategy. It may be used as a qualitative data collection method. Maps may also be revisited towards the end of a research project to discuss project findings and possible actions that might arise from the research.

HOW TO USE PARTICIPATORY MAPPING

The following steps may be followed:

1. Depending on the number of participants and the goals of the exercise, the group can be divided to produce a number of separate maps.
2. Groups can be divided depending on demographic categories such as age, gender, or length of time living or working in the focus area. In this way maps may be different depending on the daily experiences of the group living or working in the focus area.
3. Maps may be drawn on paper or on the ground (typically in developing countries). When using paper, it is important not to allow the size of the paper to constrain the map, adding adjoining pieces as necessary to enable more distant features to be included if these are deemed important.
4. Participatory maps may be drawn on an existing base-map of the area, which might show key features like roads, settlements and rivers. In some contexts, aerial photographs may be used for this purpose (typically in developing countries).
5. A preliminary map is drawn by each group. Commonplace objects (e.g. pens or stones) can be used to represent features on the map. If participants find it hard to draw everything in the area, it may be possible to ask different groups to focus on features to be mapped.
6. Good facilitation is necessary to ensure all group members are able to participate in the production of the map, so that all views are represented.
7. The map is then copied onto paper and/or photographed.
8. The paper copy of the map is then taken on a walk or drive of the area. Particular attention may be paid to the extent and boundaries of key resources or land uses, and to features that were disputed during the initial map drawing. During the reconnaissance, it will be possible to ask many questions about resources and land use that were not apparent during the initial drawing phase.
9. A Global Positioning System may be used to mark features and boundaries to improve the accuracy of the final map.
10. At the end of the exercise allow participants to view all maps and take note of the discussion that follows.
11. Throughout the exercise, it is as important to capture the discussion that leads to the creation of the map as it is to record the map itself.

CASE STUDIES

EXPERIENCES FROM BIODIVERSITY RESEARCH

PARTICIPATORY MAPPING IN BIODIVERSITY RESEARCH



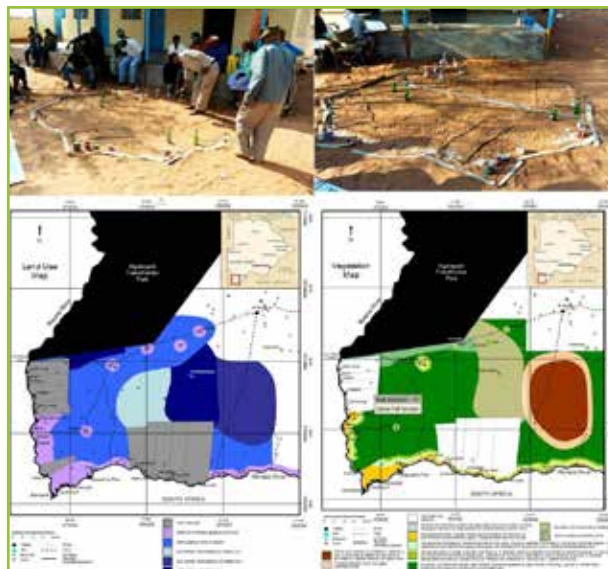
Stakeholders share knowledge on the HighARCS project.

Participatory mapping can capture information at a range of scales. The HighARCS project (see [Appendix 1](#) of the *Handbook*) used participatory mapping in Asian highland communities to look at the threats to aquatic resources at a river-catchment scale. This allowed participants to highlight both local threats, but also those located further away outside of the catchment. For example, in an Indian community, mining outside of the focus area was identified as a cause of excessive siltation in the river system. Although the results were not verified by biophysical measures in this case, it was a useful way of gathering local knowledge.

Maps are a good basis for sharing information. A stakeholder from another project (additional to the HighARCS case study projects), where participatory mapping of ecosystem services and biodiversity was used, explained that maps can be a good starting point for discussion. People are often accustomed to looking at maps, and discussing specific places can lead on to deliberation about complex issues. Additionally, mapping can be a very inclusive process where a broad range of knowledge and multiple perspectives can be captured and visualised.

The photographs and maps displayed here show the participatory mapping process for biodiversity research conducted in the Kalahari Desert, Botswana. In the top left photograph, members of the local community position familiar objects on the ground to denote different land uses and vegetation zones. The result is shown in the top-right photograph, with tin cans representing villages, ash representing calcrete outcrops, a dry river-bed in pieces of card, bottles for boreholes, and various patterns in the sand denoting different land uses and vegetation zones. The map is being transcribed to paper in the background of the top-left photograph, after which the transcription was taken along with community members in vehicles across the landscape for further discussion and refinement. It resulted in the maps below of land use (bottom left) and vegetation (bottom right).

For more information on methods used by the HighARCS project see : http://www.higharcs.org/topic/integrated_approach/



There are a number of excellent resources available that give more detailed explanations of how to do participatory mapping, for example the International Fund for Agricultural Development good practice guide

(http://www.ifad.org/pub/map/PM_web.pdf) and Tools for Integrated Conservation and Development from the Centre for International Forestry Research (<http://www.cifor.org/conservation/ref/research/research.3.2.htm>).

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For further information on this report, contact:

Helen Baker (helen.baker@jncc.gov.uk) or Matt Smith (matt.smith@jncc.gov.uk)



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Annex 1

Practical method note 4
How to write a policy brief



PRACTICAL METHOD NOTE 4

HOW TO WRITE A POLICY BRIEF

A policy brief can take many forms, and there is no single 'correct' way to create one. There are some simple guidelines that can help increase the impact of the brief and adapt it to the needs of your audience.

There is often an assumption that all that is needed to have an impact on policy is a good policy brief. However, it is what is done with the good policy brief that matters, as well as how good it is. An effective policy brief may never reach the policy-maker who can make a difference. Very often, policy makers feel more comfortable listening to advice from researchers they have an existing relationship with and know that they can trust. Investing time in developing relationships with people in the policy community most closely aligned with the research is of crucial importance. The policy brief can then become a visual aid for meetings or seminars attended by those interested in the research. Passing on the policy brief after a face-face discussion gives greater credibility to the project and enables decision makers to interrogate the evidence base behind the work if necessary.

Here are a few tips for writing an effective policy brief:

- * **Identify the audience:** there are many types of policy audience that can be targeted. To target policy audiences, the policy brief must be understood easily and quickly by non-specialists. Typical audiences for policy briefs may include:
 - * Members of specific Government agencies, who are likely to have a relatively focussed interest in the topic, with a relatively high degree of technical competence.
 - * Policy analysts within Government departments who advise Ministers. These people should be targeted in a focused manner and briefs should include some technical detail.
- * Politicians and Government Ministers are often generalists who are unlikely to have a high degree of technical competence in the area of research, and will be interested in links to wider issues of political significance.
- * **Set a target length:**
 - * Policy briefs for specialist policy audiences should ideally be between 6-12 pages long, or 2000-3000 words, but it is best for briefs to be concise.
 - * Policy briefs for more generalist policy audiences need to be much shorter – typically 1-2 pages maximum. They may however link to a longer version or online resources.
- * **Identify key messages:** rather than just taking the key points from the conclusion of a published paper, it is necessary to think about what the key messages of the research are *from the perspective of policy makers*. To do this, familiarity with on-going policy debates and upcoming policy processes and decisions is required, as well as existing policy frameworks. Most Government departments have email lists to alert people about forthcoming consultation exercises, utilising this communication avenue can be a useful way to find out about new policy developments in advance. Alternatively, try to establish relationships with relevant policy advisors, where possible arranging face-to-face meetings about the research. Rather than simply telling your audience about the research, it is useful to take time to find out what they're working on, and how they think the research might be able to make a contribution. If efforts are made to do this at the start



of a project and to work with members of the policy community to adapt research to their needs, then it should be possible to identify key messages that are likely to be of interest to the policy community.

- * **Be specific and practical:** try to formulate specific recommendations or actions that could arise from the research findings, and avoid vague, theoretical or methodological conclusions. Avoid dictatorial language such as telling a policy maker they ‘must’ or ‘need’ to change policy as they will view the brief as a lobbying document; impartiality can be important to gain credibility. In making recommendations or actions, be sure to clarify the benefits of these in a way that will be relevant to the chosen policy-maker audience.
- * **Think beyond the facts:** don’t just present statistics and facts – think about what they mean for policy makers, put them in context and interpret them for readers.
- * **Headline key information:** make it easy to see what the key messages and recommendations are at a quick glance. For example, consider headlining the most important key message on the front page and provide an information ‘box’ with recommendations on the back page.
- * **Don’t overstretch the findings:** there can be a temptation to try to make concrete recommendations for the purpose of a policy brief that link only tenuously to the research findings. If the findings are not of relevance to the policy community, it is better to leave the policy brief until there is something more substantive to say.
- * **Be precise:** avoid terms such as ‘large’ and ‘mostly’ without qualification (e.g. offer easy to understand

statistical evidence and cite sources of information). Present findings as precisely as possible so that decision-makers have access to key evidence that they can use to build upon. Discuss interpretation of results in terms of ‘certainty’ to help policy makers understand what is known and what is not known about the subject, but try to avoid statistics jargon.

- * **Get help with the language:** try to avoid technical jargon wherever possible, even when writing for more specialist members of the policy community. Where jargon is unavoidable, make sure terms are defined using simple language. Of course, distinguishing what is, and what is not, jargon can be difficult for researchers. So it is important to get someone who is not familiar with the field to proof-read the document. If affordable, employing a science writer can be an effective way of getting messages across, with relatively little effort. Alternatively the ‘Up Goer Six’ text editor (www.splasho.com/upgoer6/) colour codes words according to how commonly they are used, to help identify jargon and simplify wording. If writing in a second language, for example for EU policy-makers, then try to have the brief edited by somebody who speaks the language or languages that are required.
- * **Don’t put in too much:** ‘less is more’ in policy briefs so as not to overwhelm the readership with peripheral details – edit the text down, and then edit it down again, cutting it back to only the most important points. Make sure there is plenty of white space and photos. People are far more likely to read something that looks attractive and easy to digest than something that is presented in very small font sizes, is cramped, and not illustrated. Use sub-headings to break up any blocks of text so people can easily skim through the key points if they are in a hurry. If using graphics, make sure they are simple, labelled clearly with simple explanations and have short, meaningful titles; simply

pasting a graph from a journal publication into a policy briefing will probably not work.

✳ **Get feedback:** from colleagues and if possible from contacts in the policy community, especially advisers who have plenty of experience of writing briefs for the national policy-makers who they work with. Developing policy briefs in collaboration with the people who are likely to read them can be a particularly effective way of tailoring language and messages to their needs.

✳ **Get the timing right:** find out if there are key policy processes, decisions, events or debates coming up that the policy brief could be linked to, or launched at. Listen to the news and be responsive to opportunities to adapt findings to the latest breaking news story in the research field (as long as the link is clear).

✳ **Provide links:** make sure those who read the policy brief can get in touch with the researchers, and can easily get access to the evidence that underpins the arguments in the policy brief, such as via a 'further reading' section at the end of the brief with links to a project website.

BiodivERsA produces policy briefs that are designed with EU and national policy makers in mind – they are available to download from the BiodivERsA website¹ and provide a useful template.

1 <http://www.biodiversa.org/501>

CASE STUDY

EXPERIENCES FROM BIODIVERSITY RESEARCH

THE BENEFITS OF CO-WRITING A POLICY BRIEF WITH STAKEHOLDERS

Policy briefs have been regularly used within the INVALUABLE project (see [Appendix 1](#) of the *Handbook*) to disseminate research findings discussing and proposing new market-based instruments for biodiversity conservation. In advance of the conference of the parties for the Convention on Biological Diversity (CBD) in 2012, the researchers wrote a policy brief in partnership with a government agency responsible for the strategy on biodiversity in France. This had the advantage of increasing the visibility of INVALUABLE at the conference; however researchers felt that much earlier collaboration would have resulted in a more synthesised and insightful policy brief and suggested beginning the writing process six months prior to such an event is necessary.

*Policy brief written
in collaboration
with INVALUABLE
project
stakeholders*

<http://www.iddri.org/Publications/>



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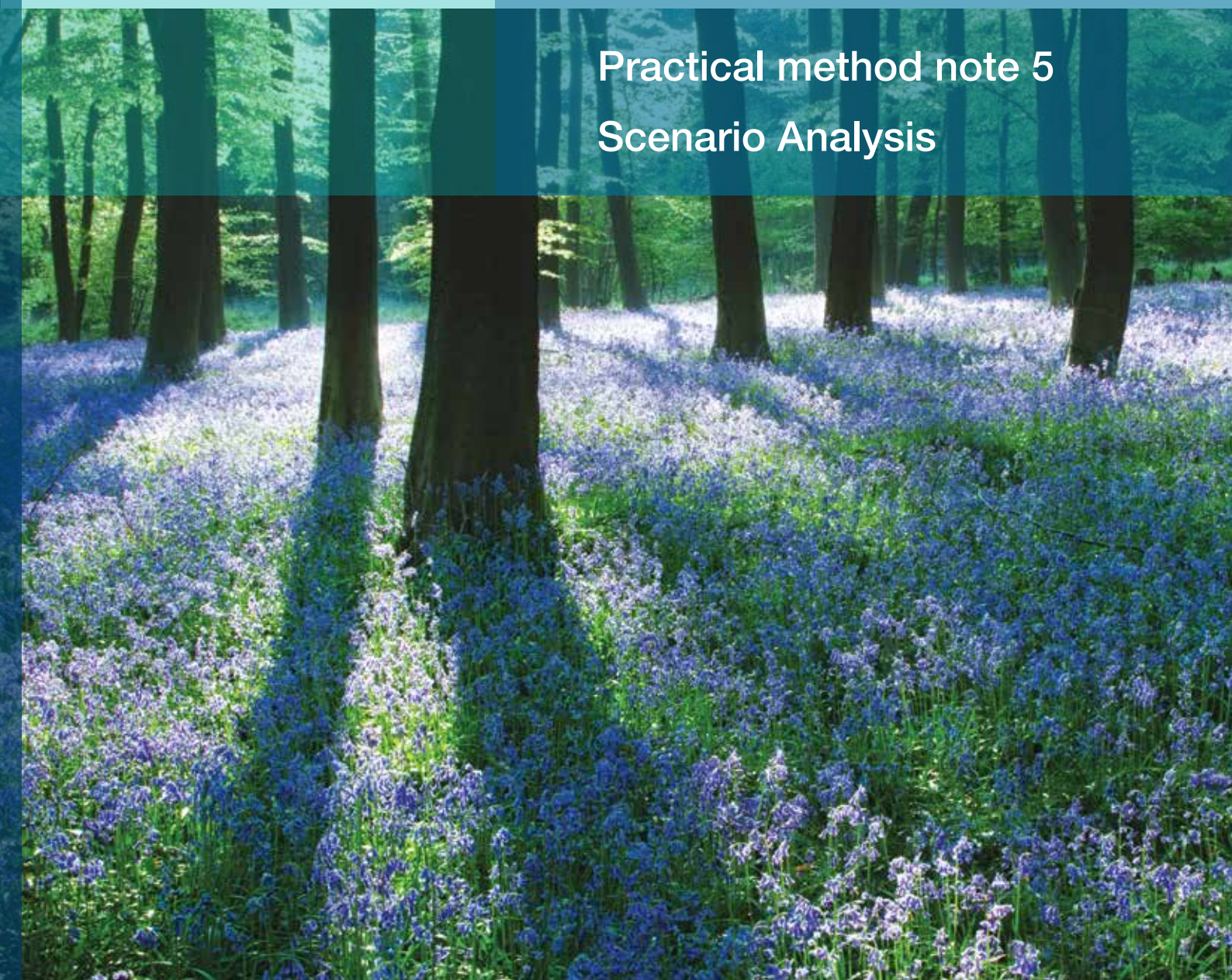
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For further information on this report, contact:

Helen Baker (helen.baker@jncc.gov.uk) or Matt Smith (matt.smith@jncc.gov.uk)

Annex 1

Practical method note 5 Scenario Analysis



PRACTICAL METHOD NOTE 5



SCENARIO ANALYSIS

WHAT IS SCENARIO ANALYSIS?

Scenario analysis enables management choices, strategic planning and decision-making to be better-structured for stakeholders. The process of mapping out different scenarios and what may be required to implement them can help stakeholders consider the implications of a range of options when the future is

uncertain. The UK NEA¹ states that “scenarios are neither predictions nor projections and sometimes may be based on a ‘narrative storyline’. Scenarios may include projections but are often based on additional information from other sources.”

WHY ENGAGE STAKEHOLDERS IN THE DEVELOPMENT OF SCENARIOS?

By engaging stakeholders in the process of developing scenarios, it is possible to voice conflicting opinions and different worldviews, and to create scenarios that have greater relevance to stakeholders. For example, Tress and Tress² found that a participatory approach to scenario development built trust and increased acceptance of planning decisions, whilst enabling planners to produce better plans through integrating local knowledge. Reed et al.³ suggested that there are three key benefits of engaging stakeholders in scenario development:

- * Co-developing scenarios with stakeholders makes the scenarios more relevant to stakeholder needs and priorities, and hence more useful in decision-making.
- * It is possible to significantly extend the range of scenarios (or options within scenarios) you can develop.
- * It becomes possible to move beyond scenario development to actually facilitate action to reach or avoid future states.

APPROACHES TO SCENARIO ANALYSIS

Two general approaches to scenario analysis exist; forecasting and backcasting:

1. Forecasting – Creating projections about what may occur in the future and the alternative paths to getting there. Here, scenario analysis is employed to choose the path or future point that is desired, and groups work to identify how to create that desirable future situation. Patterns and trends from the past are identified to help make projections about likely change in the future; such patterns and trends may be identified through research and statistical analysis or via formal and informal observation.

2. Backcasting – Project groups determine a desired future situation, and the group works backwards from this point to identify steps needed to reach the desired future position. Backcasting has been found to be particularly useful where problems are complex and a significant change in direction is required. The group must reach consensus on a desired future end point and ‘work backwards’ defining what goals, objectives or activities are considered instrumental to achieving this desired end point.



HOW TO CONDUCT SCENARIO ANALYSIS WITH STAKEHOLDERS

The following steps may be used to create scenarios with stakeholders:

1. Define the context in which you wish to develop scenarios (biophysical, socio-economic and political) and establish whether there is a basis for stakeholder engagement in scenario development. It should not be assumed that participation is always necessary or advisable, for example where stakeholders do not have decision-making power to take action and respond to scenarios. In some contexts you may need to build capacity amongst stakeholders to engage effectively in more technical scenario development exercises.

2. Systematically identify stakeholders to ensure that all **relevant stakeholders are represented appropriately** in the process (see [Part 3](#) of this *Handbook* on how to identify stakeholders).

3. Define clear objectives for scenario development with stakeholders including spatial and temporal boundaries. By doing this, stakeholders have ownership of the process, the outcomes are relevant to them, and they are more likely to act on the outcomes of the work.

4. Select relevant participatory methods for scenario development:

I. During initial **construction of scenarios**, consider using data from interviews, qualitative conceptual modelling or fuzzy cognitive mapping (see [practical method note 3](#) on developing models with stakeholders in Annex I of the *Handbook* for more ideas), or the Delphi method (see [practical method note 8](#) on the Delphi method in Annex I of the *Handbook* for further guidance). For simple

scenarios, key driving forces may be placed on two axes to create a 2x2 matrix containing four scenarios. More complex processes may involve stakeholders identifying drivers of change, system components, potential outcomes, and estimating or quantifying relationships between each of these.

II. To evaluate and **select scenarios** for further investigation, consider using visualization techniques, participatory GIS or multi-criteria evaluation (see [practical method note 11](#) on MCDA and participatory GIS in [Annex I](#) of the *Handbook* for more ideas). The optimum number of scenarios is between two and five. The scenarios should be plausible, but there may also be a desire to prepare for surprise, or extreme, scenarios. Scenarios are often re-drafted multiple times and can be represented by both quantitative and qualitative data, visually or textually.

III. To **support decision-making** based on scenarios, consider backcasting from desired scenarios; identifying steps that could be taken to reach particular future states. Alternatively, scenarios may be used as management options in a multi-criteria decision analysis (see [practical method note 11](#) on MCDA in [Annex I](#) of the *Handbook*).

BENEFITS AND DRAWBACKS OF SCENARIO ANALYSIS

Scenario analysis helps to explore a range of possible and plausible futures. The process of defining scenarios provides opportunities for individuals to consider different futures instead of accepting the inevitable. It can help those involved appreciate that uncertainty is normal and to sensitise them to probabilities of risk. As such, participatory scenario analysis may also help communities become more resilient to future changes. Through scenario analysis, it is possible to visualise how multiple variables interact. This can facilitate

more critical thinking and stimulate creative ideas and solutions. However, there is a risk that scenarios can oversimplify an issue, as detail must be balanced with available time and resources. Mixing qualitative and quantitative information may help to overcome this. Finally, scenario analysis is often used in situations where there are sensitivities and conflicts, due to the competing agendas and perspectives of participants. Therefore, the process must be well designed and (often professionally) facilitated to ensure it is constructive.



CASE STUDY

EXPERIENCES FROM BIODIVERSITY RESEARCH

EXPERIENCES OF SCENARIO ANALYSIS IN BIODIVERSITY RESEARCH

Use in informing model development: The FIREMAN project (see the *Handbook* for details of BiodivERsA projects) engaged with stakeholders involved in fire management to develop scenarios for future fire management under a changing climate. Stakeholders were asked what likely management options they would undertake. For example, moorland managers in the Peak District in England were asked how their approach to prescribed burning would vary under a range of future climatic conditions. This provided researchers with valuable information that was used in complex climate–fire–vegetation models to predict impacts on biodiversity and vegetation composition under the scenarios developed with stakeholders. The results were therefore of interest and relevance to the stakeholders. Researchers noted that stakeholders found it quite difficult to think about management on long timescales (50 years in this case), so good facilitation skills were required. More information on the model development in FIREMAN can be found in [practical method note 6](#) on co-development of research outputs with stakeholders.

The timing of the method can enhance the impact of the results: The HUNT project used scenario analysis to consider the future of game management and hunting in Europe and Africa. Essential to the success of this project, was ensuring that the scenario process was carried out during ‘a window of opportunity’. For example, in an Ethiopian case study, there was a high level of uptake by influential stakeholders, because the scenarios were focused on the revision of legislation for the sharing of hunting revenues and therefore of direct relevance to current policy development.

Ensure clarity over language, objectives and use of results: Stakeholders can be mistrustful of scenario analysis. In the HUNT project, stakeholders were sometimes reluctant to explore scenarios as they felt this signified that they accepted that these visions of the future could not be changed. This is problematic as one of the benefits of the method is allowing stakeholders to have the freedom to consider different visions in a creative way. One stakeholder thought this misconception arose from

the differences in language between researchers, practitioners and policy makers. It is advisable to clearly outline the aims of the objectives and how the results will be used. A stakeholder reported that their organisation declined to take part in scenario analysis on another project due to a fear they would subsequently be put under pressure to alter their management practices as a result. The BIOSCENE project was focused on the development of scenarios for reconciling biodiversity conservation with declining agricultural use in the mountains of Europe. The rationale behind the use of scenarios was explained to stakeholders in detail during semi-structured interviews before they participated in scenario workshops. It was also explained that the results would only be communicated to decision makers with the consent of the stakeholders. The researchers based initial scenarios on the data from interviews and excluded scenarios that the stakeholders were reluctant to explore.

Consider how scenario analysis will add value to the research: Before using a complex method such as scenario analysis, consider whether it is the right tool for achieving the project aims. Scenario analysis was used to explore the future of deer management in Scotland as part of the HUNT project. This approach was considered by some stakeholders to be an overly academic and complicated approach to an already highly complex issue. While the opportunity for open discussion was viewed positively, some of the stakeholders were sceptical about the value of the process for determining good practice for deer management.

A neutral party may help take the process forward: The scenarios developed in the BIOSCENE project were subject to a sustainability assessment from researchers external to each case study, and often from other countries; these individuals were generally viewed by stakeholders as neutral and objective. These assessments provided a useful basis for further discussion and refinement of the scenarios. Although stakeholders were reluctant to explore more extreme scenarios and did not consent to the communication of results to policy makers in some cases, the project demonstrated the potential for integrated ecological and socio-economic information about sustainable development (for further details see Tzanopoulos et al.⁴).

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For further information on this report, contact:

Helen Baker (helen.baker@jncc.gov.uk) or Matt Smith (matt.smith@jncc.gov.uk)

Annex 1

Practical method note 6

Co-development of research
outputs with stakeholders



CO-DEVELOPMENT OF RESEARCH OUTPUTS WITH STAKEHOLDERS

Researchers may choose to engage with stakeholders at a number of levels, including: **informing** them of project findings; **consulting** with them and seeking their views on the research process; **involving** stakeholders in the research in various ways (e.g. to provide data); or **collaborating** with stakeholders fully as members of the research team to co-develop research outputs (Table 1.1 of the *Handbook*).

There are a number of examples of collaborative research on biodiversity in which researchers and stakeholders have worked closely to develop outputs

together. For example, this *Handbook* provides detailed guides to participating in scenario development, ranking stakeholders with regards to the level of required engagement and participation and multi-criteria analysis, and workshop design and facilitation, all of which may be used to co-develop research outputs. A number of other examples are given here, to illustrate how researchers can collaborate more fully with stakeholders in your research.

BUILDING MODELS WITH STAKEHOLDERS

There are a number of ways that biodiversity researchers may engage stakeholders in the development of models as part of their research. Broadly, they can be grouped as qualitative, semi-quantitative and quantitative approaches:

✳ **Qualitative approaches** to developing models with stakeholders focus on the development of conceptual models that describe stakeholder perceptions of the systems or issues being studied. The process may be based on qualitative analysis of interview transcripts (see [practical method note 1](#)) participatory mapping (see [practical method note 3](#) or the development of schematic diagrams (e.g. spider diagrams or mindmaps), and either developed as a group or developed individually at first, and then common elements brought together. Insights from conceptual modelling can then be used to inform the development of numerical, process-based computational models, for example helping to identify key components or relationships that need to be captured in the model.

✳ **Semi-quantitative approaches** include Dynamic Systems Models and Fuzzy Cognitive Mapping (also sometimes referred to as ‘mediated modelling’). This process starts by creating conceptual models with stakeholders and then attempts to quantify as many relationships as possible within the model. These may range from robustly quantified relationships, described by regression equations, to estimated line-and-curve relationships based on stakeholder knowledge; or relationships may be characterised simply as positive or negative. Where little is known, relationships may be left un-quantified, and researchers and stakeholders can then adjust different model parameters to identify particularly important relationships or tipping points, which can direct and focus future research to further quantify the model.

✳ **Quantitative approaches** include Agent-Based Models and Bayesian Belief Networks. To create an Agent-Based Model, stakeholders work with researchers to define decision-rules. Decision-rules map observations to appropriate actions and can be used by individual people (or agents) involved in the modelling process to inform how they interact with one another and the natural environment. Alternatively, these decision-rules may be derived statistically from



interviews with stakeholders. Agents are then directed to behave according to these decision-rules, making it is possible to observe how agents interact with each other and the information about the natural environment; for example altering land use or land management practices that have consequent impacts on biodiversity. Bayesian Belief Networks are probabilistic models that can be used with stakeholders to explore uncertainty in natural systems if certain variables are known (e.g. characteristics of land management regimes) and other

variables are not known (e.g. land use change). These models can use quantitative data (e.g. area of land holdings) or qualitative data (e.g. from interviews with land managers).

CASE STUDY

EXPERIENCES FROM BIODIVERSITY RESEARCH

CO-DEVELOPING MODELS

Including management actions in models: Examples of building models with stakeholders in biodiversity research include the scenario-based climate-fire-vegetation models developed with stakeholders involved in fire management in the FIREMAN project (see [Appendix 1](#) of the *Handbook* for details). The researchers obtained valuable information from stakeholders about how they would undertake fire management under various future climatic conditions (e.g. how prescribed burns would be conducted on moorland in the Peak District in England). The modelling provided prediction for questions of genuine interest for moorland managers concerning the effects of burn intervals and intensities on vegetation composition, structure and biodiversity. The process had the advantage of allowing stakeholders to think about management on much longer timescales than normally considered and to establish a much more-detailed understanding of the potential effects of climate change on the environment and management.

Similar benefits were experienced on the MOTIVE project, where stakeholders working in European forestry management were involved in the development of models for adaptive forest management under climate change. As well as engaging with ideas about climate change, which was not part of their usual agenda, the stakeholders were involved with developing models directly relevant to their local context that provided valuable output for informing management.

Be clear about how models will be used: It is important that stakeholders understand how the models they help develop will be used both during and after the project. One of the aims of the MOTIVE project was the development of tools for adaptive forest management. There was an assumption by some partners in the project that the models produced with stakeholders would be interactive and transferable between users so that stakeholders would be able to use them to inform their management following the project. In reality, the models developed were highly complex and while results of model runs were communicated to stakeholders and were a useful source of information, in most cases the models are not tools that can be easily used by stakeholders that do not have expertise in modelling.

CO-DEVELOPING DECISION-SUPPORT TOOLS

Decision-support tools may be used with stakeholders as part of the research process, for example economic tools such as Cost–Benefit Analysis and choice experiments, quasi-economic tools such as Multi-Criteria Analysis (see [practical method note 11](#)), and spatial tools such as participatory mapping, GIS (see [practical method note 3](#)) and 3D scenario visualisations. They may also be an output of the research process that supports stakeholders to make decisions based on research-based evidence beyond the life of the project.

For example the Integrated Valuation of Environmental Services and Tradeoffs (InVEST) software is a GIS-based decision-support tool that uses land use/cover patterns to estimate levels and economic values of multiple ecosystem services, biodiversity conservation, and the market value of the commodities provided by the landscape. The InVEST approach starts by engaging with stakeholder to identify scenarios before running a range of biophysical and economic models to estimate benefits and trade-offs that can inform decision-making.

Decision support tools influencing policy: ‘Choice experiments’ are a survey-based valuation method where participants choose between different scenarios by stating preferences for different attributes. The results can be used to support decisions about natural resource management. Researchers in the CONNECT project worked in partnership with a government agency to co-develop appropriate attributes for a choice experiment that was carried out with the general public in the Netherlands to understand how they valued changes in and around a fresh-water lake. The government agency approached the researchers and asked specific questions which aimed to inform decisions about land use in the area. This process required research expertise to develop a suitable method to collect the data. The advantage of this approach is that the results could directly feed into policy about land use in the area. An example of a ‘choice card’ used to elicit values of the public for the lake area is showed below.

	OPTION 1 No increase in dike height	OPTION 2 Increase in dike height	OPTION 3 Increase in dike height
Flood probability	Once every 1,000 years (3% in 30 years)	Once every 1,000 years (3% in 30 years)	Once every 10,000 years (0.3% in 30 years)
Type of shore	No shores 	Shores next to dike 	Shores off the coast 
Bird population	Decrease of 30% 	No change 	Decrease of 10% 
Annual local tax	No change	60 Euro per year MORE	100 Euro per year MORE
You prefer:	☐	☐	☐

A choice card used for a survey of the public in the CONNECT project.

CASE STUDY

EXPERIENCES FROM BIODIVERSITY RESEARCH

COMPLEX METHODS ARE NOT ALWAYS ACCEPTED

The HUNT project also used a choice experiment to explore the preferences of shooters towards game management in Scotland and attempted to involve stakeholders in its design. This is a contentious issue involving people with strong opposing views. Despite extensive consultation, the stakeholders remained mistrustful of the method, suspecting a hidden agenda, tensions arose and some stakeholders refused to participate. Very early consultation is required where more complex methods, such as choice experiments, are used to ensure that stakeholders properly understand their purpose.

Ensuring the usability and legacy of a decision support tool: Work Package 1 of the BESAFE project (at the time of writing) is in the early stages of designing a web-based tool in collaboration with stakeholders which will be used to inform policy makers and stakeholders involved in decision making about biodiversity, on the effectiveness of different types of arguments used for biodiversity protection over a variety of governance levels and socio-economic settings. By collaborating with a stakeholder panel, researchers aim to create a web-based tool that: provides material of interest on both a general level and for specific contexts; is accessible for people working at different governance levels; and exists in a format that can be used and taken over by stakeholders after the end of the research project. To meet these requirements, researchers deemed it essential to involve stakeholders in the development of the tool.

CO-DEVELOPING MANAGEMENT PLANS

There are also examples of biodiversity research where researchers and stakeholders work together to develop management plans for specific locations, based on evidence from research and local needs and priorities.

Agreeing on an adaptive protocol: Researchers and stakeholders in the Ecocycles project worked together in a consultative forum to develop adaptive protocols for improving the management of rodent outbreaks in agricultural land in Northern Spain. Farmers use poisons to control outbreaks and prevent crop damage, but it causes unintentional deaths in birds and other mammals, and had caused conflict with conservationists and hunters. A series of sensitively facilitated meetings turned adverse arguments into a more rational approach to controlling outbreaks. Stakeholders agreed upon an aim of producing a specific project output that would help them tackle outbreaks in the future. The resulting protocol was not written to provide definite solutions, but to guide recommended management actions under a range of circumstances given the existing scientific knowledge and uncertainties.

A note of caution about management plans: A stakeholder with extensive experience of biodiversity research warned that proposing a detailed management plan during the course of a research project was not advisable. Stakeholders may feel such plans will put pressure on them to make unwelcome changes to their management and refuse to engage. It can also be unrealistic to produce a management plan with sufficient detail over the short time-scale of a research project. Management change is a gradual process that requires evidence from many sources. The stakeholder expressed a preference for being involved in the co-production of policy briefs that can have a more realistic impact (see [practical method note 4](#)).

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For further information on this report, contact:

Helen Baker (helen.baker@jncc.gov.uk) or Matt Smith (matt.smith@jncc.gov.uk)

Annex 1

Practical method note 7

Commissioning and working with
video





COMMISSIONING AND WORKING WITH VIDEO

Hiring a professional film company to make a short video about key research findings can be a powerful and highly professional way to communicate messages to broad audiences, if sufficient budget is available.

Projects on a much smaller budget have the option of creating their own video, and this guide provides some advice on how this can be approached.

MAKING VIDEOS

With the low cost of digital video equipment and the integration of video recorders of sufficient quality for online streaming on most mobile phones nowadays, combined with the ready availability of free and easy-to-use video-editing software (e.g. Windows Moviemaker,

Apple iMovie, YouTube video editing function), producing video content is now within easy reach of most researchers.

SOME KEY CONSIDERATIONS WHEN WORKING WITH VIDEO CONTENT INCLUDE:

- * Plan thoroughly and write a script – this will ensure only the required shots are captured and will make editing much easier.
- * Spend time thinking about the story, and tell it like a story with a clear beginning, middle and end.
- * Try to come up with some memorable visuals such as some sort of visual metaphor that sums up the research findings, a spectacular location, or something entertaining that will help the key ideas stay in people's minds.
- * Turn the script into a 'story board' - little sketches that convey what will happen visually for each section of your script.
- * Pay attention to the sound – if possible use an external microphone for interviews, or make sure the speaker is near enough to the camera's built-in microphone, and be aware of background noise.
- * Always use a tripod for filming static shots and avoid zooming or moving the camera around unless it is absolutely necessary.
- * Make use of editing software – use titles, transitions and effects to convey meaning and to make the video look more polished. However, be careful about over-using effects as this can be distracting and may look unprofessional.
- * Get clearance before filming starts. Obtain signed consent forms from participants and use only copyright-cleared materials for things like images and soundtracks.
- * Make videos available in as many formats as possible to improve accessibility. This could include You Tube, Vimeo, podcasts, embedded videos in the project website, and links to download files in .mp4 and .wmv formats.
- * The optimum length of a video on You Tube is said to be between 2-3 minutes – to keep the audience watching to the end. Try to keep the



film to 5 minutes or less, since this will make file sizes manageable if it is to be integrated into a podcast or viewed where internet speeds are limited.

- * Retain viewer interest by making videos entertaining where possible and use a variety of styles and content. For example, include footage of expert interviews, site visits/tours, documentary, biographical, and profiles.
- * Attempt to make videos look as professional as possible by adding introductory titles and end credits.

COMMISSIONING VIDEOS

Most of the same points apply when commissioning video, except the professionals will take care of much of the process. Here are a few key points for working with film-makers:

- * Although many film-makers will be able to help refine the story, it is still necessary to provide them with the source material. Researchers have the best understanding of their work and should go to a film-maker with a few different ideas about how to tell their story, rather than just sending them the latest paper or policy brief and expecting the film maker to convey the story in an effective way.
- * Think about who should be interviewed and in which locations. Every extra day of filming on location will add to the budget, so if everyone can be gathered in a key location, this will minimize the number of filming days and save on costs.
- * Once it is decided what is required for the film to be made, a price can be negotiated. There will be an element of negotiation to achieve

- * Ensure the video is promoted. Simply putting a video online won't necessarily get any views. The video should be integrated into a knowledge exchange and communications plan. Just embedding it in your project website won't help if only a few people are viewing the website. It can be particularly useful to invest in social media to increase views of online videos (see [practical method note 10](#) on Social Media).
- * Do not be averse to just trying to use video. Learn by doing it and seek constructive feedback from colleagues to improve your video production.

outcomes and it may be necessary to scale back the ambitions for the production depending on the available budget.

- * Ask the film-maker if they can provide a cut-down 'promotional' version of the film within the price or for a small additional fee. This can be an effective way of creating an additional version of the film that may be more relevant to a generalist audience and can help expand who accesses the material.
- * Make sure the draft version of the film is carefully checked and provide detailed comments regarding things that need to be changed. Take time at this point to consult with the rest of the research team, rather than going back and forth with lots of edits, or colleagues objecting to content after the film is finished.
- * Get copies of the film in lots of different formats; lower resolution for putting online and higher resolution for showing on larger screens.

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For further information on this report, contact:

Helen Baker (helen.baker@jncc.gov.uk) or Matt Smith (matt.smith@jncc.gov.uk)

Annex 1

Practical method note 8
Delphi method





WHAT IS THE DELPHI METHOD?

Named after the ancient Greek oracle, this tool was developed at the RAND Corporation in the early 1950s to investigate the potential impact of nuclear war¹. The Delphi method has been used internationally across many studies and fields, for a wide range of purposes. The Delphi technique is a participatory method used in reflective research by structuring a group communication process so that it enables a group of individuals to deal

with a complex problem. The method has a number of variations, but generally involves gathering feedback from a panel of experts over multiple rounds².

HOW TO USE THE DELPHI METHOD

In a typical process, panel experts respond to set questions without knowledge of the other panellists' responses. In the following rounds, responses are then presented back to each expert along with their own. Participants are given opportunity to revise their individual responses based on those of other participants. It is usual to have approximately three rounds, after which consensus or contrasting views emerge. The aim is not to reach consensus but rather to achieve a stability of responses, where no one panellist would change their

view, even though they may disagree. By engaging a 'panel' of participants (normally experts) in an anonymous survey, the technique is used to generate opinion and/or consensus about a particular topic or policy issue over a series of iterative rounds (for a thorough review of the method and systematic guidelines for its application, see Donohoe and Needham³). The technique explores contrasting and minority views and opinions and can help understand uncertainty.

The Delphi method typically follows these steps:

1. Participant panel members' responses remain anonymous throughout.
2. Participants complete a series of written questionnaires developed by the researcher.
3. Questionnaires are returned to the researcher who collates the responses to the questions posed in each round and feeds these responses back to the participants for their consideration, giving each panel member the opportunity to adjust their responses accordingly, if they so wish.
4. The researcher uses these responses to identify areas of consensus and conflict, and presents these back to the panel for further comment.
5. Through exchanging information participants can change their positions in light of new evidence and generate new ideas.
6. The question posed needs to be asked over a series of stages to allow deliberation and iteration and to give participants time to consider their ideas and opinions in the context of others.
7. Ideally the Delphi process should be between 3 and 5 rounds.



BENEFITS AND DRAWBACKS OF THE DELPHI METHOD

The Delphi process enables a group of people to work together anonymously to reach a decision, develop ideas and/or gather knowledge on a topic. As such, it removes power imbalances amongst the group by preventing more powerful individuals from dominating the process^{4,5}. As the questionnaire process does not require any face-to-face meetings it can be less costly to a project and participant, enabling them to complete questionnaires at a time and place that suits them. This enables extra flexibility to engage with the individuals outside of the usual consultant and geographically disparate groups. The process is flexible in that it can be applied to most situations and questions. As an iterative process it allows people to consider their own views in the context of those of others, which can lead to consensus-building and early identification of key

barriers or points of potential conflict. The iterative nature of the Delphi method arguably works better than individual interviews because the structured feedback process increases creativity by widening knowledge and stimulating ideas⁶.

However, in order to be effective, the process requires skilled facilitation, and may also require the responses and feedback to be collated by a non-biased individual, as the majority of power lies with the one individual collating the responses. As the process must take place over a number of rounds it is important that it is stimulating, or participant dropout rates may be high.

CASE STUDY

EXPERIENCES FROM BIODIVERSITY RESEARCH

The Delphi method can be used in a full participatory way: The Delphi method was used in each case study area for the HighARCS project (see the *Handbook* for a list of BiodivERsA projects) to capture multiple perspectives and to attempt to reach consensus on problems and potential solutions in relation to highland aquatic resources (see Bunting⁷ for further details). Rather than using a conventional Delphi approach, which normally involves an expert panel, the HighARCs project implemented a stakeholder Delphi process, where a diverse range of stakeholders from different hierarchical levels, and with conflicting viewpoints, were asked to contribute their knowledge and opinions about aquatic resources.

Using the Delphi method can capture a lot of information: A stakeholder Delphi approach was viewed as a successful way of overcoming the limitations of workshops where it is difficult to capture all existing views and where there can be reluctance from participants to speak out in the presence of others.

The Delphi method may be viewed as ‘formal’ and hinder open discussion: Some drawbacks were also experienced. In one site there was hesitation from some senior forestry department stakeholders to engage in what was viewed as a formal process where their views would be recorded in writing. The process was viewed as alien and caused some tensions to arise. The researchers recommend carefully considering whether the Delphi method is the right method of engagement depending on the

CASE STUDY

EXPERIENCES FROM BIODIVERSITY RESEARCH

stage of the project, and how it might influence existing stakeholder relations. For example, if there is constructive open discussion ongoing it might be seen as a backward step to start a very structured and anonymous process such as the Delphi method.

Risk of stakeholder drop out: Methodological issues may also arise, due to the iterative and time-consuming nature of the Delphi method, where stakeholder representation change at different points or completely disappear from the process. In the case of HighARCS, stakeholder dropout raised questions over the validity of replacing them in subsequent rounds.



Stakeholders in Vietnam working on an action plan for the conservation and development of fisheries resources for the HighARCS project. Photo by Nguyen Phong.

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Cover photograph : Two farmers in a traditional horse drawn cart near Codrii Reserve, Central Moldova, July 2009.
Wild wonders of Europe / Geslin / naturepl.com

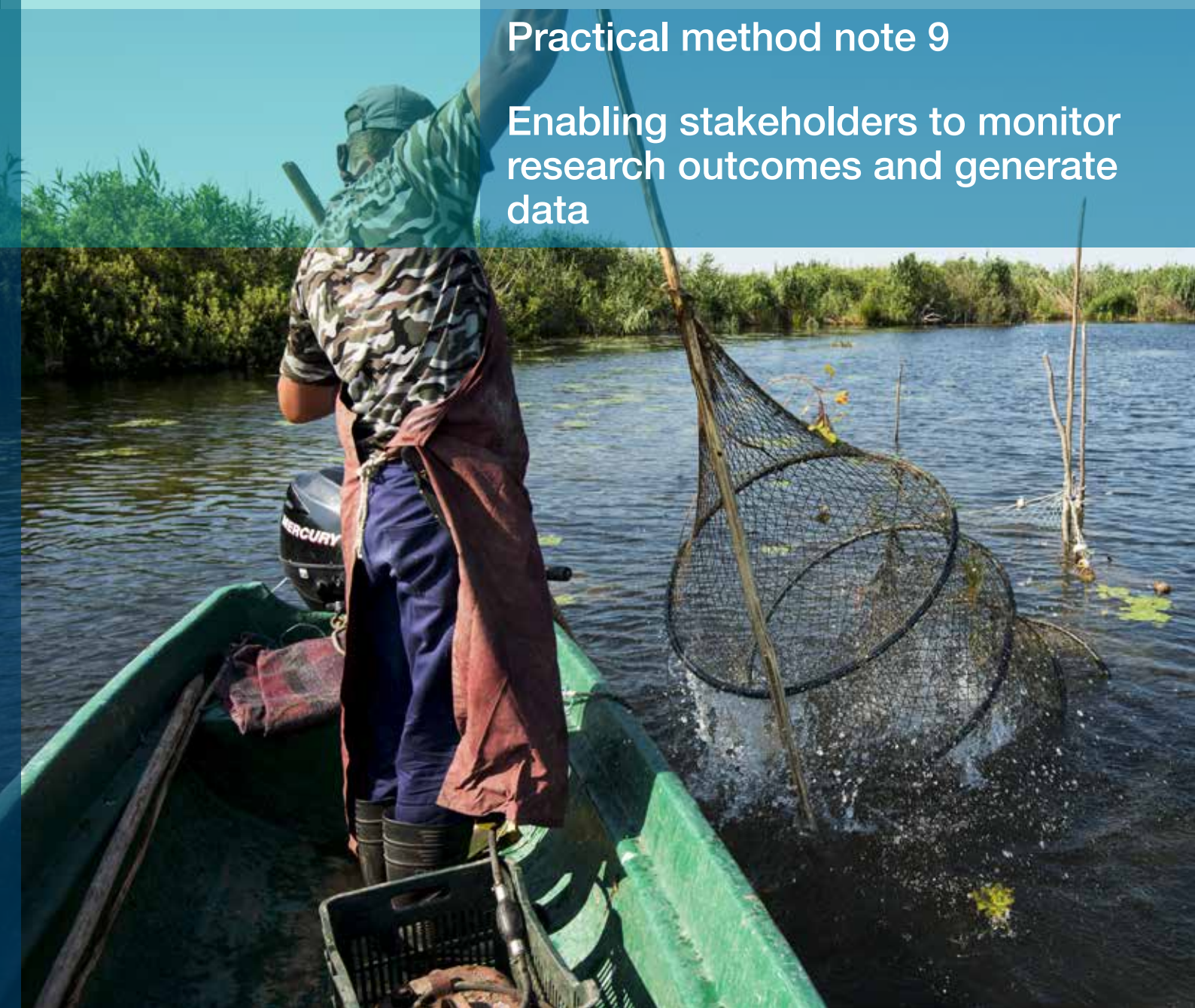
For further information on this report, contact:

Helen Baker (helen.baker@jncc.gov.uk) or Matt Smith (matt.smith@jncc.gov.uk)

Annex 1

Practical method note 9

Enabling stakeholders to monitor
research outcomes and generate
data





ENABLING STAKEHOLDERS TO MONITOR RESEARCH OUTCOMES AND GENERATE DATA

It is possible to work with stakeholders to monitor progress towards jointly agreed project outcomes, typically using indicators. Feedback from stakeholders can be extremely valuable in helping you achieve project outcomes that have a lasting legacy. It may also be possible for stakeholders to use indicators to provide

data for research – which is often referred to as ‘citizen science’. Citizen science for biodiversity research most commonly focuses on easily-identifiable indicator species, such as bird or butterfly counts. Methods of recording data typically include recording sheets, web-based data-bases and mobile phone applications.

WHY MONITOR RESEARCH OUTCOMES WITH STAKEHOLDERS?

Project funders increasingly expect researchers to monitor progress towards project outcomes at regular intervals, and to demonstrate that their work will leave a lasting legacy. By monitoring progress in this way it is possible to identify and correct problems early to ensure outcomes are achieved. If this is done in collaboration with the people who are likely to use the research, then it can be much more effective, providing the research team with constructive ideas on how to make outputs

more relevant and useful on an ongoing basis. By giving stakeholders ownership of research outcomes and providing them with tools to easily monitor progress after the end of the project; it may be possible to help secure the legacy of the research. Indicators are commonly used to monitor research outcomes and by developing indicators with stakeholders, it is possible to empower them to monitor progress themselves.

WHY GET STAKEHOLDERS TO GENERATE DATA?

Citizen science should not be seen as a cheap and easy method for generating data, as engaging effectively with those who may collect data typically takes significant time and effort on the part of the research team. It should not be seen as a substitute for traditional data collection methods, as it can be challenging to guarantee data quality and systematic coverage of sites or replication of treatments. However, it can be possible to include citizen science in the design of research to supplement

data collection, for example providing data for locations that could not otherwise have been included in the sampling strategy. It is also a great way of raising awareness of the research amongst stakeholder groups or members of the public, and engaging them in greater depth than might otherwise be possible. Participating in data collection can give volunteers new skills, new connections and an opportunity to make a difference to their local environment.

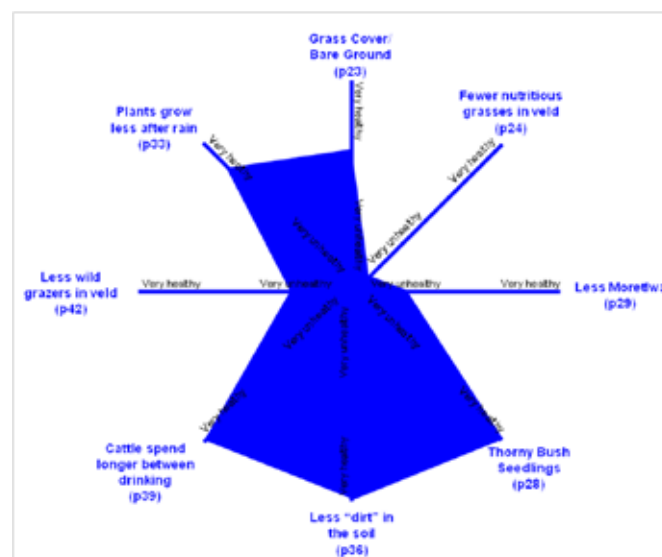
HOW TO MONITOR PROJECT OUTCOMES WITH STAKEHOLDERS

The following steps may be followed to engage stakeholders in monitoring research outcomes:

1. Identify stakeholders who are likely to be interested in the project outcomes (see stakeholder identification in [Part 3](#) of this *Handbook*).
2. Discuss and negotiate proposed project outcomes with stakeholders, adapting and adding outcomes where possible to ensure their needs and priorities are met.



3. Decide the scope of the monitoring which will be done with stakeholders. Consider whether there are particular project outcomes that are better suited to monitoring by non-experts or that are of particular interest and relevance to stakeholders, motivating them to get involved.
4. Identify indicators to represent project outcomes, that stakeholders can measure easily (e.g. indicator species, erosion features). Establish a current baseline, set target levels for each indicator or identify thresholds (e.g. ecological) that should not be crossed, so that data can be interpreted easily by stakeholders after the project has ended. Consider opportunities for technology to make it easier for people to submit data and that can make data entry and analysis efficient for the research team. However, also consider whether these technologies may exclude certain groups, and where necessary provide alternative methods for them.
5. Test and refine the use of indicators with stakeholders, ensuring they accurately represent intended project outcomes and can be used easily by all stakeholders.
6. Recruit a team of relevant stakeholders to collect indicator data.
7. Accept the data and provide feedback to participants so that they know their data has been received and how it is being used. This may be provided via an automated (and if possible tailored) response via a mobile phone application, via email, or in a regularly published newsletter.
8. Following analysis of indicator data, interpret findings and share results with participants. If possible, provide methods that can enable stakeholders to analyse and interpret data themselves easily after the project has ended (e.g. radar diagrams [see the figure below]).



The Radar Diagram designed for use by pastoralists in the Kalahari Desert, Botswana. Users measure each indicator qualitatively on a scale from very unhealthy to very healthy, and can refer to guidance about how to solve problems identified by the indicators (from Reed and Dougill').

HOW TO UNDERTAKE CITIZEN SCIENCE²

Citizen science initiatives commonly follow these steps:

1. Decide if it is likely to be possible for non-experts to collect the sort of data required to address the research question(s), and whether citizen science is likely to complement the proposed research design and stakeholder engagement strategy.
2. Decide how involved stakeholders should be in the research. At one end of the spectrum, this may be simply providing data to achieve research goals in a research design set by researchers. At the other end of this spectrum, stakeholders may be involved in the development of the project, jointly setting research goals, contributing to the design of the research and providing guidance throughout the research as members of the project team.
3. Identify stakeholders (see stakeholder identification in [Part 2](#) of this *Handbook*) and develop an engagement strategy that will motivate their involvement.
4. Establish a project team and set goals for the research including outputs or 'impacts'. Depending on the approach decided (step 2), stakeholders may be involved in the team and jointly set goals with researchers.
5. Select easily measurable indicators that can be measured by stakeholders and develop standard and easy-to-follow methods and protocols for collecting and recording data. Consider opportunities for technology to make it easier for people to submit data and that can make data entry and analysis efficient for the researchers on the team. However, also consider whether these technologies may exclude certain groups, and where necessary provide alternative methods for them.
6. Test and refine the protocol with stakeholders to ensure it is easy to use and provides the data required.
7. Promote and publicise the project as widely as possible.
8. Accept data and provide feedback to participants so that they know their data has been received and how it is being used. This may be provided via an automated (and if possible tailored) response via a mobile phone application, via email, or in a regularly published newsletter.
9. Complete data analysis and interpretation of findings and share results with participants.



CASE STUDIES

EXPERIENCES FROM BIODIVERSITY RESEARCH

Park Rangers involved in a citizen science project in the Peak District National Park in England were involved in the data collection exercises and reported that it was a highly rewarding way of learning more about the environment in which they worked. The project benefited from the large amount of high quality data collected by people with knowledge and expertise about the local area and who had access to the environment being studied. Evening dissemination events were very popular with participants and helped maintain interest in the project.

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For further information on this report, contact:

Helen Baker (helen.baker@jncc.gov.uk) or Matt Smith (matt.smith@jncc.gov.uk)

Annex 1

Practical method note 10

Social media





SOCIAL MEDIA

WHAT ARE SOCIAL MEDIA?

As we increasingly aim to improve the impact of our research and move towards co-creation of research, there is a growing impetus for using social media. Broadly defined, social media are a group of Internet-based applications that enable users to interact with one another, affect and change content on the Internet.

Within this general definition, there are various types of social media, many of which will be familiar to a wide section of society, such as Wikipedia, YouTube, Twitter and Facebook:

- * Wikipedia enables the collaborative creation and editing of documents to form a 'living' encyclopaedia that is constantly being added to, edited and updated. A researcher may wish to add details of their new research or their projects to Wikipedia to make them more widely visible and accessible online.
- * YouTube enables users to upload and edit their own videos and to comment on and share the videos of others (see [practical method note 7](#) on commissioning video).

- * Twitter enables small pieces of information (a maximum of 140 characters per 'Tweet') to be shared between users, often with links to larger documents, websites or films. Twitter enables users to comment on information, ask specific questions or directly interact with the bodies which may have most use for research findings.
- * Facebook is the world's largest social network. A Facebook fan page can be a great way to promote research findings, and create a forum for conversation and discussion.

There are many other social media platforms to choose from (notably Google+, LinkedIn, Instagram and Research Gate), but we focus on these four (and in particular the last three in the list above) because they are most widely used by and adapted to the purposes of researchers.

WHY USE SOCIAL MEDIA TO ENGAGE WITH STAKEHOLDERS?

Social media has the potential to inform public debate and decisions in policy and practice. For example, a 2004 study by Sutherland et al.¹ showed that up to 77% of conservation management is based on anecdotal evidence and discussion with friends and colleagues, rather than directly being based on research. A similar study by the *Organisation for Economic Co-operation and Development* in 2007² showed that 75% of Internet users used social media as a key source of information. Social media enables the rapid spread of concepts through peer-to-peer learning. People pay attention to what their trusted information sources and friends have to say. In social media, information moves rapidly between and across social networking sites, through both technology features and also through

key individuals active on multiple platforms. Products, messages and behaviours spread like viruses and, similar to medical epidemics, a handful of people play an important role in starting 'idea epidemics'. Social media can enable researchers to position themselves in these discussions, spark new discussions and make their findings easily accessible to the rapidly growing population of social media users.

Social media is about facilitating greater engagement of stakeholders and others interested in research. Commonly, universities, institutions and businesses do not approach social media optimally and treat them simply as platforms for interactive marketing (providing information and enabling comment). However, to



enable true participation and learning, social media must be used in a way that enables information to spread effectively from person to person. For example, researchers on a project may publish its biodiversity research as a paper, putting the link onto a social media platform. This is only interactive marketing. In order to turn this into participatory social media, the research

team would need to add space for people to comment on the paper or upload their ideas for how to implement the research. The difference is in enabling a conversation and creating ownership beyond the research team and into the wider online community.

APPROACHES TO ENGAGING WITH SOCIAL MEDIA

To effectively use any kind of social media it can be particularly useful to be aware that those who are most effective in their use of social media tend to fall under one or more of three specific categories: **Mavens**, **Connectors** and **Salespeople**. A research team may find it helpful to identify individuals that are particularly suited to these roles and involve them when utilising social media:

- * **Mavens** are idea specialists, human databanks, who are likely to be obsessive about details and about sharing them with others; many academics fall within this area. In social media, the Maven shares facts with others but may not necessarily interact with other users. Those new to social media may find that the Maven role is the most comfortable.
- * **Connectors** are networkers. They tend to know

a lot of people from different cultures and niches and are skilful at making contacts. The connector acts as social 'glue' by spreading ideas around. For example, a connector may access the information provided by a Maven and share this with others as they have a large and wide range of contacts. Connectors may be active over numerous social media platforms and are key players in affecting change as a result of the information they share.

- * **Salespeople** have skills of persuasion. These are highly influential individuals, with high-level positions in their organisations, and are recognised by many for their knowledge. Endorsement by salespeople can be key to information becoming trusted and having ideas and concepts spread.

BEST PRACTICE IN USING SOCIAL MEDIA³

Before adopting social media as a promotional tool make certain that activities are planned appropriately, set goals and objectives, and identify actions necessary for achieving your desired result.

Even if the social media presence is for your research, a personal approach to interacting with your target audience may lead to more successful and productive communications. These interactions may include thanking users for liking Facebook pages or retweeting, or offering expert views or expertise to followers.

Always ensure that the content that is posted on social media does not contain inaccuracies or mislead your audience, as this can lead to reputational damage

to the Project Team or institution. One of the biggest reputational risks can come from being vulgar or confrontational on social media sites. It is vital that all content remains professional and any grievances are not aired publicly. It is important to set expectations about what should and should not be included in online content.

Promoting research is the likely reason why the Project Team are using social media and whilst sharing experiences, expertise and knowledge can promote the value of the research it is important to balance self-promotion by promoting and helping others. This can make your followers more receptive to promotional posts

and make them more likely to circulate your promotions amongst their own networks. It is also important to ensure you do not share too much. Remember, if you wouldn't say it in front of people who are valuable to your team or project then it should be kept off social

SOCIAL MEDIA PLANNING

It is worth thinking systematically about potential use of social media to get the most out of it:

1. Check the social media policies of the organisations involved in the research.
2. Create a social media plan. The best social media plans involve elements that give people a reason to do something, share something, or gain something. The best plans integrate more than one of these elements.
3. When working with social media it is useful to think about separate campaigns, for example particular topical issues, points of engagement in the research, or key findings.
4. Decide what outcomes are sought from using social media (e.g. attendance at a workshop, reads of a paper, awareness of an issue), and then consider what action would support this. For example, there may be creative activities that could be used. An example may be trying to get increased community understanding of resilience under climate change. In order to do this, a project may empower the community to tell others about what it means to be resilient. To further raise awareness, community members could create short films illustrating their vision of a more resilient future

GETTING STARTED

YOUTUBE

YouTube is the largest video sharing site on the internet and lets anyone upload short videos for private or public viewing. It enables users to share and comment on its content. As such, it is a popular way to reach large audiences with videos. In order to reach a larger audience a single YouTube channel for a whole faculty, department or research group may be the best approach rather than having separate channels for different research projects, which are likely to have relatively few videos in each channel. This approach has a benefit of accessing a much larger audience than on an individual channel and ensures that content is automatically branded.

media sites.

Following these best practices can assist the Project Team in creating an engaged online community and ensure that the Projects online presence is productive and positive.

alongside an amount of money that would be needed to achieve this vision. This information, along with the films, can be uploaded to a dedicated webpage. Once done, each group would work independently to raise awareness of their video and campaign to get others to donate. Such a campaign should include 'do', 'share' and 'gain' aspects.

5. Successful social media campaigns are often 'PUVV': they should be **Personal** (cultivating the feeling of personal relevance to other users), **Unexpected** (people like consuming then sharing new information through social media; attract their curiosity and present familiar concepts in new ways), **Visual** (where possible, show, don't tell; use photos and videos and synthesize thoughts with quick visuals), and **Visceral** (a successful campaign often triggers the senses: using sight, sound, etc., to tap into emotions).
6. Different social media platforms have different audiences and it can help to tailor the message to that audience or to choose one platform over another in order to be most effective in targeting a message.

Step 1: Getting the right account: A Google account is needed in order to upload videos to YouTube. An existing Google account can be accessed at www.youtube.com where a channel can be customised. To create a separate account for a research project, select a new username and password for the project. Choose a username that reflects the name of the project, as this will become the ending of the URL for the channel.

Step 2: Starting and customising a channel: After logging in to YouTube, there will be a 'Channel Setup Checklist' at the top of the right-hand pane, where channel art (e.g. project logo) and a channel description can be added.

TWITTER

With its 140-character updates ('Tweets'), Twitter is a great way to get timely information out to audiences and to engage with those with similar interests.

To create a Twitter account:

- * Go to <http://www.twitter.com> and click on "Sign up now".
- * For "Name", give the department, program, or project name.
- * Next, choose a Username – this will become part of a Twitter address and a personal identifier when tweeting and responding to tweets. Choose a username that clearly identifies the department or program.
- * Ideally for email, use a group mailbox that several members of a department or program can check if possible, rather than a personal email address.
- * Next, click "Settings" and fill in that information.

FACEBOOK

A Facebook fan page can be a great way to promote department or program activities, showcase accomplishments and events, engage with stakeholders, students, faculty, staff, alumni and the wider community, as well as create a forum for conversation and discussion.

1. Timeline

Requirements:

A profile picture that links the programme to its institution. Universities may already have, or be able to create, an appropriate image.

A timeline cover image. This is a large image that will take up the width of the Facebook page. It should be at least 399 pixels wide and very high quality. It shouldn't have buttons or call-to-action wording on it.

Images for the tabs. This is where the call-to-action items can be and these should be attention grabbing and lead visitors to more content.

2. Facebook Fan Page vs. Facebook Group

It is usually better to create a fan page rather than a group for a department or program.

Under the 'one-line bio', include brief descriptive text about the department or program, and a link to the web site.

- * For a picture, use a professional icon that links to the institution. Universities may already have, or be able to create, an appropriate image.
- * Before tweeting, build a list of departments and individuals to follow. Seek out other accounts from the institute and for people and programs in the same field, as well as those tweeting keywords relevant to the interests of the programme. Read, retweet and respond to these tweets to begin building a network.

Twitter is generally best viewed as a conversation, not a megaphone. As such, it is important to share interesting news and information and to share news from other sources, to respond to and ask questions and to build a conversational relationship with others.

Feature	Fan Page	Group
Allows distinct URLs	Yes	No
Indexed by search engines like Google	Yes	No
Admin can access visitor statistics	Yes	No
Discussion features and forums	Yes	Yes
Can be cross-promoted on other fan pages	Yes	Yes
Ability to create events and invitations	Yes	Yes
Twitter or blog feeds	Yes	No
Visible to unregistered people	Yes	No
Fans can leave comments and "likes"	Yes	No
Can send out bulk emails to your members' in boxes	No	Yes
Information posted on your wall will appear on your fans' wall	Yes	No
The administrator's personal information isn't listed	Yes	No

How to create a Facebook fan page

- * To set up a Facebook fan page, first secure the approval of the department chair or program manager. Unlike a personal Facebook page, this page directly links back to the university and must be professional. Include a statement on the page to ensure it is clear that inappropriate content will be removed.
- * To create a fan page, there must be a pre-existing Facebook account. This account can be set up with a personal email account (fan pages keep personal account information private). See www.facebook.com and fill in the form on the homepage to set up a new account.
- * Using the personal Facebook account, go to www.facebook.com and log in with user name and password.
- * Then go to www.facebook.com/pages/create.php
- * A preferred category may be “Local > Education” or “Brand, Product or Organization > Nonprofit.”
- * For “Name of Page”, choose something that will clearly identify the organisation.
- * Then click on the “Create Page” button.

- * Now start adding items to the fan page.

Here are some ideas to help build a Fan Page:

- * Avoid sending too many updates to fans.
- * Mention when the project Web site is updated, whether it is new photos, an upcoming event, etc.
- * Add links to drive traffic to the department or organization’s Web site.
- * Mark as ‘Favourite’ other Facebook pages that have topics that are similar.
- * Monitor comments daily and respond to those that warrant it.
- * Encourage two-way communication. Delete comments that include personal attacks, vulgarity or slurs. However, do not delete comments simply because they are critical – rather, respond on the wall or directly to the individual with additional information.
- * Ask staff and co-workers to “Share” or “Post” to the Facebook page. Ensure all comments also follow guidelines for professional university/programme communications.
- * Include all social media information in promotional materials and in email signatures.

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For further information on this report, contact:

Helen Baker (helen.baker@jncc.gov.uk) or Matt Smith (matt.smith@jncc.gov.uk)

Annex 1

Practical method note 11
Multi-Criteria Decision Analysis





MULTI-CRITERIA DECISION ANALYSIS

WHAT IS MULTI-CRITERIA DECISION ANALYSIS (MCDA)?

MCDA (also called Multi-Criteria Evaluation/Analysis or Multi-Criteria Decision Modelling) is a tool for exploring issues and making decisions that involve multiple dimensions or criteria. It allows economic, social and environmental criteria, including competing priorities, to be systematically evaluated by groups of people. Both quantitative and qualitative data can be incorporated to understand the relative (non-monetary) value placed on different dimensions of decision options

(e.g. management options). Broadly, the process involves context or problem definition, representation of evaluation criteria and management options, and evaluation. This method can be used in a participatory way with multiple stakeholders and is a useful way of evaluating decisions where there are competing interests.

HOW TO DO MCDA?

When applied in a participatory way, MCDA typically involves the following stages:

1. Establish context and identify participants:

This ensures the early identification of key issues; socio-environmental dynamics and identification of stakeholders for involvement in the multi-criteria decision-making process (see [Part 3](#) of this *Handbook*). A combination of interviews, focus groups, workshops and document analysis can indicate perceived differences and views on the issues of interest, and help structure stakeholder involvement.

2. Define criteria: Criteria are defined that capture stakeholders' interests via facilitated discussion and literature (e.g. research outputs, policy documentation). Broad criteria, such as environmental, economic, institutional and social variables, can be broken down into more-specific criteria.

3. Rank or weight criteria: To reflect differing values and priorities, criteria are ranked to indicate their importance relative to the objective of process – this may be done individually or by agreeing ranks within groups.

4. Define management options: Alternative management options are defined (e.g. using literature,

policy documents, management plans, and local knowledge). Current management may be compared to potential future scenarios.

5. Score management options against criteria: The performance of each management option is scored against each criterion. This may be completed by all stakeholders (individually), a subset of participants or by researchers. This may involve the use of empirical data, expert opinion, scenarios and modelling.

6. Multi-criteria evaluation: Normally, algorithms are used to calculate weighted values based on combined scores and ranks that describe the overall preference towards each option. Results can be presented for individuals or aggregated for different groups. Statistical analyses can be applied to test whether differences exist between individuals or groups. The tool may be used more simply by summing the number of votes for each option against all criteria, and then varying these scores by altering the weighting of different criteria arithmetically.

7. Discuss options based on MCDA results: MCDA is a decision-support tool so outcomes may be deliberated with participants or amongst decision-makers to assess the degree of consensus, negotiate compromise and manage trade-offs.



BENEFITS AND DRAWBACKS OF MCDA

MCDA can support complex decision-making processes with diverse groups of stakeholders where there are a variety of competing priorities and management options. Both quantitative and qualitative data can be used within an MCDA framework and the method can accommodate uncertainty and knowledge gaps. It is highly suited to the inclusion of local values in decision making, as both criteria and options can be designed or adapted with the input of stakeholders. The method can be used in a transparent step-by-step way with stakeholders to make decisions and there are numerous ways of visually displaying the results of the ranking and evaluation stages so that stakeholders understand how their input influences the results, stimulating further discussion. MCDA methods fit well into broader decision-making processes and the results can be presented in a way that is accessible to policy makers.

The performance of MCDA suffers when there are a high number of management options and criteria involved in the decision-making process; which puts too high burden on the participants to understand all of the options sufficiently well during the ranking and scoring stages. Problems also arise when the decision problem is very complex and there are interactions and feedbacks between the criteria that are difficult to unravel and understand (e.g. trade-offs between ecosystem services). The method has also been criticised where conclusions have been based on the results of a purely quantitative analysis without sufficient consideration of qualitative data, thereby excluding more subjective values that are less easy to define and measure.



CASE STUDY

EXPERIENCES FROM BIODIVERSITY RESEARCH

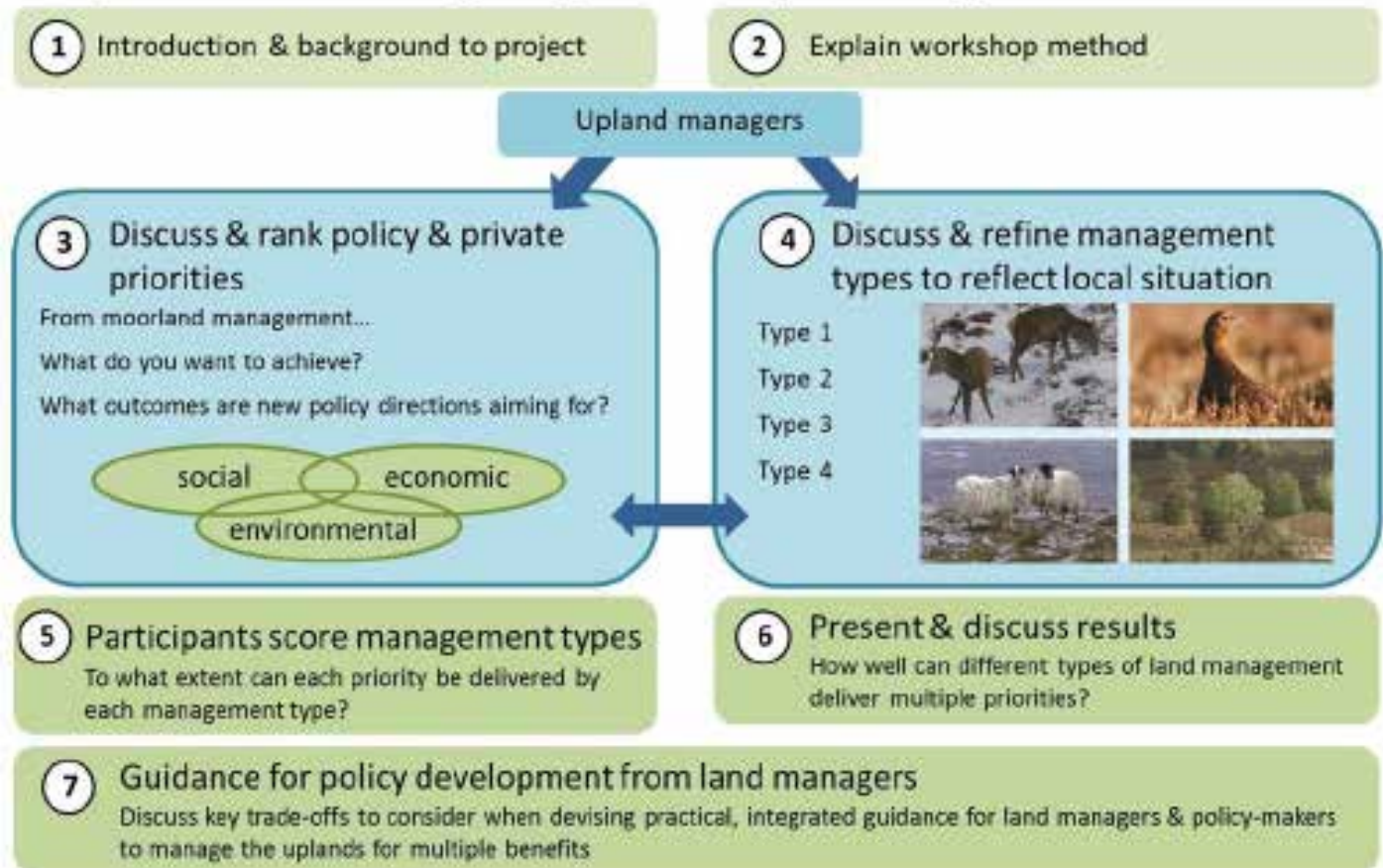
The following recommendations were made from the experiences of researchers using MCDA in the HUNT project (see [Appendix 1](#) of the *Handbook* for details of BiodivERsA projects) to investigate the impacts on upland managers from a policy shift towards managing the land for multiple benefits:

- * For MCDA outcomes to be useful there should be an appetite for change, and for the process to be timely in terms of larger management and policy processes.
- * Criteria should reflect the views and values of stakeholders as well as drawing on information from research and policy. Each criterion should be clearly defined to avoid ambiguity and it should be recognised that criteria can be either positive (e.g. maximising game numbers for harvest) or negative (e.g. minimising predator numbers). There should be similar numbers of economic, environmental and social criteria to avoid bias towards one dimension.

- * Scoring the performance of management options against criteria requires stakeholders to make trade-offs between multiple criteria. It is critical that the questions put to stakeholders to derive these scores are clear and unambiguous in terms of context and scale. Allowing discussion and opportunities to re-score may improve the search for compromise.
- * Methods used to derive a final value for each management option should be transparent and there are several ways of doing this, for example aggregating individual responses by stakeholder group or region. No consensus should be inferred without allowing time for further deliberation.
- * Visual methods are useful for representing uncertainty and communicating differences of opinion and can form the basis for negotiating compromise and managing trade-offs between biodiversity objectives and other land use priorities.
- * A stakeholder who took part in the MCDA process emphasised the importance of keeping the results of such methods in context. Assumptions and judgements about large complex problems should be based on a range of approaches; and not only the results of one method such as MCDA. The issue of managing land for biodiversity and other benefits in the Scottish uplands is highly complex and multi-faceted and it is important that methods such as MCDA are not viewed as the sole solution to a problem.



Making decisions in the uplands: managing multiple objectives



This schematic shows the MCDA process that was used in the HUNT project

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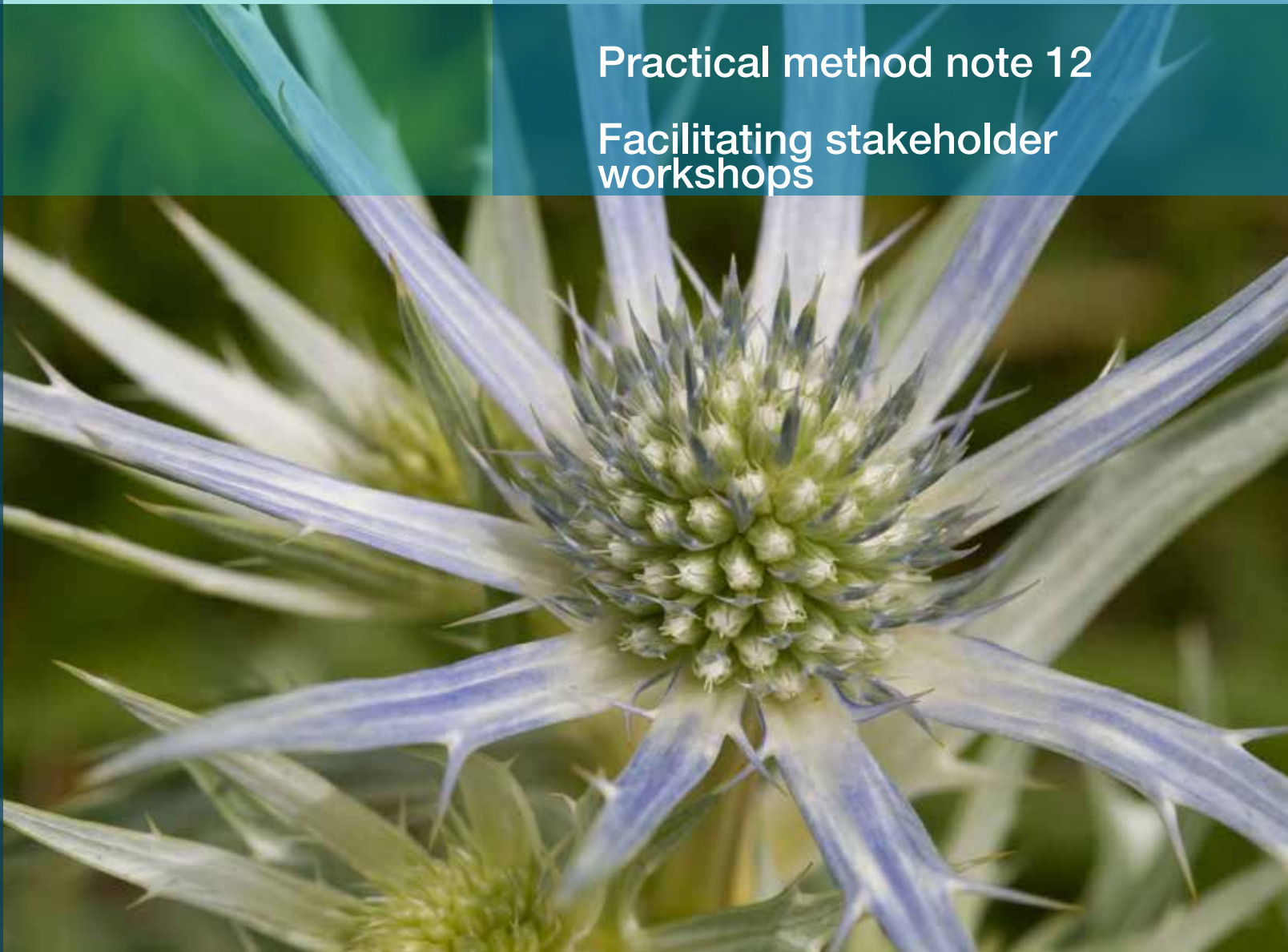
For further information on this report, contact:

Helen Baker (helen.baker@jncc.gov.uk) or Matt Smith (matt.smith@jncc.gov.uk)

Annex 1

Practical method note 12

Facilitating stakeholder
workshops





FACILITATING STAKEHOLDER WORKSHOPS

Stakeholder workshops are increasingly used in research projects, yet despite planning and preparation an event can falter due to poor facilitation, leading to confusion and disengagement of stakeholders. Many researchers mistakenly think that because they are good at chairing meetings with academics, they can facilitate a stakeholder

workshop.

Having a good facilitator takes the pressure off the research team and invariably leads to better workshop outputs and happier participants.

IS A FACILITATOR REQUIRED AND ARE THEY AFFORDABLE?

There are a number of reasons why hiring a professional facilitator (or investing in learning facilitation skills) can be particularly useful when engaging with stakeholders and likely users of research during workshops, for example:

- * Efficiency: more can be discussed in less time, and the event runs to time.
- * Impartiality: a facilitator remains neutral and can be critical of the research if necessary.
- * A good facilitator can create a friendly, unthreatening and helpful atmosphere in which people feel comfortable talking.

Professional facilitation can ensure that workshops run smoothly and may be especially important in areas of conflict. However, facilitators can be expensive and prices vary with the expertise and reputation of the facilitator and the amount of time necessary to prepare for the event. Unless their role is little more than a chairperson to help the researchers steer through a simple agenda on time, it

- * No one particular organisation or individual is in control or has the power of veto.
- * The outcome is open and more likely to be considered fair by all those involved.
- * A good facilitator will use appropriate techniques to keep people engaged and get the most out of everyone.
- * More people have a say.

is likely that a number of days will be needed to discuss the project aims and come up with draft facilitation plans that use different techniques to reach these aims. If the facilitator is to be responsible for writing up the outputs from the event, then this will cost more. It is therefore advisable to build facilitation costs into the research proposal from the outset.

RESEARCHERS AS FACILITATORS

In many projects there are insufficient funds to hire a professional facilitator, so researchers end up fulfilling this role. Apart from getting training (which is always recommended), there are a number of things researchers can do to make facilitation easier:

- * Getting practice: although it may not be possible to practice working with stakeholders, there may be other contexts in which facilitation tools and skills can be tried, for example by adapting teaching with students to incorporate methods that can be used later with stakeholders.



- * Getting to the venue early so that any practical issues can be resolved in good time before participants arrive.
- * Meeting the facilitation team the day before or in good time before the event to go through the facilitation plan and make sure everyone is clear on their role.
- * Having an alternative plan for high-risk activities that haven't been tried before can help ensure the smooth running of an event. If a technique isn't working, it can be changed. There are also a number of practical pointers that can be used to keep control of dominating individuals and get the most out of more reticent members of the group (see below).
- * Building in 'buffer time' to the facilitation plan (e.g. identifying sessions of lesser importance that can be dropped, or where food and drink breaks can be shortened). Ensuring that expectations of the event are realistic can help reduce nerves on the day.
- * Getting feedback from colleagues on the facilitation plan to make sure it is realistic and achievable.
- * If a certain individual is known to be particularly problematic (e.g. argumentative, confrontational), consider having a one-to-one meeting with them separately, rather than inviting them to the event.

PRACTICAL FACILITATION SKILLS

- * The following points provide examples of skills and actions that constitute good practice when acting as a facilitator:
- * Active listening, for example giving non-verbal feedback (like maintaining frequent eye contact, nodding, focussed attention, remaining undistracted, positive body language).
- * Valuing silence as group thinking time and not being intimidated by it.
- * Verbal feedback (e.g. sounds, phrases, probing (open) questions).
- * Giving people time and space to clarify and unpack their thoughts.
- * Letting people know their opinions are valued.
- * Ensuring everyone has their say.
- * Summarising key points back to the group to check they have been understood correctly, or bringing a particular line of discussion to a close to help keep the process on track.
- * Helping people to 'own' the issues they talk about, rather than couching it in terms of 'us' and 'them', so they can take responsibility and think of solutions.
- * Reframing points where necessary to help people move from a highly critical or negative stance to be able to discuss a more positive way forward with the group.
- * Giving momentum and energy.
- * Impartially recording the discussion.
- * Writing clearly and managing paperwork (ideally with the help of an assistant so the facilitator can focus on group dynamics).

Listed below are some further ideas that can be used to get the most out of facilitating events with stakeholders:

- * Agree some ground rules: refer back to them if need be (e.g. people are not to talk over one another, everyone's views should be equally respected, no use of offensive language etc.). It may be useful to write these down and place them on the wall for everyone to see. It is typically easy to agree such rules as a group at the outset. They can be particularly useful if someone becomes obstructive or abusive later in the event. Given that they were part of the group that agreed these rules, it is socially quite difficult for them to ignore the rules, and if they do continue to ignore these rules, there is a clear basis upon which they may be asked to leave.

- * Parking space: if there is a participant who finds it hard to be concise and in particular if contributions are off-topic, it is possible to create a 'parking space' where these ideas can be written up and 'parked' for later discussion. This technique only works if the group has jointly agreed to the aims of the event at the outset, and if there is the flexibility to create a 15-20 minute session at the end to deal with the 'parked' points. Parking less-relevant ideas for later helps keep the discussion focussed and on time. By the end of the event, it will have become clear to all participants whether the points that were parked are relevant or not. Where points are deemed worth covering, extra time may be created to deal with them, which prevents these points taking up a valuable part of the main discussion. Also, because the 'parked' points are discussed at the end of the meeting, participants are usually keen to finish and have an incentive to be more concise.

- * Open space: if it transpires that the aims of the researchers do not match the aims of some of the participants, it can be challenging to keep everyone present and engaged in the process. A simple technique is to use some of the buffer time in the facilitation plan (e.g. dropping a session or curtailing a break) to create an 'open space' discussion. Using this approach, the additional topics that participants want to cover are collected (and grouped if there are many points). Participants then have the option to sign up to topics of particular interest to them over the next break and then small group discussions can be facilitated, with discussions being recorded and fed back to the wider group. At this point it will become apparent if some of the topics were just the interest of one vocal proponent if others don't sign-up for that group. If there are too few facilitators to do this, the person who proposed each topic can be asked to facilitate their group.

- * Get an opinion leader to introduce the event: by getting someone who plays a key role in the community to introduce the event the group may be more likely to trust the researchers.

- * Empathise with the group: get a sense for how the group is feeling (e.g. bored, tired or angry) and adapt the approach to their needs. Empathy is about putting yourself in the place of another, so as to connect with their feelings, identifying with them in some way, such as by voicing it or mimicking them via body language (or both). This makes it possible to counter feelings that may negatively affect group dynamics, gradually changing body language, tone of voice and language to become increasingly open, upbeat and interested. Although this can take significant effort, it can be surprising how many participants start to mirror types of behaviour and begin feeling and acting in more positive ways.

- * Make the effort to consciously keep smiling, and maintain a positive and energised tone of voice, pace, with open and friendly body language throughout the whole event.

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For further information on this report, contact:

Helen Baker (helen.baker@jncc.gov.uk) or Matt Smith (matt.smith@jncc.gov.uk)

Annex 2

Conflict Management Tools

TOOL 1 Analysing the underlying cause of conflict

TOOL 2 Analysing the issues that give rise to conflict

TOOL 3 Analysing Stakeholder Rights, Responsibilities, Returns and Relationships (The 4 R's)



CONFLICT MANAGEMENT TOOLS



CONFLICT MANAGEMENT TOOLS

Three tools, which can be adapted for specific uses, are presented; they are based on the FAO (2005) negotiation and mediation techniques for natural resource management¹. They can be used in two different ways: as

a way of structuring thoughts and defining questions; or as aids for facilitating discussions or group sessions with stakeholders.

TOOL 1: ANALYSING THE UNDERLYING CAUSE OF CONFLICT

This tool enables stakeholders to assess the origin and underlying causes of conflict, highlights the linkages between factors that lead to conflict arising, and can assist the project team in developing a clear picture of the cause-effect chain.

Analysing underlying causes of conflict can reveal the different stakeholder interpretations of cause and effect. In some instances, stakeholders may not want to discuss

key factors that have led to conflict. Often there are differences of opinion when it comes to deciding upon the weighting of importance for different issues. It is essential to ensure that the analysis does not become overly complex, thus making it difficult to identify the true underlying issues.

IDENTIFY UNDERLYING CAUSE OF CONFLICT

1. UNDERTAKING PRELIMINARY CONFLICT ASSESSMENT

- * Meet with stakeholders and provide them with the opportunity to discuss their issues, grievances and perceptions of the project.
- * Pose suitable questions to explore the identified causes in greater detail.
- * The project team should then use this information to develop a simple schematic to help visualise how the conflict originated and evolved.
- * Ascertain whether conflict causes can be linked to broader issues (e.g. social, political).
- * Decide whether or not there is a need for a conflict management process (*if so, continue to the next step*).



2. FACILITATING STAKEHOLDERS' ANALYSIS OF UNDERLYING CAUSES

- * Explain to stakeholders that the activity is designed to help understand how the conflict began.
- * Show stakeholders the schematic that was produced in the initial step (1, above) to demonstrate how the project team believes the conflict has come about.
- * Highlight to stakeholders that without proper identification of underlying causes any subsequent steps that are taken to manage or solve conflict may omit important factors.
- * Offer stakeholders the chance to pose questions and clarify any issues or concerns.
- * Begin analysis with the entire group, or divide into subgroups. Subgroups may be more appropriate in cases where there are significant differences in power or levels of influence within the group; when only a few group members are talking; or some parties are reticent in voicing their opinion in the presence of opposing parties.
- * When ready, invite participants to discuss why the conflict has occurred and what they perceive to be the immediate causes.
- * Ensure parties continually ask the question 'why' with regards to reasons behind the immediate causes.
- * Explain to stakeholders that this is an exploratory exercise and that the truth and relative significance of underlying causes will be determined at a later stage in the process.
- * Continue the discussion until the participants have identified some conflict causes.
- * If the group has been divided reconvene into one group and request a member from each group to present the outcomes of their discussion.
- * As a group discuss the similarities and differences between the discussions, the reasons why these may exist, and explore what the group can do to find areas of common ground.

3. CONSIDERING RELEVANCE OF CAUSES AND EVALUATING CAUSE-EFFECT CHAINS

- * Begin by differentiating between varying perceptions and identify the facts that can be verified and those that will require further exploration.
- * Invite participants to identify the cause-effect chains that they consider to be most important and explain that if a high number of causes exist then it is unlikely they will be resolved simultaneously.
- * Prioritise the most significant causes by ranking them, emphasising that there is no set prioritisation rules.
- * Distinguish the issues that require immediate attention, and those that will need to be addressed over a longer time period.
- * Assist participants to identify priorities for action. Stakeholders may decide to focus on immediate causes of conflict, or focus upon the underlying issues.

The session can be drawn to a close once stakeholders have agreed on conflict causes, they have identified knowledge gaps that require further action, and identified key root causes that need particular attention.



TOOL 2: ANALYSING ISSUES THAT GIVE RISE TO CONFLICT

This Tool helps stakeholders ascertain the particular issues that contribute to the conflict and consider potential means for resolving them. Issue analysis adds to the activities that help identify underlying causes of conflict, by providing an additional level of analysis. This type of activity identifies the boundaries and key issues surrounding the conflict and can assist project teams in

categorising these issues and placing them in context. This type of analysis is best used as a mental model by project teams to gain a better understanding of the conflict. It is not suited as a facilitation aid, as classifying issues into different types may be deemed as unhelpful for some stakeholders.

UNDERTAKING ISSUE ANALYSIS

1. INITIAL CONFLICT ASSESSMENT

- * The project team needs to hold an internal meeting.
- * Each member of the team identifies the issues that they believe are central to the conflict.
- * Invite team members to state the conflict and present their key issues.
- * Once all issues have been presented, group the issues that are of a similar nature according to the five types of core issues: conflicting values; structural issues; conflicting interests; problems with information; and difficult relationships.
- * Identify what caused the issue to arise: a perceived or actual difference; contending views; a perceived or actual threat; a lack of information.
- * Advise team members that issues can overlap, and that these overarching categories are used to guide systematic assessment of conflict causes.
- * As a team agrees upon which issues are the most significant, identify whether they require immediate attention or whether they will require long-term action.
- * Consider the analysis and discuss possible steps that can be taken to resolve the conflict.

2. FACILITATING STAKEHOLDERS' ISSUE ANALYSIS

- * Arrange stakeholders into small groups or speak with individual stakeholders face-to-face.
- * Separate conflicts into the core issues, identify the type of issue and what has caused it.
- * Allow stakeholders to express their opinions and feelings with minimal interference, it may be appropriate to ask 'why' questions at certain times to clarify points that are unclear

- * Following the stakeholder meeting, the project team can use the information gathered as a basis for more-targeted questions, or for informing subsequent consultations and stakeholder engagement.

The project team may want to consider collecting the information in a tabulated format so that information is kept organised and easily accessed by all team members (see example on the following page).

The table on the next page shows a hypothetical scenario to demonstrate how issue analysis may be undertaken.

Scenario: The local community are concerned that the research being undertaken in the local forest by the project team will give the local conservation organisation, who manages the wood, cause to ban the collection of wild food products. A template of this matrix can be found in the appendices of this *Handbook*.

Proposed actions identified by conflict analysis:

- * Review the details of proposed forest management plan with conservation organisation and local members of the community who are likely to be affected by proposed changes to management.
- * Conservation organisation to provide information on proposed changes, explain the reasons for the change in management and clearly demonstrate the scientific knowledge that has gone into designing this proposal.
- * Facilitate meeting between groups in order to initiate constructive dialogue between parties and improve relations.
- * Local stakeholders to explain cultural significance of wild food collection to forest managers.
- * Potentially set up a joint committee consisting of foresters and community members to discuss future forest use and explore management options that incorporate interests of both parties.

Once this initial phase has been completed the analysis should be continually updated by the project team whenever new information comes to light to ensure it remains an up-to-date working document and provides a valuable source of information that can be drawn upon by all members of the project team.

Type of issue	Description of issue	Analysis of issue
Conflicting interests	Local community collect wild food products in the forest and it is a source of income for some individuals. Conservation organisation want to stop collection of wild foods as there is concern that overexploitation is impacting the populations of some edible species.	Perceived difference in interests relate to the use of the forest (conservation versus provisioning wild foods and supporting local traditional livelihoods). Perceived threat of the conservation organisation restricting use of the forest by local community.
Information issues	Local community have not been provided with information on how wild food collection is threatening wild species or information on how to sustainably manage these resources. Community question whether the species under question are actually threatened. They are calling into question what is underpinning this claim.	Lack of information provided to community explaining reasons for actions by conservation organisation. Validity of information confirming conservation status of threatened forest species.
Difficult relationships	Previous conflict between some members of the community and conservation organisation over access to the forest.	Local community feel conservation of wildlife is taking precedence over community well-being and livelihoods and feels they have lost control over their local woodlands.
Structural issues	Limited consultation with local community on forest use.	Lack of consultation with all local stakeholders likely to be affected by changes in forest management.
Conflicting values	Wild food collection has been part of village tradition for centuries and is a significant source of income to some local residents.	Conservation organisation failed to appreciate the local cultural and economic importance of wild food collection.

TOOL 3: ANALYSING STAKEHOLDER RIGHTS, RESPONSIBILITIES, RETURNS AND RELATIONSHIPS (THE 4R'S)

This analysis will enable the project team to examine relationships among stakeholder groups. Applying this tool will require clear explanation and guidance, as it requires stakeholders to understand the conceptual categories. Understanding the differences between stakeholder in regards to the 4 R's is a useful step towards addressing conflicts, as inequalities that relate to these four factors can influence power relationships and shape

allegiances amongst stakeholder groups. Understanding relationships is particularly informative for recognising existing networks; identifying potential new alliances; identifying and evaluating possible intermediaries; and gaining a better understanding about the powerbase of stakeholders.

UNDERTAKING AN ANALYSIS OF THE 4 R's:

1. EXPLAINING PURPOSE AND DEFINING THE 4 R's

- * Explain the purpose of the activity to the stakeholders.
- * Define the meaning of the 4 R's: Rights are defined as access or control; Responsibilities are roles and power relations; Returns are the benefits and costs realised by stakeholders based upon their rights and responsibilities; Relationships are how the stakeholders interact or relate to one another.
- * Invite stakeholders to list all stakeholders that are identified as being involved in the conflict.
- * Based on this information construct a 4 R's analysis table (see example on the following page).
- * Request the stakeholders to complete the table for each of the stakeholders involved in the conflict.

2. STAKEHOLDERS CONSTRUCT CONFLICT MATRICES

- * Ask stakeholders to review and clarify the terminology of the 4 R's.
- * Invite stakeholders to describe existing rights, responsibilities and returns for each group of stakeholders and score each one on a scale of 0 to 5 (0=None and 5=High). It is important to clarify that scoring for responsibilities must reflect the reality of policy and legal requirements, not the responsibilities that are actually displayed (i.e. some stakeholders may voluntarily adopt certain responsibilities that have no policy or legal foundation).
- * The task is complete once information has been completed in all of the columns in the analysis table and all stakeholders have been ranked according to respective weighting of rights, responsibilities and returns.

The table below shows a hypothetical scenario to highlight how a 4 R's analysis may be undertaken.

Scenario: A research project is undertaking a study that is assessing the role that urban 'brown field' sites play in conserving rare endangered species. The outcomes of the project may be used to influence the future use options of brown field sites in the local area. A large area within the study site under observation is currently earmarked for development into a recreational theme park. Another section of the site has been purchased from the local council a number of years ago by a conservation consortium that is made up of a conservation NGO, a local ornithology club and a local angling club, all of whom are likely to strongly oppose any development plans. The local council, the theme park company, and the local community are in favour of the development as it will help improve the local economy and bring jobs to the area. A crucial element of the project is to assess how local communities are using the site and how they perceive it as an urban 'green space'. However, stakeholders are concerned about becoming involved with the study. The project team decides to undertake a 4 R's analysis. A template of this matrix can be found in the appendices of this *Handbook*.

Stakeholder	Rights	Rank	Responsibilities	Rank	Returns Positive (+) and Negative (-)	Rank
Theme park company	None	1	Conducting impact assessment. If development goes ahead, ensuring that activities are conducted in a manner that limits disturbance to wildlife and ecosystems.	4	+Revenue from ticket and merchandise sales. +Partnership with local tour operators to promote Theme Park. +Positive publicity through job creation and urban regeneration. -Reduced biodiversity. -Possible negative publicity for impacting on biodiversity.	5
Local council	Owner of the land earmarked for development	5	Reviewing planning applications. Ensuring public interest is fully considered. Ensuring that legal requirements placed upon developers are adhered to. Organising planning meetings. Managing and maintaining the site. Ensuring that any current or future activities do not have negative impacts on protected species and habitats.	5	+Improved local infrastructure. +Urban regeneration. +Local job creation. +Increased trade for local businesses. +Increased tourism. +More media coverage of the local area. +Revenue from the sale of land. -Increased traffic on roads. -Reduced biodiversity. -Possible negative publicity for impacting on biodiversity.	4

Local chamber of commerce	None	1	Attracting business to the area. Providing jobs for the local community. Running training schemes for local young people. Promoting the conservation areas as a tourist attraction. Working to attract investment to the area.	2	+Job creation. +Increased visitor numbers to the area will support local businesses. +Potential trade deals with the theme park. +Improved infrastructure attracting people to the area. -People may avoid the area due to increased traffic caused by the theme park visitors. -Some businesses may come into direct competition with the theme park.	3
Local Community	None	1	Adhering to access rules and recreation code set out by the conservation consortium when using the nature reserve.	1	+Job creation. +Better infrastructure. +Increased recreation activities. +Urban regeneration. +Boosted local economy. -Increased visitor numbers mean more traffic on local roads. -Local services could become over-stretched. -Increased pollution from traffic and extra waste generated by tourists. -Loss of urban green space.	4
Conservation consortium	Owner of adjoining land that is managed for wildlife conservation. Exclusive recreational fishing rights for all watercourses on the private land.	4	Managing the site as a nature reserve. Ensuring all activities have no adverse impact on protected species and habitat. Conducting ongoing monitoring programmes. Providing data to the local university and record centre.	4	+Increased tourist number to the nature reserve. -Disturbance of wildlife and habitats. -Likelihood of fewer rare birds impacting bird watching opportunities. -Disruption of hydrological cycle affecting watercourses and angling. -Potential problems with increased pollution. -Loss of habitat connectivity and total habitat area.	1
University	Currently have access rights to all areas of the site to conduct scientific research.	3	Using research methods that have no impact to site.	1	-loss of access to research site. -disruption of long-term research.	0

This table shows the ranking of stakeholders according to rights, responsibilities and benefits.

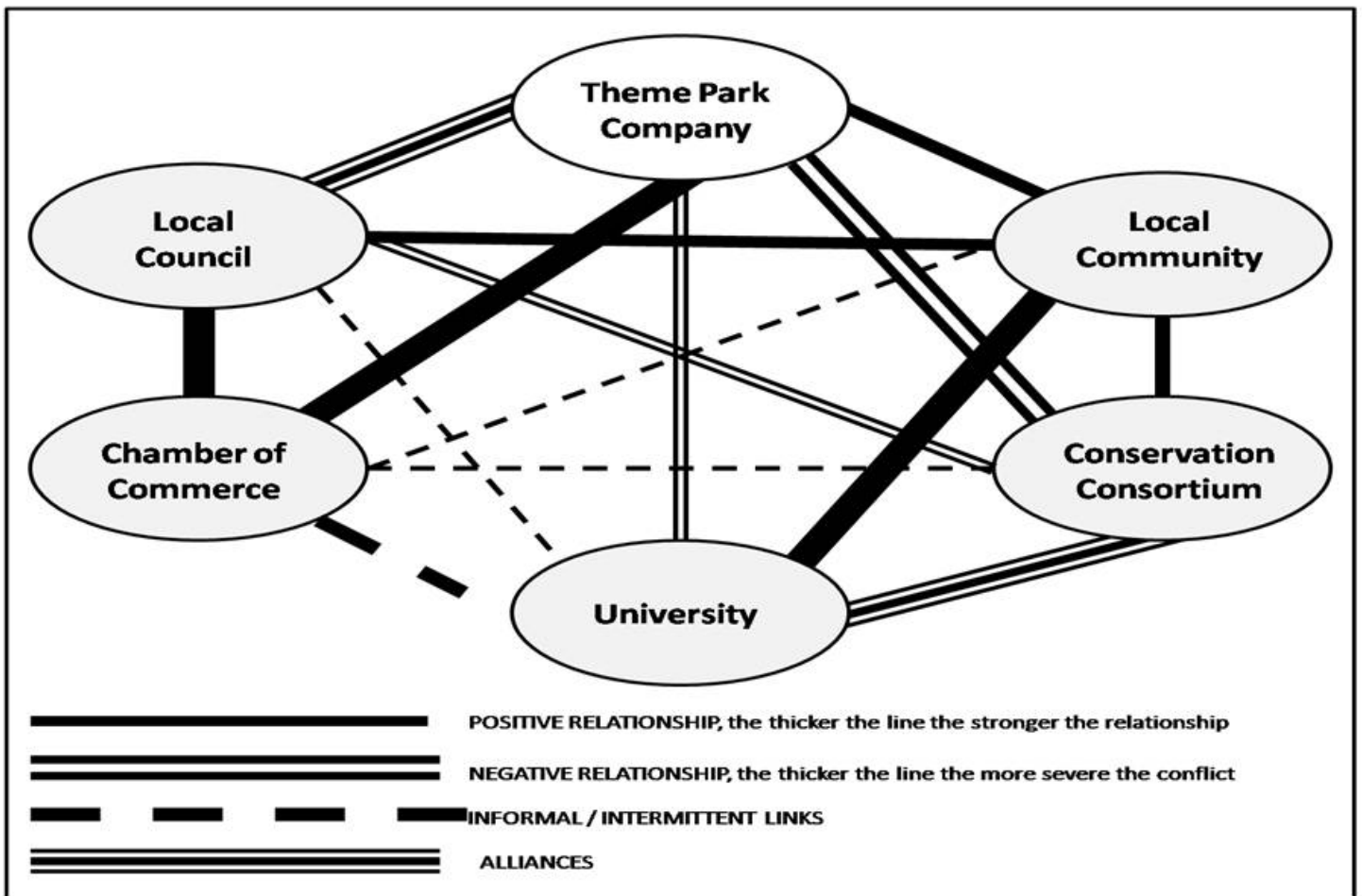
Rank	Greatest Rights	Most Responsibilities	Most Benefits
1	Local council	Local council	Theme park company
2	Conservation consortium	Conservation consortium	Local council
3	University	Theme park company	Local community

3. INITIATE DISCUSSION

- * Within the group discuss what was learnt from conducting this exercise.
- * Assess how stakeholders differ in their rights, responsibilities and returns, and how these differences may impact each stakeholder's power or influence in the conflict.
- * Consider whether there is any scope for any changes be made that could reduce the level of conflict.

4. ANALYSE RELATIONSHIPS BETWEEN STAKEHOLDERS

- * The second phase of the discussion should focus on analysing the relationships amongst stakeholders.
- * Invite participants to discuss relationships in order to ascertain whether they are negative and conflicting or positive and cooperative.
- * Consider whether these relationships are intermittent or long-term and well established.
- * In order to assist the discussion it may be useful to create a diagram that helps visualise relationships (see an example on following page).
- * Encourage participants to discuss what this activity has highlighted, in particular how rights, responsibilities and returns affect relationships.
- * Within the group analyse the complexities of relationships and ascertain whether there are any shared histories.
- * Ask participants to identify potential alliances that may help strengthen their position.
- * If required, attempt to identify a potential trusted intermediary that could be used to assist in conflict management.



Example of a stakeholder relationship map.

¹ FAO (FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS), 2005. Negotiation and mediation techniques for natural resource management. Rome, Italy.
Available at: <ftp://ftp.fao.org/docrep/fao/008/A0032E/a0032e00.pdf>

Annex 2 of “*The BiodivERsA Stakeholder Engagement Handbook*. BiodivERsA, Paris (108 pp). © BiodivERsA, Paris, 2014”

The BiodivERsA Stakeholder Engagement Handbook is available online at <http://www.biodiversa.org/577>



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For further information on this report, contact:

Helen Baker (helen.baker@jncc.gov.uk) or Matt Smith (matt.smith@jncc.gov.uk)

This template has been designed to be used for stakeholder identification, categorisation, noting the reasons for engagement and identifying potential stakeholder benefits realised from engaging. An example of how to complete this matrix can be found in Table 3.1 in Section 3 of the *BiodivERsA Stakeholder Engagement Handbook*.

Stakeholder	Category (e.g. NGO, general public, government department)	Reasons to involve the stakeholder(s)	Why the stakeholder may want to be involved (benefits)

This template is an example of a stakeholder interest-influence matrix. The user may consider inserting additional columns to capture more detail about each stakeholder than is typically possible using graphical techniques. Information on how to use this template can be found in Section 3 of the *Biodiversa Stakeholder Engagement Handbook*.

Name of Organisation	Interest (High (H)/Medium (M)/Low (L))	What aspects of the research are they likely to be interested in?	If interest is L/M, how might we motivate engagement with the research?	Key messages from your research for this group	Influence H/M/L	Comments on influence (e.g. times or contexts in which they have more/less influence over the outcomes of your research)	Key contact(s) and best way of contacting them

This template has been designed to help understanding existing relationships between stakeholders, their knowledge and views of a project and their willingness and capacity to engage. Examples of typical stakeholders and possible overall levels of engagement have been provided in Table 3.3 in Section 3 of the *Handbook*. The overall level of engagement will depend on the results of mapping exercises and information on this and how to use this template can be found in Section 3 of the *BiodivERSA Stakeholder Engagement Handbook*.

Stakeholder	Existing relationship	Relationship with other stakeholders	Knowledge of the project	Views on the project	Best means of communication	Willingness to engage	Capacity to engage
Collaborate							
Involve							
Consult							
Inform							

This template can be used when planning activities for different levels of engagement with various stakeholders at particular points within the project cycle. The project timescale (top row) indicates the most likely stage at which each method would be applied. An example of how to undertake stakeholder engagement activity planning and how to use this template can be found in Section 6 of the *Biodiversa Stakeholder Engagement Handbook*.

Project Timescale →	Before		Before / During		During		During / After		After	
↑ Roles of Stakeholders										
↓ Stakeholders	Specific stakeholder activities									

This template can be used for categorising stakeholders into ‘High Dedication’ and ‘Lower Dedication’ depending upon perceptions of the project and perceived goals. An example of how to undertake stakeholder categorisation and how to use this template can be found in Section 7 of the *Biodiversa Stakeholder Engagement Handbook*.

	High Dedication to project goals		Lower Dedication	
	Critical to project success	Non-critical	Critical	Non-critical
Similar perceptions on use of project results				
Opposite perceptions				

This template provides a simple stakeholder engagement evaluation table that can be used when evaluating stakeholder engagement activities that have taken place throughout the project. Information on how to evaluate stakeholder engagement is discussed in Section 8 of the *BiodivERSa Stakeholder Engagement Handbook*.

	What do you want to know?	What evaluation methods will you use?	How will the evaluation be conducted?
Planning Process			
Engagement			
Benefits			
Outcomes			

This template is designed to be used when evaluating the outcomes and impact of the engagement process. Information on how to consider the aims and objectives of stakeholder engagement activities is discussed in Section 8 of the *BiodivERSa Stakeholder Engagement Handbook*.

Activity	Goals/purpose	Possible indicators	How to obtain data	Important assumptions

This template is designed to be used when evaluating the roles, responsibilities and returns associated with various stakeholders. Information on how to undertake this activity is discussed in *Annex 2 Conflict Management Tools of the BiodivERsA Stakeholder Engagement Handbook* (Tool 3 – Analysing stakeholder rights, roles, responsibilities, returns and relationships).

Stakeholder	Rights	Rank	Role	Rank	Returns Positive (+) and Negative (–)	Rank

Rank	Greatest Rights	Most Responsibilities	Most Benefits