Task T1.2-1

GUIDELINES FOR STAKEHOLDER MAPPING AND ESTABLISHING STAKEHOLDER BOARD IN MAINSTREAMING RESTORATION IN MERLIN

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Content

1   Introduction

The purpose of this note is to develop a guideline for stakeholder mapping in MERLIN[1] case studies in Work Package (WP) 1 and WP 2[2] to establish Case Study Boards (CSB)[3]. The guidelines developed here are based on the notion that mainstreaming nature-based solutions (NbS) and ecosystems restoration is complex, attracting a wide range of stakeholders; and they may have common or divergent interests. In particular, NbS implementation and management cut across different sectors and administrative scales[4]. The sectoral interests can include water resources, recreation, environmental management, agriculture and forestry, which will usually depend on the functions performed by NbS. It terms of scale, it can range from neighborhood, city (town), catchment, regional to national levels. Apart from the interests that each of these sectors and scale have in the project, they can affect or be affected by the NbS implementation differently.

With this complexity, a major challenge to NbS implementation and restoration of ecosystems is not just identifying these stakeholders, but theirs interests and how they are affected or can affect the implementation are also important. However, it is also a challenge to develop a conducive strategy to manage such interests when there is a conflict. These challenges call for Stakeholder Mapping (SM).

> Whether or not NbS initiatives will be successful, it will depend on several context-specific issues, including stakeholders and their attributes. Stakeholder mapping will help to identify the stakeholders, understand their attributes and how they should be engaged to facilitate the restoration process

This guideline integrates recommendations from both scholarly articles and policy frameworks related to NbS, natural resources management, water resources governance and ecosystems restoration. In the next step, the meaning of stakeholders is defined and contextualized for MERLIN and WP1 & 2. Section 3 explains the meaning of stakeholder mapping (analysis), its purpose and benefits. Section 4 presents the framework, steps and methods for SM, while Section 5 provides the guidelines for categorizing the and mapping stakeholder networks. The final section summarizes the process with key takeaway messages. The guidelines provide detail and best practice but can be modified to suit the timelines and resources available to the MERLIN partners.

For partners involved in on-going projects with case study boards already formed and running, MERLIN asks us to consider restoration upscaling and mainstreaming to meet the Green Deal goals – in this context, do you have the best mix of stakeholders to achieve the regional scalability plans for the future? To effectively, address this question, apply the template and the guideline to review your on-going processes and make necessary revisions.

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[1] MERLIN stands for Mainstreaming Ecological Restoration of freshwater-related ecosystems in a Landscape context: INnovation, upscaling and transformation

[2] WP 1 centres on demonstrating good practice from existing restoration projects, whilst WP2 considers how to innovate and upscale these restoration measures within the region.

[3] Case Study Boards comprise communities and key stakeholder representatives established to jointly promote the upscaling and optimization of restoration initiatives across various case studies in MERLIN.

[4] *OECD. (2015). Stakeholder Engagement for Inclusive Water Governance.*

2   Who are stakeholders?

Keywords usually contained in the definition of stakeholders are interests and influence (effects) and how they relate to different sets of actors. For instance, the OECD[5] - in the context of water resources governance – defined stakeholders as "a person, group or organisation who has an interest or stake in a water-related topic, may be directly or indirectly affected by water policy, and/or have the ability to influence the outcome positively or negatively." This definition is similar to that of the IUCN[6] – in the context of Environmental & Social Management System. From these definitions, the meaning of a stakeholder can be simplified in Figure 1.

Figure 1 - Figure 2 - Meaning of stakeholders simplified (Source: Ibrahim, 2021)

In the context of MERLIN, stakeholders are those individuals, communities, groups, institutions, and organizations who have direct and indirect interest and the potential to positively or negatively influence freshwater and ecosystems restoration initiatives a across MERLIN case studies.

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[5] *OECD. (2015). Stakeholder Engagement for Inclusive Water Governance.* Page 35

[6] IUCN Environmental & Social Management System (ESMS). (2021). Guidance Note: Stakeholder Engagement in IUCN projects. Retrieved from https://www.iucn.org/sites/dev/files/esms_stakeholder_engagement_guidance_note.pdf.

3 Stakeholder Mapping: Purpose and benefits

While there are different definitions for stakeholder mapping (or stakeholder analysis)[7]. Stakeholder mapping is an iterative process and a methodology for identifying stakeholders and examining their attributes, including interests, power and how they can influence or be affected by the restoration initiative. In MERLIN WP1 and WP2, the primary purpose of stakeholder mapping is to create CSBs to co-create, optimize and upscale restoration across various case study sites. The CSBs will be the foundation for enhancing participation throughout the lifecycle of MERLIN case studies. Overall, the purpose and benefits of stakeholder mapping include the following:

→ To examine key stakeholders, their knowledge, interests and influence

→ To understand how they can affect and be affected by the restoration process and outcomes

→ To identify and understand their relationships

→ To examine and improve leadership potential of stakeholders

→ To identify and examine who and how they should participate in the process

→ To examine how to address stakeholders' concerns and conflicts

→ To empower the marginalized stakeholders

→ To motivate, priorities and attract their support

Attention should be paid to the fact that stakeholder mapping is an iterative and there can be several parameters for the mapping. Understanding the iteration of the mapping will help to continuously update the process and fill identified gaps. Past project outcomes show that inadequate consideration of stakeholder attributes may lead to project failure due the lack of collaboration/cooperation and objection of the project by certain groups[8]. Hence, the stakeholder mapping should be thoughtful, but flexible. The literature shows that success factors of stakeholders mapping[9] (engagement) and consequently the restoration process include being purposeful, timely, fair and transparent, participatory, respectful and comprehensive. These principles are illustrated in Figure 2.

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[7] Sample definition for stakeholder analysis or mapping can be found in the following resources:
- OECD. (2015). Stakeholder Engagement for Inclusive Water Governance.
- Reed, M. S., Graves, A., Dandy, N., Posthumus, H., Hubacek, K., Morris, J., . . . Stringer, L. C. (2009). Who's in and why? A typology of stakeholder analysis methods for natural resource management. Journal of environmental management, 90(5), 1933-1949.
- Grimble, R., & Chan, M. K. (1995). Stakeholder analysis for natural resource management in developing countries: some practical guidelines for making management more participatory and effective. Paper presented at the Natural resources forum.
- Zingraff-Hamed, A., Hüesker, F., Lupp, G., Begg, C., Huang, J., Oen, A., . . . Pauleit, S. (2020). Stakeholder Mapping to Co-Create Nature-Based Solutions: Who Is on Board? Sustainability, 12(20), 8625.
- Chevalier, J. M. (2001). Stakeholder analysis and natural resource management. Retrieved from http://www1.worldbank.org/publicsector/politicaleconomy/November3Seminar/Stakehlder%20Readings/SA-Chevalier.pdf

[8] Grimble, R. (1998). Stakeholder methodologies in natural resource management. Natural Resources Institute.

[9] Australian Government. (2005). Stakeholder Engagement Framework. Retrieved from https://www.health.gov.au/resources/publications/stakeholder-engagement-framework
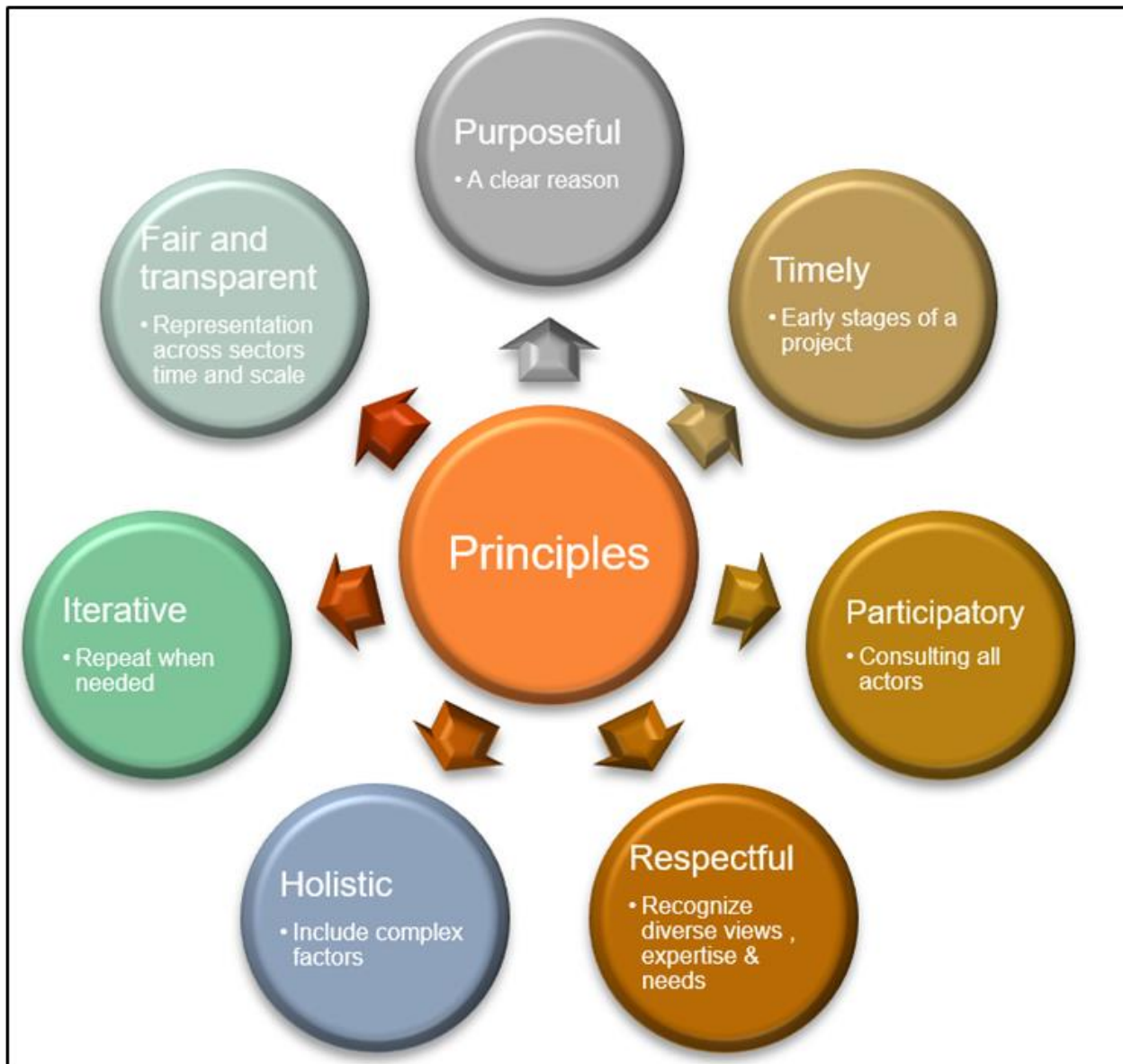
In all cases, scholars[10] advised that caution should be exercised and that loopholes to avoided include:

→   Bias (not being truthful with findings)

→   Undiplomatic analysis

→   Taking group interests and boundaries for granted: it is important to know when to separate a particular group of actors as different stakeholders and when to combine various actors into single stakeholder

→   Shying away from addressing power structures

→   Too small or too large stakeholder groups. Thus, it may not be too inclusive or descriptive

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[10] See the following articles for example:
- Zingraff-Hamed, A., Hüesker, F., Lupp, G., Begg, C., Huang, J., Oen, A., . . . Pauleit, S. (2020). Stakeholder Mapping to Co-Create Nature-Based Solutions: Who Is on Board? Sustainability, 12(20), 8625.
- Reed, M. S., Graves, A., Dandy, N., Posthumus, H., Hubacek, K., Morris, J., . . . Stringer, L. C. (2009). Who's in and why? A typology of stakeholder analysis methods for natural resource management. Journal of environmental management, 90(5), 1933-1949.
- Chevalier, J. M. (2001). Stakeholder analysis and natural resource management. Retrieved from http://www1.worldbank.org/publicsector/politicaleconomy/November3Seminar/Stakehlder%20Readings/SA-Chevalier.pdf

4   Framework, steps and methods for stakeholder mapping

It is important to understand that the stakeholder mapping can take different forms[11]. There are the simpler frameworks which are usually based on their power/influence and interests. It can also be analysed based on the interface between power, legitimacy and urgency. There are also the detailed and holistic frameworks which aims to address the complex and intertwined issues related with natural resources management. As mentioned earlier, ecosystems management can contain diverse actors across scale, time and sectors. This diversity must always be evaluated, understood and factored into the analysis. Hence, while all the cases may follow the same steps, each case may vary in terms of outcome due to this diversity. For the purpose of WP1-2 developing and working with CSB, five key steps have been identified for the mapping as illustrated in Figure 3.

Figure 3: The framework and steps for stakeholder mapping (Source: Ibrahim, 2021)

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[11] See for example:
- Durham, E., Baker, H., Smith, M., Moore, E., & Morgan, V. (2014). The BiodivERsA stakeholder engagement handbook. BiodivERsA, Paris, 108.
- dos Muchangos, L. S., Tokai, A., & Hanashima, A. (2017). Stakeholder analysis and social network analysis to evaluate the stakeholders of a MSWM system–A pilot study of Maputo City. *Environmental Development, 24*, 124-135.
- Reed, M. S., Graves, A., Dandy, N., Posthumus, H., Hubacek, K., Morris, J., . . . Stringer, L. C. (2009). Who's in and why? A typology of stakeholder analysis methods for natural resource management. Journal of environmental management, 90(5), 1933-1949.
- Chevalier, J. M. (2001). Stakeholder analysis and natural resource management. Retrieved from http://www1.worldbank.org/publicsector/politicaleconomy/November3Seminar/Stakehlder%20Readings/SA-Chevalier.pdf

All case studies should complete at least steps 1, 2 and 3. Steps 4 and 5 are optional steps. In cases where case study boards (CSB) already exist, the steps can be used to evaluate whether the existing participants could be supplemented. This evaluating the current boards based on the guidelines here is important because MERLIN asks us to consider restoration upscaling and mainstreaming to meet the Green Deal goals. Hence, it is important to ask if you have the best mix of stakeholders to achieve the regional scalability plans for the future.

Each step would have its own methods and strategies. The first two steps[12] – identifying and clarifying the rationale and developing overall understanding of the system – seem to be underrated in the existing literature. However, they are as important as the subsequent steps. Overall, the methods used can include document reviews, interviews, questionnaires and focus group discussion. However, whichever method is used depends on the purpose and intended outcome of the mapping exercise. Hence, there can be modifications to the framework to suite specific contexts, including project goals, time availability and resources.

4.1   Identifying and clarifying the rationale

In line with the 'purposeful' principle, the rationale for the stakeholder mapping should be clearly stated. The main reason for this analysis in MERLIN WP1 is to establish CSB to lead the upscaling and optimization of restoration across case studies; and useful information can be found in the Grant Agreement and presentations at the Kick-Off meeting. It is important for the case study leads to discuss and agree on their particular focus. Each case should determine the working definitions for various issues regarding the stakeholders, the objectives of SM and the intended outcome. Also, the problem that need to be addressed should be specified. The range of stakeholders to be identified may be addressed differently, depending on the role of each stakeholder group as presented in Figure 4. Thus, while some stakeholders will be informed, others may need the MERLIN partners to empower them to lead and co-create restoration. As illustrated in Table 1, The excel Sheet 1 (SM Rationale (Brief description) can be used to address these issues. The information in the sheet can be complemented by the responses in the IUCN NbS Self-Assessment Tool.
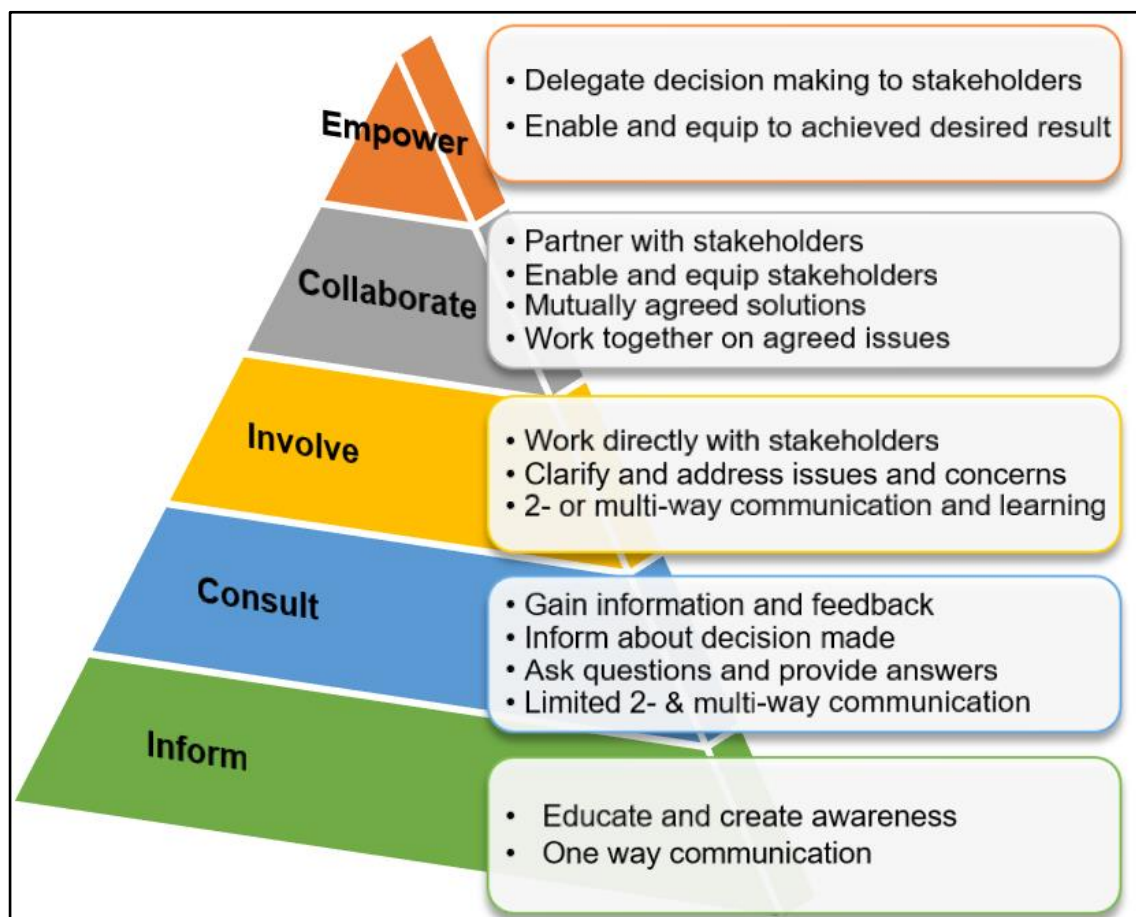
Figure 4: The purpose for mapping stakeholder groups (Source: Ibrahim, 2021)

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[12] Grimble, R. (1998). Stakeholder methodologies in natural resource management. Natural Resources Institute.

Table 1: Determining the rationale for Stakeholder mapping

Issue	Description
Name of Case study	
Main challenges or problems (A problem tree can be used if possible)	
Reasons of stakeholder mapping and engagement (These include to inform, Consult, involve, collaborate and empower actors)	
What results to expect the MERLIN project ends?	
Any other expectation	

4.2   Developing overall understanding of the system

This is a very important stage given that each of the case studies have different attributes in terms of spatial scale (boundary), stakeholders, challenges being faced, decision-making frameworks, distribution of responsibilities and interventions required. Consequently, all case study leads should build a comprehensive understanding of their case study based on these issues. An initial rapid appraisal of each case will be required - the IUCN self-assessment tool will give partners this overview. Further methods include reviewing the relevant documents and policies for the case, consulting decision-makers, prior observation of stakeholders in the region and asking relevant questions related to these issues. Issues to consider in each system attribute are listed in Table 2. The excel Sheet 2 (System Description) can be used to address these issues. The information in the sheet can be complemented by the responses in the IUCN NbS Self-Assessment Tool.

Table 2: Parameters for understanding the system for which SM is required

System attribute	Issues to consider (Not limited to these, but each is essential)
1. Spatial Scale of intervention and case	Town, city, catchment (no of basins if any), national, or transboundary
2. System components - biophysical	Type of freshwater system (wetlands, rivers) and relevant land cover in the catchment
3. System components – socio-economic	Key sectors (water, agriculture, spatial planning, etc) who would be impacted, or could enable restoration (including finance).
4. Distribution of stakeholders	Number of local government areas, number of towns/communities/zones, demographic trends and composition; norms, land ownerships, private entities, etc.
5. Decision-making process	Existing rules and policies, key decision-makers, participation process and requirement
6. Responsibilities	Which actor is responsible for which sector and/or which part of the catchment?
7. Interventions	What kind of restoration is required in each case? Dam removal, riparian restoration, rewetting, natural water retention measures, channel restoration, reconnection of floodplains.

Source: Ibrahim, 2021

We are compiling potential questions for the stakeholders in the CSB to help with this system understanding, to allow any gaps to be identified and addressed.

4.3 Identification of stakeholders

After developing an overall understanding of the system, the next activity is to begin identifying the stakeholders. Ideally, interviews, questionnaires and focus groups could aid in the identification of the stakeholders include reviews. Nevertheless, it will be more appropriate for the case partners to initially conduct a brainstorming[13] exercise and identify the most obvious stakeholders. Following the brainstorming, further approaches can be used to further identify both obvious and less obvious stakeholders. What is important is to clearly identify the scale, sector, type and areas of interest where each stakeholder belongs to. Table 3 provides an outline of the stakeholder identification process. This table can be used a stakeholder register and regularly updated. The end result is to select the stakeholders with significant interest in restoration. An excel spreadsheet to allow this to be done will be available [here].

Table 3: Stakeholder identification outline

Stakeholder name	Acronym	Sector	Involvement status	Scale (Local, municipal, regional, national)	Ownership (Public, Private, NGO, Community group)	Description: Expectations, interests, responsibilities	Lead Contact (Name and Email)	Weblink

Source: Ibrahim, 2021

4.4 Examining attributes of stakeholders

Following the list of stakeholders, the characteristics of each stakeholder should be examined. There are several and varying attributes used to define stakeholders. However, the more nuanced the attributes, the better the understanding of stakeholders to consider for the stakeholder boards. Table 4 presents these attributes compiled[14] with further explanation. See the excel template created for this purpose. Each of the attributes in Table 4 is explained below:

A. Knowledge and expertise: Denote the knowledge and awareness of the stakeholders regarding the restoration issues being addressed. This will be determined partly by how each stakeholder understands the restoration initiative and have expertise to undertake certain initiative. However, lack of knowledge is not a good reason to exclude stakeholders.

B. Position: The stakeholders' stance, whether they support or do not support the project. The opposition and support can all be moderate. Sometimes stakeholders can be neutral.

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[13] See the following references:
- IUCN Environmental & Social Management System (ESMS). (2021). Guidance Note: Stakeholder Engagement in IUCN projects. Retrieved from https://www.iucn.org/sites/dev/files/esms_stakeholder_engagement_guidance_note.pdf.
- Jepsen, A. L., & Eskerod, P. (2009). Stakeholder analysis in projects: Challenges in using current guidelines in the real world. International journal of project management, 27(4), 335-343.
- Zingraff-Hamed, A., Hüesker, F., Lupp, G., Begg, C., Huang, J., Oen, A., . . . Pauleit, S. (2020). Stakeholder Mapping to Co-Create Nature-Based Solutions: Who Is on Board? Sustainability, 12(20), 8625.

[14] See the following references:
- Chevalier, J. M. (2001). Stakeholder analysis and natural resource management. Retrieved from http://www1.worldbank.org/publicsector/politicaleconomy/November3Seminar/Stakehlder%20Readings/SA-Chevalier.pdf
- Grimble, R. (1998). Stakeholder methodologies in natural resource management. Natural Resources Institute.
- Kennon, N., Howden, P., & Hartley, M. (2009). Who really matters?: A stakeholder analysis tool. Extension Farming Systems Journal, 5(2), 9-17.
- Schmeer, K. (2000). Stakeholder analysis guidelines. Policy toolkit for strengthening health sector reform, 2, 1-43.

C. Interests: The level of interest in the project and how the project will affect the stakeholders. Some stakeholders will be advantaged (positive), while others may be disadvantaged (negative). Others may not have either of these. Whether stakeholders have positive or negative attributes, their interest could be high, low, or moderate.

D. Alliances and relationships: Existing relationships can influence stakeholders to change their mind or consolidate positions, whether to oppose or support the project.

E. Influence: the ability to affect the implementation of a project through financial or other means (e.g. political influence, social media influence). In this guide we prefer the use of influence over power because using power

F. Leading: The ability and willingness of stakeholders to initiate or lead an action.

Table 4: Stakeholder Attributes

Stakeholder name	Acronym	Knowledge & expertise	Position	Interest		Influence	Leading	Alliances	Overall comment
		5 = Very high 4 = High, 3 = moderate 2 = Low, 1 = Very low	Sup. Neu. Opp.	Kind of interest: positive neutral, negative	5 = Very high 4 = High, 3 = moderate 2 = Low, 1 = Very low	5 = Very high 4 = High, 3 = moderate 2 = Low, 1 = Very low	5 = Very high 4 = High, 3 = moderate 2 = Low, 1 = Very low	List names of stakeholders	Any observation about attributes

4.5 Categorizing, mapping networks & determining strategy to manage and influence stakeholders

The final stage involves grouping stakeholders based on their attributes. It also means determining the network that exist between the stakeholders, following which a strategy to manage and influence the stakeholders will be decided. The strategies are those already identified in Figure 4. As mentioned earlier, this analysis is not just to identify the stakeholders to be engaged: it is also about establishing the stakeholder boards (people resource) to lead the implementation of the restoration projects[15].

An easier way to start the categorization is to use the excel filtering to know which stakeholders fall under which ranking. For instance, filtering can be used to identify all stakeholders that have high interest or those that have high influence or low influence. However, this form of filtering does not provide a very good visual impression and a comparison between two different indicators.

Consequently, we propose the use of interest-influence matrix to visualize and group the stakeholders. There will be three levels of categorization as presented below. In addition to the matrix, the alliance and relationships between the stakeholders can be determined. These processes are detailed further below.

4.5.1 Alliance and relationship

Understanding the relationship between stakeholders can be mapped using a matrix where all the stakeholders are listed in both the first column and first row as illustrated in Table 5. Each stakeholder will then be compared

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[15] Kennon, N., Howden, P., & Hartley, M. (2009). Who really matters?: A stakeholder analysis tool. Extension Farming Systems Journal, 5(2), 9-17.

with the other to understand the kind of relationship that exists between them. For each comparison, the relationship could be 'conflict', 'complementary', or 'cooperation'. The basic idea is to understand which stakeholders can work together to deliver the project and how to address their conflicts and capitalize on their positive relationships. In the excel sheet 5, one relationship type can be selected for each comparison.

→ Conflict: A stakeholder feels an action or activities of another stakeholder may negatively affect them. It can also mean the interest of two or more stakeholders are incompatible with each other resulting in opposition to others' interest.

→ Complementary: The actions of a stakeholder can fulfil the activities of another stakeholder or vice versa.

→ Cooperation: Two or more stakeholders can work together to achieve a common goal.

Table 5: Stakeholder relationship matrix

	Stakeholder 1	Stakeholder 2	Stakeholder 3	Stakeholder 4	Stakeholder 5	Stakeholder 6	Stakeholder 7
Stakeholder 1							
Stakeholder 2							
Stakeholder 3							
Stakeholder 4							
Stakeholder 5							
Stakeholder 6							
Stakeholder 7							

Use the excel drop down in Tab 5 to indicate whether there is 'conflict', 'cooperation' or 'complementary', between each pair of stakeholders.

4.5.2 Interest vs Influence

Influence/interest matrix is a common tool for grouping stakeholders[16]. It is an easy way to understand those stakeholders with high interest-power and low interest-power. As shown in Figure 5, the level of interest/power determines the level at which the stakeholders will be engaged. For example, stakeholders with low influence and low interests will be informed, while those with high interest and high influence should be empowered and collaborated with. Stakeholders within medium categories may need a combination of consultation and active engagement.

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[16] Important references include:
- Durham, E., Baker, H., Smith, M., Moore, E., & Morgan, V. (2014). The BiodivERsA stakeholder engagement handbook. BiodivERsA, Paris, 108.
- https://www.era-learn.eu/documents/era-learn-publications/policy_brief_stakeholder_engagement.pdf

Interests			
	Low	**Medium**	**High**
Influences — **High**	**Involve/Consult** → Keep adequately informed → Maintain regular contacts → Understand and consider needs → Obtain feedback		**Collaborate/Empower** → Fully engaged → Work together on all decisions → Solicit their support → Keep them satisfied
Medium			
Low	**Inform** → Provide balance and fair information → Limited monitoring and management		**Consult** → Obtain feedback on all decisions and options → Address their concerns → Should not be inundated with information

Figure 5: Power/interest matrix

The excel sheet 6, Grouping (Interest vs Influence) in the provided template has been set up to automatically generate the categorization. In addition, location of stakeholders on the power-interest matrix can be combined with a third variable (or attribute) such as stakeholder's knowledge, leadership and position. In the excel template, knowledge is added as the third variable. Hence, as shown in the Figure 6, the bubble size represents the knowledge and expertise of each stakeholder. It is evident that some stakeholders with low interest may have high knowledge or expertise. For example, in Figure 6, NGO1 has low influence (scale 1 on influence axis), but with high interest (scale 4 on interest axis) and high knowledge and expertise (bubble size).

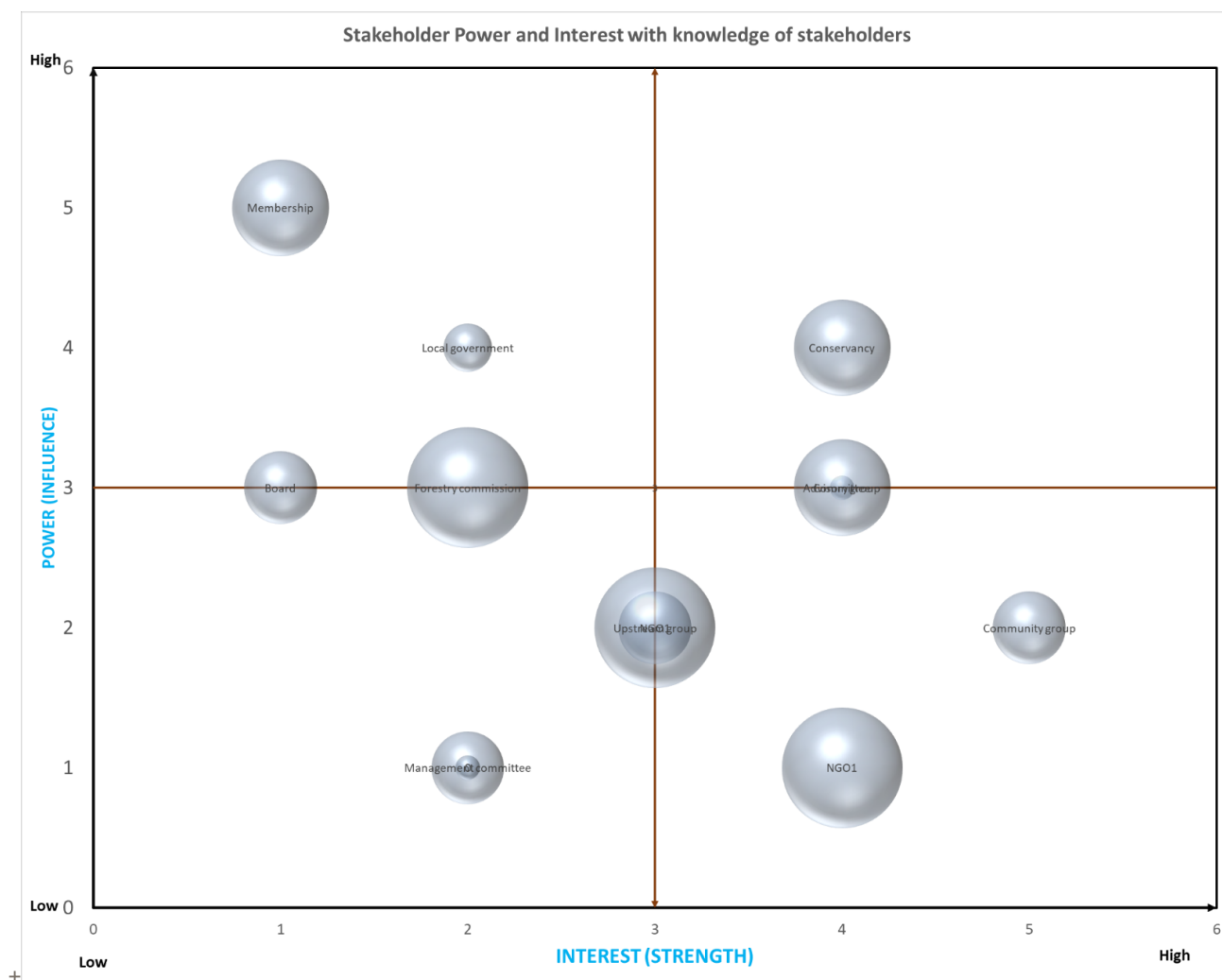**Stakeholder Power and Interest with knowledge of stakeholders**

Figure 6: Illustration of how the stakeholder interest and influence will be mapped. The sizes of the bubbles in this example represent knowledge of stakeholders.

Source: Illustrated by Ibrahim, 2021

This suggested option for categorizing the stakeholders should not be restrictive. Thus, the project leads are free to adopt or integrated other variables to what is already suggested. For instance, leadership potential and willingness and could be included by varying the color of the bubbles, with orange, blue and green representing low (1&2), medium (3) and high (4&5) scales respectively. Similarly, position of stakeholders can be represented by the line type of the bubble outline, where *dotted outline, dashed outline* and *thick outline* representing opposition, neutral and support respectively. However, given time limitations, this process could be avoided and the excel filtering can be used to generate each stakeholder group.

5 Establishing or Updating stakeholder boards

The stakeholder mapping should give a clearer picture of stakeholders to inform, involve, collaborated with, empowered or those to be consulted (Please see Figure 5 in section 4.5.2). This outcome should inform the formation of the stakeholder boards, which will be established for the lifetime of the project and beyond. Overall, key factors to consider are those stakeholders who can positively influence and enable the restoration, while keeping other stakeholders with diverse interests and influence in check. It is acknowledged that various case studies in MERLIN may have their own sets of rules and guidelines for forming the stakeholder boards. Hence, these rules and guidelines should be considered when forming the boards. Also, consideration should be given to time and resource limitations when determining the range of stakeholders to be invited to the boards and stages in which they can play roles.

> Case Study Boards are being established as local coalition to facilitate co-management and co-production of restoration initiative. The aim is not to depart from the existing practices across various case studies, but to build on them to generate win-win results.

5.1 Decide structure (two tier – management + wider board)

Given the time and resource constraints, it may not be possible to form stakeholder groups for each of the levels of engagements (Collaborate/Empower, Involved, Consult, Inform) presented already. At the same time, forming only one board likely means, either a wide range of stakeholders are excluded, or the boards are made too large, which can be difficult to manage. Hence, two tier-boards are proposed here. The first-tier board will be those in the mainstream management, who should most likely come from the top-level of stakeholder matrix. Thus, this tier should be composed with stakeholders to be empowered and collaborated with. The second tier is the wider board, comprising representation of those to be involved/consulted and informed. While specific number is not being imposed, it is better to get at least one representation from each stakeholder groups identified in section 4.3. These include the various sectors and type of ownership (public, private, community and non-governmental agencies).

5.2 Decide level of formality and draft terms of reference

The level of formality should be decided and be informed by the rules and regulations related to the case-study context. However, for the Tier 1 Boards, the formality should be higher compared with Tier 2. Overall, the terms of reference should include the following:

→ Purpose, Remit, mandate, decision making protocols, conflict resolution

→ Agreed project plans

→ When and how to end (or organisations to exit)

→ Regular and ad-hoc meeting rhythm

→ Payment for time or expenses

→ Communication and feedback

It is important for stakeholders to know their roles as early as possible, and mandates should be clearly specified. The purpose of the boards should be in line with MERLIN objectives. The specific roles and responsibilities for the boards could be determined based on the stages of the project as presented in Table 6. These stages include 'before', 'during' and 'after' the project implementation. These stages could also be framed as the "design, development, implementation and evaluation" (OECD, 2015: p. 39)[17]. Thus, all the stages the roles in Table 6 capture the strategic and operational aspects of project implementation. Case studies that already have boards running can focus on 'during' and 'after' stages of the project. For case studies that are yet to begin, the 'before' stage should be included.

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[17] OECD. (2015). Stakeholder Engagement for Inclusive Water Governance.

Table 6: Possible roles that could be played by the stakeholder boards[18]

Stage of case study	Potential role and contribution to case study	Tier 1 Board	Tier 2 Board
	→ *Help to define the project concept and project design strategy, including identifying useful potential outcomes and common interests* → *Identify other potential stakeholders and possible roles* → *Help define the best governance approach for project* → *Identify possible scope of their own contributions, including motivation, and associated limitations* → *Highlight possible risks and potential for conflicts to arise* → *Advise on knowledge exchange requirements*		
Before and during	→ *Establish agreements on access to project sites* → *Provision of resources – for example, equipment, funding, staff time* → *Defining project plans, including planning* → *Co-design and development of conflict resolution approaches, if relevant* → *Networking and awareness raising with non-contributory stakeholders*		
During	→ *Assist with training of other stakeholder to enhance delivery or participation* → *Data provision, including capturing new data (monitoring)* → *Prediction and modelling – informing development of scenarios and models, or participation in data analysis* → *Review project success* → *Assist in defining and developing tools* → *Conflict resolution, if relevant*	*Collaborate, involve and consult throughout the process*	*Keep regularly informed. Consult when required.*
During and after	→ *Define, develop and help deliver knowledge exchange activities* → *Implementation of results – testing outputs of the research (e.g. tools, new methodologies, strategies)* → *Advise on data exchange requirements*		
After	→ *Publicity, promotion, via channels such as websites, academic materials, research reports, newsletters, books, guidelines, social media and the general media (newspapers, radio and television)* → *Review project success* → *Identify future information, tools and resources* → *Develop stakeholder-led monitoring and networking beyond life of funded project*		

Tier 1 (Management) Boards are likely to play more roles compared with the Tier 2 (General Boards). Nevertheless, the guiding principle should be that Tier 1 Boards will be more involved regarding the design and implementation, while Tier 2 Boards will be informed and consulted with about key elements and outputs of the project.

Meetings will be essential components of working with both stakeholder groups. However, there is no specific number of times the boards should be meeting. For the first-tier boards, the meeting is expected to be regular as they will be part of the project phases. The second-tier board can meet on ad-hoc basis and when required. Decisions on meetings should be made in consultation with the stakeholders and their needs should be considered.

5.3 Conflict resolution

It will not be surprising for conflict to exist or arise between the stakeholders. It is the case because of diverse attributes of actors and opinions related to culture, politics, financial resources and rights, among others. Even if the said conflict is not always negative (because some conflicts may result in new management options and

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[18] In formation in the first two columns (Stage if case study, and the role and contribution were adopted from Jolibert, C. (2011). Stakeholder Engagement in EU Research: bringing science to bear on biodiversity governance. Paper presented at the Conference ESEE,. 18. In Durham, E., Baker, H., Smith, M., Moore, E., & Morgan, V. (2014). The BiodivERsA stakeholder engagement handbook. BiodivERsA, Paris, 108.

ways of thinking)[19], they should be identified, evaluated and resolved. It is hoped that some of the potential conflicts might have already been identified in step 4.5.1 of the stakeholder mapping. To resolve conflicts some questions should be asked as suggested in Table 7.

Table 7: Questions to guide the resolution of conflicts

Level of conflict resolution	Relevant questions
When identifying conflicts	→ What conflicts exist at present? → What conflicts are not yet visible, but might arise? → What are possible reasons for conflicts: → in general, in the region? → *at specific points during*
After identifying conflicts	→ How did the conflict arise? → what issues/interests does the conflict concern? → how long has it been going on? → Is there sufficient information available concerning issues (why/why not)? → Who is involved in these conflicts? → what are their interests in the conflict? → what kind of official and/or traditional power do they have? → what are historical relationships between conflicting groups? → can the groups work together at all? → Why or why not? → In what manner might it be possible?
Possibilities of identifying conflicts	→ What kind of agreements could be tolerated by all? → Can the problem be solved internally or amongst groups without external assistance? → Are outsiders tolerated? → How can an outsider be involved to (re)solve the conflict? → What kind of outsider? → How can solutions/resolutions be made sustainable? → are written agreements sufficient? → what is traditionally considered "lasting" and binding? → what recourse do stakeholders have if agreements are not honoured? → *Are there also other optional "solutions"?*

Source: Questions adopted from Poolman et al. (2010: p. 10)[20]

Obtaining accurate answers to the above questions will determine how the conflicts should be resolved. Overall, four main steps to take in managing the conflicts are listed below[21]:

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[19] Poolman, M., Munamati, M., & Senzanje, A. (2010). Stakeholder and Conflict Analysis: Small Reservoirs Toolki. M. Andreini, T. Schuetz, & L. Harrington (Eds.), Small Reservoirs Project.

[20] Ibid

[21] Engel, A., & Korf, B. (2005). Negotiation and mediation techniques for natural resource management (Vol. 3). Food and Agriculture Organization of the United Nations Rome.

i. Reaching out to the parties, examining backgrounds of parties and analyzing conflicts

ii. Expanding stakeholder engagement to understand the root causes of conflicts, all the associated stakeholders, position, influence and interest and generating options for addressing the conflicts

iii. Negotiating and reaching agreement between all the parties

iv. Monitoring the resolution agreement to ensure that relationships have been improved and project implementation can proceed

5.4   Consider how to encourage participation

Despite the benefits of participatory decision-making, there are some challenges involved. One of such challenges is the lack of interest by stakeholders to take part of the decision-making process. There are other times in which stakeholders may not have adequate time or be fatigued by the engagement process[22]. Other factors that could decrease the willingness of stakeholders to participate are the pitfalls highlighted in Section 3. These factors include bias, undiplomatic analysis and imbalances between majority and minority interests. In all cases, these factors should be avoided to encourage effective participation. The stakeholder mapping should have given a good idea of those who have high interest in being part of the process. Such stakeholders could be used to reached out to the wider stakeholder groups.

Following the process for stakeholder mapping in this document could be key in overcoming the challenges to participation. Hence, principles of participation in Section 3 could be used as strong tools to overcome the challenges. For instance, letting the stakeholders to know the purpose of participation and the restoration initiative and respecting their opinions and feelings could be an important enabler. Overall, the following factors could be relevant in enhancing participation.

→   Use existing champions (brokers), leaders with high, positive interest and are connected (see step 4)

→   Support from WP5 to animate MERLIN?

→   Using professionals to support is required (i.e. if use of professionals are part of MERLIN requirement)

Other strategies recommend by Durham et al. (2014)[23] are summarised below.

→   Value stakeholders' knowledge

→   Use the stakeholder mapping to understand the stakeholders who need to be included and understand the different roles played by them

→   Ethical issues should be addressed

→   Be clear about the objectives to the stakeholders

→   Embrace flexibility and adaptability to meet the changing needs of various groups, including diverse culture, age, etc.

→   Use easy to understand language to communicate to all stakeholders

→   Value the feedback from stakeholders and be prepared to address concerns when necessary

5.5   Monitor & Evaluation of how the board is working?

The case study boards, and their activities (processes), outcome and impacts should be monitored and evaluated. Since the evaluation will be part of implementation monitoring process (Task 1.2-1) of MERLIN, not much detail will be provided here. Nevertheless, monitoring and Evaluation (M&E) will be important in the following ways[24]:

• Clarifying the purpose of the boards and measure their progress and success

• Enhancing their activities by assessing how their operations align with MERLIN objectives

• Ensuring accountability through reporting deliverables and achievements in their entirety

• Serving as empirical evidence for improving future practices

[22] Durham, E., Baker, H., Smith, M., Moore, E., & Morgan, V. (2014). The BiodivERsA stakeholder engagement handbook. BiodivERsA, Paris, 108.

[23] Ibid 23

[24] Warburton, D., Wilson, R., & Rainbow, E. (2007). Making a Difference: A guide to evaluating public participation in central government. Involve. Department for Constitutional Affairs. Retrieved from https://www.involve.org.uk/resources/publications/practical-guidance/making-difference.

The M&E could occur at various stages, including before the inception of the board, throughout the process and in the final stages.[25] From the inception of the board, specific issues to be evaluated should be determined and refined in the terms of reference. A range of issues that could be covered by the terms of reference and to be monitored and evaluated include[26] the objectives of the boards; the context of operation in relation to MERLIN, levels of inclusion, processes and techniques, stakeholders involved, cost and outcomes. Project leads are encouraged to consult the activities specified in Task 1.2 for more details about the evaluation.

5.6 *Wider engagement/comms strategy for non-board actors in cases*

It is practically impossible to include all actors in case study areas on the board. Hence, a range of engagement strategies need to be used to reach out to the actors not included on the board. Case study leads are encouraged to refer to the communication strategies developed as part of Work Package 5 of MERLIN. While adopting the communication strategy, attention should be paid to the level of engagement (inform, consult, involve, collaborate, empower) as identified in Section 4.1. The range of engagement methods have been summarized in Table 8.

Table 8 - Methods for engaging wider communities and based on level of engagement

Method	Inform	Consult	Involve	Collaborate
Website	☒	☒	☒	☒
Social media	☒	☒	☒	☒
Lectures	☒	☒	☒	☒
Multi-stakeholder forums	☐	☒	☒	☒
One-to-one meetings and interviews	☐	☒	☒	☒
Town Hall meeting	☐	☒	☒	☒
Workshops	☐	☒	☐	☒
Questionnaires/surveys	☐	☒	☒	☒
Practical demonstrations	☐	☐	☒	☒
Steering group	☐	☐	☐	☒

Adopted from (Durham et al. (2014)[27]

Some of the methods are more suitable for certain levels of engagement. For instance, while websites and social media could be used for all the levels of engagement, they are most appropriate for informing and consulting. The most appropriate methods for collaborating with stakeholders is workshops, practical demonstrations and steering groups.[28] All project leads are encouraged to explore the most appropriate options as recommended in WP5 of MERLIN.

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[25] Durham, E., Baker, H., Smith, M., Moore, E., & Morgan, V. (2014). The BiodivERsA stakeholder engagement handbook. BiodivERsA, Paris, 108.
[26] See also Ibid 25
[27] Durham, E., Baker, H., Smith, M., Moore, E., & Morgan, V. (2014). The BiodivERsA stakeholder engagement handbook. BiodivERsA, Paris, 108.
[28] Ibid 26

6   Conclusion and key points

The guidelines in this document captured most of the requirements for stakeholder mapping. It is important that the principles outlined are kept in mind to guide the process. The five steps required are listed below. The first 3 are essential and should be completed.

1. Identifying and clarifying the rationale

2. Developing overall understanding of the system

3. Identification of stakeholders

4. Examining attributes of stakeholders

5. Categorizing, mapping networks & determining strategy to manage and influence stakeholders

These guidelines are not definitive, but the process should be repeated when needed to ensure that the best results are attained. Other important points to note include the following.

→   Balance good practice with available time and resources

> →   Must do steps 1-3

> →   Optional steps 4-5

→   Refer to existing resources further ideas

→   Word document with guidance circulated 15/12

→   [Excel sheets to populate circulated 15/12.](#)

→   Support available from Hutton (Alhassan.Ibrahim@hutton.ac.uk)

→   How to capture information for M1.1?

In addition to the references provided, additional resources are suggested below.

7   Resources

7.1   Stakeholder engagement handbooks and toolkits:

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

2. IUCN Environmental & Social Management System (ESMS). (2021). Guidance Note: Stakeholder Engagement in IUCN projects. Retrieved from https://www.iucn.org/sites/dev/files/esms_stakeholder_engagement_guidance_note.pdf.

3. Sequeira, D., & Warner, M. (2007). Stakeholder engagement: a good practice handbook for companies doing business in emerging markets. The World Bank.

4. OECD. (2015). Stakeholder Engagement for Inclusive Water Governance.

5. Brouwer, H., Kormelinck, A. G., & van Vugt, S. (2012). Tools for analysing power in multi-stakeholder processes–a menu. Toolbox developed for the Thematic Learning Programme 'Strategically dealing with power dynamics in multi-stakeholder processes' 1st ed. Centre for Development Innovation. Wageningen Wageningen University and Research CDI.

6. Warburton, D., Wilson, R., & Rainbow, E. (2007). Making a Difference: A guide to evaluating public participation in central government. Involve. Department for Constitutional Affaires. Retrieved from https://www.involve.org.uk/resources/publications/practical-guidance/making-difference.

7.

7.2   Online toolkits

1. http://www.maes-explorer.eu/

2. http://actioncatalogue.eu/

3. https://www.pmi.org/learning/library/stakeholder-analysis-pivotal-practice-projects-8905

4. https://www.pmi.org/learning/library/stakeholder-analysis-pivotal-practice-projects-8905

5. https://mspguide.org/