Understanding mangrove governance
Research methods and guidelines
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We would like to express our special thanks to the United States Agency for International Development (USAID) for financing this work through the Sustainable Wetlands Adaptation and Mitigation Program (SWAMP).
Mangrove governance requires cross-sectoral and multistakeholder collaboration. Effective mangrove management also requires institutional setup, rules of the game, and a clear tenure regime and distribution of rights and responsibilities between stakeholders. The outcomes of mangrove protection and conservation will be different under different mangrove management regimes (state-owned, community-led initiatives, private sector-led initiatives, co-management between the state and local communities, or public-private partnerships). Understanding the complexities of mangrove governance is challenging and requires appropriate research methods. As part of our SWAMP research, the Center for International Forestry Research and the Vietnamese Academy of Forest Sciences developed a set of research methods and guidelines to understand opportunities and challenges for mangrove governance in different political, social and economic contexts. This mix of methods includes focus group discussions, key informant interviews and household surveys. Each of these methods is presented in details in the following sections.
2 Guide to focus group discussions (FGDs)

2.1 Aims of focus group discussions

- Collective reflection on the changes in mangrove area over time, drivers of mangrove deforestation and degradation;
- Collective reflection on the effectiveness of mangrove protection policies and projects;
- Collective reflection around the nature of property rights and changes associated with the use and management of mangroves;
- To reflect on various aspects of mangrove tenure, resource status and outcomes including reducing vulnerabilities to climate variability.

2.2 Background information

Having sufficient background information will greatly aid in understanding context and directing the discussions. Some of the necessary general information is available from reports from the first phase, but for some locations it needs to be gathered in advance. The team might arrive one day prior for background information and necessary logistic steps. The information includes:

- Location and general description (political, administrative, geographical, historical, cultural especially related to different ethnic groups)
- Main sources of livelihood and level of income
- Land use and tenure
- Governance systems
3 Participants

The unit of analysis is the smallest administrative division in the Vietnam government hierarchy: village.

In each selected study site, three FGDs are conducted, one with women, one with men and one with young people (both young men and women between 16–25 years old). There will be around 10 participants for each FGD. Participants are randomly selected. Head of villages are not invited to these FGD meetings.

In general, the FGD is conducted according to the following general steps:

3.1 Introduction

The facilitator begins by welcoming the participants and thanking them for coming.

Explain briefly about the project. Explain about informed consent, that the participation in this discussion is voluntary, that we will record the discussion solely for clarity and discussion note purposes, that information will only be used for research, and we will report back. Ask if the participants understand/agree with it. Ask if we can proceed.

3.2 Mapping current land uses/ livelihoods

Ask participants what the current land uses and mangrove uses are in their village. Ask participants to identify any local practices that involve maintaining or planting mangroves.
Ask participants to rank current land uses based on their importance for the village community. Note down the rank for each land use on the flip chart. Allow participants to define ‘importance’; it could be importance in a monetary context (the amount of money it generates), the size of land, cultural values, or numbers of people involved (most people in the village are involved in the land use).

Ask participants the extent to which mangroves contribute to their livelihoods. Are mangrove resources important in their livelihood portfolios?

3.3 Identifying changes in land uses/mangrove changes/livelihoods

Ask participants if land uses/mangrove uses/livelihoods have changed over time. Ask what major changes have occurred when using a historical axis drawn on the flip chart. Start with the present time and work backwards. The land uses meta-plans identified previously can be placed under the present time. Leave participants to decide the time benchmark (it could be a particular year or important event such as independence, reformation, new sub-district).

If necessary, the facilitator can draw a trend curve for the changes alongside a historical axis for a visual aid. Probe questions for possible dynamics of trends between time benchmarks.

3.4 Identifying drivers of changes in land uses/mangrove uses/livelihoods

Explain to participants that now we will look for the causes of the main changes identified before. If many changes have been identified, focus on one particular change first.

Depending on the audience, you can distribute several meta-plans to each participant and ask participants what they think has caused / is causing the change. They can write or draw pictures to represent the cause (one cause on one meta-plan). Alternatively, when it appears that participants might have difficulties in writing, the facilitator can ask participants and write their answers on the meta-plan. Ensure to clarify if you have the cause right.

Explore why changes occurred, to whom, and how and what impacts the changes had on them. Also ask which actors are involved in driving the changes. During this process participants might come out with some more causes. Note down each of these additional causes on a meta-plan and add to the flip-chart.
3.5 Identifying rights and rulemaking related to mangrove governance

Ask participants who has the right to exploit mangroves, who has the right to make decisions about mangrove practices, how they take part in mangrove decision making rules. Have any of these rules changed over time? (Focus on approximately the last 20 years) Explain changes. What caused the changes?

Ask participants if there have been any conflicts over decision making. Please describe them, including parties to conflicts, causes of conflicts, and frequency.

Ask participants about rule compliance, monitoring and control:
- Who enforces rule compliance about extraction and forest use and management practices in the village? Note: Refer to specific situations: What happens if I break the rules? Say I take too much timber... is there a sanction? Who enforces it? When was the last time someone was sanctioned? Explain. How many people were sanctioned in the last year?
- In cases where rules are not complied with, what types of sanctions exist?
- Do you think this enforcement is fair and/or effective?
- Who has the right to establish sanctions when rules are violated? Are the village regulations written? (Are there any bylaws?) Are members aware of these?
- Who monitors rule compliance about extraction/mangrove management practices in the village?
- Can rights to forests (to extract products) be taken away? What happens in such situations?
- Has any external actor (e.g., government, private company, NGO) kept you from extracting products from mangrove forests? If yes, which external actor? For what products? What were the reasons for imposing these restrictions? What were your responses to these restrictions?
- Have any of these rules or sanctions on extraction changed over time? (Focus on approximately the last 20 years) Explain changes. What caused these changes?
- Today, do you think community members follow the rules? (Always, frequently, not often, never) Which ones would you say are the most commonly followed/violated? Why?
- Have there been any conflicts over the monitoring and enforcement of rules? Please describe them, including parties to conflicts, causes of conflicts and frequency. Were the conflicts resolved? By whom? Who is responsible for resolving conflicts over monitoring and enforcement? In your opinion are they effective? Do they resolve conflicts fairly?

3.6 Identification of policies, projects and investment in mangrove improvements

Ask participants about specific policies, projects, actions and interventions that the province, district, commune, groups/individuals have implemented in order to improve their mangrove resources. For each policy, project and activity, mention who initiated it (whether community, state agency, NGO, etc.), when you started it, when it ended or whether it is ongoing, and how they organized the implementation of the actions/interventions. The actions/interventions may include restoration/rehabilitation of mangrove trees, improving/enriching tree species, extending mangrove forest cover, or others they may name, etc.

Ask participants to discuss factors that enable or constrain the effective implementation of these policies, projects and actions, and their views on whether these actions/interventions have been successful, and why.

3.7 Closing: summary, verification, thank you

The last part of the FGD is its closing. The facilitator summarizes the discussion and conducts a final verification, then thanks the participants for their active engagement in the discussion process. As a final step, the facilitator might invite the participants to ask questions.
3. Household survey questionnaire

ID : __________________________ Name of Interviewer : ________________
Study Site : ____________________ Date : ____________________________
Start time : ____________________ End time : _______________________

1. General information

1.1. Name of respondent:____________________________

1.2. Sex of respondent: 1= Male  2= Female

1.3. Are you the household head?

    □ 1= Yes  
    □ 2= No

1.4. If No, what is the sex of the household head? 1= Male  2= Female

1.5. (a) Respondent’s age:_________  (b) Age of the household head:_________

1.6. Marital status of the household head:

    □ 1= Married  □ 3= Widowed  □ 5= Separated
    □ 2= Single   □ 4= Divorced  □ 6= Other:______________

1.7. (a) How many years have you lived in this village?____________

    (b) How many years has the household head lived in the area?___________

    (c) Where did you live before moving here? ______________

1.8. Household gender distribution: (a) Male:_________ (b) Female:______

1.9. Household age distribution:

    (a) < 5:_________  (b) 5-18:_________  (c) 19-60:_________  (d) > 60:_______

1.10. Please fill-in the number corresponding with the highest education lever of the:

    (a) Household head: __________  1= No education  5 = Completed secondary
        (b) Respondent:___________  2= Incomplete primary  6= Incomplete high school
                                          3= Completed primary  7= Completed high school
                                          4= Incomplete secondary  8= University, college

1.11. (a) Respondent’s occupation:____________________________

    (b) Household head’s occupation:____________________________
1.12. Please list main source(s) of household income in 2017.

<table>
<thead>
<tr>
<th>Sources of income</th>
<th>Details</th>
<th>Income (đ/month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Agricultural production</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Livestock</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Trading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Salary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Wages</td>
<td></td>
<td></td>
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<tr>
<td>6. Pension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Aquaculture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Exploiting aquatic resources from mangroves</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Wages from planting and protecting forests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Other (specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Utilization of mangroves

2.1. Are mangroves important to your family?
- [ ] 1= Yes, explain why
- [ ] 2= No, explain why

2.2. Does your household extract products from the mangrove forest?
- [ ] 1= Yes
- [ ] 2= No

2.3. Which products do you harvest from the mangrove forest and how often do you harvest them?

<table>
<thead>
<tr>
<th>Products</th>
<th>Frequency of harvest</th>
<th>Alternative sources of product if mangroves are not available and where these are found</th>
<th>Alternative sources: 1= Purchased 2=Obtained for free</th>
<th>Rank the mangrove products in order of importance (1-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1= Daily</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2= Weekly</td>
<td></td>
<td></td>
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<td></td>
<td>3= Bi-weekly</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>4= Monthly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5= Firewood</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6= Building poles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7= Boat making materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8= Furniture making</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9= Fishing stakes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10= Fence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11= Medicine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12= Animal feed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>13= Fertilizer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>14= Seafood</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15= Other (specify):</td>
<td></td>
<td></td>
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</tbody>
</table>
3. Local governance structures, characterization, roles and acceptance

3.1. Do you know who is in charge of managing the mangrove forest? □ 1= Yes □ 2= No

3.2. If yes, mention the specific individual(s) and their position:

3.3. Are there community groups involved in the management of mangrove forests in the area?
□ 1= Yes □ 2= No

3.4. If yes, which groups?

3.5. Are the local community leaders involved in conservation and management of mangroves?
□ 1= Yes □ 2= No

3.6. Are you currently managing an area of mangrove forest?
□ 1= Yes, explain □ 2= No, explain

3.7. Are you aware of any rules and regulations governing the management of mangroves?
□ 1= Yes □ 2= No

3.8. If yes, which ones?
□ 1= Law on Protection & Development/Law on Forestry
□ 2= Provincial, district and commune mangrove protection plans and plans – give examples
□ 3= Local regulations (province, district, commune) on mangrove protection – give an example
□ 4= Traditional customs (conventions, conventions, etc.) – give an example
□ 5= Other (specify):_________________________________________________

3.9. To what extent are you satisfied with the rules and regulations? (Tick as appropriate)
□ 1= Very satisfied □ 2= Satisfied □ 3= Average □ 4= Dissatisfied □ 5= Very Dissatisfied

4. Local attitudes and perceptions on the state of the mangrove ecosystem

4.1. In your view, how has the area of mangroves changed in recent decades?
□ No change □ Slightly declined □ Severely declined □ Very severely declined

4.2. What is your view on the overall condition of the mangrove ecosystem in the past 20 years?
□ Not degraded □ Slightly degraded □ Severely degraded □ Very severely degraded

4.3. What is your view on drivers of mangrove deforestation and mangrove degradation?
4.4. Do you feel responsible for the conservation and management of the mangrove forest?
   □ Yes, why? □ No, why?

4.5. In the village and commune where you live, are there any programmes and projects on mangrove conservation?
   □ Yes, please list each programme and project, specify who initiated them, how they have been implemented, and what activities have been implemented
   □ No

4.6. Do you participate in any of the above programmes and projects on mangrove conservation?
   □ Yes, which programme(s) or project(s)? Why you participate?
   □ No, why?

4.7. If you answered Yes to Question 4.6., how do you participate in the programme(s)/project(s)?
   □ Being paid by government
   □ Being paid by companies
   □ Being paid by projects
   □ Voluntary
   □ Other (specify)

4.8. What are opportunities and challenges for these programmes and projects?

4.9. How effective are these programmes and projects at conserving mangroves? Why?

4.10. What can be done to improve the effectiveness of these programmes and projects?

Thank you very much for answering the questions!
4 Guidelines for key informant interviews

Province: 
District: 
Sub-district: 
Village: 
Name of respondent/Occupation/Gender/Age: 
Role in the province/district/commune/community/village/clan (e.g., head of forestry department, village leader): 
Role in forests (e.g., member of forest management committee): 
Date/Time: 
Interviewer:

4.1 General information

- What is your current role?
- How long have you been working in this position?

4.2 Status of mangrove and drivers of mangrove deforestation and degradation

- Has the area of mangrove forest changed in recent decades?
- What is your view on mangrove quality? Has it changed in recent decades?
- What and/or who has driven these changes?

4.3 Changes in organizations and institutions (regulating mangrove forests and related resources)

How are mangrove forests used? Who uses them? (gather information on harvesting timber and NTFPs; clearing for farming, pasture or grazing; recreational and spiritual uses; hunting; gardening; housing. Add other relevant categories as needed).

- Who is involved in these activities? State the distribution of tasks/uses according to age, gender, wealth status, etc. Forest user groups: who uses the forest/forest resources/forested landscapes? For what, when, how and why?
- What external actors use these areas? How and why?
- Who is the formal owner of the mangrove forests that people in this village use? (1) individual – some level of collective action around resources; (2) area designated for collective use; (3) area is the property of the state
- How has the use of mangrove forests changed over time? When and why? Ask questions about changes in mangrove forest uses, what triggered these changes, and when. Allow respondents to recall several episodes of such changes if they can remember, but try to at least cover major changes during the past 10–30 years. Focus on the most significant changes that respondents’ recall.
4.4 Changes in rights and access, and related organizations and institutions

- What were the key reasons driving changes in rights to mangrove resources? Who granted (or removed or modified) these rights? (e.g., land agency, court, forest institute or ministry, regional government, village leaders; after long struggle by the village, or by another organization, after conflict with neighbours, etc.) Explain.
- How were local residents involved (or not) in rights changes?
- Did the changes involve the creation of new village organizations/committees and/or arrangements? For what purpose? What is the composition of these village committees/organizations, and their roles and responsibilities?
- What are your overall perceptions of these changes? Have they improved people’s rights and access? Have they improved people’s livelihoods? Have they improved the status and condition of mangroves?
- Have there been any interventions in this village that have changed rights to mangroves? (i.e., what people are able to do in mangrove forests, who has access to what)
- Account for changes among external actors? (We want to determine whether people are now excluded from these areas after the interventions. We also want to determine whether or not the village has new exclusion rights)
- What are the rules for mangrove forest use today?
  - Who makes the rules for forest use?
  - Are there any special rules that limit the activities carried out in the mangrove forest?
  - Who makes the rules regarding who is allowed to access which resources and for what purpose? (or to convert forest. Also, rules may differentiate between what can be accessed for home use versus sale)

4.5 Conflicts over mangrove forest resources

What are main forest-related conflicts between this village and people from outside the village? (Neighbouring villages, government agencies, migrants, private companies, other)

- What were the main sources of conflict?
- How have these changed over time? (Type, source, degree and intensity)
- How did you resolve the conflicts? What were the main challenges faced in resolving conflicts?
- Did these conflicts affect people’s rights to forests? (e.g., access, use, and management)
- Have these conflicts affected the overall condition of the forest?
- Are there legal guidelines for conflict resolution? How frequently are they applied in the event of conflict? For what kinds of conflicts are they usually applied? In your experience, are legal guidelines/statutory law the main way in which conflicts are resolved? If not, why not?

What are the main forest-related conflicts inside the village?

- How have these changed over time? (Type, source, and degree and intensity)
- What were the challenges you faced when trying to resolve the conflict?
- Have these conflicts affected people’s rights to forests? (e.g., access, use, management)
- Are there legal guidelines for conflict resolution? How frequently are they applied in the event of conflict? For what kinds of conflicts are they usually applied? In your experience, are legal guidelines/statutory law the main way in which conflicts are resolved? If not, why not?
- Over the last five years, what do you think of the level of conflict within the group? (please explain) Increased / Unchanged / Decreased / Interfered with daily activities / Channelled in ways that do not interfere with daily activities
4.6 Tenure security

Do you think that villagers rights to mangrove forest resources are secure or insecure? Why? (By tenure security we mean “Your confidence that the members of this village will continue to be able to use, at least for the next 25 years, the mangrove forests you now use and benefit from in that particular area”).

- What makes tenure secure/insecure? List 3 main reasons.
- For whom is tenure secure/insecure? (Women, men, migrants, elites etc.)
- How has tenure security changed over time?
- On a scale of 1 to 5 where 1 is very insecure and 5 is very secure, where would you put this village currently?

4.7 Mangrove conservation programmes and projects

- Are there any mangrove conservation programmes and projects in your area? Who initiated them? How are they implemented?
- Do external actors provide financial support? How much? Which activities are supported? Do they provide technical support on forestry? What kind of support? Do they provide support for women’s groups? What kind of support?
- Are you satisfied with the range of services and effectiveness of services provided by external actors? Please explain. If appropriate, please indicate some of the things that can be done to improve interactions between external actors and your village.
- What are opportunities and challenges for these programmes and projects?
- How effective are these programmes and projects in conserving mangroves? Why?
- What can be done to improve the effectiveness of these programmes and projects?
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