

# Knowledge Broker Support Program

## Volume 2 – Knowledge Broker Tools – Governance mapping module

The Knowledge Broker Support Program (KBSP) was funded by the Australian Department of Foreign Affairs and Trade, through the Australia Pacific Climate Partnership.



## Citation

Cosijn, M., Meharg, S. Grigg, N., Busilacchi, S., Barbour, E., Nadelko, A., Skewes, T., Hayes, D., Dutra, L.X.C., van Putten, I., Taboada, M.B., Laka, J., Konia, R., Souter, R., Anisi, A., Teava, B., Petsakibo, E., and Butler, J.R.A., 2023, Knowledge Broker Support Program Volume 2 – Knowledge Broker Tools, CSIRO, Canberra, 92 pp.

## Copyright

The work is produced under a Creative Commons under CC BY-SA 4.0

As long as you attribute the material, by using reference above and citing the Creative Commons number you are free to:

**Share** – copy and distribute the material in any medium or format

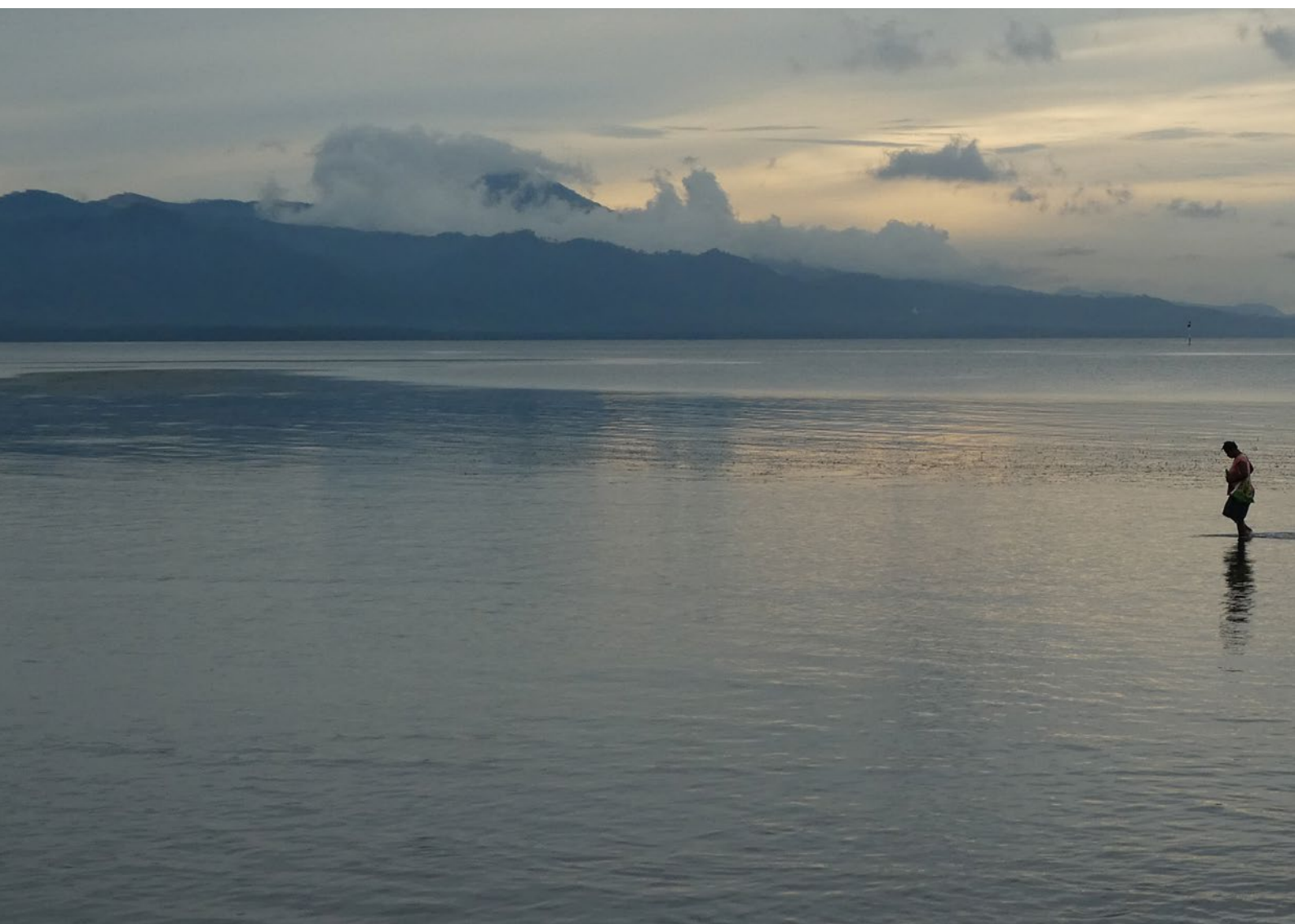
**Adapt** – remix, transform, and build upon the material for any purpose, even commercially.

## Important disclaimer

CSIRO advises that the information contained in this publication comprises general statements based on scientific research. The reader is advised and needs to be aware that such information may be incomplete or unable to be used in any specific situation. No reliance or actions must therefore be made on that information without seeking prior expert professional, scientific and technical advice. To the extent permitted by law, CSIRO (including its employees and consultants) excludes all liability to any person for any consequences, including but not limited to all losses, damages, costs, expenses and any other compensation, arising directly or indirectly from using this publication (in part or in whole) and any information or material contained in it.

CSIRO is committed to providing web accessible content wherever possible. If you are having difficulties with accessing this document please contact [csiro.au/contact](https://csiro.au/contact)

**Cover photo: Knowledge broker in action.** Photo by Tom Greenwood, 2017. Photo below by Seona Meharg.



# Governance mapping

In this module, you will learn:

- 1 **What governance is and what good governance looks like.**
- 2 **Why use governance mapping to support complex decision-making.**
- 3 **How to undertake governance mapping.**

## What is governance?

Governance is the process of decision-making involved in the management of the environment, its assets and resources for the benefit of people, while minimising the risk of negative consequences to the community or environment.

Here is a formal definition of governance in the context of the use of natural resources:

---

**“The norms, institutions and processes that determine how power and responsibilities over natural resources are exercised, how decisions are taken, and how citizens participate in and benefit from [their] management”** — Campese et al. 2016, p. 1

---

In the context of natural resource use, governance aims to increase the benefits of the resource to the people who use them and avoid over-use (over-extraction), ensuring sufficient resources now and into the future. This also applies to value chains and markets, which also need to consider the governance of natural resources.

Examples of natural resources include mud crabs, cassava, mangroves, fish, forests and crops. Some of these resources are a public good – which means they are available to everyone for consumption, but access to them can still be managed via licenses or even via traditional laws that can allow or forbid (tabu) access to the resource.

## Natural resources and governance

### Who is involved in governance?

A governance system establishes ‘who’ makes decisions, ‘what’ their powers and responsibilities are, and ‘how’ they exercise them.

It consists of two interacting systems:

- People and organisations, called actors
- Rules or institutions (formal and informal)

Government, people, and organisations operate at multiple scales from local to national governments, traditional hierarchies, from villages, to regions, and international agreements.

#### **People and organisations** (i.e. groups, industry, government, departments, etc.)

Governance includes not only government and the rules that it sets, but any people or organisations that interact, regulate or organise anything to do with that resource (e.g. processing and selling it).

#### **Rules and institutions (formal and informal)**

- Laws and regulations set by governments
- Social norms and cultural conventions (traditional laws) – Traditional governance systems are also important to manage natural resources and are often formally acknowledged by governments across the Pacific. Governance involves regulation incentives and traditions – norms around ways of doing things.

Formal and informal rules, also called institutions, mediate how people interact among themselves and with natural resources.

Formal and informal rules are important. Shared expectations often modify or overrule written rules and vice-versa. Aspects like conflicts of interest and the distribution of power are important to understand.

## AN EXAMPLE OF GOVERNANCE FOR BÊCHE-DE-MER (SEA CUCUMBER)

The government can establish a formal rule (a law or regulation) establishing that bêche-de-mer can no longer be fished for a certain period of time, at particular places (or both), to try to increase its numbers if overfished. Rules are formalised in fisheries management plans. A community, via traditional law (informal rule), can also establish minimum sizes, spatial or temporal bans on certain species. Informal rules are not written. Formal and informal rules should be observed but are sometimes broken. If they are broken, there may be punitive measures meant to incentivise people not to break the rules.

### A SOCCER ANALOGY FOR GOVERNANCE

Governance describes ‘who’ makes decisions, has powers and responsibilities, and ‘how’ they exercise this.

It consists of two interacting systems:

- Rules (institutions)
- People (organisations)

Soccer can be used as an analogy for the governance of natural resources.

‘Who’ are obviously the players, but soccer clubs, regional soccer bodies, and even the supporters are also part of the ‘who’.

‘How’ includes how the players interact, but also how the championships are organised, the prizes, and processes to resolve conflicts, for example, a decision made by a referee.

Like in any governance system, soccer consists of two interacting systems: the institutions, or rules of the game, and organisations, or the people involved.

Playing soccer involves only a few rules:

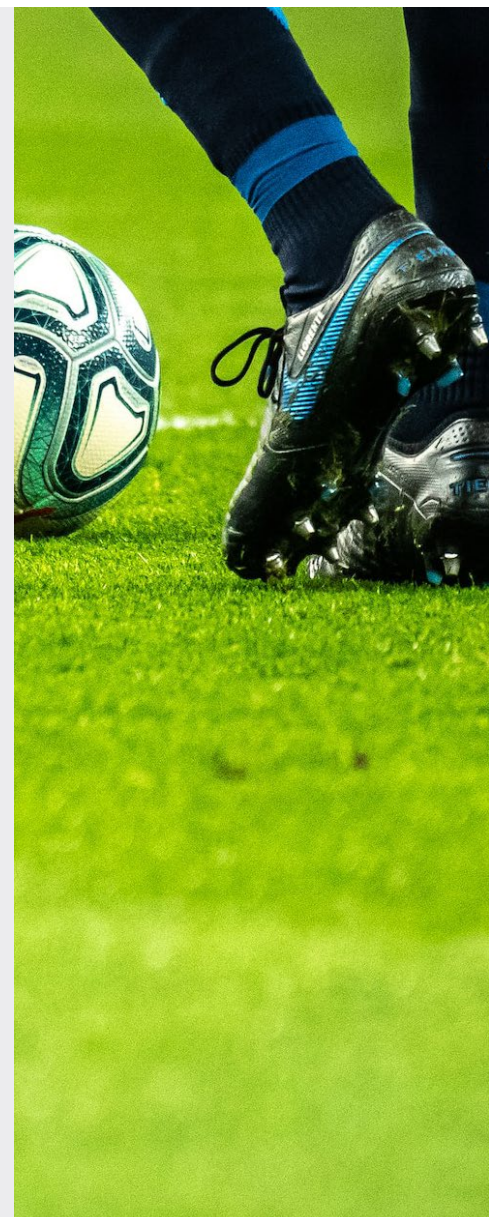
- Two teams
- A soccer field
- A certain number of players in each team
- A goal
- As long as the ball stays in the field, the game is in play
- And most importantly, NO HANDS!

An example is Pele, was a very skilled player, who did a few tricks that only he could have done to score this goal during the 1958 World Cup.

A less experienced player would do it very differently and probably wouldn’t have scored the goal!

Some people don’t follow the rules and if they are not caught, they can even win a World Cup! Remember a basic rule of soccer is: NO HANDS!

The governance of anything, including soccer, involves rules and people, where people create the rules that mediate the interaction between people and between people and resources.



### AN EXAMPLE OF FISHERIES GOVERNANCE

The governance of fisheries can be very complex as several formal and informal rules are often applied in the same area. The regulations set by national governments and informal rules to manage fisheries often interact with each other.

For example, in Fiji, the national government recognises traditional fishing grounds called qoliqoli and there are certain formal and informal rules that are used to manage these fishing grounds. For instance, the government sells fishing licenses to commercial fishers but a condition of the license is that they are required to seek permission from owners to fish on their fishing grounds.

Formal and informal rules are applied in the same area and it is important to understand each one and how they interact, as misunderstandings can lead to conflicts and unsustainable practices, while harmonisation of the two rules can lead to more sustainable practices and outcomes.

Rules and regulations external to the management of the fisheries may be relevant as well. For instance, forestry and water management may affect water quality on the fishing ground, impacting fishing.

### FISHERIES MANAGEMENT

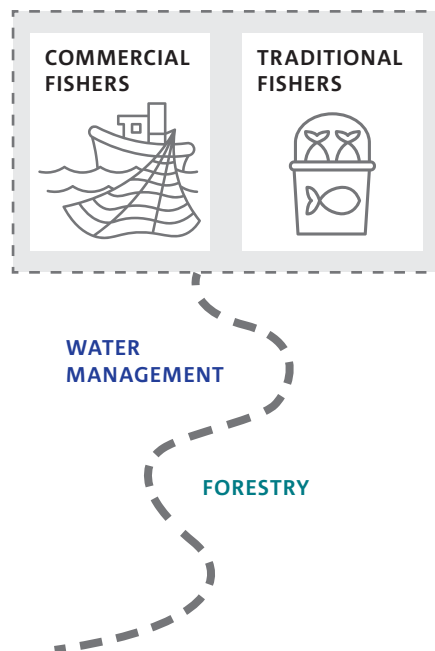


Figure 49 Management of fisheries

### What does good governance look like?

Good governance is an important concept and consists of six different elements that are all equally important.



Figure 50 Attributes of good governance Adapted from source: <https://learningforsustainability.net/good-governance/>

## Why map governance?

Governance mapping helps you to understand: Who is involved, how decisions are made, what and when these decisions are made and what outcomes are expected from these decisions.

When you map a governance system, you bring information on actors, decisions and outcomes together by asking the simple questions of who, how, what and when.

When you map a governance system, you also better understand the local strengths and weaknesses in the governance system. You also better understand the needs of decision-makers and how to improve it.

Context-specific and structured approaches to mapping governance can be useful in:

---

**Governance mapping is the process of understanding both the people and rules of the game and how these two interact with and impact resources.**

---

- Obtaining a clear view of the overall system (i.e. a snapshot).
- Identifying actors and the relationships between them.
- Helping all involved in the process better understand the decision-making processes and how the different elements fit together.

It will enable you to answer many different questions, such as:

- Who? Who makes the important decisions?
- How? How many different leaders, organisations, committees and agencies are involved in the decision?
- What? How do they influence the outcomes of decisions, and what rules and processes are required to better deal with the problems we are dealing with?



# The Governance Mapping Process

Before you start to do the mapping, think about the following:

## Why

Understanding ‘why’ you are mapping governance is probably the most important step in the process as it will help you to focus your engagement approaches and analyses (i.e. define the reason and the areas of interest). If you don’t, your governance map can become very wide and it can be hard to define an entry point.

### Examples of why you may want to map governance

- solve issues within the value chain
- understand who makes decisions in relation to water use
- better manage legal and illegal fishing in your area
- improve the use of resources such as forestry

## Who

When the reason for doing the governance mapping is clear to you, the next stage is to identify who will be involved. Remember that you are trying to understand a ‘game’, so you need someone who is a player or who really understands the game, otherwise, you won’t get the answers you need to properly map the governance system.

### Example of who you may involve if you are mapping governance to solve problems related to illegal fishing:

- Fishers, both commercial and traditional
- enforcement officers
- local leaders
- government

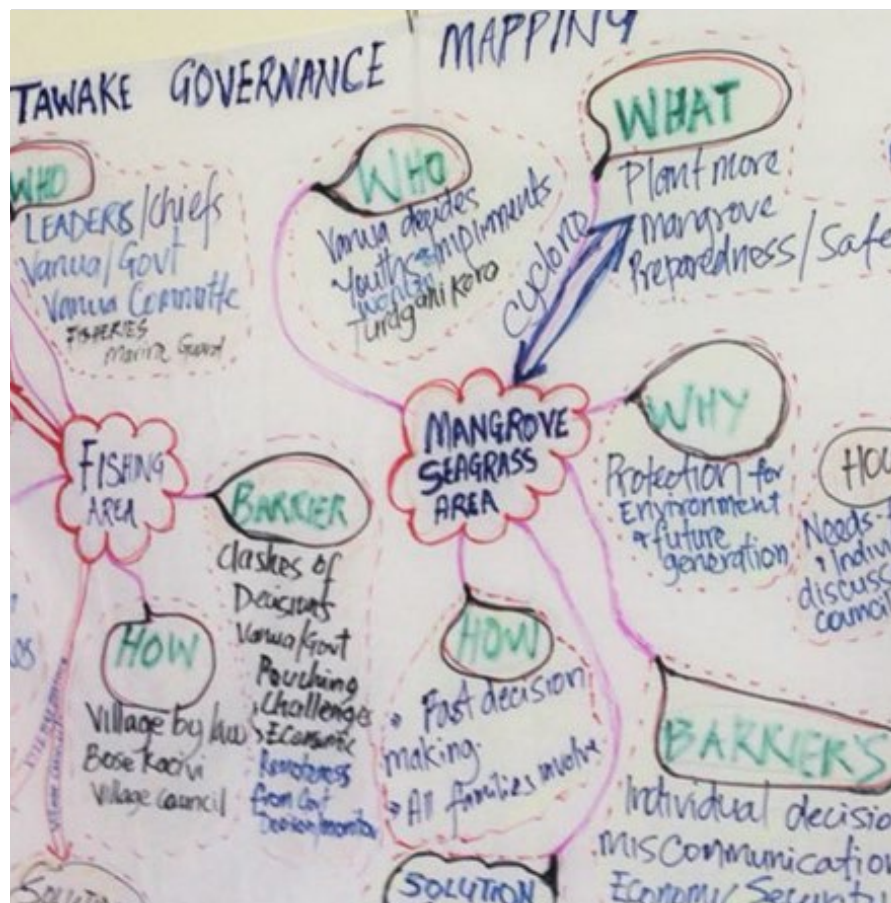
## How

Then you need to design a process so the people you identified can provide the information required to map the governance system.

### There are several ways you can do the governance map.

- You can do secondary research and use documents to answer the questions.
- You can also organise interviews with key informants or get the information needed from focus groups and workshops.

You need to understand if people are willing and available to contribute, how much time they are willing to give and what they will get out of the process.



The process must be useful to everyone and conducted in a sensitive manner.

When doing governance mapping with people, it is also important to consider personal circumstances because participants may have personal or work commitments, there may be planned community activities, etc.

Some people might not want to talk about governance because of their positions within the community or simply because they are uncomfortable talking, which you need to respect.

It is always good practice to provide the information from the project back to participants (following ethical guidelines) and see how the information can support existing decision-making processes.

# Process Mapping

## Define the issue

First, you should state your objective in doing the governance mapping; that is, why do you want to map governance around the natural resources of your interest? What is the problem you are trying to solve? This phase is very important as it will set the boundary of your research. You want to be sure to focus on the issue you are interested in and give the proper scale of detail.

For example, the problem you are trying to solve could be overfishing of traditional fishing grounds by outsiders (an access issue), or the clearing of mangrove areas because of lack of local authority, catch of undersized crabs because of lack of compliance, and so on.

At this stage, you also need to clearly define the area of interest. For example, a village, a group of villages, Province, etc.

Then you need to give a decision context so people can relate to it. For example, if you are trying to understand overfishing issues, you might want to know about the fishing activity:

- What sorts of decisions are made about fishing? Who can go fishing, what are they allowed to fish, where they can fish, how can they fish, etc.
- Why do people need to decide what to fish? Maybe because of the season to avoid over-exploitation.
- Who makes decisions? Fishers make decisions about fishing, but who else makes the rules, and enforces the decisions?

- How are the decisions made? Are there formal processes to allow fishers to catch? What information is used to decide what can and cannot be fished?
- How and when are decisions implemented? For example, closures, re-openings, minimum sizes, access?

The last two questions are about understanding bottlenecks and opportunities and asking them requires skilled facilitators because decision-makers will likely be in the room, and criticising them in public can lead to conflicts.

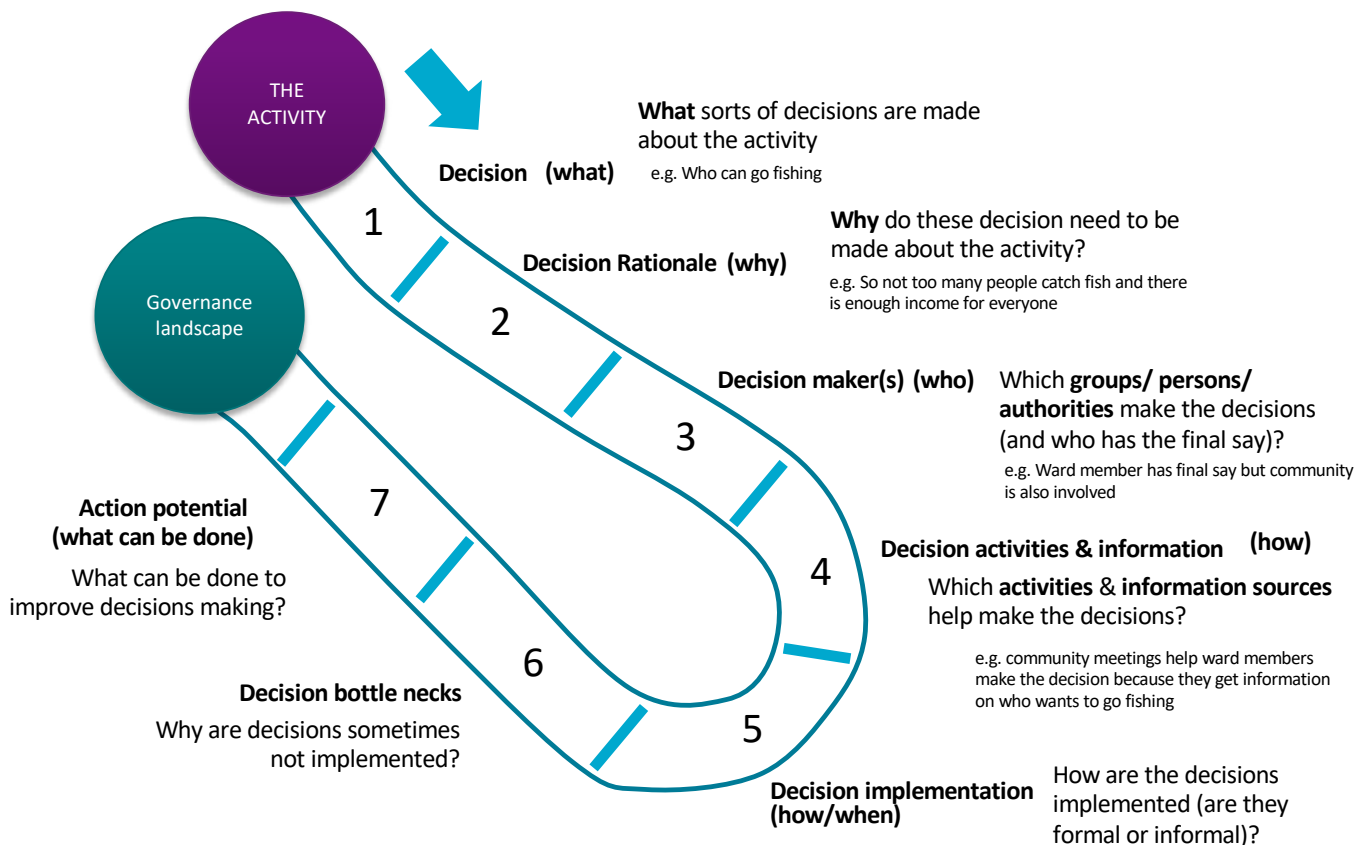


Figure 51 Process mapping. Artwork by Manuela Taboada, Queensland University of Technology



## MAPPING GOVERNANCE - A FISHING EXAMPLE

Using butchers paper and coloured papers or post-it notes can help facilitators go through this process where each step will have a different colour and you can gradually build complexity as you go.

- **STEP 1:** Identify what decisions are made
  - In the first step, you add the sorts of decisions that are made. Fishing in the mangrove area is used as an example throughout this explanation.
- **STEP 2:** Identify why these decisions need to be made
- **STEP 3:** Identify who makes the decisions e.g. chiefs, government
- **STEP 4:** Identify which activities & information sources help decision-making, e.g. research, official reports, local knowledge.
- **STEP 5:** Identify how are decisions implemented (formal vs informal). E.g. the village by-laws, parliamentary processes
- **STEP 6:** Identify why decisions are not implemented (e.g. fishing by outsiders, lack of communication between government and chiefs)
- **STEP 7:** Identify what can be done to improve the governance process for each of the barriers (e.g. improving monitoring, and establishing formal and informal communication mechanisms).

**Watch the video** to see how this process has been applied by the Tawake community in Vanua Levu, Fiji.



## References and additional resources



If you would like to watch a YouTube video on this module, please see:

**TOOL:** [https://www.youtube.com/watch?v=Uj\\_9bZV9YwE](https://www.youtube.com/watch?v=Uj_9bZV9YwE)

**What is Governance Mapping (soccer video) –** <https://www.youtube.com/watch?v=tLDkOnT2aDk>

### References

Campese, Jessica, Nakangu, Barbara, Silverman, Allison and Springer, Jenny, 2016. The NRGF Assessment Guide: Learning for Improved Natural Resource Governance. NRGF Paper. Gland, Switzerland: IUCN and CEESP.

Dutra, L. X. C., R. H. Bustamante, I. Sporne, I. van Putten, C. M. Dichmont, E. Ligtermoet, M. Sheaves, and R. A. Deng. 2015. Organizational drivers that strengthen adaptive capacity in the coastal zone of Australia. *Ocean & Coastal Management* 109:64-76.

Dutra, L.X.C., Sporne, I. Haward, M., Aswani, S., Cochrane, K.L., Frusher, S.M.F., Gasalla, M., Giancesella, M.F., Grant, T., Hobday, A.J., Jennings, S., Plagányi, E., Peci, G., Salim, S.S., Sauer W., Taboada, M.B. and van Putten, I.E. 2018. Governance Mapping: Framework for assessing the adaptive capacity of marine resource governance to environmental change. *Marine Policy* Volume 106, August 2019, 103392.

### Acknowledgements

This module was developed by:

**Leo Dutra (CSIRO):** is a senior research scientist and has multi-disciplinary expertise linking ecological processes, stakeholder engagement, governance and decision-making to support resource management, conservation and adaptation.

**Ingrid van Putten (CSIRO):** is a senior research scientist. Her research focus is to understand social and economic behaviour of marine resource users and their interactions with the biophysical marine environment, and to find ways to influence behaviour and reduce risks.

**Sara Busilacchi (Independent research scientist):** is a research scientist with a background in fisheries science with a focus on social-ecological systems thinking for the sustainability of small-scale fisheries in a changing world using collaborative and participatory approaches.

**Adi Vasulevu (Executive Director of Transcend Oceania):** is based out of Suva and is working with CSIRO on Blue Economy carbon livelihoods and who provided her experiences of using governance mapping.

As Australia's national science agency,  
CSIRO is solving the greatest  
challenges through innovative  
science and technology.

CSIRO. Unlocking a better future  
for everyone.

**Contact us**

1300 363 400  
+61 3 9545 2176  
[csiro.au/contact](https://www.csiro.au/contact)  
[csiro.au](https://www.csiro.au)

**For further information**

**Environment**

Michaela Cosijn  
[Michaela.Cosijn@csiro.au](mailto:Michaela.Cosijn@csiro.au)

**Environment**

Seona Meharg  
[Seona.Meharg@csiro.au](mailto:Seona.Meharg@csiro.au)