

## Knowledge Synthesis Methods

### 20. Participatory mapping<sup>1</sup>

#### Summary of method

Participatory mapping defines a set of approaches and techniques that combine the tools of modern cartography with participatory methods to represent the spatial knowledge of local communities. It is based on the premise that local inhabitants possess expert knowledge of their local environments that can be expressed in a geographical framework, which is easily understandable and universally recognised.

#### Key references

The International Fund for Agricultural Development (IFAD) has produced a guidance document that identifies good practice, evaluates participatory mapping tools (Annex A) and lists project examples (Annex B).

International Fund for Agricultural Development (2009). *Good Practices in Participatory Mapping*  
<https://www.ifad.org/documents/10180/d1383979-4976-4c8e-ba5d-53419e37cbcc>

Community Maps — A Platform for Participatory Mapping.

<http://europe.foss4g.org/2014/content/community-maps-%E2%80%94-platform-participatory-mapping.html>

#### Examples of application

Beverly, J. L., Uto, K., Wilkes, J., & Bothwell, P. (2008). *Assessing spatial attributes of forest landscape values: an internet-based participatory mapping approach*. Canadian journal of forest research, 38(2), 289-303.

Chambers, R. (2006). *Participatory mapping and geographic information systems: whose map? Who is empowered and who disempowered? Who gains and who loses?* The Electronic Journal of Information Systems in Developing Countries, 25.

Fagerholm, N., & Käyhkö, N. (2009). *Participatory mapping and geographical patterns of the social landscape values of rural communities in Zanzibar, Tanzania*. Fennia-International Journal of Geography, 187(1), 43-60.

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<sup>1</sup> A guidance note from Dicks LV, Haddaway N, Hernández-Morcillo M, Mattsson B, Randall N, Failler P, Ferretti J, Livoreil B, Saarikoski H, Santamaria L, Rodela R, Velizarova E, and Wittmer H. (2017). *Knowledge synthesis for environmental decisions: an evaluation of existing methods, and guidance for their selection, use and development – a report from the EKLIPSE project*.

- Forrester, J., Cook, B., Bracken, L., Cinderby, S., & Donaldson, A. (2015). *Combining participatory mapping with Q-methodology to map stakeholder perceptions of complex environmental problems*. *Applied Geography*, 56, 199-208.
- Mapedza, E., Wright, J., & Fawcett, R. (2003). *An investigation of land cover change in Mafungautsi Forest, Zimbabwe, using GIS and participatory mapping*. *Applied Geography*, 23(1), 1-21.
- Sletto, B. I., Hale, C. R., Middleton, B. R., Nygren, A., Rodríguez, I., Schroeder, R., & Sletto, B. I. (2009). *"We Drew What We Imagined" participatory mapping, performance, and the arts of landscape making*. *Current anthropology*, 50(4), 443-476.

## Participatory mapping

Cost	Requires a GIS expert and facilitator/moderator Cost depends on <ul style="list-style-type: none"> <li>• GIS Software used, some freeware and trial versions available</li> <li>• Number of stakeholders/experts involved</li> <li>• Number of revision rounds→ depending on further use of the map</li> <li>• Level of detail (explanation provided for mapping process and area, number of unique map elements)</li> <li>• Complexity of elements being mapped (e.g. water cycles and pollution)</li> <li>• Frequency and extent of updates</li> <li>• Availability and cost of spatial data</li> </ul>
Time required	Variable, as above
Repeatability	If done with two different groups of people, the maps will likely differ
Transparency	Potential to be highly transparent, depending on the process
Risk of bias	Medium. Relies on full and equal representation of all stakeholders
Scale (or level of detail)	Normally local
Capacity for participation	Highly inclusive. Local stakeholder participation is required
Data demand	Local-scale spatial data
Types of knowledge	All types of knowledge, but especially local knowledge (ILK)
Types of output	Map with legend and attributes (categorical or continuous variables) This could be part of a regional development plan and have an explanatory document

Specific expertise required

Expertise in GIS and facilitation of local stakeholders

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<b>Strengths</b>	<b>Weaknesses</b>
<p>Follows a clear protocol</p> <p>Engages local stakeholders and can combine scientific knowledge with indigenous and local knowledge</p> <p>Provides visual representation of data</p> <p>Can generate policy or management recommendations</p>	<p>Relies greatly on stakeholder knowledge (subjective)</p> <p>Can be biased, depending on facilitation and representativeness of stakeholders engaged</p>

