

Bridging Dimensions: Participation and Natural Resource Management Principles in the Tapestry of Governance

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Abstract:

Public engagement is attractive for decision-makers to make governance more participatory and legitimate. Arnstein (1969) defines participation as a categorical term for citizens' power that includes/excludes them from political and economic processes. This is relevant in the context of natural resources governance when analyzing i) how different actors exercise their powers and ii) the roles played by both governmental and non-governmental actors. However, governance principles for natural resources management (Lockwood et al., 2010) do not go deeply enough into how varying participation impacts governance design and vice versa. This paper delves into the interplay between these two analytical tools, with an emphasis on circular synergies and potential trade-offs. Synergies are mostly identified starting at the middle levels of participation, with potential trade-offs emerging at the highest levels. This discussion provides insights on the sustainable governance of natural resources and public spaces where citizen influence is most needed and asked.

Introduction

Citizen participation has become a buzzword when discussing natural resource management. Its appeal stems from the notion that involving people affected by a policy in its development improves democratic legitimacy, contributes to citizens' empowerment, and promotes more inclusive decision-making processes, knowledge co-production and social learning (1,2,12,19,21,28). Moreover, it might favor the implementation of high-quality policy decisions whose fulfillment requires the collaboration of multiple actors (15,41,43). In the middle of an ecological crisis combined with loss of democratic control and rising inequalities, citizen participation also stems from a normative argument (5,43): it is perceived as a legitimate way to develop governance arrangements while trying to reshape social, economic, and political relationships.

Yet, there are several forms of participation, each with implications for processes and policy outcomes (3,30,49). For instance, if participation lacks the power to bind changes, it is rather an act of tokenism used to portray an image of inclusion (1,3). Moreover, citizen participation may also be used to raise public awareness rather than to increase actual decision-making power (40,41). Finally, the different levels in which a person can participate are proportionate to her power to influence change by using her voice (1).

This point is relevant in the context of natural resources governance, when analyzing decision-making rules and processes, and the roles of governmental and non-governmental actors (21,34,41). Lockwood et al. (35) present eight governance principles for natural resource management (NRM principles) to guide the design of governance systems regulating how involved actors exercise their powers to meet certain objectives. They point out (35:990) that "effective natural resource governance requires democratic and mutually supportive central and local governance institutions"; yet an analysis of the implications of different degrees of citizen participation is lacking in their discussion.

This paper initiates a conversation bridging Lockwood et al.'s NRM principles (35) and Arnstein's ladder of participation (3). The interplay between these two analytical tools is discussed with an emphasis on circular synergies and potential trade-offs. Accordingly, we highlight how each governance principle enables or restrains different degrees of citizen participation¹, and we dig into how different levels of participation can influence each governance dimension. We refer to more recent literature on the two topics to further justify our arguments.

This manuscript is a step forward in connecting two important streams of research when addressing sustainability governance. Extending the scope originally intended for NRM principles highlights the importance of incorporating participation levels and drivers for participating in the co-creation and co-management of natural resources. On the other hand, understanding how different degrees of participation affect NRM principles sheds light on possible advantages and drawbacks of democratic governance for the sustainability transition.

¹ Following Kiss et al. (30), we use "citizens participation" in an extended manner, avoiding a strictly territorialized and formal understanding of citizenship. We instead refer to citizenship as also coming from the interaction with participation (49).

2. Participation and Principles for Natural Resources Management: a relationship analysis

Lockwood et al. (35) highlight the need for normative guidance in designing and implementing multilevel institutions capable of delivering good governance practices. Such need is the highest when dealing with wicked problems (25,33). Thus, they propose eight normative principles that, by providing embedded institutional infrastructure that supports citizens' participation, can work as a citizens' enabler and support democratic NRM. However, the question is whether these principles affect lower or higher levels of participation (3) – i.e. whether they foster tokenism or promote citizens' empowerment. Similarly, citizens' participation can create appropriate conditions for the implementation of NRM principles. However, as found by Jager et al. (28), much depends on the level of influence and power citizens have in the decision-making and implementation processes. Moreover, trade-offs might emerge between fostering meaningful engagement and maintaining effective governance structures. Figure 1 shows a visual representation of the relationship analysis we found by conducting a literature review of more recent works on some of these connections.

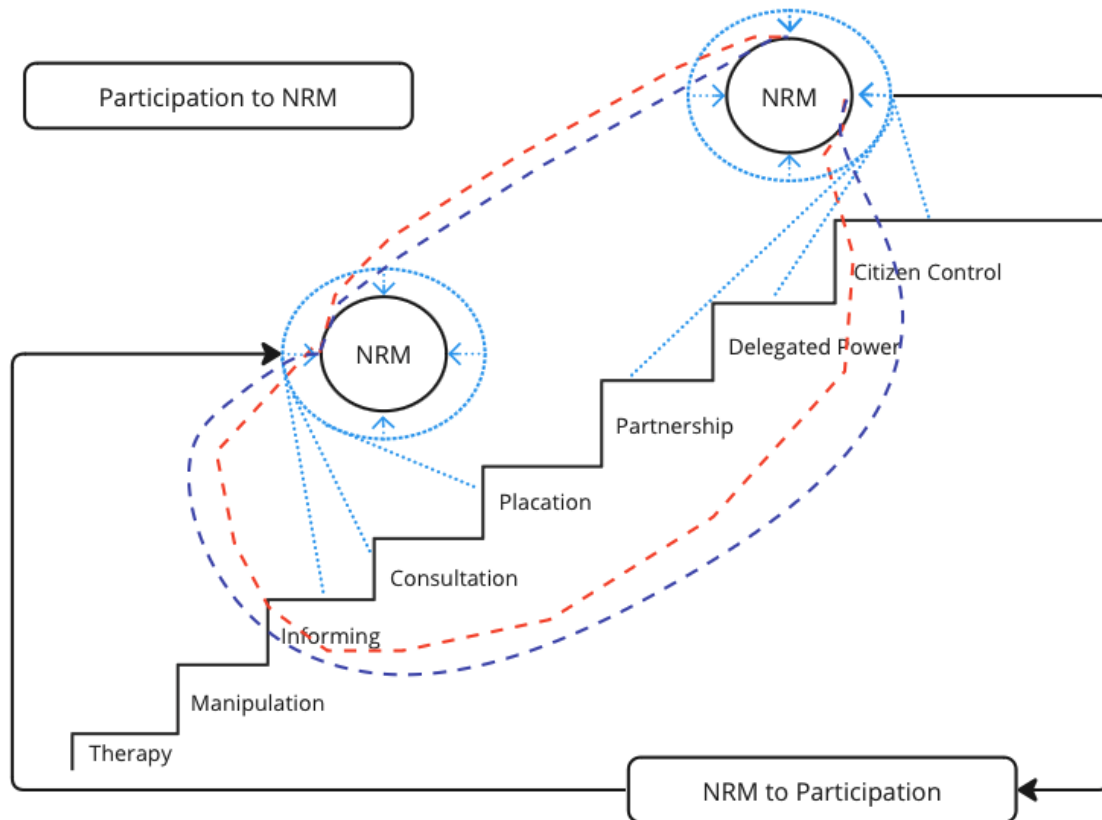


Figure 1: Participation staircase towards an adaptive governance system. Meaningful bridging– in terms of both synergies and trade-offs between Arnstein (1969) and Lockwood et al. (2010) – requires citizen's participation beyond the staircase's bottom steps (therapy and manipulation). In the middle of the staircase (information, consultation, placation), there are (mostly) synergies between principles and participation. At the top of the staircase (Partnership, Delegated Power, Citizen Control), while further synergies and positive feedback (blue dotted line) remain reachable, trade-offs and negative feedback (red dotted line) become challenges to advance towards a more democratic governance system. The conversation on how to substantially advance a subset of principles makes the most sense when a society is at the top of the participation staircase.

Participation and legitimacy

1 The principle of legitimacy refers to who is entitled to develop rules and how they have gained
2 authority. When considering participation, actors have to justify processes that need to be
3 accepted as legitimate. Participation of relevant stakeholders is thought to increase legitimacy
4 of policies (7,8,16,42,54); however, much depends on how participation is structured. Looking
5 at Arnstein's (3) ladder of participation, informing is the first step towards legitimacy because
6 it makes rules appear more legitimate rather than imposed. However, as long as information
7 flows unidirectionally – from government to citizens – or is incomplete and citizens have few
8 or no opportunities to affect the outcome, institutional rules can look as just top-down, and
9 hence be less widely accepted. Instead, legitimacy might increase as long as we go up
10 Arnstein's ladder, as citizens start to have more bargaining power (partnership, joint
11 committees) and decision-making authority (delegated power), which guarantees a certain
12 degree of subsidiarity (37,55). Clearly, if citizens have control over a policy, the ultimate
13 decision might appear even more legitimate, as they feel they had more influence on the
14 outcome (7,54).

15 On the other hand, legitimacy can foster participation through reinforcing trust (37,52).
16 Indeed, if an institution is accepted by various parties in the process, this can guarantee
17 feedback across various levels, and reinforce meaningful participation (38). For instance,
18 studies on public participation and trust in the South Korean government suggest that a
19 government ought to build citizens' trust by being transparent, held accountable, and fair, to be
20 perceived as legitimate (10). Conversely, a lack of trust in the legitimacy of a decision-making
21 process may lead citizens to jump off the ladder, as they realize that participatory arrangements
22 are merely formal (27). Indeed, mistrust acts as a catalyst for citizens not wanting to participate
23 in the process and even leads to disruptive behavior, i.e., protesting (54). For instance, in their
24 study on participatory natural resource management in Turkey, Abkulut and Soylu (1) find that
25 local people but also state officials were highly critical of the sustainable management plan
26 under discussion, so they were reluctant to participate in committee meetings.

Participation and transparency

27 Recommending that a governance system should be transparent means that decision-making
28 actors and processes must be visible, clearly communicated, and justified. Compared to other
29 principles, the relation between transparency and participation is less discussed in the literature,
30 especially in the NRM field. However, preliminary observations can be made.

31 Considering Arnstein's (3) ladder, the lower the ladder the less transparent the process.
32 For this principle too, informing is the first step in making governance more transparent.
33 However, if the information is provided at later stages of planning, it is just partial information,
34 or it is given in an inaccessible format, then transparency is not guaranteed (20,24). Starting
35 with placation, transparency increases, as some stakeholders might have more direct access to
36 first-hand information, processes, and decision-making, and might also question unclear issues.

37 Inversely, implementing the principle of transparency does not necessarily lead to
38 increased participation in higher ladders (51), but it can have positive effects on lower ones, as
39 new infrastructures are developed to ensure that citizens are informed on future projects
40 (informing), can express their opinions (consultation), and have an increasing influence (higher
41 ladders) (27).

Participation and accountability

Providing clear information on roles and responsibility enhances accountability, as a citizen who is well informed and aware is expected to better accept allocation of responsibilities and know who to address when necessary (53). However, a one-way communication approach at this level of participation (informing) does not allow for negotiation between officials and citizens or feedback from citizens (45), therefore constraining citizens' actual influence. Moving up the ladder, accountability heightens when including citizens' representatives on institutional boards (placation). Then, further increase in participation leads to responsibilities being shared with the citizens' leaders (partnership) and possibly a higher pressure on authorities to comply with programs (delegated power).

On the other hand, if roles and responsibilities are shared with citizens, accountability is expected to increase trust in the decision-making process, which can lead to an increase in participation (10,23).

Participation and inclusiveness

Inclusive governance speaks to the need of involving all relevant stakeholders as equal parties in decision-making processes, and ensuring that governance institutions reflect heterogeneity in values and interests. The aim is for governance authorities to have access to as many sources of knowledge as possible that help solve complex problems. Thus, participation is key to guaranteeing inclusiveness. Looking at Arnstein's (3) ladder, inclusiveness requires at least consultation. However, asking relevant stakeholders to express their opinions is not sufficient; as inclusiveness implies that citizens can influence the process, higher ladders of participation can better guarantee it. For instance, if citizens' representatives are part of boards, their opinions might be acknowledged, and some degree of value diversity ensured. This is even more the case when citizens achieve some degree of decision-making authority (delegated power) or full control of plans and programs (citizen control).

Considering the other direction, more inclusive processes run the risk of being less effective when the issue at stake is highly technical (9,36). Furthermore, when more players are asked to participate in the process, each actor's influence decreases, perhaps leading to a loss of interest in participating (38).

Participation and fairness

Authorities are to follow the principle of fairness, according to which all stakeholders should be considered equally relevant, and decision-making should be unbiased (4). Moreover, fairness refers to the distribution of costs and benefits in case many stakeholders are involved, as it is usually the case in NRM.

Clearly, the participation format (15) has an impact on (perceived) fairness: the more citizens are able to express their concerns (consultation) and have power to influence decisions (from partnership), the more they will perceive their arguments to be considered equally valuable (4,50). Thus, going up Arnstein's ladder can potentially increase (perceived) fairness by empowering marginalized groups (1). However, it is also important to consider who participates, i.e. whether participants actually represent all views relevant for the issue at stake (31). On the other hand, if citizens perceive that the process is not fair, they might lose interest

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in participating, as found by Baldwin’s study (5) on electricity regulation. Thus, the interaction between participation and fairness seems to be mutually beneficial.

However, other studies, such as Boedeltje and Cornips (4:16), report that fully implementing fairness can actually be counterproductive, “as more equality will decrease the chances of individuals to effectively influence decision-making”.

Participation and integration

As participation increases, the more integration between and within governance levels and institutions is reachable. This principle addresses the need to improve connection and coordination at the institutional level, as relevant stakeholders start to have some influence and can give advice. Integration, though, is still only partial at this ladder, as power holders retain the power to decide.

On the other hand, integration can be beneficial to implement more meaningful participation. Indeed, participatory processes, even in the form of consultation, require institutions that work together and interact to transform citizens’ opinions into actions. Thus, if different actors at different organizational levels interact successfully, meaningful participation might be better enabled (29,32).

Participation and capability

A capable governance needs to have the resources and infrastructures to enable both experts and lay citizens to deliver on their responsibilities (18). All stakeholders must have competences and skills relevant to their responsibilities. A capable governance should guarantee solutions to complex problems characterized by uncertainty, long time scales, multiple values, and multidimensional impact of decisions (35).

Increasing levels of participation allow the implementation of this principle by expanding the type of knowledge and expertise that flow into institutions when citizens are “placed” in discussions (13,35). Indeed, citizens’ backgrounds, more direct experiences and ecological knowledge can be key for developing effective sustainability outcomes (30).

However, for this interaction to be a free and effective communication between various levels of governance, lower tiers must have proportionate resources. Kurkela et al., (32) demonstrate that advancing participatory capacity (11) requires sufficient human and financial resources, time, information, and expertise, especially for lay stakeholders (5, 18). Similarly, findings from Roos et al. (44) and Sandström and Widmark (46) on consultation processes between Sami reindeer herders and the forestry sector show these to be highly unbalanced, as the former claim they lack time and adequate and accessible information to truly influence the process. Abkulut and Soylu (1) document that local people did not participate in meetings to develop a Global Environmental Facility project because they thought it would be inappropriate for them to attend - mostly because they were not adequately informed and because of local power relationships based on gender, wealth, and social status. Thus, a lack of adequate information and technical knowledge can discourage participation, and a redistribution of capabilities might be necessary for participation to result in meaningful co-production (26,37).

Participation and adaptability

Citizen participation can have contrasting effects on the capacity of governing processes and procedures to adapt to changing conditions. On the one hand, citizens who are closer to the natural resource at stake might better detect change and have better knowledge of possible and suitable answers (38,48). Thus, if citizens' concerns are heard and solutions are put into action (placation) or they have a certain degree of authority (partnership), they can inform and influence the governance process accordingly, to make it more responsive (11,14). For example, in the case of NRM and urban areas, citizens' experience when visiting these areas and the purpose they give to them can provide insights on how to better manage them in the future. In this regard, Stringer et al. (48) demonstrate that local participation in an urban greening project in Bangkok was crucial for the plan to be adaptive to local needs and changing circumstances. Indeed, the interplay between power and participation is identified by Folke et al. (17) as a requirement for achieving adaptive governance, which can respond to changes by renewing and reorganizing itself using novel approaches. However, a trade-off might emerge as more democratic control can slow down the decision-making processes and, therefore, the system's capacity to adapt.

Looking into the effect of adaptability to participation, instead, Bennett and Satterfield (6) suggest that adaptive governance tend to create spaces that provide fora for dialogue, reflection, and deliberation, while constantly reviewing and adjusting policies as needed. In turn, the creation of dialogues can foster citizen participation by providing a space to share their thoughts and concerns.

3. Discussion

In conducting this analysis, we have mostly highlighted mutually supportive interactions between NRM principles (35) and different levels of participation (3). First, as shown in Figure 1, no NRM principle can be achieved in the presence of low participation - described by Arnstein (3) as non-participation - and no meaningful participation can be obtained without inclusive, integrative, and fair governance. Moreover, higher staircase of participation generally leads to an improved implementation of NRM principles, which in turn advances the conditions for increasing meaningful participation.

However, in certain cases trade-offs might emerge. For instance, more genuine participation can slow down decision-making processes, thus rendering governance less flexible and slower when it comes to adapting. Moreover, an increase in participation affects governance only under the assumption that citizens or representatives have the required power, technical and communicative skills, time, and information to make relevant contributions, but this might not be the case. Thus, the principle of capability assumes particular relevance in nurturing a virtuous cycle between participation and governance. In this regard, Wamsler et al. (50) study the effect of citizens' involvement in the development of Nature Based Solutions. Their findings show that, under actual conditions, increased citizen participation often obstructs sustainable outcomes. This is mostly due to power dynamics, citizens' lack of cognitive and relational capacities, low environmental awareness and ignorance of legal provisions, as well as municipal authorities' inability to promote constructive engagement.

The interplay between participation levels and NRM principles allows for their analysis in the larger context of sustainability governance. Indeed, the latter requires a deep

1 understanding and balancing of environmental, economic and social concerns, which in turn
2 needs democracy and meaningful participatory approaches (2,39,47). This study helps moving
3 into this direction as, in contrast to previous studies on the link between participation and
4 environmental quality (28,38), it sets the stage for a conversation that relates participation with
5 a broader range of outcomes, including not only environmental ones but social outcomes as
6 well.
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9 However, despite its potential to unlock sustainability innovation, this analysis is still
10 preliminary, and it opens several avenues for further research, resulting in a promising research
11 agenda. First, the study can be expanded to include not only the intensity of participation (3)
12 but also its format (5,18), i.e. whether different forms of participation such as bargaining and
13 aggregation or deliberation have a different effect on NRM principles. For instance, Birnbaum
14 et al. (8) demonstrate that perceived legitimacy is associated with perceived quality of
15 deliberation. This would help embrace the challenge of investigating real forms of participation
16 and their contribution rather than starting with a bias on the role of participation for
17 sustainability transformation (18). Another important aspect to consider is *who* participates,
18 not just *how* (18), and whether altering types of participants, i.e. by gender, age, profession or
19 other identity criteria, while maintaining the same participation format, has an impact on
20 different NRM principles. Finally, the overall discussion can be applied to wicked problems
21 beyond the conventional management of natural resources –e.g. the governance of urban public
22 spaces.
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*of special interest

**of outstanding interest.

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** This paper outlines eight governance principles aimed to provide a direction on how governance actors should exercise their powers in the design of natural resource management governance institutions.

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