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Practitioner Brief on Factors for Effective Environmental Management Collaboration

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Practitioner Brief on Factors for Effective Environmental Management Collaboration

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Abstract:
This brief grew out of an attempt to distill the early research on a typology of collaboration for use in the field by practitioners attempting to build new collaborations and strengthen existing ones. Here, we have created a list of the key factors or elements that lead to the success or failure of collaborations. This list builds on our field work as well as the rich literature on the topic. We view this as a first step in our process of creating a typology in which we see how contextual conditions shape how these success factors ultimately influence the success of collaborations.

Keywords:
Collaboration, governance, success factors, institutions

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About this guide

This guide is meant to help those involved in collaborative environmental management situations to identify the key contextual factors or elements of these collaborations that lead to their success or failure. As researchers, we are still learning about these conditions; feedback from practitioners in the field will help advance the knowledge about the important processes of collaboration so that key conditions of success can be shared more widely around the world. This guide is based solely on a selection of the current literature on the topic of collaborative management and collective action. We aim to test and enrich this list with case study research, to learn how context conditions these variables, and to identify which are the most important factors in certain contexts.

It is important to note that not every condition must be present in a collaboration for the collaboration to be considered successful. Although we suggest that collaborations in which a large number of the listed conditions are present will likely be successful that may not always be the case. Practitioner comments and feedback are therefore welcome and much appreciated.

A note about language

We strive to avoid jargon, but some terms are hard to avoid. In our usage, the word **"institution"** refers to ***a set of rules in use***, consistent with the literature on common pool resource theory. "Successful" means the collaboration is effective in reaching the core objective it has set for itself and is adaptable to changing social, economic, political, and environmental conditions.

Literature selection

We drew on literature published by scholars in political science, environmental social science and sustainability, and international relations related to collective action and common pool resources, adaptive co-management, and collaborative governance theories. We selected 10 publications for inclusion in our analysis. The selection criteria for inclusion was based on whether the researchers had relied on compilation/meta-analysis, (i.e., a large number of case studies were examined in order to come to the study conclusions) and whether the publication advanced theory development in its discipline by putting forth a list of key variables or factors in the success of collaborative efforts. Accordingly, the 10 publications selected are representative of the issues surrounding collaborative governance and adaptive co-management but do not represent an exhaustive examination of all the literature. Again, practitioner feedback is needed to confirm that the variables identified are indeed useful in practice and empirically in the analysis of a broad range of common pool resource governance situations.

Some key factors in collaborative governance of natural resources - *from the literature*

A. **Conflict resolution mechanisms** – There are methods in place for resolving conflicts that arise between people or groups collaborating to manage the natural resource or area.

B. **Collective choice arrangements** – Most individuals affected by the rules governing day-to-day activities can participate in modifying these rules as well as the rules which govern the collaboration itself.

C. **Nested enterprises** - In the case of larger common-pool resources, governance activities are

organized in multiple layers from the local level to the larger scale (i.e. regional, state, federal, perhaps global) that coordinate with one another to manage the resource.

D. **Knowledge building (e.g., learning, information sharing)** – Activities and processes are in place for gathering and disseminating knowledge throughout and beyond group (e.g. publications, speaking events, public meetings etc.).
E. **Minimal recognition of rights to organize** – The rights of collaborators (e.g. users) to devise their own institutions are not challenged by external (governmental) authorities.
F. **Rules congruent with local ecology and with local culture** – Rules governing resource use are sustainable in terms of the resource and the social context of resource usage.
G. **Leadership** – The collaborative effort is led by an effective leadership team or individual who is able to create a context of cooperation and collective action towards a common vision that results in sustainable resource stewardship.
H. **Trust and Social capital** – Trust and social capital are both necessary ingredients of any collaborative effort. Some amount of trust is needed to sit down to work together and to collectively establish rules for resource governance. We define social capital as the characteristics of individuals and their relationships to each other that allows them to work together to solve collective action problems.
I. **Institutional adaptability/variety/flexibility** – The element of adaptation is often incorporated as an adaptive management style, in which progress is reviewed and rules and management activities are potentially revised based upon results. This can be seen as a form of flexibility, rather than rigidity in planning and establishing documents and rules. In addition, it may be advantageous to employ a variety of types of rules in some scenarios.
J. **Benefits of cooperating proportional to inputs/investment** – Collaboration may involve compromise, putting aside personal and narrow organizational interests for the purpose of reaching a common agreement. The benefits of collaborating must still outweigh the costs of participation and compromise.
K. **Capacity building (e.g., training, resources)** – Participation in collaborative resource management should help to develop and strengthen skills and abilities of the organizations and individuals involved in creating and maintaining resource management institutions.
L. **Clearly defined permitted users of resource** – The legal uses of the natural resource and who is allowed to use it must be very clearly articulated.
M. **Clearly defined boundaries of the resource** – It is easier to track the abundance of and/or usage of a resource with clearly defined boundaries (e.g. a common forest surrounded by fenced farmland) than it is to track a resource without clearly defined boundaries (e.g. fish or songbirds).
N. **Monitors present and actively audit resource conditions and appropriator behavior** – There must be some kind of official monitoring of the health of the resource as well as its use, whether it is by authorities or community members.
O. **Monitors are accountable to (or are the) resource users** – These monitors must be seen as credible by all parties, and ideally have a vested interest in sustaining the resource
P. **Graduated sanctions (punishment proportional to scale of offense)** – There is a continuum of consequences for rule violation, so that the punishment is proportional to the misconduct, where greater/more frequent offense leads to more serious consequences for the offender.
Q. **Social Learning** – Human behaviors can be/ are learned by observing others, especially in a

social setting. Successful collaborations sometimes learn together, collectively, through inquiry, experimentation and then may use new knowledge gained to build institutions, trust, and social capital.

R. **Long-term commitment and shared understanding** – Governance of natural resources is clearly a long-term commitment, and therefore efforts to successfully sustain natural resources are more sustainable when there is long-term commitment. To create this sense of commitment on the part of organizations and individuals, it is key to foster a shared vision or understanding of the goals of the collaborative governance institutions. This is not always easy to create, but can avoid in-fighting and foster the ability to move forward.

S. **Networks (especially previous to collaboration)** – Collaboration is enhanced by early networks when participants organize themselves and create a common vision even before a collaborative governance arrangement is formalized. The literature suggests that when some stakeholders engage in informal collaboration efforts, it facilitates the creation of a more formalized collaboration, including formal government support.

T. **Face-to-face dialogue** – A few experts argue that there is no substitute for face-to-face dialog and interaction when it comes to collaborative governance. Others don't mention this factor at all, so this one would be interesting to test.

References

1. Ansell, Chris and Alison Gash. 2007. "Collaborative Governance in theory and practice." Journal of Public Administration Research and Theory. Vol 18, 543-571.
2. Armitage, D. R., Plummer, R., Berkes, F., Arthur, R. I., Charles, A. T., Davidson-Hunt, I. J., Diduck, Alan P., Doubleday, Nancy C., Johnson, Derek S., Marschke, Melissa, McConney, Patrick, Pinkerton, Evelyn W., and Eva K. Wollenberg (2009). Adaptive co-management for social–ecological complexity. *Frontiers in Ecology and the Environment*. 7(2), 95-102.
3. Cox, Michael E., Arnold, Gwen, and Sergio Villamayor-Tomas (2010). "A Review of Design Principles for Community-based Natural Resource Management." Ecology & Society 15(4): 38.
4. Dietz, Thomas, Elinor Ostrom, and Paul Stern. 2003. The Struggle to Govern the Commons. *Science*. 302:1907-1912.
5. Olsson, P., Gunderson, L., Carpenter, S., Ryan, P., Lebel, L., Folke, C., & Holling, C. S. (2006). Shooting the rapids: navigating transitions to adaptive governance of social-ecological systems. *Ecology and Society*. 11(1).
6. Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge, U.K. Cambridge University Press.
7. Ostrom, E. (2009). Design principles of robust property-rights institutions: what have we learned? Chapter 2. Property Rights and Land Policies. G. K. Ingram and Y.-H. Hong. Cambridge, MA, Lincoln Institute of Land Policy: 25-51.
8. Ostrom, E., & Cox, M. (2010). Moving beyond panaceas: a multi-tiered diagnostic approach forsocial-ecological analysis. *Environmental Conservation*. 37(4), 451-463.
9. Ostrom, E. and T. K. Ahn (2003). Introduction. In Ostrom E. and T. K. Ahn (Eds.) F*oundations of Social Capital* (pp. 1-24). Cheltenham, Cheltenham: Elgar.
10. Plummer, R., Crona, B., Armitage, D., Olsson, P., Tengö, M., & Yudina, O. (2012). Adaptive comanagement: a systematic review and analysis. Table 2. *Ecology and Society*. 17(3).
11. Stern, P. (2011). Design principles for global commons: Natural resources and emerging technologies. *International Journal of the Commons*. 5(2).
12. Young, O. R. (2002). *The institutional dimensions of environmental change: fit, interplay, and scale*. Chapter 7: Usable Knowledge: Design Principles and Institutional Diagnostics. Cambridge, MA. USA. The MIT Press.