Linking adaptive and interactive governance for disaster risk reduction

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1. Introduction

Disaster risk reduction (DRR) governance research mostly uses the adaptive governance (AG) approach. It has scarcely engaged with interactive governance (IG). This paper assesses and combines the literature on both theories to create an adaptive interactive governance theory for application to DRR.

2. Problem

• In the Anthropocene, risk of creeping to sudden disasters are growing
• Multiple governance theories have yet to be integrated

3. Question and Method

Question: How can governance theories be integrated to better govern disaster risk in order to continuously cope with the threat of creeping to sudden disasters?
Method: Analyzing and developing the literature on AG and IG both of which are themselves based on many governance theories and approaches.

4. Adaptive Governance (AG)

AG addresses uncertain and non-linear changes in the dynamic socio-ecological system including creeping and sudden disasters. It calls for social learning, polycentric institutional arrangements, and leadership and aims at transformation. AG has been applied mostly to fisheries management and sudden disasters. It calls for social learning, polycentric institutional arrangements and leadership and aims at transformation (Olsson et al., 2006). AG can be assessed through an Adaptive Capacity Wheel (ACW) with 6 parameters and 22 indicators measured through traffic light colours—where green is good and red is poor (see Fig. 1 and 3). AG can be applied to disaster risk reduction (Djalante et al., 2011). Elements from Olsson et al., (2006) and Djalante et al., (2011) can be used to improve the ACW.

5. Interactive Governance (IG)

IG was introduced to explain governance processes on socio-ecological systems. With its roots in public administration, it has been applied mostly to fisheries management (Torfing, 2012; Bavinck, 2005; Kooiman and Bavinck, 2005; Kooiman, 2008; Jenkoff, 2007). IG focuses on the interaction (inter and intra) between (a) the governance system and (b) the system to be governed (See Figure 2). It examines the capacity to govern (governability).

6. Comparative analysis

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Adaptive Governance</th>
<th>Interactive Governance</th>
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<tbody>
<tr>
<td>1. Origin</td>
<td>Rooted in ecological and expanding to social</td>
<td>Rooted in social and expanding to ecological</td>
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<tr>
<td>2. Focus</td>
<td>Non-linearity and uncertain problem</td>
<td>All types of problem</td>
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<td>3. Looks at</td>
<td>Type and quality of governance</td>
<td>Looks at relationships and interaction (inter and intra) between governing system and system to be governed</td>
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7. Adaptive and Interactive Governance

We have combined AG and IG in a conceptual framework which builds on the strength of both (see Figure 3). Since IG looks at two systems and three actors (government, civil society and private sector) and AG looks at the quality of relations and also at three types of products—outputs, outcomes and effects, our comprehensive AIG has four key steps:
1. Governance system
Step 1a—ACW (a): Assessing the quality of relationships in the governing system
Step 1b—ACW (b): Assessing the quality of the output of the relationship (e.g. policy)
2. System to be governed
Step 1c—ACW (c): Assessing the quality of outcome—i.e. policy implementation
Step 1d—ACW (d): Assessing the quality of effect on the socio ecological system.

8. Conclusion

Our AIG research framework has both helped to combine the two governance approaches and provided us with a methodology of four steps in the two systems allows us to analyse where the interactive governance system is capable of adapting to non-linear, uncertain events including creeping to sudden disasters.

References