

# Rural Resource Institutions and Sustainable Governance

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A stunningly large array of research has been conducted in the past two decades on rural resource governance institutions in the developing world.<sup>1</sup> Beginning from the 1980s, when an interest in forms of governance outside the state and the market began to flower, a raft of research has examined rural local resource governance in detail, with studies by scholars such as Elinor Ostrom, Robert Wade, Fikret Berkes, Baland and Platteau and recently a volume by the NRC forming convenient markers of the evolution of this research (Baland and Platteau 1996, Berkes 1989, NRC 2002, Ostrom 1990, Wade 1988). Thousands if not tens of thousands of research papers attest to the vitality and productivity of this research program.

The existing research on the subject is not only voluminous it is also one of the more successful collective enterprises in the social sciences. It has successfully altered views about the nature and role of institutions in resource governance. It has illuminated and advanced understandings of what leads to successful collective action, especially in relation to the effects of group size and social heterogeneity, the importance of enforcement, and in general, the role of collective institutions in shaping individual incentives. It has shown that effective governance is at least partially correlated with sustainability resource management.

Therefore, it is as much a statement about the social sciences as it is about this research program that there are still vast areas of ignorance about the effectiveness of resource governance institutions in rural areas, their interactions with macro-political and economic forces, and the magnitude and direction of such relationships. I illustrate this point with reference to four critical areas in which existing research needs to contribute far more to be an effective guide for policymaking. These four areas concern the relationship between sustainable governance and equity (especially as it concerns gender and other social dimensions), the impact of social identities and culture on outcomes, the role of biophysical factors in effective resource governance, and the inattention to critical methodological considerations in most contemporary research on resource governance institutions.<sup>2</sup> I end with a description of the international forestry resources and institutions research initiative which focuses on some of the research questions related to rural resource governance institutions. Scholars affiliated with the IFRI research network

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<sup>1</sup> Rural institutions in the developing world constitute a remarkably broad set. My presentation focuses primarily on institutions related to natural resource governance, and even within this set, on non-family institutions. These certainly include indigenous community-based and local institutions, but also those formed as a result of external interventions, whether state institutions or non-governmental organizations.

<sup>2</sup> Undoubtedly, other observers of the research on resource governance institutions will identify other areas in which knowledge can be enhanced.

currently conduct collective research in ten countries in eastern Africa, south Asia, and Latin America.

Equity and rural resource governance institutions: Studies of rural resource institutions have focused on the relationship of social heterogeneity to both sustainability as well as equity in outcomes. On the first issue -- how inequalities and social heterogeneities affect sustainability of resource governance, and by extension, sustainability of livelihoods -- it is fair to say that existing research has failed to reach much of a consensus. There are strong arguments asserting both that inequalities lead to more effective resource governance, and that inequalities undermine the prospects of better resource governance. The polarized findings on the subject may in part be the result of the fact that a substantial part of this research seeks to identify direct links between resource-related outcomes and social differentiation. These relationships may however be significantly shaped by the nature of institutions themselves so that efforts to find significant unmediated relationships yield different results depending on the institutional context.

On the second issues, however, much of the research reaches a similar conclusion as earlier studies of development institutions. This position is summarized well by a review of a community development institutions conducted by Schwartz in the late 1970s! Schwartz remarks, “externally introduced resources—technical, economic, political, social—are distributed along lines of existing inequality and thus reinforce it unless accompanied by radical, massive institutional changes.” (1978: p. 249). Conversely, there is also substantial evidence that greater participation in decision-making processes by those belonging to more marginal social groups leads to more equitable outcomes. The research on this subject is not only quite extensive, but by this point, often methodologically very sound as well.

Impact of social identities and culture on governance outcomes:

Although contemporary research on rural resource institutions has greatly advanced existing knowledge about how institutional variables affect outcomes, it has been less successful in analyzing the role of a multitude of other variables that affect the way institutions shape outcomes. One crucial set of such variables concerns social identities and cultural factors. For example, we know, for instance, that similar institutions yield quite different outcomes when located in different cultural contexts. People with different preferences and different social identity groups respond differently to similar institutions. Indeed, over time institutions reconfigure social identities. Current research on rural institutions tells us far too little about these relationships even as it suggests that on the average particular institutional changes may lead to predictably different outcomes.

One way to think about this paradox -- we know a fair deal about the effects of institutional features but not so much about how institutions perform across cultural context -- may be to think of it as the difference between the mean and the variance. That is to say, existing research allows us to assess better the “average impact” of institutional variation across cultural settings, but it equips us only poorly to sort out how cultural differences shape institutional effectiveness in any given instance. However, because policy implementation related to rural institutions is often concerned about specific effects of policy. Therefore we need to develop a far better sense of how culture and institutions interact. A major issue here concerns the speed with which the expectations

of those subject to new institutions converge around the incentives that new institutions represent. Without deeper research into this issue, we will continue to take comfort from such generalization as indigenous peoples, or women, or particular castes tend to be more dependent on primary resources, or better at resource governance and at generating sustainable livelihoods.

#### Biophysical factors and the limits of institutional impacts

A major gap in the research on rural institutions concerns its near universal neglect of the extent to which variations in biophysical factors “explain” outcomes related to resource governance, especially as these pertain to the sustainability of resource systems and consequently, the sustainability of many forms of livelihoods. Variations in biophysical factors correlate with variations in many of the proxy variables included in the analysis of the effectiveness of rural institutions. As a result, when such the effects of biophysical variables are not considered explicitly in the analysis, inferences about the effectiveness of institutions tend either to be over- or under-estimates of their actual effectiveness. Certainly, policy interventions are unlikely to alter the nature of biophysical variables, or their impact on resource-related livelihoods. But it is still necessary to incorporate these variables explicitly into the analysis because the alternative is to arrive at an unnecessarily rosy or gloomy assessment of the effectiveness of institutions.

#### Critical methodological considerations

Much existing research on institutions also continues to be relatively deficient in attention to methodological issues. One of the major problems in understanding how rural institutions affect outcomes, whether these outcomes are related to livelihoods or distributional equity is the extraordinarily large number of variables that potentially play a role in any given situation. In an early review of the commons literature, I had identified close to 35 distinct variables that different researchers identified as being critically important in understanding governance outcomes. Recent research suggests that the number is likely even higher. If one virtue of ongoing research on rural institutions is that it has been extremely productive in identifying the many different factors that shape the effectiveness of institutions, the downside of this finding is also that it creates substantial methodological problems for those who would rely on rural institutions to improve outcomes related to livelihoods and development.

It is true that in contrast to earlier research on rural institutions and governance which were often based on isolated cases or at best comparative analysis of multiple cases, contemporary studies tend to rely on a large number of cases, use statistical models, and are relatively careful about research design. However, most studies are still based on observational data, and few have attempted to address the problems in statistical inference that large numbers of independent variables create. More explicit modeling of the potential relationships between multiple causal variables, recourse to both mathematical and agent-based models to understand how changes in causal parameters affect outcomes and a better understanding of non-linear relationships is critical to advance what we know about the role of rural institutions in shaping both livelihoods and equitable development.

### Research by the International Forestry Resources and Institutions (IFRI) Network

The IFRI network is a unique, interdisciplinary, international research network on local forest governance ([www.umich.edu/~ifri](http://www.umich.edu/~ifri)). Founded in 1992 with the leadership of Elinor Ostrom, it currently has 12 Collaborating Research Centers (CRCs) as members in 10 countries. IFRI researchers have collectively created a growing international database of cross-national, time-series data on forests, people, and institutions. Among its major research concerns, IFRI has focused on alternative systems of governance and tenure and their effects on social outcomes, ecological conditions, and equity in resource allocation; the conditions that favor successful collective action for the provision of resource governance; and how different groups of people benefit from and respond to changing ecological and social conditions.

To address these questions, IFRI researchers collect data on both socio-economic and ecological variables through a suite of eleven research instruments. These data (on nearly 1100 variables for each record) have been used to create a global database on local resource governance institutions. The current state of the IFRI database is summarily described in Table 1 below.

Table 1: State of the IFRI Database

<b>Research Inst. -&gt; CRC</b>	<b>Site</b>	<b>Forest</b>	<b>Plot</b>	<b>Settle-ment</b>	<b>Users</b>	<b>Pro-ducts</b>	<b>Forest Assn.</b>	<b>Non-Harv. Organ.</b>	<b>Orgn. Inventory</b>
<b>Uganda</b>	<b>47</b>	<b>59</b>	<b>1638</b>	<b>52</b>	<b>98</b>	<b>255</b>	<b>2</b>	<b>58</b>	<b>168</b>
<b>Nepal</b>	<b>51</b>	<b>112</b>	<b>2613</b>	<b>238</b>	<b>96</b>	<b>236</b>	<b>50</b>	<b>52</b>	<b>149</b>
<b>Bolivia</b>	<b>18</b>	<b>27</b>	<b>707</b>	<b>33</b>	<b>36</b>	<b>90</b>	<b>8</b>	<b>20</b>	<b>74</b>
<b>USA-</b>	<b>29</b>	<b>47</b>	<b>1309</b>	<b>31</b>	<b>58</b>	<b>225</b>	<b>32</b>	<b>29</b>	<b>135</b>
<b>Ecuador</b>	<b>1</b>	<b>1</b>	<b>30</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>2</b>	<b>3</b>	<b>3</b>
<b>Madagas</b>	<b>11</b>	<b>11</b>	<b>350</b>	<b>19</b>	<b>30</b>	<b>79</b>	<b>5</b>	<b>12</b>	<b>38</b>
<b>Tanzania</b>	<b>10</b>	<b>10</b>	<b>267</b>	<b>15</b>	<b>26</b>	<b>22</b>	<b>2</b>	<b>20</b>	<b>40</b>
<b>Kenya</b>	<b>16</b>	<b>16</b>	<b>452</b>	<b>15</b>	<b>52</b>	<b>62</b>	<b>7</b>	<b>16</b>	<b>49</b>
<b>Thailand</b>	<b>10</b>	<b>12</b>	<b>398</b>	<b>29</b>	<b>14</b>	<b>32</b>	<b>4</b>	<b>12</b>	<b>73</b>
<b>India</b>	<b>53</b>	<b>56</b>	<b>1052</b>	<b>54</b>	<b>56</b>	<b>171</b>	<b>44</b>	<b>32</b>	<b>62</b>
<b>Colombia</b>	<b>1</b>	<b>1</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>3</b>	<b>7</b>
<b>TOTALS</b>	<b>247</b>	<b>352</b>	<b>8829</b>	<b>491</b>	<b>472</b>	<b>1172</b>	<b>156</b>	<b>257</b>	<b>798</b>

We have used this data to address a large number of questions about the effectiveness of rural resource governance institutions. One of the most consistent findings of the research program concerns the importance of enforcement in effective governance. Enforcement, when compared to such variables as social capital, degree of formal organization, and extent of resource dependence for 178 cases, consistently

swamps the effects of variations in these latter variables (Gibson et al. 2005). This finding raises the obvious question of what accounts for effective enforcement.

In addition to attempting to answer the above question, current IFRI research focuses on several other issues related to rural institutions that this note highlights. Two other important current projects focus on environment and equity, and institutions and identities. The first seeks to trace better the mediating role of rural institutions in the relationship between socio-economic heterogeneities and governance outcomes. The second examines how the creation of new rural institutions affects existing environmental identities of those subject to such institutions.

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