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Authors
Lejano, Raul
Ingram, Helen
Whiteley, John
et al.

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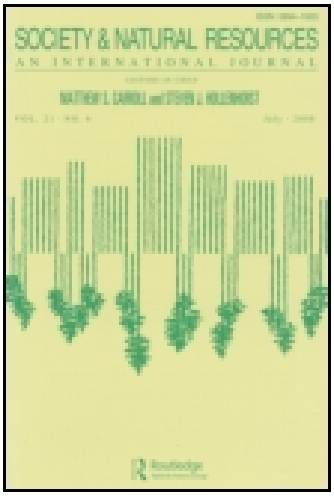

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The Importance of Context: Integrating Resource Conservation with Local Institutions

Raul P. Lejano [a] , Helen M. Ingram [a] , John M. Whiteley [b] , Daniel Torres [c] & Sharon J. Agduma [d]

[a] Department of Planning, Policy, and Design , School of Social Ecology, University of California, Irvine , Irvine, California, USA

[b] Department of Environmental Health, Science, and Policy , School of Social Ecology, University of California, Irvine , Irvine, California, USA

[c] Pawikan Conservation Project, Department of the Environment and Natural Resources , Quezon City, Philippines

[d] Department of Sociology and Anthropology , Ateneo de Manila University , Quezon City, Philippines

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The Importance of Context: Integrating Resource Conservation with Local Institutions

RAUL P. LEJANO AND HELEN M. INGRAM

Department of Planning, Policy, and Design, School of Social Ecology, University of California, Irvine, Irvine, California, USA

JOHN M. WHITELEY

Department of Environmental Health, Science, and Policy, School of Social Ecology, University of California, Irvine, Irvine, California, USA

DANIEL TORRES

Pawikan Conservation Project, Department of the Environment and Natural Resources, Quezon City, Philippines

SHARON J. AGDUMA

Department of Sociology and Anthropology, Ateneo de Manila University, Quezon City, Philippines

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This article focuses on the manner by which resource management regimes, often conceived far away from their areas of application, are integrated into the local institutions, practices, and social structures of a place. This process of contextualization *may be especially critical where, for reasons of resource scarcity, remoteness, or system complexity, the state cannot engage in effective program management. The thesis of the article is that if the program is to be sustainable, contextualization may be necessary and, moreover, can induce profound changes in the form and function of the original program. This process can lead to a type of governance that operates through webs of social relationships rather than hierarchical and bureaucratic lines of authority. We use this mode of analysis to show how a unique and viable species conservation program evolved on the Turtle Islands, Philippines, how the process of contextualization transformed it, and why it all unraveled.*

Keywords adaptive management, conservation, context, decentralization, governance

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Address correspondence to Professor Raul P. Lejano, Department of Planning, Policy, and Design, School of Social Ecology, SE-I, Room 218G, University of California, Irvine, Irvine, CA 92697-7075, USA, E-mail: rplejano@yahoo.com

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One difficulty with conservation programs is that, often being conceived in places far removed from their place of application, they can fail to take into account the challenges and opportunities found in particular contexts. There is now an ample literature on the perils of state-sponsored attempts at natural resource conservation (e.g., see Ludwig et al. 1993; Brandon et al. 1998). We should recognize that this is part and parcel of the model of the regulatory state, in which policy is formulated by a central authority, passed on down the hierarchy of authority, and eventually enacted by local or street-level bureaucrats (Moran 2002). This is compounded by models in which policy is depicted as entirely separate from implementation (e.g., Pressman and Wildavsky 1979). However, situations abound where the state lacks resources to implement programs, when it is physically too distant from the field to effectively govern, or when the system is of such complexity that centralized management lacks the knowledge and capacity for effective enforcement (Gunningham et al. 1988; Ayres and Braithwaite 1992). Habitat protection programs often exhibit exactly these characteristics. To meet this challenge, initiatives have arisen promoting decentralization, that is, the shifting some of the authority and responsibility for a program away from the centralized state to other, more local policy actors (see Manor 1999 for a useful review) and a closer attention to context in program design and evaluation (e.g., Brunner 2004).

An aspect of governance that needs more explicit attention is that of *contextualization*: the process by which, as local actors get increasingly involved, the form and function of the program itself grow into greater coherence with the place (Lejano 2006). A central point of this article is that for a program to be sustainable, it may need to find a fit with local institutions, social structures, and the everyday patterns of life—what we call *institutional coherence*. In this way, the program is integrated into a place and not merely imposed on it from outside. Another central point is that this process of contextualization can induce profound changes in the form and function of the program—in a sense, policy design and implementation occur concurrently. We illustrate these analyses with a case study on turtle habitat management in the tropics and show how this kind of integration can result in a mode of governance that is markedly different from that originally designed. We also provide an account of the program's unraveling, which gives reason to reflect on the necessity of contextualization and the peril of shortchanging this process. We use the case study to illustrate these four points:

1. Contextualization: There are circumstances, such as resource management in far-flung areas where the state is relatively weak, when it is necessary to build a program from the existing institutions of a place. In these systems, program functions are coursed through the web of relationships of that place, and not just through the formal bureaucratic or organizational structure.
2. Blurring: Because the program is grafted into the local context, formal elements of the institution (such as rules and roles), as originally designed, may start to shift or blur as local actors begin reshaping the program to suit the local context.
3. Integration: To some extent, the process of contextualization may achieve a coherent merging of local goals, motivations, and knowledge with those originally envisioned by policymakers.
4. Maintenance: Because these systems are grafted onto the web of relationships in a place, care must be taken to continually nurture and sustain these relationships.

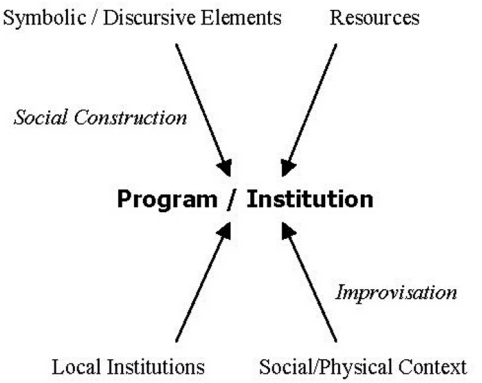

Figure 1. Diagram of institutional coherence.

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The Notion of Institutional Coherence

In Figure 1, we depict the process of forming an institution (e.g., habitat conservation). The top half of the diagram depicts an institution as a social construct (DiMaggio and Powell 1991; also Berger and Luckmann 1967). That is, these programs are thought of and designed by policymakers, often in a central position of authority, and subsequently implemented in the field. This is characteristic of the state-centered administrative model, for example (Moran 2002).

The lower half of the figure depicts yet another process that speaks to the fact that programs are not merely conceived and then subsequently implemented—they also evolve in a place (Hannan and Freeman 1977). This process, which is referred to in the diagram as improvisation, entails taking the originally conceived program and refashioning aspects of it so as to evolve a more suitable design. Often this is accomplished by local actors who refine the design so that it best fits their local needs and capacities. Especially when state resources are scarce, the act of improvisation often involves using local resources to supplement the program. A program that, on paper, requires the use of a centralized training center for agricultural extension support may be instead conducted by holding workshops in local schools. In fact, the program may utilize not just material resources, but the social institutions found in a place—for example, information campaigns may be routed through kinship-based or other social networks rather than only through formal bureaucratic or organizational structures. Improvisation can also involve modifying the basic rules, procedures, and other formal elements of the program to fit the local situation. For example, a training program originally centered on sustainable agriculture may evolve to include aspects of gender empowerment if local women's or other groups see a need for it. We refer to this process as one of contextualization, which is, in a sense, one aspect of the broader notion of adaptive management (e.g., Stacey 1996).

Case Study: Context and Method

The setting for the case study is a group of six small islands, ranging from 7 to 116 hectares, in the Sulu Sea, on the Philippine side of the marine border with Malaysia. The islands are far removed from the seat of government in Manila and actually are

much closer to the Malaysian mainland in Sandakan. The island system, along with three neighboring islands in Malaysia, is one of only 10 major green turtle rookeries in the world (Palma 1993). The islands were first settled in the 1940s by members of the Jama Mapun, an indigenous Malay group, and were formally incorporated as a municipality in 1959. By the 1950s, island residents began to discover the growing market for turtle eggs, considered a delicacy in parts of Asia. Under supervision of the local mayor, residents began collecting eggs for transport to the black market in Sandakan. The practice also involved the cessation of harvesting during the first 3 months of the year, in order to preserve the turtle population (Domantay 1953). There also evolved during this period a corps of local experts, or egg-probers as they were known, who developed finely tuned procedures for tracking turtle eggs and locating egg pits.

Green and hawksbill turtles were increasingly becoming subject to state protection as endangered species, however. In the 1980s, a small group of conservationists from the Philippine government arrived on the islands and began to work with locals to develop and formalize conservation practices. The group, which was later named the Pawikan Conservation Project or PCP (Note: Pawikan is the Tagalog word for sea turtle), was a makeshift unit within the Philippine Department of Environment and Natural Resources (DENR) and had little funding or other resources with which to work. Over the course of several years, the PCP negotiated with the local officials to initiate a program around the systematic practice of turtle egg conservation. At the same time, the PCP realized that income from egg harvesting was an important source of livelihood for the island residents, so the new program allowed for the harvesting of a portion of the annual egg yield for income generation. Important elements of the PCP program included a permit system that allowed each family to harvest and sell an allotment of eggs, a conservation requirement for each family to leave a portion of the eggs in the ground to hatch, and the setting aside of one of the more productive islands, Baguan, as a sanctuary on which no harvesting would take place at all. Harvesting outside the permit system was considered poaching, and the PCP instituted a patrol to guard the beaches and enforce the poaching ban. Formally administered by the municipal government but implemented by the PCP, the program also involved deputizing some of the elderly egg-probers to act as conservation wardens for the PCP. It was significant that from the mid-1980s onward, conservation was indeed practiced systematically, as seen in Figure 2, which charts statistical data collected by the wardens.

All that changed in 2001, however, when the government passed RA 9147, the Wildlife Resources Conservation and Protection Act, as a response to the Philippines' obligation as a signatory to the Convention on the International Trade of Endangered Species (CITES). RA 9147 essentially prohibited the sale of wildlife and wildlife by-products. This meant an immediate ban on the harvest of turtle eggs and the transfer of jurisdiction over the habitat to the national government. To the PCP's surprise, the locals reacted with indignation over the loss of a source of livelihood and, moreover, a perceived takeover of the entire island system itself. Soon after, the municipal government responded with a formal resolution to control the habitat and, essentially, take this authority away from the national government (Musilim 2003). This led to the PCP's physical eviction from the islands, and even their local counterparts, the conservation wardens, were prevented from implementing conservation and relegated to the status of observers on the islands (except for Baguan, which was uninhabited).

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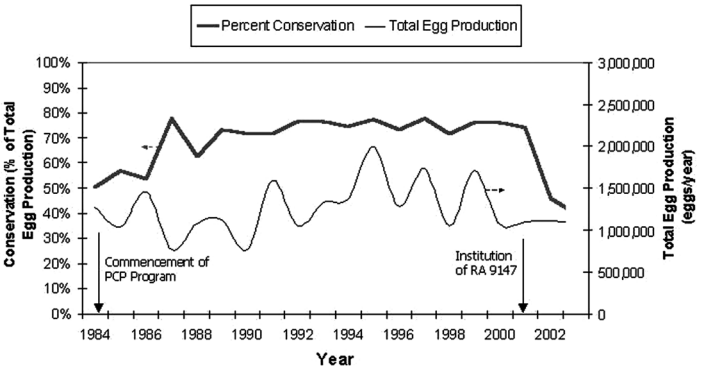

Figure 2. Historical egg conservation activity (Turtle Islands, Philippines). Source of data: Cruz (2002), Borja (2006).

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The account that we provide comes from a number of sources, including a review of archival records, extended interviews with 16 stakeholders from the Turtle Islands and Manila, and the notes and observations of one of the coauthors, who lived on the islands for extended periods of time during the years 1986–1988 and 2001. The open-ended, semistructured interviews consisted of initially having each respondent characterize the turtle management program in his or her own terms. The interviewer would then probe further beyond the formal depictions of the program and into elements of practice. Respondents were role players in the Turtle Island program, including PCP members from the 1980s and the present, local wardens, DENR management, and several external observers. The set of respondents was limited to those who participated directly in the conservation activities. This is because our main objective was to characterize the PCP's practices. Interviews were taped, transcribed, and, along with archival documents, were then analyzed by performing content analysis around a number of basic themes (Miles and Huberman 1994). The primary themes were the formal depictions of the system (i.e., rules, roles) and departures from these formal boundaries. Triangulation of sources involved corroborating an observation from one respondent with similar information from one other respondent or archival source.

Analysis: The Process of Contextualization

We now examine the PCP program more closely, vis-à-vis the points made earlier.

1. Contextualization

The PCP program was integrated into the local context in various ways, notably through the modification of program rules and their implementation through the web of relationships found in the place.

The very first instance where we see an attempt by the PCP to integrate their conservation program with local needs and priorities was in the construction of the permit program. The system of permits essentially allowed the PCP to further the extent of egg conservation while, at the same time, allowing the local residents to maintain a measure of income from sale of a portion of the eggs. Moreover,

program functions were coursed through the system of relationships, and not just through formal organizational linkages. As an example, consider one of the PCP's main tasks, which was to patrol against and enforce the ban on poaching (i.e., the harvesting of eggs outside the times and durations allowed by the permit program). For example, when PCP members would ascertain the identity of a poacher, rather than confront the person directly, they would instead approach the person's elders and ask them to reproach the guilty party. This departs from the formal procedure of informing the local police and filing a case in the local tribunal. At other times, instead of apprehending the poacher, the PCP would require the person to assist in conservation activities on Baguan Island for a month. According to the wardens, this practice was effective enough that, to their knowledge, there were never any repeat offenders. When we asked them why these alternative practices were necessary, we were told that they were simply part of being of the place—the Tagalog word they used was *pakikisama* or, loosely translated, "belonging." According to the respondents, these were not simply improvised practices—they were actually the essence of the program, itself.

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2. Blurring

The process of contextualization changed some dimensions of the program such that formal elements, such as roles and rule systems, began to blur and depart from their original design.

In describing how the system actually ran, PCP members would recount practices that were not captured by established rule systems. Take again, as an example, how PCP members would patrol the islands to enforce the ban on egg poaching. As one PCP member recounted: (Tagalog portions translated):

> We cannot be in the position of condoning poaching, but we patrol...so as not to encounter any poachers. For example, one of my favorite pastimes there was vocalizing [he then demonstrates]...I would vocalize until I heard echoes back from the other pocket beaches, till I heard three echoes...in the context of these negotiated relationships, they would know that I was coming, because I would project, and they could hide, so I would not see anyone when I passed the area...I was telling them "hide," and I will not catch you, because if I do, as a law enforcement agency, we are supposed to apprehend you. If the relationship were otherwise, then people may start bearing arms...sometimes it's four of us and twenty of them....We would know when we were going to get hit...first, when we hear that there is an upcoming wedding, and you sometimes just need to turn a blind eye...and another is during the Hari Raya Puasa [involving the return to one's place of origin] when they need to find funds for travel...you learn to understand the culture, their dilemmas.

In essence, what the program amounted to was a mode of "patrolling without patrolling." We contrast this with the simple rule system in place, that is, the directive banning the poaching of turtle eggs and penalties for those caught engaging in the activity. In describing such, we are not making a normative claim about this

method being better than the more formal mode of patrolling—only that the practice was sustainable.

Roles within the system also exhibited a degree of blurring. There arose a multiplicity of roles in the PCP program that mirrored patterns in the larger society of the islands, in general, as the PCP observed: ''A Jama Mapun may be also a municipal fisherman, an egg collector, and a farmer. The Muslim religious leader may be also a Tausug and a business operator. A government official may be also a farmer and egg collecter. They may be also related by kinship and ritual'' (Cola 1998).

Consider the multiplicity of roles assumed by the fishing trawlers that frequented the area. Part of the PCP's work was to patrol against illegal fishing in protected areas by these trawlers. On other occasions, however, the trawler companies would be a source of support, as when the community approached the PCP, who in turn approached the trawlers, for financing for new school equipment, or whenever the PCP would need a ride to and from the islands. While the PCP was aided in its patrolling by the marines, some of these marines were themselves thought to be part owners of some of the trawlers, and on and on in the endless web of relationships in the place.

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3. Integration

The PCP program reflected an integration of the needs, knowledge, and values of the place with the original ethic and design of the conservation initiative.

The nature of a marine reserve, as something devoid of human presence, is an alien concept in the Turtle Islands. When the prospect of pursuing ecotourism in the Turtle Islands is broached, one response is a disapproving allusion to Boracay, a popular Philippine beach resort modeled after the Western concept of pure (and alienating) recreational space. In this worldview, integration of nature and community seems to be requisite. This is seen in various taboos that seem to coincide with protection of valued habitat. For example, according to the local lore, the two most productive turtle habitat areas, Baguan and Lihiman islands, were said to be resting places for two *shariff*, or Islamic holy men (Cola 1998). The design of the permit system and its mode of enforcement reflected the fusing of priorities, both local and state-centered.

The merging of policy and context is also seen in the practices of the PCP members themselves, who adopted the practices of the elder egg-probers. Their admiration for the learning that the Mapun shared with them is evident in their field notes:

> Some local residents have devised methods to locate the eggs in the green turtle nest despite such concealment. . ..On a typical early morning, Pa I (alternating with Pa S) treks Baguan's beach, searching for traces of sea turtle activity the night before. . ..However, the exact location of the eggs and the depth that these are buried cannot be determined without additional information. To ascertain the location of the egg chamber, Pa I and Pa S use a metal egg probe. . .Pa I and Pa S use the egg probe very sparingly. . ..For most nests, they have achieved a skill level that enables them to ''perceive'' where the egg chamber is located even without resorting to the egg probe. . ..During my early fieldwork, Pa I and I would test each other. . ..Invariably, Pa I would be correct.

4. Maintenance

The new conservation edict did not respect the social ties that evolved around the program and so led to the dissolution of the conservation program altogether.

The graph shown in Figure 2 reveals another important piece of information. Beginning in 2002 (the year immediately after RA 9147 was passed), the rate of egg conservation took an alarming drop. By 2003, it was estimated that only about 40% of the eggs were being conserved, a drop of almost half compared to the late 1990s. While the PCP's local wardens were still able to monitor egg collection and record data, they were physically prevented from implementing the conservation program. As a result, fewer than 5% of the eggs were conserved on any of the islands save for Baguan, the latter contributing the bulk of the eggs that were then being conserved (Cruz 2002; Borja 2006). In a sense, the unraveling of the system underscores the power of the model in capturing this system of governance. In contrast to the careful, respectful manner by which the PCP began establishing relationships in the early 1980s, RA 9147 came upon the scene as a completely alien intrusion. Fashioned in Manila without any dialogue from the locals, RA 9147 threatened to take away the islanders' sense of ownership of their place. When the PCP first informed the local mayor of the new statute, he tore the DENR's letter into pieces and launched into a verbal tirade. Soon after, the PCP members were forced to leave the islands and, as of this writing, still have not reestablished their presence there.

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Conclusion: Implications for Program Design

To be clear: We are not stating that systems built upon the local relationships and institutions of a place are necessarily better than formal, bureaucratized modes of governance. Rather, we only state that, in some cases, contextualization may be necessary—either because the state has a relatively weak presence or, as in the Turtle Islands, local residents are hostile to the idea of the state completely taking over their place. Figure 2 is instructive in another sense. Whether optimal or not, the system that evolved in the Turtle Islands did meet its foremost program objectives, which was to sustain conservation. Furthermore, the precipitous drop in conservation that began with the passage of RA 9147 attests to what the PCP members maintain, which is that to sustain conservation, they also had to be sensitive to the needs, knowledge, and ethics of the place. RA 9147 does represent, in part, a more centralized, state-centered approach and, at least in this situation, it has proven unworkable. As a lesson for institution-building, we reflect on the need for policymakers to build into their program concept the possibility of, and support for, these processes of contextualization.

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