Devolution and Discretion:
Building Community-Based Resource Management into Contemporary Governance*

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Abstract

Community-based management demands collective decisions that reflect influences reaching across many borders--natural, jurisdictional, and bureaucratic. These influences include pressures by consumers exercising opportunities for market democracy; values transmitted through citizen networks; and authority exercised in departmental hierarchies.

At the same time, legislation increasingly imposes obligations on public servants to pursue integrated, ecosystem-based, precautionary approaches to decision-making in an environment increasingly recognized to be complex, changing and uncertain. There are many problems, both administrative and conceptual, to be faced in carrying out—or, indeed, simply in understanding—such obligations in a changing public sector context.

This paper explores that social and governance challenge of managing human activities in complex ecosystems by reference to recent institutional innovations in the Clayoquot Sound region of British Columbia. It concludes that processes of social learning have a long way to go in overcoming some persistent fundamental differences in perspective.

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Purpose of this paper

Increasingly it is recognized that both the natural and the human components of ecosystems dynamics are complex, profoundly uncertain in structure, ceaselessly changing, and intricately inter-related through the constraints of a 'full world'.

With respect to natural systems, one result is a rapidly growing body of international covenants and national legislation designed to regulate human activities with significant ecological impacts. With respect to social systems, one result is a rapidly growing (and globalizing) structure of civil society organizations, and heightening expectations of individual opportunities for participation and influence in processes of decision-making in those organizations and institutions (ironically, just at the time of—or perhaps as a consequence of—the dramatic growth of institutions and tribunals intended to discipline and constrain the use of the regulatory powers of governments responding to such participation and influence in trade and commercial activity).

Both sets of influences demand that public servants modify their beliefs and their practices, and that formal organizations modify their principles and cultures. Like corporations, public sector organizations are driven by changing mindsets and beliefs to amend fundamentally their modes of operation, both in application of industrial principles and in obligations to find reconciliation of strikingly different perspectives.

The goal of this paper is to examine some resulting problems of discretion, devolution and coordination in public management, using for illustration some recent history in the Clayoquot Sound Region, on the West Coast of Vancouver Island.

This is a strikingly attractive and substantially pristine region, on the extreme Western fringe of Canada (about as close to Australia as one can get in Canada without getting very wet). Like remote coastal communities everywhere, it has been hard hit by problems of economic structural adjustment, arising from transformation of the economy from a resource-dependent, logging and fishing community into something else (to know what else, is a big part of the problem).

The Commitment-Compliance Cycle

Before going on to talk about specific developments in this region, it will be helpful to review very briefly (in this section) some general questions of policy formation and implementation, and (in the next section) some recent developments in environmental governance in tiered systems.

It is hard to keep all the various strands in hand without some mental picture. With apologies, I am going to refer here to one version of a standard image of the policy cycle, what I call the commitment-compliance cycle, in order to emphasize the number of conceptually different links in the chain of policy development, program and process design, and service delivery or operational management.

Using the metaphor of the policy cycle for shorthand, I am going to argue that there are dramatically new and important developments associated with the formation of collective

intent, and indeed throughout the whole mandate development process, or what has sometimes been called the process of rule-making. From the point of commitment or covenant at international or epistemic level, the policy-making process cascades downwards to more specific legislation, regulation and program mandates at more local scale. This rule-making process increasingly hinges on intergovernmental administrative agreements or more formal instruments of delegation, or informal partnerships.

There are also dramatic institutional innovations occurring on the ground, in communities, at the point of actual implementation or program realization, where processes of community-based management are evolving. Questions of local level indicators of community health and ecosystem integrity, or reporting on progress toward sustainability as a result of actions taking place on the ground, are active areas of current research centered at this stage of the policy cycle.

There is a great deal of institutional structure and management linkage in between, and substantial puzzle around how all that is evolving. It seems to me that it is to this organizational linkage that much of the discussion of partnering or contracting for service delivery is directed, as in the other sessions of this workshop. But it is my claim that we have to judge the effectiveness of all this linkage, all these strategic alliances and public-private partnership structures, on the basis of their success in truly linking the ideals and covenants developed by epistemic communities at international level with the local knowledge and management decisions of communities of place at local ecosystem scale. It is fidelity or authenticity in the performance, on the ground, of texts elaborated in cyberspace, that represents the ultimate test. If so, these are standards of performance that governments, administrative agencies and private organizations have not much faced before.

Epistemic Communities and International Covenants

So first, just a quick reminder of the vast array of new ideas introduced in recent years in international negotiations, especially those leading to multilateral environmental agreements (MEAs) and even trade deals.

Principles like those in the Rio Declaration, Agenda 21, the proposed Earth Charter, and so on, establish a growing concern for questions of sustainability and intergenerational equity. These lead on to articulation of principles of action such as the precautionary principle, increasingly expected to influence the fundamental balance in institutional decision-making in the face of risk, whether public or private. In addition, management principles are amended to reflect a need for integrated, ecosystem-based analysis and management. In an explicit way, these developments redefine the boundaries for social decisions and political action; but they do not eliminate them. They modify the definition of the spillovers and linkages that must be taken into account, they may accommodate more trans-border flow of information across borders, but those borders do not vanish.

These commitments and ideas mentioned above are now substantially reflected in national legislation, to be implemented by officials in a public service which has rarely

been exposed to them, let alone become fully aware of the conflicting objectives and resulting tensions involved in carrying them forward.

But from this national legislation reflecting an underlying ethical orientation and international commitments, there is still a substantial apparatus of formal organization before one gets to see action on the ground.

Let me suggest just a few examples.

- Canada's new Oceans Act, which came into force in January, 1997, explicitly establishes three over-riding principles or orientations to govern public policy and management in the field of oceans. It requires that policy and management follow an ecosystem approach, a precautionary approach, and an integrated approach. It also mandates a more inclusive consultation-based process of policy development.
- Canada's new Environmental Protection Act includes reference to a precautionary approach, giving rise to considerable debate as to what this might mean operationally.
- Canada's Environmental Assessment Act requires synthesis and integration of traditional ecological and local knowledge with conventional science-based evidence in carrying out assessment of proposed developments.
- Health Canada now pursues a precautionary approach in its management of social risks to health, again raising heated questions about what this should mean in practice.
- All federal departments are now required to table every three years their sustainable development strategies and a Commissioner of Environment and Sustainable Development is required to review and report to Parliament on the adequacy of these and of the government's overall corporate approach to its sustainability responsibilities.

And so on. I know that much the same thing has been happening also in Australia for some time, and I look forward to learning more about these developments.

- At the provincial level, in British Columbia, similar developments are shaking up existing practices.
- A new Forests Act and Forest Practices Code[1] builds in (in its preamble, though not in its binding text) a legislated commitment to sustainable forestry.
- The Environmental Assessment Act demands exhaustive consultation and timely recommendations to Ministers on approval of development projects, taking into account impacts on the sustainability of communities and cultures.
- A Fish Protection Act proposes to regulate development activities at municipal level in order to protect fish habitat and assure sustainable fisheries. (Massive controversy surrounds the effort to write regulatory streamside directives to implement the intent of the legislation.)

Institutional Innovation on the Ground

Now let's look at what's happening out on the fringes. Take the example of Clayoquot Sound, on the West Coast of Vancouver Island. This region has now been designated a UNESCO Biosphere Reserve[2]. The history of the community processes and institutional development leading to this outcome is remarkable as an example of increasing community cohesion, emerging during an extended consensus-building effort following a deep and protracted period of conflict and civil dissent, leading to unanimous support among the seven distinct communities of the region—five aboriginal communities and two non-aboriginal communities—for the Biosphere Reserve nomination (such unprecedented unanimity being a condition before provincial and federal governments would submit the nomination formally).

Such an outcome would not have been predicted from the turbulent history over the last decade or two[3]. During that period, Nuu-chah-nulth First Nations, environmental groups and the logging industry have all been struggling to win influence in relation to government decision-making on land and resource use in the area.

As a result of a number of blockades by environmental groups and a growing public voice against old-growth logging, both locally and internationally, a number of dispute resolution roundtables or committees were formed in an attempt to reach consensus among all groups with an interest in sustainable development. These committees, which met off and on from 1989 through 1992, included representation from federal and provincial governments, local governments in the area, and stakeholders from the large number of sectors in the region.

These committees were unsuccessful in reaching consensus on any development strategy. (Part of this failure must be attributed to the absence of some major players: since the government refused to halt logging activity while talks were going on, most environmental organizations walked from the table in protest against the 'talk and log' policy, a concern that continues to this day.) The final committee was disbanded in October, 1992. However, the issue of sustainable development in Clayoquot Sound remained a priority for the British Columbia government and led to a Cabinet land use decision for the region[4] and a public report by the Commission on Resources and the Environment (CORE)[5] in 1993. The CORE report recommended the establishment of a Scientific Panel[6] to review current land use standards and to make recommendations for improvements for the area. This panel was established in 1993, with the government committing itself to adhere to all its recommendations. When the panel finally reported in 1995, these recommendations included far-reaching principles for an ecosystem-based approach to planning, based on an integration of traditional knowledge with conventional science, using watersheds as the basic unit for planning and management, and for full recognition of the need to promote the cultural, social and economic well-being of First Nations. The panel also recommended that land-use decisions must, to the extent possible, not prejudice or be subject to the outcome of comprehensive treaty negotiations[7], which were just beginning to get underway. There is anecdotal evidence that government officials are determined to ensure that the precedent set by this process not be extended to other regions in the province. On the other hand, many voices that at

the time complained that the panel was asked only how—not whether—to log in the Clayoquot Sound region now view the panel's report as establishing the baseline for responsible resource management everywhere.

The BC government and the Nuu-chah-nulth Central Region Tribes[8] commenced government-to-government negotiations on the co-management of the Sound in 1992. As part of these negotiations, an Interim Measures Agreement (IMA)[9] was signed in March, 1994, creating the Clayoquot Sound Central Region Board (CRB)[10]. The Agreement has since been extended twice, and ultimately, in March, 2000 was replaced by the Clayoquot Sound Interim Measures Agreement: A Bridge to Treaty."[11]

The mission of the Central Region Board, created under this structure, is to manage land and resources in Clayoquot Sound, prior to the conclusion of a treaty, in a manner that

- provides opportunities for First Nations consistent with aboriginal resource uses and heritage, and considers options for treaty settlement;
- conserves resources in Clayoquot Sound and promotes resource use that supports sustainability, economic diversification, and ecological integrity.

Major innovations in institutional structure have followed. The most dramatic thus far is the creation of Iisaak Forest Resources[12], a joint venture of Weyerhaeuser with the Ma-Mook Development Corporation[13], the latter, a development arm of the Nuu-chah-nulth Nation, holding majority control. More recently, a community-based fisheries management structure, the West Coast Vancouver Island Regional Aquatic Management Board[14], has been created as a pilot project by agreement of four orders of government.

In addition, as noted above, the community succeeded in coming together around a unanimous nomination of the region as a UNESCO Biosphere Reserve. This designation was formally confirmed by UNESCO in 1999, and a Canadian government financial contribution toward the funding for the creation of a Clayoquot Biosphere Trust as a non-profit society was announced by the Minister of Finance in the February, 2000 federal budget.

UNESCO Biosphere Reserves serve to combine the three following functions:

1. conservation: contributing to the conservation of landscapes, ecosystems, species and genetic variation;
2. development: fostering economic development which is ecologically and culturally sustainable;
3. logistic support: research, monitoring, training and education related to local, regional, national and global conservation and sustainable development issues.

Biosphere Reserves form a World Network. Within this network, exchanges of information, experience and personnel are promoted. Biosphere Reserves develop local solutions on conservation and sustainable development that can be shared with other Reserves.

The Clayoquot Sound UNESCO Biosphere Reserve has as a guiding principle the Nuu-chah-nulth First Nations philosophy "Hishuk ish ts'awalk", or "everything is one." This stresses the importance of recognizing and learning about the interconnections within and between ecosystems in order to promote truly sustainable local communities and economies, while protecting the environment for future generations.

Through the web links set out in the end-notes to this paper one can find brief chronologies and details of these and other institutional developments in three selected sectors--fisheries, forestry, and integrated land use. In the fisheries domain, one can see in the pilot project a dramatic shift toward shared decision-making. With respect to forestry, developments have involved the joint venture just mentioned, and negotiation of codes of conduct or agreed standards of practice, in response to market measures at regional and global level (but also with substantial concern about capacity to monitor and report independently on actual practice, capacity to certify meaningfully, and capacity to engage in enforcement measures effectively). On the land use side, the search for effective land use planning at watershed scale, with reasonable integration of both terrestrial and marine components of coastal zone management, raises questions of local control potentially in conflict with province-wide policies as interpreted by provincial ministries.

These questions are explored a bit more fully in the following sections.

Governance Themes

These four (including the Biosphere Reserve designation itself) selected institutional innovations illustrate a wide range of organizational responses to the dramatic challenges of economic and social structural adjustment facing the region.

- The community initiative that led to the unanimous nomination of the region as a UNESCO Biosphere Reserve created an internationally recognized framework for land use generally consistent with the zoning framework established in the Land Use Plan established by Cabinet decision (though there is, in any case, substantial doubt that the land use decision will ever be implemented).
- Strong pressure from the Nuu-Chah-Nulth people led to the negotiation with the provincial government of interim measures agreements and the creation of the Central Region Board as a voice for local control in integrated land use decisions.
- Pressure from Nuu-chah-nulth leaders, allying themselves with regional fishing interests, particularly through formation of the Regional Aquatic Management Society, succeeded in pushing negotiations for a Regional Aquatic Management Board to a successful conclusion, with formation of the Board accepted by the federal Department of Fisheries and Oceans as a pilot project[15]. Further pressure has led to a proposed decision making process that would extend a participatory model of shared decision-making throughout B.C.
- And, following yet a different model, a major forest operator and the Nuu-chah-nulth development corporation formed a joint venture that successfully negotiated unprecedented Memoranda of Understanding with environmental organizations and with forest contractors or loggers to clear the way for continuing forest

operations (neither federal nor provincial government was signatory to these documents, though the provincial government did approve the transfers of tenure[16] involved).

These four different models give rise to a number of observations and questions about governance mechanisms. A number of barriers can be noted briefly here and are explored in the next section.

First, these institutional innovations came only with difficulty, and continue to face serious practical problems because of the varying structures and cultures of the organizations involved. Existing administrative systems and accountability mechanisms are serious barriers to innovation. These administrative systems truly are caught in a sandwich between influences spilling over from distant stakeholders and strong pressures for local autonomy. The strains of the resulting cultural transitions are visible.

Second, as always, the tensions associated with power sharing are formidable.

It is important also to recognize that the cultural barriers to effective cross-boundary linkage apply not only to the organization and structures for operational management, as mentioned above, but also to a distinct, prior activity of building understanding, shared beliefs about facts and visions or norms, and indeed to an extended investment in building understanding and agreement around process and procedure. (Note that the CORE experience suggests something like 18 months is needed for this purpose simply of building trust and agreement around procedure—but if this investment is not made, the process will fall apart when it hits the first hard decisions that cannot be 'win-win' on the first round for everybody. Indeed, this is the whole point—to build recognition that 'win-win' solutions can only be possible in the context of a commitment to longer term processes promising a generalized reciprocity, not an assurance of favourable outcomes on a transaction-by-transaction basis.) For operational purposes, a pragmatic concern with timely decisions will view this development with some skepticism.

Can it be argued that this complex array of new institutions on the ground is itself coherent? Can there be a coordinated approach to the interacting, interdependent ecosystem dynamics at play? Is there really horizontal thinking here, or is it simply that integration is possible at a practical level when all these players are working at regional scale? It remains to be seen whether all these new institutions will simply gravitate toward a new elite, will in effect be co-opted in their turn by the existing large-scale formal institutional apparatus, as they become more abstract and distant in order to be effective in their linkage roles.

In all of this, however, the key point is that the importance of boundaries has not diminished—they may be in some ways more permeable, perhaps, and there may be many more mechanisms for bridging or linking across boundaries. But they remain significant.

If so, partnerships might be examined not so much as boundary spanning mechanisms as boundary enlarging—creating a new structure/alliance which brings inside new boundaries some groups or organizations that formerly were not part of so strengthened a membership. This leads to observation that boundaries are themselves socially constructed. Just as we recognize increasingly that our science is socially constructed, we see also that the boundaries to which we choose to respond—the communities of concern with which we choose to identify—are also open to social adjustment.

The dynamics of interaction between initial community pressures, government and corporate concessions, subsequent attempts to secure participation in the new processes, fears of cooption, are challenging concerns for all the organizations involved, but particularly so for the small civil society organizations. In the Clayoquot Sound setting, the interesting interaction between the reality of community pressures and the rhetoric of transformation in governance processes and government institutions is highlighted. Though the origins of these initiatives in community pressure is clear, ultimately the institutional innovations they drove find resonance in larger current campaigns for new modes of governance, subsidiarity and so on.

Issues for Discussion

To be sure, institutional innovations in community-based management in the Clayoquot Sound region have emerged out of a specific context, one determined in part by unique attributes and features that are products of particular circumstances. Yet conflicting interests, similar to those that drove innovations in the Clayoquot Sound region, are elsewhere being addressed in a similar way on a larger scale, for example now on the Central Coast of BC[17]. There, as in the Clayoquot example, discussions among formal stakeholders seemed to become more fruitful when First Nations and local communities were also brought into discussions with a focus on dialogue and a search for areas of shared common interests that could support innovative mechanisms such as green investment, community forests, cooperatives or trusts to institutionalize new relationships. Expectations of effective voice and shared decision-making appear to be growing throughout civil society, and the dynamics of the learning processes integral to the development of collaborative institutions in Clayoquot Sound are perhaps becoming more comprehensive and more inclusive, and spreading.

Still, the dust is far from settled on this story, and many questions remain. We should consider briefly at least the following.

- **Government's role**. Community visions of community control are, at best, rarely shared by governments. Many government agencies seem, perhaps understandably, still to be fearful of the existence, let alone expansion, of the model of local control and community-based management. Yet, new and larger accords (and global market influences) now seem to be driving the determination of corporate practices on public land without recourse to legislation or appeal to government authority.

  It is crucial to recognize how dramatic a change is being proposed in some of the discussion around these local institutional innovations. In the case of West Coast

salmon fisheries, for example, some proposals for reform of decision-making processes envisage officials from both federal and provincial governments becoming advisory to a consensus-seeking process, rather than seeing the consensus-seeking process as advisory to them. Government officials (or Ministers) would be expected to exercise powers to make independent decisions only in cases where the consensus-seeking process fails to achieve consensus on necessary management action.

"Perhaps we need a new institutional paradigm that sees management agencies not as providers of solutions, but as facilitators and partners with citizens (i.e. true "civil servants") to help find joint solutions."[18]

(One may also note here the growth of interest in mechanisms such as consensus conferences on the Danish model[19]. We return below to consider recent skeptical review[20] of all this enthusiasm for consensus.)

- **Legitimacy, agency and accountability.** This development of participatory mechanisms of course leads to complex questions of legitimacy and agency amongst the formal civil society organizations and informal groups claiming places at the table and voice in decisions. Which groups speak for whom? Who speaks for the trees? How do we recognize the role of groups speaking for environmental concerns[21]? Which can claim to be representative, accountable and eligible to participate in the contested interpretations of uncertain evidence flowing from interventions as experiments? Who elected them? Are there limits to the tactics they might properly pursue in advancing their particular agenda in the face of general resistance?

- **Sensitivities.** From the uncertainties surrounding answers to these questions flow other concerns about sensitivities, rivalries and conflict within communities. Explicit protocols may be developed to bridge or reconcile some of the differing perspectives brought by various parties to processes of community-based management, but in other cases only long periods of institutional investment in building trust and confidence can establish the degree of shared commitment to joint undertakings that would be necessary to ensure that the process continues to be accepted as legitimate even though individuals may encounter adverse outcomes in particular cases. That is, it is crucial that participants become willing to stay on in the process even though they cannot win on every decision, or even avoid individual costs on some. What will motivate them to do so?

- **Fragmentation and horizontality**. The usual problem of diffuse and dispersed government responsibilities and mandates arises here in a crucial way, fragmenting attempts to deal in an ecosystem-based fashion with integrated resource management. For example, consider that the task of sustaining the fishery must be seen as sustaining fishing communities as well as sustaining fish stocks[22]. At what scale should the necessary integration and conflict resolution be attempted? The mandate of the Department of Fisheries and Oceans and the expressed priorities of recent ministers, for example, emphasize conservation. Should DFO itself attempt to balance these priorities against the concerns with sustainable coastal communities that

should preoccupy social and economic departments? Have they the knowledge base and expertise to do so? How can departments or governments assure that their many representatives sitting at many different tables speak with one voice—or at least do not contradict each other in responding to or mandating needed community action?

- **Subsidiarity**. With the spillovers inherent in ecosystem-based resource management, can the authorities and autonomy necessary to effective adaptive management be exercised on the ground, within local decision-making bodies, without unacceptably fettering the discretion or pre-empting the responsibilities of Ministers or governments? Are we already seeing bureaucratic efforts to contain this threat, for example, to reduce the impact of the precedents set by creation of the Scientific Panel or the Central Region Board?

- **Trusts**. A striking feature of some of the institutional developments sketched here is the manner in which they evolve toward an underlying structural theme, that of the trust as an alternative institutional mechanism. The formation of the Clayoquot Biosphere Trust was an institutional legacy of the UNESCO Biosphere Reserve designation. Forest trusts have been a solution emerging in the search for an end to the 'war in the woods'; the British Columbia government has pursued trials of community forests as part of forest licensing and tenure reform discussions. Interest in the broader concept of a Community Ecosystem Trust[23] is growing. Aquatic Conservation Trusts to hold retired licenses at regional level have been proposed in the fisheries context as a means to preserve some community rights of access to the fishery in the face of the reductions in numbers of licenses and concentration in their ownership as a consequence of license buyback and fleet rationalization programs[24]. Discussion of a lands trust is being pursued as a way of resolving the most vexed and explosive of the land use issues in the Clayoquot Sound region, the question of Meares Island. (Note the provision in the Nuu-chah-nulth Agreement in Principle,[25] now in abeyance following its overwhelming rejection in early summer 2001 by Nuu-chah-nulth members eligible to vote.)

  In reflecting on this concept of trusts identified as one general governance theme, it is important to note the significance of this development as a way of enabling devolution and decentralization, not to private corporations, but to other institutional forms more representative of a balanced community interest rather than only a possibly distant shareholder interest. This has the effect of recognizing not just financial capital or formal intellectual property, but the claims of other forms of capital—human, social, cultural and natural, as well as tacit and traditional knowledge. (And in this respect it has fascinating resonance with the emerging World Bank 'many capitals' approach to measuring the wealth of nations and reporting on progress toward sustainability. One attempt to put the approach to work can be found in the ESDI project[26] launched by the National Roundtable on Environment and Economy in response to Finance Minister Martin's call for environmental indicators to parallel the economic indicators on which budgets are based.)

- **Certification**[27]. The crucial role of certification processes and the flow of information has also to be emphasized here. Ultimately all these processes of market democracy, shareholder activism and similar approaches to reliance on decentralized decisions driven by the informed citizen rest crucially on adequate access to information enabling citizens to judge not just the products or outcomes of corporate or public decisions, but also the adequacy and acceptability of the means and the processes which generated them. But all these mechanisms also run up against the old reality of corporate control, and the separation of control from ownership, whether formal or virtual. Along with the movement to entrench investor rights, it might be argued, we are seeing also an attempt to counter the effectiveness of market democracy by extending the enclosures movement to the whole realm of knowledge as a global public good. What all this means for the role of the public servant in exercising discretion in resource management decisions, is an important contemporary question. (One distinct but crucial illustration related to openness and the responsibilities of the public servant in possession of internal knowledge but participating in deliberative processes is explored in a separate paper[28].)

- **Realism: capacity.** Is there in fact adequate capacity to carry out the necessary shared decision-making as envisaged? Are there the resources to maintain the monitoring processes, data capture, information-sharing, synthesis and interpretation necessary to support ongoing informed deliberation, and can there continue to be, in an era of increasing government budget restraint? Is this an area where initiatives such as the Social Sciences and Humanities Research Council's innovative Community-University Research Alliance program (sadly now already a victim of questionable budget decisions) or the new Community-University Connections initiative[29] may make an important difference?

- **Realism: implementability.** Is it also possible to conclude that the consensus essential to community-based management may be achieved around decisions in principle, but will erode quickly as the hard choices of concrete implementation have to be faced? Is this more likely to be the case given the time scales involved with such resources as long-lived fish or old-growth forests, and the limits on community capacity? How do we respond to the need for interim returns, early harvests, concrete evidence of progress and tangible benefits?

- **Realism: misguided objective.** The enthusiasm for community-based management, and for extending its reach to inclusion of traditional knowledge and broadly participatory shared decision-making may have to be tempered by questioning their impacts on the quality of decisions themselves. Observers like Coglianese[20] have argued that decision rules requiring consensus are neither necessary nor desirable. Reasoning principally from work in regulatory rule-making, Coglianese argues that such decision rules lead to lowest common denominator results that fail to address the difficult issues. (The point that is missed by these criticisms, of course, is that the concern is not with single decisions or particular outcomes; the focus is on consensus-seeking and learning processes. It is on relationships, not individual transactions; it is on building a track record, not recording individual victories; it is on a social context

where mutual gains from continuing cooperation, not concentrated winnings from competitive victories, are the goal. Coglianese and others with similar criticisms fail to appreciate the difference between specific decisions demanding consensus and cohesion built by consensus-seeking processes.)

- **Realism: market tests**. Ultimately, market tests in some form must be faced. Despite the best hopes of smart growth advocates or ecological footprinters, regional self-sufficiency is not an option—neither feasible nor desirable. The resources to enter into trade and commercial relations outside the region must somehow be earned. Will consumers really pay the premium involved in ecologically responsible resource harvesting? Can certification really force wholesalers to direct procurement to responsible producers? Can investors be persuaded to offer sufficient funding to purchase investment units embodying environmental values to the extent necessary to support viable commercial operators? Will sufficient philanthropic inflows be feasible on terms that do not conflict with local values and principles, and hence influence decisions towards activity unacceptable to community interests?

- **Realism**: **what community, what borders—colonialism by another name?** In the end, it seems, we still grapple with the core problem of institutions (multi-national enterprises, governments, civil society organizations) from far away doing deals about the exploitation and conservation of regional resources. Global transactions shape local life chances. Are communities of place any closer, as a result of all this institutional innovation, to real participation in the management of adjacent resources and the consequences for their own futures?

These questions and observations thus lead us back to the more extended context of social learning, and to the longer-term evolution of ideas and beliefs. In the case of Clayoquot Sound, we perhaps can see the effects of a dramatic evolution of ideas independently at two different scales. On one hand, we see an evolving view of universal rights and an expectation, within a globalizing civil society, that values can appropriately spill over from one community to influence—indeed, must constrain—the conduct of activity (and hence public decisions) in another. Practices in Clayoquot Sound are thus forced to conform to the demands of distant markets reflecting the exhortation of distant advocacy groups. (For some prescient commentary on these developments one can see an old paper by David Cohen[30].) On the other hand, at the same time, at a local scale, we note a heightening sense of entitlement to be not just involved in policy deliberation, but to be substantively engaged, with a significant degree of agency and autonomy, in policy formation and realization on matters that previously might have been thought to rest solely with Ministers in Victoria or Ottawa.

This paper began with the problems of coastal communities facing the strains and challenges of transformation from an unsustainable model of resource exploitation and economic development to a vision of a journey to sustainability. Recognition of the problems of the old model and the essential shape of the new are both still contested, and approached from many perspectives. But a key element of the new vision is to see human relationships and institutions—the human subsystem—as embedded in the

ecosystem as a whole, crucially dependent on relationships with the natural systems that form part of the surrounding biosphere.

In exploring this transformation, a key focus was the fascinating story of the development of new, more inclusive, participatory mechanisms for shared decision-making, involving a synthesis of traditional and local knowledge with information developed from conventional scientific methods.

One can argue the case for participation on three different grounds. The first is intrinsic, based on the inherent right of all individuals to have voice and influence in decisions that affect them profoundly. The second is substantive, based on the conviction that greater participation brings greater awareness, promotes synthesis of local and traditional knowledge with conventional science, and hence leads to substantively better decisions. The third is instrumental, based on the belief that broad participation is essential to acceptance of the legitimacy of decisions, and hence to compliance with them.

The transformation toward a sustainable path has not yet been accomplished. Indeed there must be reservations about whether any of the new institutions described here is really working well, really meeting the objectives set out for them. The old industrial model remains the driving paradigm, it seems, in almost all relevant decision-making quarters. Transformation of organizational cultures in the federal Department of Fisheries and Oceans or the provincial Ministry of Forests has not been achieved, despite pockets of evangelical promotion of sustainable management and participatory decision-making in each. Forest operators, fishing enterprises, land development companies, despite some participation in some of the new institutions explored here, remain largely constrained to a focus on industrial products rather than ecosystem values (though perhaps now more apprehensive about potential influences from market activism arising out of concern for the latter). Indeed, as First Nations and other community interests develop more immediate economic interests in the returns from production, pressures to deliver the fish and get the logs out now fragment pressures for sustainable management and create local antagonism to external exhortation about principles of sustainable development. The figure-ground reversal that brings people to see economic activity as limited within the broader framework of continuing stewardship of a common heritage of humankind has not been achieved; the focus on cooperative action for mutual gain has not yet offset the drive to immediate short-term returns. The willingness to engage in true sharing of hierarchical power has not withstood the pressures of concentrated corporate interests and conventional bureaucratic mindsets.

On the other hand, to all these reservations and challenges it may be necessary to offer the same hopeful but incremental response. The hope here lies in social learning over decades or generations; the returns are not all in yet. There is a process of social movements attempting to establish a rules-based globalism that permits a social frame around the transactions of a global economy, a frame that ensures that economic and commercial relationships are pursued within underlying charter principles of social and ecological integrity. These influences on all formal institutions—governments and civil society organizations as well as corporations—are creating external realities to which

institutional decisions must respond. Though there is a growing threat of institutional control of necessary information and access channels, and consequent irreversible loss of citizen agency, this threat is not yet a reality.

Thus the challenge of drawing the right lessons from the fascinating recent history of the Clayoquot Sound region, and the institutional models and innovations presently in place (and the countervailing forces to which they may give rise), remains.

Conclusion

"Even in a live concert, the audience is separated from the individual voices. Only the performers are able to hear the person standing next to them singing a different harmony." (Janet Cardiff, from her notes on her work, Forty Part Motet (2001), included in the National Gallery of Canada exhibition, Elusive Paradise)

I would argue that the experience of Clayoquot Sound underlines the importance of processes of social learning in managing the impacts of human activities and dealing with the realities of collective action in a world of profound uncertainty. The over-riding feature of such management is to find order emergent, from the interplay of many voices, from participation and deliberation, not from expertise and calculation. The organizational challenge of accommodating the discretion essential to adaptive management is dramatically multiplied as both public expectations and legislative directives dictate vastly extended consultative processes, integrated approaches and synthesis of many forms of knowledge.

The dynamics of the processes in Clayoquot Sound are becoming more comprehensive, more inclusive, addressing more comprehensive tasks. The specific conflicts that drove developments and innovation in the region earlier are being addressed in a more abstract, institutionalized fashion at larger scale. The lessons, it seems, are being taken very seriously now on the Central Coast of BC. Newspaper stories recently have been reporting expectations of new and larger accords, driving the determination of corporate practices on public land without recourse to legislation or government authorities. Many government agencies may, understandably, still be fearful of this expansion of the model of local control and community-based management. But expectations of effective voice and shared decision appear to be growing, throughout civil society.

And perhaps this is an inevitable outcome as the performers become more aware of the power of the harmonies to be achieved by their many voices singing.

[1] Forest Practices Code [FPC]
The Forest Practices Code refers to regulations made by Cabinet to regulate activities in the forest, particularly to reduce the size of clearcuts, strengthen requirements for reforestation, reduce the environmental impacts of logging roads, and protect water quality and fish habitat. Ostensibly, the code represents a "get tough" approach to dealing with unacceptable logging practices. It was initially welcomed by environmentalists, but criticized by the forest industry on the grounds that the code is complex, unwieldy and imposes excessive costs of compliance. In its implementation it appears to be considerably less effective in protecting forest ecosystems than had been hoped.

[2] Clayoquot Sound UNESCO Biosphere Reserve
Biosphere Reserves are areas of terrestrial or marine ecosystems which are internationally recognised within UNESCO's Man and the Biosphere [MAB] Program for promoting and demonstrating a balanced relationship between people and nature. Individual countries propose sites within their territories that meet a given set of criteria for this designation. The Clayoquot Sound UNESCO Biosphere Reserve has as a guiding principle the Nuu-chah-nulth First Nations philosophy *Hishuk ish ts'awalk*, or "everything is one." This concept stresses the importance of recognising and learning about the interconnections within and between ecosystems in order to promote truly sustainable local communities and economies, while protecting the environment for future generations.
http://www.clayoquotbiosphere.org/ and http://www.unesco.org/mab/wnbr.htm

[3] Clayoquot Sound Archive Project
The Clayoquot Sound Archive Project supports a web site index of documents relating to the recent history of Clayoquot Sound. http://sitka.dcf.uvic.ca/CLAYOQUOT/

[4] Clayoquot Sound Land Use Decision [CSLUD]
After years of inconclusive discussion, the government of British Columbia made a decision in April 1993 on land use in Clayoquot Sound. As a result of the 1993 CSLUD, 34 percent of Clayoquot Sound is to be preserved for all time. The decision placed a further 21 percent of the Sound under special management, which allows some sensitive logging while emphasizing the protection of wildlife, recreation, and scenic values. Before the land-use decision, the area assigned to general integrated resource management — the usual designation for logging and other resource extraction — included 81 percent of Clayoquot Sound. The Government reduced this to 40 percent. First Nations were outraged at being excluded from the decision making process, and environmental groups were outraged that the plan permitted too much logging of old growth forest. While the provincial government's decision concerning logging in Clayoquot Sound has not been explicitly reversed, the government responded to the opposition by setting up the independent Scientific Panel.
http://www.for.gov.bc.ca/het/Clayquot/clay.htm#hpp
http://www.for.gov.bc.ca/vancouvr/district/SOUTHISL/Clayoquot/clayoquot_sound.htm

[5] Commission on Resources and the Environment [CORE]
Established by the provincial government in 1992, CORE's mandate included the development of strategic land use plans in four of the province's most controversial regions (though Clayoquot Sound was excluded from its mandate). Although none of the regional land use planning processes initiated by CORE reached consensus at the table, the recommendations made by the Commissioner were extremely influential in the final regional land allocations decided by Cabinet. CORE was disbanded in 1996, with the expectation that the consultative processes would be carried on with the ongoing Land and Resource Management Planning (LRMP) process at the sub-regional scale.

[6] Scientific Panel on Sustainable Forest Practices in Clayoquot Sound
The Scientific Panel, which included First Nations resource management experts and leading scientists, was created by the BC government following the April 1993 decision on Clayoquot land use. The panel's mandate was to review current forest management standards in Clayoquot Sound and make recommendations for changes and improvements. The goal of the panel was to develop world-class standards for sustainable forest management in Clayoquot Sound by combining traditional and scientific knowledge. ftp://ftp.hre.for.gov.bc.ca/pub/clayoquot/clay1.pdf

[7] British Columbia Treaty Commission [BCTC]
The BCTC is responsible for facilitating treaty negotiations in the province, not including the Nisga'a treaty negotiations. As the independent and impartial keeper of the process, the Commission is responsible for accepting First Nations into the treaty making process, It assesses when the parties are ready to start negotiations, and allocates funding, primarily in the form of loans, to First Nations. The Commission monitors and reports on the progress of negotiations, identifies problems and offers advice, and assists the parties in resolving disputes. http://www.bctreaty.net/files/bctreaty.html

[8] Nuu-chah-nulth Tribal Council
The Nuu-chah-nulth Tribal Council represents 14 first nations on the West Coast of Vancouver Island from Brooks Peninsula north of Kyuquot to Sheringham Point south of Port Renfrew. Five such groups make up the Central Region tribes in the Clayoquot Sound Region. http://www.nuuchahnulth.org/

[9] Interim Measures Agreement [IMA],
Interim Measures Extension Agreement [IMEA]
In 1994, a two-year Interim Measures Agreement [IMA] between the provincial government and the five First Nations of the Nuu-chah-nulth Central Region was signed. The IMA acknowledged that the Ha'wiih (Hereditary Chiefs) of the First Nations have the responsibility to conserve and protect their traditional territories and waters for generations which will follow. As a result of this agreement, the First Nations and the province became partners in a joint management process for land use planning and resource management in Clayoquot Sound to be carried out by a Central Region Board [CRB] composed of First Nations representatives and provincial government appointees.

In 1996, because treaty negotiations were still in progress, an extension to the initial IMA was signed, known as the Interim Measures Extension Agreement (IMEA). In April 2000, this agreement was replaced by the Clayoquot Sound Interim Measures Extension Agreement: A Bridge to Treaty.
http://www.island.net/~crb/agmts.htm
http://www.gov.bc.ca/aaf/down/IMEA_Final4.pdf

[10] Central Region Board [CRB]
The Clayoquot Sound Central Region Board was created by the 1994 Interim Measures Agreement and continued under the 2000Interim Measures Extension Agreement: A Bridge to Treaty. Its mission is to manage land and resources in Clayoquot Sound, prior to the conclusion of a treaty, in a manner that: provides opportunities for First Nations consistent with aboriginal resource uses and heritage, and considers options for treaty settlement; conserves resources in Clayoquot Sound and promotes resource use that supports sustainability, economic diversification, and ecological integrity; and encourages dialogue within and between communities and reconciles diverse interests.
http://www.island.net/~crb/

[11] Clayoquot Sound Interim Measures Extension Agreement: A Bridge to Treaty
http://www.island.net/~crb/pdfimea/imea2000.pdf

[12] Iisaak Forest Resources
Iisaak was created to provide a new model of forest management in Clayoquot Sound, and is the direct result of commitments made by the Nuu-chah-nulth Central Region First Nations and MacMillan Bloedel Ltd. (now Weyerhauser) in the 1996 Interim Measures Extension Agreement. Through the joint venture agreement, the Central Region Nuu-chah-nulth First Nations own 51 percent through Ma-Mook Natural Resources Limited (Ma-Mook) and Weyerhaeuser (formerly MacMillan Bloedel Limited) owns the remaining 49 percent. In the Nuu-chah-nulth language, *iisaak* (pronounced E-sock) means "respect". “Iisaak Forest Resources is committed to *Hishuk-ish ts’awalk* (pronounced He-shook ish sha-walk), the Nuu-chah-nulth belief of respecting the limits of what is extracted and the interconnectedness of all things. This guiding principle of respect is the foundation for restructuring the economic, ecological and social elements of sustainable resource management in Clayoquot Sound.” www.iisaak.com

[13] Ma-Mook Development Corporation
In 1997 Ma-Mook Development Corporation was established to represent the collective economic interests of the five Nuu-chah-nulth Central Region First Nations. In 1998, Ma-Mook Development Corporation and MacMillan Bloedel signed a shareholders agreement detailing their partnership in a joint venture company, Iisaak Forest Resources.

[14] Regional Aquatic Management Society [RAMS]
Formed in May 1997, RAMS is a community-based organization with the purpose of establishing regional management of aquatic resources in Nuu-chah-nulth traditional territory on the West Coast of Vancouver Island. The society was a key participant in

negotiations leading to the creation of the Regional Aquatic Mangement Board [RAMB] http://www.RAMS-WCVI.org/RAMS/overview.htm

[15] Canada, Department of Fisheries and Oceans, 2001, "News Release: Pilot West Coast of Vancouver Island Aquatic Management Board to Proceed." February 26, NR-PR-01-021E. West Coast of Vancouver Island Aquatic Management Board Terms of Reference http://www-comm.pac.dfo-mpo.gc.ca/english/release/bckgrnd/2001/bg009e.htm. As this text goes to press (September 2001) the nominations to the Board have yet to be completed.

[16] Forest Tenures
Forest tenures are the manner by which the cutting of timber and other user rights to provincial Crown land are assigned. Virtually all of the forested land in the province is covered either by volume-based licenses in Timber Supply Areas or area-based Tree Farm Licenses. Most of the timber harvested is transferred to processing facilities owned by large vertically-integrated companies, and processed into relatively low value commodities such as pulp and dimension lumber, mostly shipped to the United States, giving rise to the most divisive and protracted trade disputes between the two countries.

[17] An announcement setting out the marketing strategies motivating calls for cooperation on the Central Coast of British Columbia can be found at http://forests.org/archive/canada/bcecosgr.htm. More generally, the website http://forests.org provides documentation on forests sustainability issues globally. On the Coastal Forests Conservation Initiative launched by forest companies in BC, see http://www.coastforestconservationinitiative.com/, and specifically on the Joint Solutions Project undertaken by these companies with major environmental organizations, see http://www.coastforestconservationinitiative.com/pdf/Joint%20Solutions%20Project-%20march16.pdf.

[18] Barry L. Johnson, "Introduction to the Special Feature: Adaptive Management: Scientifically Sound, Socially Challenged?," *Conservation Ecology* 3, no. 1 (1999). (Online) http://www.consecol.org/Journal/vol3/iss1/art10

[19] Johs Grundahl, "The Danish Consensus Conference Model." In S. Joss and J. Durant (eds.), *Public Participation in Science: the role of consensus conferences in Europe*. London: Science Museum.

[20] Cary Coglianese, "Rethinking consensus: Is Agreement a Sound Basis for a Regulatory Decision?" Paper presented at a conference on "Environmental Contracts and Regulation: Comparative Approaches in Europe and the United States", University of Pennsylvania Law School, September 1999.

[21] Christopher Stone, *The Gnat is Older than Man*. Princeton: Princeton University Press, 1993.

[22] R. Hilborn, J.J. Maguire, A.M. Parma and A.A. Rosenberg, "The Precautionary Approach and risk management: can they increase the probability of successes in fishery management?" *Can. J. Fisheries and Aquatic Sciences*, 58 (2001) pp. 99-107.

[23] M. M'Gonigle, B. Egan, and L. Ambus, "When there's a Way, there's a Will." Report 1: Developing Sustainability through the Community Ecosystem Trust, 2001.

[24] L. Loucks and K. Scarfo, *Breaking the deadlock, building trust: framework for an Aquatic Conservation Trust.* A strategy for environmental, social, cultural, and economic balance. West Coast Vancouver Island Regional Aquatic Management Society and Community Futures, Ucluelet, B.C., 1998.

[25] Summary of the Nuu-chah-nulth Agreement-in-Principle is available at, http://www.aaf.gov.bc.ca/news-releases/2001/ntcsummary.htm

[26] Robert Smith, C. Simard and A. Sharpe, "A Proposed Framework for the Development of Environment and Sustainable Development Indicators Based on Capital." Paper prepared for *The National Round Table on the Environment and the Economy's Environment and Sustainable Development Indicators Initiative*, January 2001, updated July 2001.

[27] Certification
Sustainable forest management certification systems are still evolving. The standards currently most relevant in BC include:

The Forest Stewardship Council [FSC] certification standard was originally developed by environmental organizations (notably the World Wildlife Fund) in conjunction with a group of forest product consumers. Like the CSA standard, it provides for a local (regional or national) process to elaborate on a set of global principles.
http://www.weyerhaeuser.com/coastalwood/wycedar/cedar_cert.htm
http://www.interfor.com/managing_our_forests/bulletins/certification.html

ISO 14001: an internationally recognized standard for environmental management systems developed by the International Organization for Standardization. It defines the management system elements that an operation must adopt in order to attain environmental goals.

CSA Z809: a national standard in Canada for sustainable forest management. It was developed under the auspices of the Canadian Standards Association through a consultative stakeholder process, and is based on criteria approved by the Canadian Council of Forest Ministers, representing each Canadian province. Implementation of the CSA standard requires extensive local stakeholder consultation in setting management goals, measurable performance indicators and objectives.

Chain of Custody: a certification system that verifies a manager's ability to track the flow of raw materials from the forest to final product. It does not offer an assessment of forest management practices, but it is a necessary tool in allowing a manager to label a product as having originated in a certified forest.

[28] A. R. Dobell, "Social Risk, Political Rationality and Official Responsibility: Risk Management in Context." Paper commissioned by *The Walkerton Inquiry*, 2001. (online). http://www.walkertoninquiry.com/part2info/commissuepapers/index.html

[29] *Community-University Connections*
A new initiative that explores the use of science in environmental and social policy, and facilitates collaborative research between community organisations and university-based researchers. The process draws on the successful European 'science shops' model of community-based research. http://web.uvic.ca/~scishops

[30] David Cohen, "Domestic Land-Use Decisions Under International Scrutiny" in Rod Dobell (ed) *Environmental Cooperation in North America: National Policies, Trans-National Scrutiny and International Institutions.* Proceedings of a North American Institute conference, Vancouver, Canada, 1996.