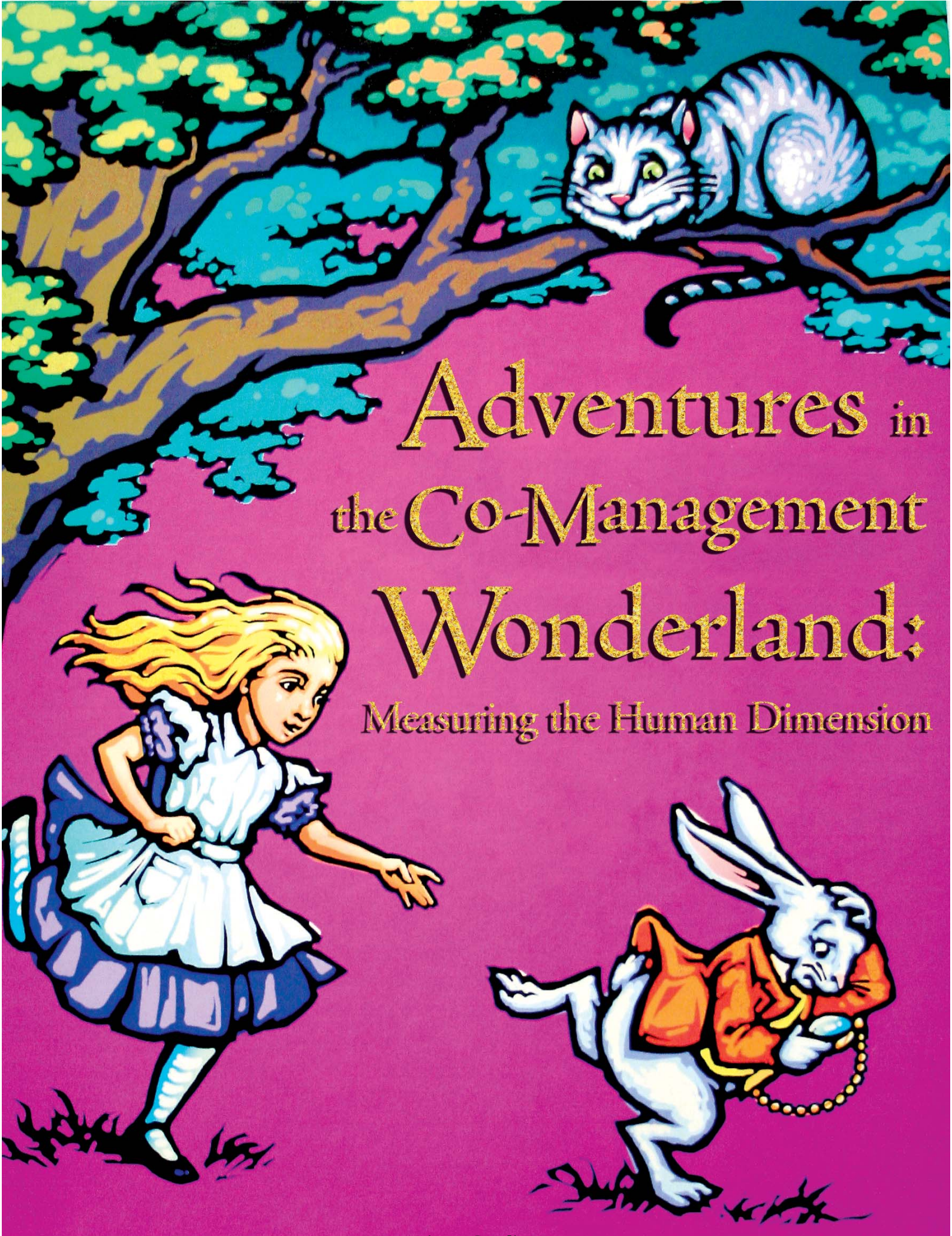


Adventures in the Co-Management Wonderland:

Measuring the Human Dimension

Victor Cowling

When people ask me what I do, I reply that I am working to find ways to get government and communities to work together better in order to improve natural resources management.

The fashion of the last few years has been to call this *co-management*, something that tries to reach an appropriate balance between the roles and responsibilities of the government at its various levels and the communities – the key resource users, to whom livelihoods and quality of life are at stake. Co-management applies at the interface of the ecosystem and the human system. Changes in state of the first are brought about by changes in behaviour of the second.

Anyone who has been working in the co-management field will probably know the feeling – you arrive in a community, start looking around, start talking to the people and quite soon you can tell, the place seems to be doing well. There is a feeling you get, that the community is acting together, the local government supportive, activities are underway and somehow, there is an air of co-management happening. But how can we quantify this, how can we persuade other people who have not visited this place that it is indeed an example of co-management in action?

You have got to have indicators

In Lewis Carroll's *'Alice's adventures in Wonderland'*, Alice asks the Cheshire Cat:

> *'Would you tell me, please, which way I ought to go from here?'*
> *'That depends a good deal on where you want to get to,' said the Cat.*
> *'I don't much care where–' said Alice.*
> *'Then it doesn't matter which way you go,' said the Cat.*
> *'–so long as I get SOMEWHERE,' Alice added as an explanation.*
> *'Oh, you're sure to do that,' said the Cat, `if you only walk long enough.'*

Co-management is not top-down and government-directed, nor is it bottom-up and community-led; there has to be a shared responsibility. Both parties bring certain things to the table. Governments can bring authority, technical skills and knowledge, can take a broader geographical and socio-economic view, and, if necessary, can mediate, adjudicate and legislate to react to conflicts over natural resources and their excessive exploitation.

Local communities bring their intimate knowledge of the condition of the resources, their detailed awareness of history and change and their fundamental reliance on the continued ability to harvest the resources.

For the best possible management, one has to know where the co-management balance currently sits, and to have a clear idea of where it should move.

For environmental components, this may be possible. While there are still debates about the best way to measure sustainable fish catch, you can at the least get figures for the numbers, the weight, the species, the time spent, the gear used – usually sufficient to make comparisons with the past (and, maybe, predictions for the future), sufficient enough detail to make an assessment of the effect of any change in management systems.

You can measure the extent of mangrove reforestation, you can do the same for sea-grass beds; divers can inspect coral reefs for their health and extent. High profile species such as turtles or dugongs can be subject to a census. So, even accepting that all environmental management is to a degree experimental, there are tangible things that you can measure.

But how do you measure the human parts of co-management? How can you put numbers to community solidarity, participation in decision-making, social inclusion? What scale can you use to judge the receptiveness of government to more decentralised control over natural resource use, or the willingness to implement policies that challenge vested interests? These things are intangible, perhaps less easy to assign cause and effect linkages to. But you need to try to make measurements, for without evidence of the beneficial impacts of a co-management approach, how can we ever convince the sceptics, the risk averse, the donors even, that the time and money invested in co-management does have paybacks?

Entering the co–management wonderland

Here, maybe, we enter co-management wonderland – but can we be more aware than Alice about where we are trying to go? There are a few characteristics that may help us design some ways of measurement, some indicators of progress.

What is needed is consistency – if three different people use the same instrument to measure some aspect of the human system, how can they be sure to get the same result – as they would if they all used a set of scales to weigh the day's catch of one small-scale fisher?

What is needed is simplicity – ways to assess that aren't intrusive, extractive and so complex that special training courses are required to learn how to do it. There is a whole industry in such work, and we do not need to create still more such industries.

What is needed is durability – we shall want to take more measurements in the future, so the method must still apply further down the road to co-management.

*Original illustration from **Alice's Adventures in Wonderland**: A Pop-up Adaptation of Lewis Carroll's Original Tale by Robert Sabuda*

What is needed is accessibility – the methods must be meaningful to the populations that live in the target areas as well as robust enough for use in field conditions.

Having asked these questions, and set standards that we might expect from indicators, what about some answers? There are methods aplenty in the research literature, but it gets harder to find ones that have been used successfully in the real world, in all its natural fuzziness.

Just like Alice, we see that we need a direction to take and we also need to be able to check if we are actually going that way, however slowly. In the language of internationally funded projects' LogFrames, we come to Objectively Verifiable Indicators (OVIs). Indicators are instruments to define and monitor those aspects of a system that provide the most reliable evidence as to its overall well-being. They are used to provide cost-effective and time-effective feedback on the health of a system without necessarily examining all components of that system.

For quantitative matters this is not so difficult. You can set measurable indicators (numbers) for many components of the environment, as noted above. Catch per Unit Effort (CPUE), species diversity in a mangrove forest, numbers of dugongs in a sea-grass bed; these may not give complete pictures, but they are indicators. Similar measures can be drawn up for financial support to and income generation from alternative sources of livelihoods.

For qualitative matters, it gets more difficult.

While numbers have a role to play in assessing performance, project managers should remain cautious when embracing numerical assessments i.e. quantitative indicators for monitoring and evaluation. It is critical to remember that numbers have an unfortunate tendency to supersede other kinds of knowing. The human mind is a miracle of subtlety: it can assimilate thousands of pieces of soft information – impressions, experiences, intuition – and produce wonderfully nuanced, carefully judged decisions. Numbers are problematic to the extent that they give the illusion of providing more truth than they actually do. They favour what is easiest to measure, not what is most important. This was a constant problem in this author's local government career in the UK.

A number of models are out there; I will mention just two quite interesting ones for this short article.

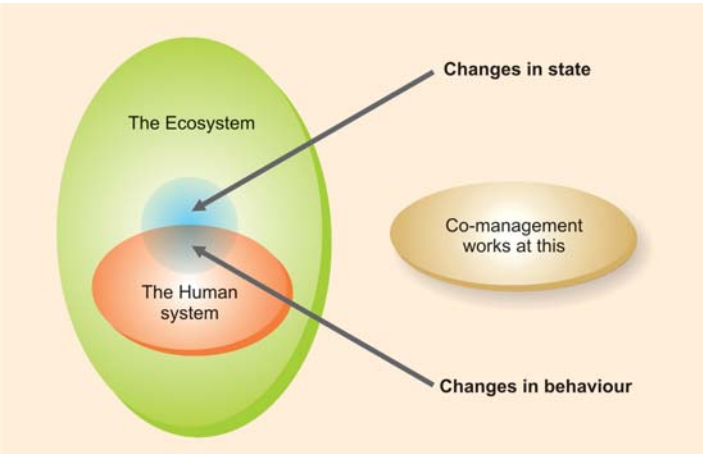
Outcome mapping

Canada's International Development Research Centre (IDRC) is the driving force behind this, and very full coverage of its work is available online at www.idrc.ca.

Progress Markers or indicators could be expressed in this way:

The (insert your Coastal Resources project name here) project intends to see local communities that recognize the importance of, and engage in, the planning of resource management activities in partnership with other resource users in their region. These communities have gained the trust of the other members of the partnership and the recognition of government officials so that they can contribute constructively to debates and decision-making processes. They are able to clearly plan and articulate a vision of their coastal resources management activities and goals that is relative to their context and needs. They call upon external technical support and expertise as appropriate. They act as champions for model coastal resources management concepts in their communities and motivate others in the partnership to continue their collaborative work.

For this article I draw your attention to IDRC's ideas concerning indicators for mapping behavioural change in Natural Resource Management programmes. They suggest that it is a concept that projects could employ in the difficult challenge of giving weight to the values and judgements made by different stakeholders involved in assessing progress in (coastal resources) co-management. It is not the role of this outside author to suggest what weight should be given to which component, since every situation will be somewhere in the co-management spectrum. In this regard, one has to have an



Example

adapted from one given by IDRC in its Outcome Mapping handbook.

EXPECT TO SEE LOCAL COMMUNITIES:

- Participating in regular coastal resources co-management partnership meetings
- Establishing a structure for cooperation in the partnership that ensures that all local interests are represented (mechanics of setting up the structure)
- Acquiring new skills for involvement in the coastal resources co-management.

LIKE TO SEE LOCAL COMMUNITIES:

- Articulating a vision for coastal resources co-management that is locally relevant
- Promoting the coastal resources co-management concept and their experiences with it
- Expanding the partnership to include all the main resource users
- Calling upon external experts when necessary to provide information or meet technical needs
- Requesting new opportunities for training and extension
- Producing and disseminating concrete examples of benefits arising from coastal resources co-management activities
- Identifying opportunities for collaboration with other institutions and actors
- Identifying opportunities for, and successfully obtaining, funding from a range of sources.

LOVE TO SEE LOCAL COMMUNITIES:

- Playing a lead role in resource management with view to long- and medium-term benefits
- Sharing lessons and experiences with other communities nationally and internationally to encourage other coastal resources co-management initiatives
- Influencing national policy debates and policy formulation on resource use and management

Major fishing activity on the Cambodian Mekong, but mostly Vietnamese fishers

Commercial cage culture in Thailand

Provincial level government officers in Lao PDR discuss community fisheries management

Tambon level government officers and community members mapping resources in Phang Nga Bay, Thailand

agreed means to debate if the current situation is the right one. If it is not, a way is needed to find agreements about what should change in order to bring about better management (whilst respecting the uncertainties of management outcomes in these complex situations).

IDRC uses the concept of Progress Markers. These are:

- A graduated set of statements describing a progression of changed behaviours in a stakeholder.
- Changes in actions, activities and relationships leading up to the ideal outcome, or outcomes.

The 'project' sets out what it would:

- Expect to see its stakeholders doing
- Like to see its stakeholders doing
- Love to see its stakeholders doing.

As a set, Progress Markers:

- Are graduated from easier to more difficult to achieve changes in behaviour.
- Describe the change process of a single stakeholder.
- If a programme has multiple stakeholders but the primary result to be achieved is changing their relationship with one another, then it is possible to create a single outcome challenge and set of progress markers for the whole group.

These markers, indicators, mileposts, can be categorised to those the project expects to see, would like to see and would love to see the local communities doing.

Projects could easily adapt and adopt these for their activities in working with government at different levels, NGOs and other identified stakeholders. The concept is fairly straightforward. Progress markers that indicate reactive participation by the stakeholder are relatively easy to achieve and are listed first, under *"expect to see"*; whereas those that indicate more active learning or engagement are listed second, under *"like to see"*; and those that are truly transformative are listed third, under *"love to see"*. In this way, the project will be able to trace what has been accomplished, while being reminded of what still needs to be achieved. The *"love to see"* progress markers should be set sufficiently high to represent profound change.

Individually, progress markers can be considered as sample indicators of behavioural change, but their real strength rests in their utility as a set. Cumulatively, they illustrate the complexity and logic of the change process. This is something that no single indicator can accomplish.

The 'Most Significant Change' Technique

The *'most significant change'* (MSC) technique was invented by Rick Davies and Jess Dart in an attempt to meet some of the challenges associated with monitoring and evaluating a complex participatory rural development programme, which had diversity in both implementation and outcomes, in Bangladesh.

The MSC technique is a form of participatory monitoring and evaluation. It is participatory because many project stakeholders are involved both in deciding the sorts of change to be recorded and in analysing the data. It is a form of monitoring because it occurs throughout the program cycle and provides information to help people manage the programme. It contributes to evaluation because it provides data on impact and outcomes that can be used to help assess the performance of the program as a whole.

Essentially, the process involves the collection of significant change (SC) stories emanating from the field level, and the systematic selection of the most significant of these stories by panels of designated stakeholders or staff. The designated staff and stakeholders are initially involved by *'searching'* for project impact. Once changes have been captured, various people sit down together, read the stories aloud and have regular and often in-depth discussions about the value of these reported changes. When the technique is implemented successfully, whole teams of people begin to focus their attention on program impact.

But, telling a story... is that not too close to that realm of emotion I mentioned before? Is it robust enough for funders? Yes, it seems to be so for those who have been actively using it. There is confidence enough for the authors to write *"We are interested in making the Guide as widely available as possible. This document is freely available in .pdf format from our websites at www.mande.co.uk/docs/MSCGuide.htm and www.clearhorizon.com.au "*

No universally accepted approach

Neither Outcome Mapping nor the MSC technique are simple add-ons. They are design features, and therefore need to be built in from the start. So far, there does not seem to be any universally accepted approach, and so we find managers of co-management seeking every time to invent something of their own, and always facing the challenge of the complexity of collection and analysis of data vs. clarity of understanding and communication.

The good intent behind co-management is to improve resources management through the improved behaviour of the human actors. Much of this hoped for change in human behaviour comes down to improved democratic processes. Simpler in theory than in practice - governments may voice democratic ideals, but then find it hard to devolve (i.e. relinquish) power, and local communities are often not ready to take up a fuller share of decision making and the responsibilities that go with it. Even in mature democracies, the right balance can be hard to achieve. And even when the majority rules and in general the system is quite stable, individuals inevitably find themselves in the minority on some things, get outvoted, and don't get what they want. These issues then assume great importance, and hence the rise of single issue pressure groups in the more developed world.

This essay has focussed squarely on the people part of 'Fish for the People'. Anywhere there is a natural resource management issue; it is people and their actions that will determine the future. People in communities, people in government, people in business. All may need to change their habits and behaviour, and such change is never such a simple thing to do. But just because something is difficult, it should not mean that we do not try.

ABOUT THE AUTHOR

Victor Cowling is an independent consultant based in Savannakhet Lao PDR. He specialises in natural resources co-management, monitoring and evaluation and all aspects of training from needs assessment through design and delivery to evaluation.

Please forward your comments to Victor Cowling at *vic_cowling@yahoo.co.uk*