



Open Research Online

The Open University's repository of research publications and other research outputs

Social learning: an alternative policy instrument for managing in the context of Europe's water.

Journal Item

How to cite:

Blackmore, Chris; Ison, Raymond and Jiggins, Janice (2007). Social learning: an alternative policy instrument for managing in the context of Europe's water. *Environmental Science & Policy*, 10(6) pp. 493–498.

For guidance on citations see [FAQs](#).

© 2007 Elsevier Ltd

Version: Accepted Manuscript

Link(s) to article on publisher's website:

<http://dx.doi.org/doi:10.1016/j.envsci.2007.04.003>

Copyright and Moral Rights for the articles on this site are retained by the individual authors and/or other copyright owners. For more information on Open Research Online's data [policy](#) on reuse of materials please consult the policies page.

oro.open.ac.uk

***Social learning: an alternative policy instrument for
managing in the context of Europe's water***

Chris Blackmore¹, Ray Ison^{1*} and Janice Jiggins²

¹Open Systems Research Group, Systems Department, The Open University,
Walton Hall, MK7 6AA, UK

²De Dellen 4, 6673 MD, Andelst, The Netherlands

* Professor Ray Ison, tel: +61 3 83446623; r.l.ison@open.ac.uk

Editorial

This special issue is based on research conducted under the aegis of the SLIM (Social Learning for the Integrated Management and sustainable use of water at catchment scale) Project, a Fifth Framework Project funded by the European Union (EU). Water management in Europe is in a state of flux as the implications of the European Water Framework Directive (WFD) unfold in practice (Kaika, 2003). Our SLIM research ran in parallel with the introduction of the WFD, but adopted throughout a broader perspective than just the WFD.

Researching social learning through SLIM

The rationale for the SLIM research came originally from the perception of water catchments as “bundles” of natural resources and ecological services whose sustainable management requires the continuous balancing and integration of social, economic and ecological factors in a complex process of societal transformation. Statutory, market-based, and non-coercive measures seek to steer and frame the process. From this perspective water catchments are characterised by connectedness, complexity, uncertainty, conflict, multiple stakeholders, multiple perspectives - all characteristics with which traditional policy prescriptions and the ‘transfer’ model of scientific research seem ill-equipped to deal. In the introductory paper Ison, Røling and Watson, (2007) develop this rationale.

PLEASE INSERT FIGURE 1 HERE

Figure 1. Location of the SLIM case studies in Europe (by number). Case studies were based in a specific catchment or water management area (●) or associated with policy contexts (◆) or the use of dialogical tools to facilitate social learning (■) drawing on more than one particular area (i.e. 5). Researchers from Sweden were involved in the project as part of the methodology team but no case studies were undertaken in Sweden.

Members of the SLIM project undertook to research social learning in the context of Europe’s water (Figure 1; SLIM 2004a). We argued , on the basis of our own earlier research (e.g. Jiggins 1993; Røling, and Wagemakers, 1998; Ison and Russell, 2000)

and involvement in the LEARN Group (2000), and from others' experience (e.g. Wenger 1998), that in such situations "social learning" is central to non-coercive natural resource governance. We also broadly shared the assumption that the prevailing 'environmental management' paradigm presented political and cultural challenges regarding the objective use of science. We further argued that research was necessary to fulfil the requirements of the EU Water Framework Directive (WFD), introduced in 2000, and which is now being implemented. Subsequently, the Common Implementation Strategy Guidance document on River Basin Planning highlighted social learning as a valuable approach in implementing the WFD (European Union, 2003). Our experience suggested that for 'social learning' to become a complementary policy instrument in water governance its successful conduct needed to be much better understood, as a conceptual framework, an operational principle, a policy instrument and a process of systemic change. This in turn presented methodological challenges as to how social learning might be researched, the role of the researcher, the place of scientific understandings as well as issues of spatial and temporal scales.

The context of our research practice

Regardless of how problems of water management arise, each situation typically involves people who are engaged in theorising and practising (i.e. doing something). In doing what we do, we each act out of a particular tradition of understanding, which we may be aware of, or not (Russell and Ison 2000). Scientists are not immune from this – as Einstein said to Heisenberg, it is the theory that determines what you can observe. The braiding of theory and practice in a situation is best described as praxis; surprisingly there seems to be widespread lack of appreciation of how praxis actually operates as a form of human activity, as an active process that unfolds in daily life (Maturana and Poerkson 2004). From a praxis perspective, scientific explanations are taken up and perpetuated, or not, in language. The same applies to theories, and thus theorising. Theories mediate between their proponents and are constituted in processes of communication and action (Krippendorff, 1998): *'theories cannot be found in the contents of statements nor inside individual minds but in the processes of their continuous re-articulations. Theories that fail to compel people to reproduce and circulate them within their community simply fade away'*.

In some senses we are, through this special issue, engaging in what Krippendorff (1998) describes. Our concern is with “social learning” as an emerging policy option, grounded in praxis, for the management of natural resources. Our research attempts to mediate the nature and quality of the relationship between people and the non-human world through the interplay of changes in understanding with changes in practices. In making this claim we recognise that: (i) for some researchers the manner in which their practices mediate relationships is implicit (and may be done without awareness) rather than explicit and (ii) the ‘environmental crisis’ is not so much a crisis out ‘there’ in ‘the environment’ but also a crisis within – understood in terms of competing values, beliefs, perceptions and political positions’ (Woodhill and Röling, 1998).

The research we report starts from a broad concern that is best expressed as trying to improve the relationship people have with the earth. In water management, integration, for example, as in ‘integrated catchment management’ (ICM), is usually a key concern (Mitchell and Hollick, 1993; Curtis and Lockwood 2000). Following SLIM (2004) we argue that integration, however practised, has a moral dimension that values the expression of local needs and interests. In a knowledge-based society, people should be recognised for what they do and not just for what they are, i.e., their recognised “status” should be that of subjects, not objects. One added value of such an approach is the emergence of relational capital resulting from the presence and interactions of different elements of other forms of capital—natural, social, artificial and human. The involvement of citizens, formal groups, enterprises, and organisations sharing the same concerns facilitates the integration of sector-specific policies. But the shared concerns can become explicit only when these are derived from collaborative knowing. As Mitchell and Hollick (1993) note: *‘designing ideal organizational structures for ICM is not sufficient for it to be effective. Ultimately, people have to make ICM function...’* and for effective functioning some degree of common understanding is required. One of the challenges thus addressed in this Special Issue is, how to create such common understanding?

We draw attention to these ‘meta-level’ concerns and phenomena because the research reported here is distinctive in a number of ways:

- (i) it seeks to move beyond historically naive understandings of participation as a key element of natural resource management – participation is necessary but not sufficient (Collins & Ison, 2006);
- (ii) in the way we carried out the research we attempted, as best we could, to ‘walk the talk’ i.e. to make our espoused theory congruent with our theories-in-use. Here we follow (Argyris and Schön 1974: 6-7):
‘When someone is asked how [they] would behave under certain circumstances, the answer [they] usually give is [their] espoused theory of action for that situation. This is the theory of action to which [they] give allegiance, and which, upon request, [they] communicates to others. However, the theory that actually governs [their] actions is this theory-in-use’.
 As Smith (2001) points out: *‘Making this distinction allows us to ask questions about the extent to which behaviour fits espoused theory; and whether inner feelings become expressed in actions. In other words, is there congruence between the two?’* In our case this required a different form of project management to that more commonly used in large EU-funded projects;
- (iii) we set out to value the experiential history of those participating and researching – their ways of knowing;
- (iv) our emergent practice was neither purely social or purely natural science, but it was built on rigorous researching and an emerging hybrid of theorising and practice which we sometimes describe as interactive social research. It is close to what Law and Urry (2004) describe as inquiry which (i) makes social realities and social worlds (not only describing the world but also enacting it) and (ii) thinking about the world we want to help to make (researchers contributing to the research have had a wide range of experience in developing country contexts and have original academic backgrounds in natural and social sciences);
- (v) we have come to be concerned with the differences that make a difference, to paraphrase Gregory Bateson (1979). Our concern arises out of an awareness that failing to appreciate differences can lead to losses, particularly sources of new insight and innovation, recognising that at the same time we have to build a language community in which some

common understanding is possible; this is a perennial problem for inter and trans-disciplinary research.

The model we take for this special edition is to take a double look – to look at the differences that made a difference to the research activities of the four participating country teams whilst at the same time exploring how ‘social learning’ might contribute something different to policy and research practice – something that does not negate other endeavours but teases out those differences that might make a difference to the over-arching goals of structural renewal in water management.

Overview of the special issue

The content of this special issue is organised following a simple logic. In the first paper the historical rationale for the project and the project’s design aims and realisations are described; this paper deals with ‘why’ questions (Ison, Röling and Watson, 2007). The focus is on the nature of complex natural resource situations, called ‘resource dilemmas’ and the methodological challenge this presents for researchers. Particular attention is paid to whether and how science can make sense of, and contribute to the management of complex situations such as water catchments.

The second paper considers the ‘why?’ of social learning, considering what kinds of learning are needed in the situations described in paper 1. It explores the history of social learning in theoretical terms, contextualises the SLIM project’s overall use of learning and social learning theories and draws out some of the implications for environmental policy and practice (Blackmore 2007). Scientific traditions are very much a part of this history because understanding and assumptions about why, what and how people learn have changed over time. Whilst conceptions of social learning are contested, most perspectives raise significant questions about the nature of knowledge and the processes of knowing; these are discussed.

The next four papers, from the different countries involved in the project, are the ‘what?’ - descriptions of the situations, what was done and so on. Two heuristic diagrams (Figure 2 and 3) are used to organise the papers from the Netherlands (Jiggins et al. 2007), France (Steyart et al. 2007), Italy (Toderi et al. 2007) and the UK (Collins et al. 2007); Figure 2 spells out what is at stake methodologically when there is awareness that each individual and/or group acts out of their own traditions of

understanding (Ison and Russell 2000). It also suggests that understanding is not something that can be fully 'shared'. It follows that when comparison between cases is under consideration (i) control is not possible - ethically and situationally; (b) case control comparisons do not work – these are non-random samples and each is historically and socially situated (as are the researchers), so (c) there is a need for a meta-level process of co-learning which creates an emergent core of common understanding (what we can claim that we have in common) but where the differences are equally valued and articulated. This is a dialectical process (see Steyaert and Jiggins 2007, the final paper, where this is further discussed). A major implication of our position is that we need methodologies for synthesis or sense making, not comparison and unifying as if there were a set of objective social 'truths' waiting to be revealed. Methodologies for sense-making are in short supply but the SLIM heuristics can be used methodologically for such purposes (as is spelt out in the final paper).

PLEASE INSERT FIGURE 2 HERE

Figure 2. A heuristic used to understand the relationship between research teams in the SLIM project which (A) recognises the different histories of each group (closed blobs) and the relationship to a core comparison matrix (Note that the Swedish contribution was methodological and distributed across all teams) and (B) the methodological dilemma of whether to attempt case study comparisons to produce a unified set of results from our common matrix or to recognise the historicity of cases and researchers and to value an on-going dialectical process (T1 and T2 refer to different times.).

A co-learning methodological approach is what was adopted and enacted in the management of the SLIM research team. This gave rise to a common matrix (Figure 2) and involved the group in a series of common workshops.

The following elements are common to each of the four 'country' papers:

- Each group is explicit about the relationship between their theory, or framework of ideas (F); their methodology (M) and the area or situation of application (A) and how each of these has changed through their research (see Figure 3).

- They start by exploring the situations associated with their research- including assumptions, nature of situation, history and so on.
- In their exploration of the situation they include the policy/practice context and the types of knowledge/knowing involved (this includes science and scientists).
- They draw out implications which apply nationally and situate these in an international context and in relation to the published literature.

PLEASE INSERT FIGURE 3 HERE

Figure 3. A general model of any research based on the relationship between a framework of ideas (F), a methodology (M) and an area of application (A) (Adapted from Checkland 1999).

The final paper (Steyaert and Jiggins, 2007) is essentially about ‘so what?’ at the level of the whole project. The main research findings are reified in a set of heuristics that can be used to explore the interplay between understandings and practices in situations such as water catchments when social learning is to be facilitated. Our findings raise significant methodological questions and capacity building issues and highlight political concerns about the nature of socio-technical democracy particularly in terms of the relationship between science and policy.

Acknowledgements

The research reported in this special issue was largely funded by the European Union through the Fifth Framework Programme (EVK1-2000-00695SLIM). We acknowledge this support, that of our DG Research Project Technical Officers, Irene Gabriel and Guiseppe Borsalino, SLIM-project PA, Huguette Armstrong and Systems Department senior secretary Pat Shah. Completion of this special edition would not have been possible without the expertise of Monica Shelley, and the encouragement of the Editors of Environmental Science and Policy.

References

Argyris, M., Schön, D., 1974. Theory in Practice. Increasing professional effectiveness. Jossey-Bass, San Francisco.

Bateson, G., 1979. *Mind and Nature: A Necessary Unity* (Advances in Systems Theory, Complexity, and the Human Sciences). Hampton Press, New Jersey

Blackmore, C., 2007. What kinds of knowledge, knowing and learning are required for addressing resource dilemmas? – a theoretical overview. *Environmental Science and Policy* (this issue)

Checkland, P.B., 1999. *Soft Systems Methodology. A 30-year retrospective*. In Checkland, P.B., Scholes, J. (Eds.), *Soft Systems Methodology in Action*. John Wiley, Chichester pp.A1-A66.

Collins, K., Ison, R.L., 2006. Dare we jump off Arnstein's ladder? Social learning as a new policy paradigm. Proceedings PATH (Participatory Approaches in Science & Technology) Conference, 4th-7th June 2006, Edinburgh.

Collins, K., Blackmore, C., Morris, D., Watson, D., 2007. A systemic approach to managing multiple perspectives and stakeholding in water catchments: Some findings from three UK case studies. *Environmental Science & Policy* (this issue).

Curtis, A., Lockwood, M., 2000. Landcare and catchment management in Australia: Lessons for state-sponsored community participation. *Society and Natural Resources*, 13, (1), 61-73.

European Union, 2003. *Common Implementation Strategy for the Water Framework Directive (2000/60/EC) Guidance Document No 8, Public Participation in Relation to the Water Framework Directive*, European Commission, Brussels

Ison, R.L., Russell, D.B., (Eds.), 2000. *Agricultural Extension and Rural Development: Breaking Out of Traditions*. Cambridge University Press, Cambridge.

Ison, R.L., Röling, N., Watson, D., 2007. Challenges to science and society in the sustainable management and use of water: investigating the role of social learning, *Environmental Science and Policy* (this issue).

Jiggins, J., 1993. From technology transfer to resource management. Proceedings of the XVII International Grassland Congress, New Zealand Grassland Association, Palmerston North. pp. 615-22.

Jiggins, J., Röling, N., van Slobbe, E., 2007. The organisation of social learning in response to perceptions of crisis in the water sector of the Netherlands. *Environmental Science and Policy* (this issue).

Kaïka, M., 2003. The Water Framework Directive: a new directive for a changing social, political and economic European framework. *European Planning Studies* 11 (3), 299-316.

Krippendorff, K., 1998. Ecological narratives; Reclaiming the voice of the theorized others, Annenberg Working Paper, May. Annenberg, Pennsylvania.

Law, J., Urry, J., 2004. Enacting the social. *Economy and Society* 33 (3), 390–410

LEARN Group: Cerf, M., Gibbon, D., Hubert, B., Ison, R.L., Jiggins, J., Paine, M., Proost, J., Röling, N., (Eds.), 2000. *Cow up a Tree. Knowing and Learning for Change in Agriculture. Case Studies from Industrial Countries.* INRA (Institut National de la Recherche Agronomique) Editions, Paris.

Maturana, H., Poerksen, B., 2004. *From Being to Doing. The Origins of the Biology of Cognition.* Carl-Auer, Heidelberg.

Mitchell, B., Hollick, M., 1993. Integrated catchment management in Western Australia: Transition from concept to implementation. *Environmental Management* 17 (6), 735 – 743.

Röling, N., Wagemakers, A., (Eds.) 1998. *Facilitating Sustainable Agriculture. Participatory learning and adaptive management in times of environmental uncertainty.* Cambridge University Press, Cambridge.

Russell, D.B., Ison, R.L., 2000. The research-development relationship in rural communities: an opportunity for contextual science. In: Ison, R.L., Russell, D.B. (Eds.), *Agricultural Extension and Rural Development: Breaking out of Traditions*. Cambridge University Press, Cambridge. pp. 10-31.

SLIM, 2004. The Role of Conducive Policies in Fostering Social Learning for Integrated Management of Water, SLIM Policy Briefing No. 5. SLIM (see <http://slim.open.ac.uk>).

Smith, M. K., 2001. Chris Argyris: theories of action, double-loop learning and organizational learning', the encyclopedia of informal education, www.infed.org/thinkers/argyris.htm Accessed 8th August 2006.

Steyaert, P., Jiggins, J., 2007. Governance of complex environmental situations through social learning: a synthesis of SLIM's lessons for research, policy and practice, *Environmental Science and Policy* (this issue)

Steyaert, P., Barzman M.S., Brives H., Ollivier G., Billaud J.P., Hubert B., 2007. The role of knowledge and research in facilitating social learning among stakeholders in natural resources management in the French Atlantic coastal wetlands, *Environmental Science and Policy* (this issue).

Toderi, M., Powell, N., Seddaiu, G., Roggero, P.P., Gibbon, D., 2007. Combining social learning with agro-ecological research practice for more effective management of nitrate pollution, *Environmental Science and Policy* (this issue).

Wenger, E., 1998. *Communities of Practice. Learning, Meaning and Identity*. Cambridge University Press, Cambridge.

Woodhill, J., Röling, N., 1998. The second wing of the eagle: the human dimension in learning our way to more sustainable futures. In: Röling, N., Wagemakers, A., (Eds.), *Facilitating Sustainable Agriculture. Participatory learning and adaptive management in times of environmental uncertainty*, Cambridge University Press, Cambridge. pp. 46-69.

Chris Blackmore is a Senior Lecturer in Environmental and Development Systems in the Open Systems Research Group at the UK's Open University. Her current research and teaching is about systems approaches to environmental decision making, with particular interest in learning systems and communities of practice. She develops open learning course material and has worked on several European research projects. Her background was originally in Environmental Sciences/Education, later Sustainable Development Education. Before joining the Open University she worked in Nigeria, Lesotho and Sierra Leone.

Ray Ison is Professor of Systems at the UK Open University (OU). Since 1994 he has been foundation Director of the Postgraduate Program in Environmental Decision Making, actively involved in the production of new Systems Practice courses and is foundation Director of the Open Systems Research Group (<http://systems.open.ac.uk>). From 2001-4 he coordinated SLIM ('Social Learning for the Integrated and Sustainable Use of Water at Catchment Scale') involving researchers from five European countries. He has been on the Board of The Natural Step UK (Ltd) and the Programme Committee of WWF(UK) and is currently a Visiting Professor at UniWater, an interdisciplinary research centre of Melbourne and Monash Universities.

Janice Jiggins has more than 30 years' experience in international development and academic work. She is currently a Guest Researcher, Communication and Innovation Studies, Wageningen University, The Netherlands, and a freelance researcher for Researching Practice. Her current work includes the International Assessment of Agricultural Science, Technology, and Development, water management in the agrarian sector of the Netherlands, membership of the boards of Tropenbos International and Participatory Research and Gender Analysis (CGIAR), and PhD supervision.



Figure 1

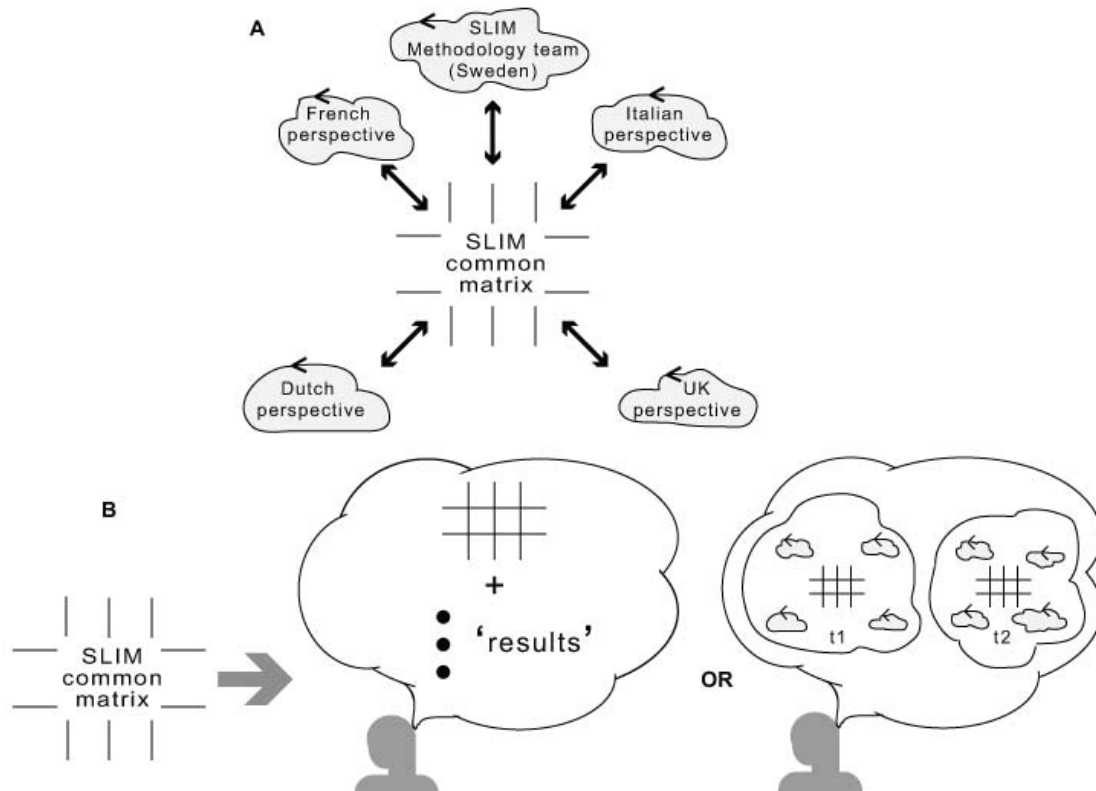


Figure 2

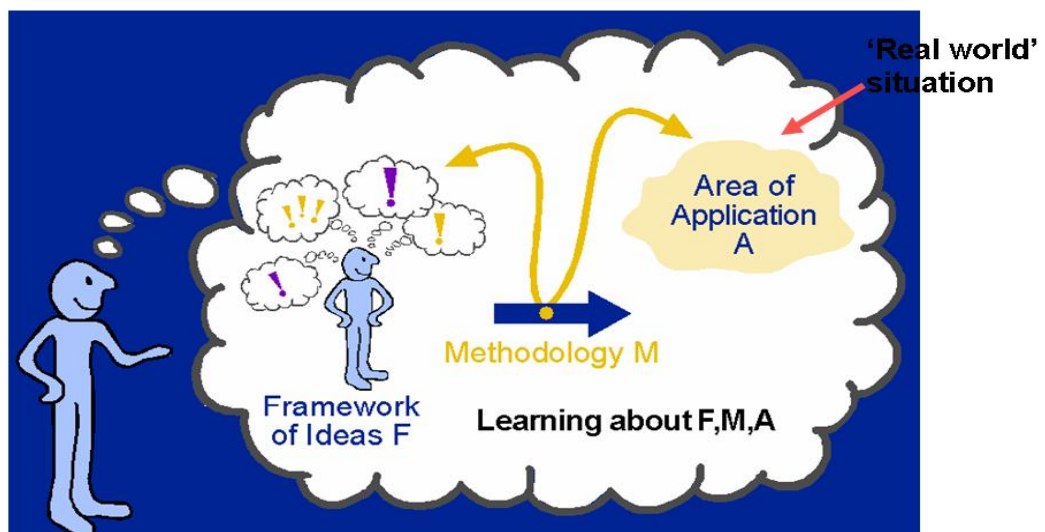


Figure 3

