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Stakeholder engagement and the work of SEI:
An empirical study

John Forrester, Åsa Gerger Swartling and Kate Lonsdale

STAKEHOLDER ENGAGEMENT AND THE WORK OF SEI: AN EMPIRICAL STUDY

An SEI Working Paper

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SUMMARY

The aim of this Working Paper is to capture lessons on stakeholder engagement from SEI's diverse project experience working on environment and development issues around the world. The Working Paper reviews SEI's experience in stakeholder engagement and relates this to current theoretical debates and innovation. The report also presents the perspectives of SEI staff on using participatory approaches in their work, rationales for using such methodologies, what works and what does not work, and what is the purpose of the engagement so as to identify ways to improved SEI's practice of the stakeholder engagement processes. In an attempt to promote intra- and inter-organisational learning, the Working Paper is aimed at both an SEI audience and other research organisations specialising in sustainable development.

After reviewing SEI experience in section 1, the report then places SEI's work in relation to thinking in participation and stakeholder engagement (section 2). Section 3 outlines examples of some SEI projects, both from the past and on going. The final section (4) outlines ways to improve participatory practise in SEI's work and outlines the implications of this review for the future.

The points raised by staff fall into three broad categories: new techniques in participation; spatial scale and level of governance; and theoretical and practical issues. Key insights from the review of SEI experience include the following:

- Methods used when working with our project partners and other stakeholders range from a lower degree of participation (such as in 'simple' surveys) to a higher level of stakeholder participation (such as in complex processes to capture options for improving livelihoods). Over the years, SEI's stakeholder engagement work has utilized techniques as varied as drama, Participatory GIS and informal networks;

- The choice of which participatory methods to use depends on the complexity of the issues and the purpose of the engagement, both of which will be determined in the initial steps of the project, where a careful evaluation of the time and resources available should be performed. There is no 'one size fits all' formula but a number of tools and techniques can be applied to suit a given situation;

- Methods used by SEI personnel are adapted specifically for projects or used off-the-shelf as appropriate but are only occasionally designed for a specific purpose;

- Due to the diversity of SEI projects there is a considerable range of approaches to stakeholder engagement and awareness of 'participation' and 'participatory research' and what this implies for the way a project is run. Many projects have participatory elements embedded in their methodology from their design and intent through to their implementation. Others have a rather more 'intuitive' or *ad hoc* manner in that they instinctively engage partners and stakeholders inclusively but without awareness of any underlying philosophy;

- There is a perceived need to be much clearer about what is meant by participation in relation to research work and when it might be appropriate to use it (e.g. to build stronger links with project partners) and when participatory approaches are not appropriate (e.g. when there may be insufficient time to follow through to meaningful participation);

- The work SEI conducts spans most of the world and this calls for a particularly high degree of cultural awareness and sensitivity when dealing with diverse stakeholders such as technical experts; local, regional or national government stakeholders; local community representatives; and/or development practitioners;

- Stakeholder engagement needs to start with the participants and their agendas alongside the researchers and their agendas. Building on this, increasingly joint problem definition by researchers, policy makers and stakeholders is seen as crucial to ensuring research outcomes are relevant;

- Research would benefit from time spent reflecting on the purpose of the stakeholder engagement, in particular being clear of where it sits on the participation 'spectrum' (from 'information giving' to 'self mobilisation', see sections 1.1 and 2.4);

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- Good stakeholder engagement processes do not 'just happen'. They require careful planning in order to identify who participates, the timing of events and modes of engagement, and the outcome of that engagement, as well as analysis and evaluation of the process;
- Applying participatory methods in stakeholder engagement is rather time consuming and needs to be iterative. This needs to be recognised when planning participatory exercises;
- Approaches to stakeholder engagement are often seen more as a continuum for working in partnership rather than as a ladder of participation with step changes, and SEI practitioners frequently pick and choose participatory methods on a rather ad-hoc basis;
- Notwithstanding, clear purpose for the stakeholder engagement is also considered vital. Engagement should be purpose-led rather than process-led and method should not dominate a substantive output; and
- A 'good' participatory process has three parts: inclusive and engaging methods and tools, a flexible process and a set of guiding principles. Most SEI participation practitioners tend to focus on the methods, while paying less attention to the process and the participatory principles. This can yield useful information, but much of the power, insights, motivation and excitement is lost if there is no effort to embed them in a participatory process guided by participatory principles.

SEI has a 20-year tradition of practising stakeholder engagement in a wide range of contexts of environment-related research and development efforts, at all scales and across the world. Against this background, SEI certainly has novel and interesting things to offer the theoretical and practical debates within the existing 'participation community', as well as the stakeholders that we work with. This empirical study indicates that there are challenges and opportunities ahead to further advance the Institute's stakeholder engagement efforts in the future, while building on past experience. Drawing on the findings put forward in this Working Paper, we recommend among other things the following:

- SEI should adopt shared, Institute-wide principles for ways of working with stakeholders and an agreement on a minimum set of values, objectives and /or behaviours to guide how SEI staff operate in the field of stakeholder engagement;
- SEI should draw more systematically upon existing in-house expertise in participatory methods and processes that researchers can call on to discuss and exchange ideas with. When applicable, training and mentoring should be offered to SEI staff who request support in designing and implementing participatory processes, e.g. using the SEI intranet;
- Undertaking these approaches requires support for researchers to reflect on what is emerging, what works well and what could be done differently. This could be achieved by promoting 'learning sets' that could offer a forum for exchanging past experience, challenging assumptions and developing practice in a constructive but safe environment;
- SEI has a long track record of research in partnerships and networks based on strong stakeholder involvement. To promote inter-organisational learning and strengthened partnerships, the Institute should deepen the exchange with external organisations in the theoretical debate on stakeholder engagement. In this process, SEI participation practitioners can contribute insights into, among other things: the use of new participatory techniques, issues of spatial scale and level of governance, and ways to promote mutual learning.

STAKEHOLDER ENGAGEMENT AND THE WORK OF SEI: AN EMPIRICAL STUDY

1. INTRODUCTION

The aim of this Working Paper is to capture lessons on stakeholder engagement and on participation, in particular from SEI's diverse project experience working on environment and development issues around the world. In our work, we engage with a number of different groups that might be partners, stakeholders, community groups or other groupings and we have a number of different ways of interacting with them. The Working Paper reviews SEI's experience in engaging stakeholders with a particular focus on participatory approaches and contextualises this in relation to current debates and innovations in the field of participation and stakeholder engagement. SEI's mission is 'to support decision-making *and induce change towards sustainable development* around the world by providing integrative knowledge that bridges science and policy in the field of environment and development' (www.sei.se, emphasis added). Thus, alongside other participatory approaches, the Institute is explicitly involved in what might be termed 'action research' in which researchers collaborate with stakeholders in an attempt to bring about change[1]. There is also a long tradition (since the 1960s after Paolo Freire) of social action research – that is where communities and citizens are viewed as co-creators of knowledge and that their knowledge can be used for their own betterment. There is an underlying trend in all sustainability science (i.e. research which addresses social and ecological issues together) that those who are impacted upon by the problem must be involved in creating solutions. This is underlined by both social sciences (see sections 2.2, 2.3 and 2.4) and by learning theory (see section 2.1 and 2.2). The Working Paper presents and reflects upon the perspectives of SEI staff on stakeholder engagement more widely, and on participation's place within it: what works and what does not work, so as to identify possible ways forward to support improved participatory processes.

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1   'Action research is 'an iterative process involving researchers and practitioners acting together on a particular cycle of activities, including problem diagnosis, action intervention, and reflective learning' (Avison *et al.*, 1999)
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There is no single definition of 'stakeholder' within SEI, but generally we use a broad definition of the term, including any person, group, or community who has a concern in a process or in a geographical area through residence, employment, or interest. Stakeholders may be self-identified, or they may be selected. They may be present at an event or they may, having been identified by those present, be found to be absent. Stakeholders may represent themselves directly, or they may represent their community or particular interest groups. Stakeholders involve a whole range of actors from statutory agencies through to individual citizens. Stakeholder engagement may be differently mediated and may be with different groups or individuals at different stages of a process but to be complete it should be open to the whole range of possible stakeholders. Involving relevant stakeholders from the outset allows the researcher to save time and resources, to gain insights into a range of pertinent perspectives and knowledge of involved individuals and groups, to ask the right question(s) as well as to target the research to be of use.

The multitude of activities conducted at SEI, across research programmes, across centres and different cultural settings, creates a complex web of both on-going and past projects and programmes. There is also considerable diversity in the approaches taken to enable stakeholders to engage and participate in the work of these projects due to their different aims. Many projects have participatory elements embedded in their respective methodologies from design and intent right through to implementation. Far from all, however, have taken a considered participatory approach (although they may well be very effective in working with partners and other stakeholders) but rather they may feature elements of participatory methods in stakeholder engagement.

It is important to distinguish between using participatory methods to perform research and carrying out participatory research. These two are often confused: 'there are still [sic.] many cases of participatory techniques being deployed without a wider collaborative approach or participatory worldview' (Kindon *et al.*, 2007: 17). While we do not claim that all our research should perforce be participatory action research, it is certainly the case that there is a special moral slant brought in when

working on research with people in poverty. To engage them and not enable them to improve their lives is difficult to square. Extractive research for research's sake is not a reasonable choice when doing research. Nor is extractive research alone often a useful problem solving method: 'participatory' means ways of working which result in people with experience of the issue having more voice in discussions about it – from defining the issues to working out the solutions (Pratt and Loizos, 1992). With such a view of participation there should be action resulting from the interaction: academic knowledge can only be partial, indirect, informative and explanatory. It lacks the grounding in the empirical reality of the researched subjects which, for them, turns [their] knowledge into a 'mobilising force capable of leading to action' (after Wresinski, 1980). Within SEI our work ranges from working with stakeholders as co-creators of knowledge to support, for example policy making, through to empowering those stakeholders to do something about their situation and this is a form of action research. We should then be clear as to the reason why participatory approaches are chosen. Stakeholder engagement may be pursued for a range of reasons, not all of them informed by a participatory worldview. It may be chosen because:

- it is more effective and efficient for reaching the project's objectives (noting that when simply using participatory methodologies it may be 'our' objectives but with participatory action research the objective is co-created with the stakeholders);

Figure 1: The relationship between participation in project work and participatory approach

- it is more sustainable because it realises a higher degree of (local, national, regional) ownership; and/or
- it is appropriate for moral and ethical reasons (such as more fair or more democratic.).

These three reasons could apply to either the application of participatory methods in 'conventional' research or to participatory action research, and it is also useful to know what difference participatory approaches and participatory research makes: a participatory way of working may not always be the best method in a given situation and it is important to be realistic about the greater time and resource considerations that are required to do it well. If the resources are not available it may be better not to do it than to do it badly.

> Participatory Action Research espouses large goals, not easily achievable. Working across the boundaries of academic and other worlds requires cultivation of mutual understanding and respect, sensitivity to differences in organisational cultures and goals […] Participatory Action Research is not an approach that can be rushed into. (Prof. Janice Monk, forward to Kindon *et al* 2007).

To be participatory, thus (in any sense of the word) takes more time and requires specific skills and needs to be properly resourced. On a continuum, practitioners may usefully and legitimately pick and chose and move along the continuum as is relevant. This distinction here between whether a practitioner is 'just' using participatory methodologies for their own (or a funder's) ends and working in partnership with stakeholders and communities does, however, introduce a step-change.

From Figure 1 it can be seen that there is, as it were, a range of participation/engagement methods ranging from information extraction through co-learning and action research. These can be considered as being on a continuum of participatory approach running from using participatory methods (but in an extractive manner) through to fully-fledged participatory approaches. Only the latter (cooperation, co-learning, action research) can be described as truly participatory approaches but all use participatory methodologies. Below we discuss the characteristics of SEI's stakeholder engagement work in relation to the continuum presented in Figure 1.
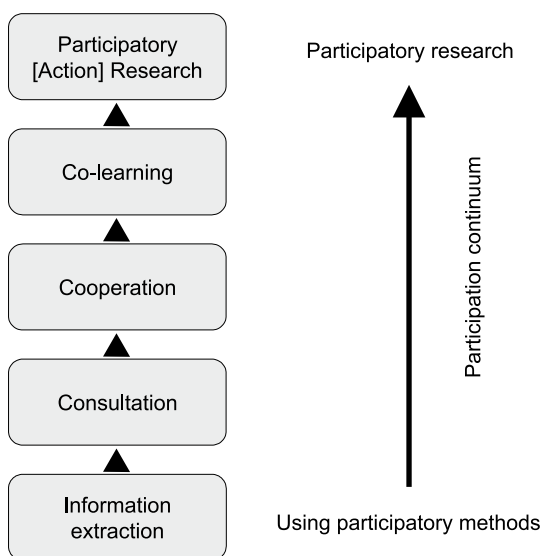
1.2 What characterises SEI's work on stakeholder engagement?

In SEI, interest in and intention to pursue (participatory) stakeholder engagement in projects is often sup-

ported by literature reviews on participatory methods and/or expert consultations with regards to research methodology. Typically, someone in a project team is keen on using a participatory approach, often building on previous experience.

Our stakeholder engagement initiatives can be placed on the continuum. The spectrum ranges from SEI projects that are conscious about their using specific participatory approaches, and where it is part of the project design and done in a learning (reflexive) way, to projects that engage with others (stakeholders) and may use various exercises to do this but have not considered this as being something of interest or important in itself other than to their own project ends. The former type of SEI project is typically the result of a design and development phase that is based on consideration and awareness of the implications of methodological choices for, and opportunities for, stakeholder involvement. This usually occurs at an early stage of project design.

Such an explicit focus on participation as a research issue, is seen in projects such as *ULYSSES* (*Urban Lifestyles, Sustainability and Integrated Environmental Assessment* (1996-1999) and the UK three-city study on *Developing Public Involvement in Predictive Computer Modelling* (1999-2002). These have been designed to develop new participatory methods and procedures within the framework of sustainability assessments and policy implementation. Drawing on previous experience and learning from both these projects, SEI researchers have strengthened their competence in the field of stakeholder participation. Sometimes, interest and expertise in participation has generated innovations and new SEI research responsibilities in participatory tool assessments and evaluation, such as in the EU funded *Sustainability A-Test* (*Advanced Tools for Sustainability Assessments*) project (2004-2006). These skills have helped SEI to take on a leadership role with regards to the methodological approach and facilitative role for guiding project partners in other projects, for example the EU project 4CElectricity (*Consumer Choice and Carbon Consciousness for Electricity*) (2002-2003) and various UK Research Council-funded projects using GIS for Participation (e.g. the Economic & Social Research Council-funded *Public Involvement, Environment and Health: Evaluating GIS for Participation*, 2002 and the Engineering & Physical Sciences Research Council-funded *Inclusive and Sustainable Infrastructure for Tourism and Urban Regeneration*, 2005-2006).

In the above projects, SEI's internal competence was used and strengthened by colleagues inviting more methodologically experienced peers to be involved in the execution of the project. This proves how in-house competency and experience with certain participatory research methods (such as deliberative focus group research and participatory mapping) contributes to strengthening the capabilities of other staff in the organisation. In addition, it extends SEI's current network of collaborators. Examples such as these are encouraging and could well serve as a way to build internal capacity in this field. A discussion on how to improve methodological awareness in SEI follows later in this section.

At the other end of the spectrum there are SEI projects that are set up and conducted using participatory methodologies without overtly addressing participation as an issue in itself. Against this background, and perhaps somewhat counter-intuitively, there is an impressive level of achievement and success resulting from this category of projects based on the application of participatory approaches. This success is largely due to the very dedicated staff and the ethos of the Institute which is overtly sensitive to the principles of enabling people to contribute effectively in decision making which have an effect on their lives and livelihoods. Researchers thus understand what it means to enable people to contribute effectively and what it means to be sensitive to the principles of good process. Examples of this would be the Malé Declaration and *APINA* (*Air Pollution Information Network for Africa*) work under the *RAPIDC* (*Regional Air Pollution in Developing Countries*) and the *BIO-EARN Programme* (the *East African Regional Programme and Research Network for Biotechnology, Biosafety and Biotechnology Policy Development*, 1999-2005). The programme was developed through in-depth consultation with key actors and stakeholders in the region. However, the project team refers to this as a fairly 'top down' process. A feasibility study was conducted to determine who should be involved and supported through the programme and also which specific issues needed to be addressed. The feasibility study involved interviews with a large number of R&D institutions and relevant stakeholders in order to design the project according to regional needs and opportunities. It is possible to conclude that the process was heavily driven by the instructions and mandate that the funder, the Swedish International Development Co-operation Agency, Sida, and its Department for Research Co-operation SAREC, had prescribed to SEI. The timeframe was very demanding and the boundaries or pre-condi-

tions were clearly outlined which left little opportunity for stakeholders to formulate interests beyond what was being offered. At the same time, once the network was formed and the programme activities were underway, SEI has been able to influence and facilitate the network partners to collaborate and solicit advice internally from within the network and region, thus helping them along in a process of capacity building. The stakeholder engagement approach and the consensus building decision making processes have been rather successful – as indicated by the transfer of the network management directly to the partners from SEI.

In reflecting on this and other similar initiatives, it is of course impossible to speculate on how things would have played out differently with a more participatory approach to stakeholder interaction and engagement, yet it is likely that many such projects could potentially benefit from an increased level of awareness from the outset and insight into how the process plays an important role in determining the outcome of stakeholder interaction as the project progresses. The positive benefits of more participatory approaches are shown by a practical example from Vietnam (see section 3.2). The concept of 'people's participation' as well as 'stakeholder participation' was introduced to the *Song Hing Multi-purpose Project* (SMHP) in late 1996 by the consultants.[2] Whilst this participation was *post-hoc*, after the dam had been constructed and people resettled, it still did have a positive influence. The value of the participatory approach during the workshop itself was the fact that the higher levels of government had to listen to reports made by traditional village leaders on the villagers' view on the resettlement.

At the same time, in this empirical study it has appeared that some of the problems encountered along the process of project implementation are at least in part related to the fact that relatively poor attention was paid to how certain participatory interventions or consultations affect the research and project outcomes. For example, and *unlike* the Vietnamese example above, SEI project teams have sometimes experienced gaps between local's concerns, issues and problems, and their expectations and interests in activities. Thus, the application of participatory interventions may lead to expectations that are not fulfilled and these gaps can cause not only delays or poor outcomes in projects,

but can also lead to a loss of trust between SEI and its partners: attention to methods, process and principles is required to avoid this. One basic participatory principle might be along the lines that perceptions of the issues need to be shared and common understanding developed before starting the project. Our responsibility is to communicate our objective and constraints – what we can do and what we cannot do – so that we do not raise false hopes.

Whilst the success of projects is not entirely contingent on the matching of a participatory methodology with a participatory approach, we argue that projects would benefit considerably from a greater reflection about and enhanced methodological awareness of the role and potential benefits and impacts of participation. The design and preparation of participatory exercises do inevitably play a large role in shaping the pre-conditions for what will and can be achieved at any given moment. An example of this is a regional workshop with stakeholder participation organised in the EU funded *ENABLE* project (see Section 3.1). The unique approach and opportune timing of planned project activities coincided with a high level political process which shaped the preconditions for a remarkable process to take place. Despite the favourable conditions for success, a great deal of thorough planning went into the preparations for the workshop. This thorough planning was key to the event's success, not only from a participatory process perspective but also from the perspective of actual political output. This achievement was, in part, made possible through a sophisticated workshop design that set it as a task for some participants to analyse and structure the results of discussions during the course of the workshop. In this particular case, this resulted in recommendations from the workshop going straight to the working committee of the East Africa Community (EAC) immediately after the workshop. Only 18 days after the workshop the recommendations were then adopted by the ministers and heads of states of the EAC. The speed at which these outputs made a high level political impact is in part to be explained by the timing of events but also importantly by the composition of the stakeholder group, which is the invited participants, the clearly defined boundary conditions of the workshop and the detailed planning of the workshop programme (which still allowed for flexibility). The involvement of an expert in process management strengthened and advanced the project team in its preparations for and execution of the workshop. The ENABLE example identified the most appropriate people to

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2 Eva Lindskog (SEI) and Dr. Vu Ngoc Long, Inst. of Tropical Biology, Ho Chi Minh City

participate, timing of events and modes of engagement as well as accurate analysis of the process.

One thing that characterizes SEI's work on stakeholder engagement and participation is diversity: due to the diversity of projects and nature of engagement in projects across SEI, it is somewhat difficult to cluster the characteristics of the work undertaken on the Figure 1 continuum. However, frequently used approaches to stakeholder engagement include either running one-off events or undertaking a series of engagement exercises *e.g.* policy workshops to gather stakeholder views on matters of concern. Sometimes stakeholder engagement takes the form of individual interviews, focus group discussions or different types of multi-stakeholder workshops or dialogues and right up to participatory action research in some SEI programmes (*e.g.* the Risk, Livelihoods and Vulnerability programme, RLV). The driver behind stakeholder engagement also varies from project to project: in some cases the purpose is to collect data early on in the project to get access to specific information for a follow-up survey, or simply to add value to, or reformulate a research question. There is sometimes a very strong problem-solving element to such exercises, either in terms of addressing communication issues within projects or challenges in policy. In other projects cooperative research with stakeholders is an integral part of the project. In such an instance the engagement of stakeholders plays an important role in shaping the outcomes of a specific project or activity. Thus the importance of managing the process well becomes crucial to ensuring quality research outcomes.

What are the challenges and lessons learnt so far?

Throughout, there are lessons that are coming through from the SEI participation practitioners who took part in the survey which informed this Working Paper. The interviews and written material provided indicate that there are a number of perceived benefits to using participatory approaches in research and development projects. Acknowledging that it is a democratic right, it also makes for efficiency in the research process: 'they come to conclusions independent of us'; 'the approach allowed for the creation of a combined viewpoint on the site'; and 'you go in with no agenda, what comes out is dependent on what people say and this drives the design of the project' all illustrate viewpoints which celebrate a pragmatic democracy to the research process. Further, participatory methods are agreed to help

people and communities develop social capital and create a sense of ownership over issues and processes. Furthermore, participatory approaches can add legitimacy to research results, which the following quotations illustrate:
- 'the output can be used as an argument to government';
- 'policy makers engage in this process in order to make better (more appropriate/relevant) policy and for decision makers to understand why certain policies are being made in the way that they are';
- 'the people who took part had a direct link to policy';
- 'UNEP now listen – they didn't before';
- 'with the technical advice they have a direct link to national level people'; and
- 'it is important to have good links at the top if you are going to make changes'.

Also, participation is a good way of getting data or knowledge and stakeholders' experiential knowledge complements scientific and technical knowledge. For example, practitioners have noted that 'we couldn't have got this information any other way' and 'if you are looking at how people make decisions about crop planting – you couldn't get this kind of information from satellite surveys. These can never replace asking people. Doing both together you get a better description of reality'. Practitioners thus get good, relevant information that is usually outside their immediate range of accessible knowledge. It is a valuable way of collecting complex information relatively quickly and a way to get to grips with how people make decisions. Participation can help researchers understand the social processes as well as the knowledge and perspectives which stakeholders hold.

However, even with the best intentions, good knowledge and expertise in participation, and thorough preparation and planning, there are certain challenges that we are likely to encounter that are inherent in systems and institutions. The work SEI conducts spans most of the world and several academic disciplines ranging across social and ecological sciences. This calls for a particularly high degree of cultural awareness and sensitivity when dealing with diverse stakeholders such as technical experts; local, regional or national government stakeholders; local community representatives; development practitioners; or others.

Feedback is also considered an important element of the participatory process, both at the time – itera-

tively interacting with the stakeholders – and later on. For example, one practitioner suggested that we should 'go back to the field site and feed back the information we have found - the rules we developed - and check them. Use this feedback to improve the rules'. Feedback is also important to allow the stakeholders to check back, review and comment upon findings. The question should be asked: 'does what we say make sense to you?' Practitioners should make time to go back to check the results with the community or stakeholder group. The learning comes when this is done. Further, it is better that participatory approaches are not used where there is no mechanism in place to follow up on what is said. We should, thus, where possible ensure that the participation is having an influence, is empowering, and is politically impacting.

SEI researchers also raised the importance of the agenda setting in the engagement process. The agenda should, where possible, be set with the partner stakeholders and should include the agenda of the whole process within which the participatory process is located. In addition, methods should suit the purpose and techniques must be tailored to the specific context.

According to SEI practitioners, the logistics of the processes are important. They should be tailored to the need of the stakeholders and the constituents. The environment in which you meet not only impinges on the comfort of stakeholders but also on their willingness to raise and discuss certain sensitive topics. Where possible, existing groups should be used to allow participation to happen more naturally rather than creating new spaces for participation to occur in an artificial milieu. Building trust with your stakeholders is an important part of the process.

Furthermore, SEI practitioners with experience in participatory action research (see footnote 1, page 3) testify that carrying out action research takes time. 'We should have allowed more time to get to know people and let them explain [to us] what they were doing'. Good participatory action research has a clear outcome but the researcher should not assume that outcome before the research commences: the researcher should be open to learning (*cf.* section 2.1 and 2.4). Working towards a clear output, grounded in local knowledge and perspectives, is a sure way to overcome 'consultation fatigue'.

One critical aspect of stakeholder engagement processes is facilitation. According to interviewees, a good facilitator must be able to:
• build trust;
• spend time getting to know the people;
• ensure everyone is valued, no one is made to feel stupid (Indeed, good facilitation can be characterized as getting a person to ask the question which they thought everyone knew the answer to but everyone really also wanted to ask.);
• encourage those who do not normally speak;
• relax people;
• tease out ideas;
• good at summarising the discussion in a useful way;
• be flexible – able to change plans quickly;
• be good at listening;
• not be judgemental;
• reat everyone present as evenly as they can;
• do what they say they are going to do (e.g. give feedback);
• keep people interested – keep the process dynamic and enjoyable;
• prompt when appropriate;
• understand group dynamics;
• let stakeholders talk;
• control the debate but only in a way that reflects back what people are saying (remembering that 'It is easy to miss things if you don't ask the right question… e.g. [in one case] rainwater was forgotten unless there was a question specifically about it)';
• needs confidence and staying power;
• importantly, a good facilitator is not to be confused with a natural leader who may have the tendency to manage the discussion (of 'facipulate' rather than facilitate). In this, the difference between using a participatory approach and using participatory methodologies is made clearer; and
• finally, a facilitator needs to be open about his/her mandate and who is the client of the participatory exercise.

The survey also suggests that it is good to use existing networks and support groups which meet anyway. This can be compared to the House of Lords Report on *Science in Society* (HoL, 2000) which says that new spaces need not be created for dialogue; further, it meets the 1970s community development motto of 'meeting people where they're at'. Using local people and sharing experience and knowledge with local people is also good practice, but local communities must be clear as to what is in it for them. Their voice should

be empowered by the use of participatory methodologies, not just the kudos of the researcher.

Finally, practitioners felt that SEI should engage with the academic debate(s) on participation and on learning. According to respondents, we do have a contribution to make even if it is synthesizing theory in practical application. Engagement and communication is fundamentally related to the SEI mission but so too is participation. We need to ground our research in the reality of those who we seek to study and we need to communicate this to our funders. By strengthening this approach, and by involving locals in project design, we can move further from extractive research to actually researching fully participatory, social-ecological science grounded in local (and global) realities.

However, in order to do this we need to share amongst ourselves what we mean by the terms participation and engagement. There is an unavoidable link between the way we carry out research and our own internal way of working. In this frame we offer this analysis to start our own reflexive and reflective considerations of the implications of these lessons for our future practice of participatory approaches.

How can SEI raise its profile and effectiveness of the participatory work undertaken?

Participatory research and participatory methods are manifestly not relevant for all of our research in SEI. However, from the interviews it appears that a significant number of staff expressed an interest in learning more about what participatory approaches are and what they could offer them, as staff and researchers, as well as contributing to project success.

In the study it became evident that the project team is key to successful stakeholder engagement processes: 'We need a core group of SEI practitioners with local sensitivities and local [cultural] knowledge as well as skills in facilitation to be responsible for guiding the overall participatory process.'

Another issue raised by respondents is the need for clear outcome and purpose of the stakeholder engagement process. There is little clarity about what we mean by participation, and hence, we need to start formulate a shared idea of the concept and gain better understanding of the rationales for using participatory approaches. For example it was claimed that: 'There are lots of people [within SEI] doing it without questioning it, for example regional policy dialogues, issues on air quality'. It was, however, regarded as challenging to develop meaningful participatory processes, and ensure

participation, that really have an impact and can lead to change. One suggestion raised to address this was '[…] a toolkit, training, [and] a group with whom we could share ideas about what we are talking about.'

In relation to purpose and outcome, it was also claimed that we should be clear about what our vision is for SEI and give examples of how these approaches can be used in many different contexts including scientific research. In addition, it was considered critical that stakeholders' perspectives have influence over the process and the outcome and that the process leads to action.

Another issue raised was that we need to allow more time both for the planning and undertaking of the participatory processes. 'It is not an add on. [You] can't just try and tag it on at the end. It is a different way of working and this has to be thought about early on. It is integral to all stages.' For this purpose, resources are needed to enable us to plan, implement, document, analyse and reflect upon the participatory processes in an effective way.

The choice and use of participatory techniques was clearly perceived as important and a range of techniques can be applied. For example 'out-of-the-box' questioning can encourage people to engage more fully and authentically in the process and enable them to express their real feelings and wishes rather than what they think the researcher wants. Another related concern is that we must not assume that there is only one way to carry out participatory processes, nor should we assume that one particular participatory approach is always appropriate: 'It is important to be reflective – think about your practice – what went well, what didn't and so on and allow feedback from the groups you work with. This enables you to give the right message. You must be open to learning'. It was noted that 'you can explain your thinking to participants and enable them to be proactive in developing the methodology'. An example of a more self-critical comment made in this context is: 'SEI is guilty of doing stuff simply because it worked before without questioning if it could be done better in a different way. If we are honest, there is probably a lack of expertise within SEI on participatory approaches and we are equally probably guilty of trying to fit participatory approaches into traditional research schedules'.

Further it was regarded essential to make our work more grounded in current reality. By becoming more aware of what we are doing we can strengthen our approach and think about how to improve it.

This involves involving local partners in project design. This is essential if there is to be a capacity building emphasis and this is not just a matter of process of extractive research. For example it was argued: 'We have applied knowledge to be able to work with local authorities as well as the academic background to be able to step back and ask questions about how policy was developed and how it could be improved and make suggestions, for example, if you take this approach you are likely to have this outcome'; 'SEI is in a good position –we have knowledge and experience of working with government so we are in a better position than purely academic organisations'. Moreover, some respondents felt that we need to engage more with the academic debate, particularly as we do have a contribution to make in terms of practical experience at all scales of governance and in multiple geographical settings.

However, in order to be truly effective, it was claimed that we need to have a coherent and consistent understanding about what we mean by participation. We need to start with a shared idea of what we are talking about when we say 'participation' and then provide 'a toolkit, training, [and] a group with whom we could share ideas about what we are talking about.' There are 'lots of people [within SEI] doing it without questioning' and we should be clear about what our vision is for SEI and be clear about how this approach can be used in many different contexts including scientific research. We should understand the other rationales for using participatory approaches.

From this we can conclude that, in order to raise SEI's profile and effectiveness in the field of stakeholder engagement, the Institute would benefit from:

- a core group of skilled SEI participation practitioners who can offer support to other staff and projects and who can take responsibility for the participatory processes;
- more resources available to plan, implement and follow up participatory approaches;
- development of a shared idea of the meaning of participation within SEI;
- more time and reflection on the choice and use of participatory techniques as well as the entire participatory process;
- be more firmly rooted in the real-world and local contexts, work more closely with local partners in the project design;

- be clearer about the outcome and purpose of the stakeholder engagement process, and promote follow up action; and
- become more engaged in the academic discourse.

There is an unavoidable link between the way we carry out our research and internal ways of working. The survey suggests that we have to get rid of the notion that you can 'participatory up' a meeting at the last minute. It would thus be good to have somewhere to bring together advice and experience on how to deal with these approaches in different contexts. To achieve this, we suggest a SEI Participation intranet section to:

- link up with people who have tried different approaches and used them in different context;
- allow access to advice;
- provide access to information about current best practice;
- allow practitioners to be able to speak to someone who had done it; and
- allow cross centre collaboration.

Finally, on the basis of the discussion above, we would like to highlight the perceived need for more time and resources for planning and undertaking stakeholder engagement work within SEI. In this context, we believe that SEI should provide a space to give staff more time to reflect on the past experience, and that learning and reflection from the past should be incorporated this into new work. This would allow us to strengthen our participation skills in general, as well as allow us to plan properly before using participatory approaches. However, this requires a commitment to internal capacity building: it is not part of external project-funded work, but it would certainly affect the externally funded projects in a positive way. Indeed, some staff argued that 'training in facilitation would be great' as well as learning experientially. In section 4 we will discuss in more detail how we could improve SEI's participatory work and look to the future by learning from the past.

2. A REVIEW OF PERSPECTIVES IN PARTICIPATION AND ENGAGEMENT

The emerging and developing disciplines around stakeholder engagement (e.g. within politics, policy and science studies) have much to offer in helping the SEI address the issues raised in the previous section. Consequently, this section moves away from SEI's internal practice and looks at the wider debates. In response to

several requests from SEI staff, we have reproduced a typology of participatory methods and plotted where and when some of these are typically and should be applied. The 'applied science – post normal science' categorization is from Funtowicz & Ravetz (1991) and each of these methods named on the diagram in italic font are recognised types or processes.

There are some common themes within the field of participation studies. Debate within the field has been influenced and driven by academic and practitioner experts and some of these are examined in the following pages.

2.1 Participation for learning and development

Bringing about change

Why do we want change?
Traditional ways of approaching research are no longer enough, especially where the subject of the research is highly uncertain and complex (*e.g.* see Funtowicz & Ravetz 1991, Gallopín 1999). Further, Pretty (1995), in his paper on learning for sustainable agriculture, neatly defines two ways of thinking about such approaches. In traditional ways of

working, researchers are seen as coming from a single discipline, spending the majority of their time remote from the people they are concerned with and fairly insensitive or unaware of the full complexity of their lives. Their goal is to develop interventions, often technological ones, to improve the situation of these people but often only affecting one aspect of their lives. In the new way of working researchers are self questioning and open about their underlying values, they use flexible methodologies appropriate to each situation, work closely with other disciplines and try to encompass the complexities of people's lives starting with their understanding of the situation, their information and their experience.

At SEI we are increasingly working with unbounded (or divergent) problems. These were described by Chapman (2002) as problems where:

- there is no clear argument about what exactly the problem is;
- there is uncertainty and ambiguity as to how improvements might be made; and
- the problem has no limits in terms of the time and resources it could absorb.

Chapman argues that these problems require a different approach to planning and implementing solutions
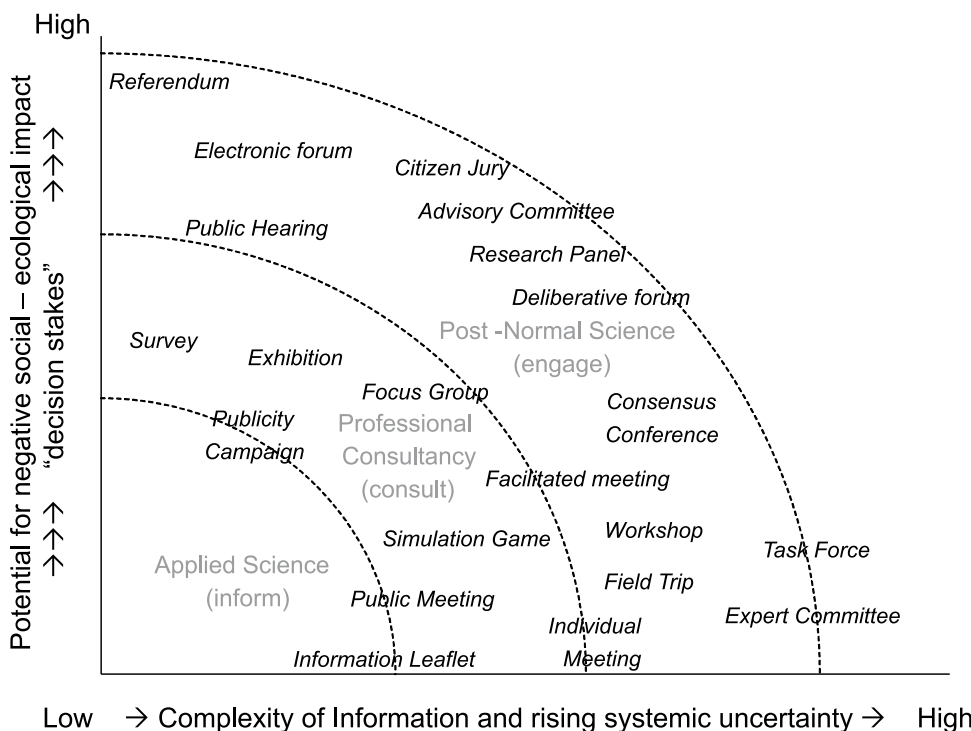

Figure 2: A Typology of participation methods after Robinson (2003) and Funtowicz & Ravetz (1991)

that recognises – rather than ignores – disagreement and uncertainty between different groups affected. Approaches also need to recognise that there are different perspectives on the problem definition as well as what a successful solution might be like. This requires a process of dialogue where the actors involved can listen to and understand the perspectives of others. Complexity theory postulates that new solutions emerge out of uncertainty; building on this, Eyben (2005: 101) comments:

> organised efforts [to direct change] more than partially confront the impossibility of ever understanding the totality of a system that is in constant flux. Composed of innumerable elements, continuously shaped and reformed through interaction upon each other, the system is constantly creating new elements that may in turn affect (loop back) and change those already in existence. Thus we cannot predict all the effects that any of our actions may have on the wider system, or indeed on ourselves as initiators of the action.

Government and policy processes, have traditionally made decisions using theory based more on certainty, rationality and predictability that is unlikely to be achievable in many cases, for example the context of climate change adaptation. There has been a desire to state what kind of knowledge is acceptable as an indicator of success or change although, given the lack of certainty in outcome, there is a need to be open to the possibility of paradox or ambiguity. Without certainty, recommendations have to be made tentatively which is less attractive for people having to make decisions about strategy especially those that require significant financial commitment. Although, in some situations, focusing on improving results can lead to an enhanced performance it can also act to block learning in an unpredictable world (*ibid.*).

In order to enable a process of emergence there is a need for the actors involved to develop the ability to improvise rather than to try to control process outputs and results. This requires investment in relationships and trust building, respect for difference and appreciation that there are many ways of seeing the world and it also requires attention to the historical context of the problem and the meaning the different actors give to the problem, as well as the power relations between the actors involved and their history of interaction (Ostrom *et al.*, 2002). Different actors may well also have very different moral perspectives and power relations may hinder communication, agreement on purpose and equal access to information.

Why is this different?

Although traditional approaches have produced much 'good science' and numerous very efficient technologies, much of the output has not always been relevant on the ground. It could not be incorporated into people's lives because of the focus on fixing a specific problem without addressing the basic constraints faced by the people who would be expected to use them, such as access to resources or power relations that discriminate against certain groups.

By starting with an understanding of the context as seen by people who experience it every day, by exploring their constraints and strategies to improve the situation with them, and by incorporating the diverse range of human values, local knowledge and individual agendas at an early stage, you almost inevitably end up with more relevant outputs and a greater likelihood that the outcome is sustained. In addition, stakeholder engagement provides a more democratic and equitable means of planning and implementing development policies and programmes. Further, by developing new strategies with concerned groups of people you develop their potential to address such problems in the future. Difficult issues may be raised by embedding the work in the complex realities of people's lives, but participatory approaches view people holistically and do not separate the constraints they face into separate sectors.

In a traditional 'rationalist' approach, data collection for science has been viewed as the collection of facts about the processes of interest, and the biases of the researchers – or the policy makers who used the outputs of the research – were rarely questioned. In a participatory process, when run well, the information unearthed is constantly checked for trustworthiness. Information is checked back with the people who developed it to clarify if that is really what they meant to say and cross-checked with others to see if they agree. Facilitators check with themselves that their own biases are not being influential and so on. If the information obtained is found to be trustworthy and thus a faithful representation of the feelings and understanding of all the key players, then the outputs are likely to be more equitable than if only the most influential or most powerful groups had been consulted.

In this way of working there is a deliberate focus on action. Why involve people in discussions about key areas of their lives, and raise expectations that things might change, if you are not actually going to do anything to improve their situation? The phenomenon of participation or consultation 'fatigue' tends not to be

due to weariness about talking about important issues but to the lack of actions that result from it. If nothing actually changes for them, then why should people spend precious time describing their experience and explaining their ideas?

If, however, change does start to happen through a participatory process the effect can be very powerful. A potentially overwhelming situation can be transformed to one of hope and, by playing an active part in the whole process, different actors can see that they can have influence and can make positive changes over the situation. When this happens there is potential for long lasting relationships between the various groups involved that outlive the life of the project. This could be called developing social capital. Through such connections one successful intervention can increase the likelihood of future successful interventions as people become more confident about their ability to address them and know who might support the process.

A process of research where action taken is reviewed and reflected on, learning is extracted and new plans of action are made and implemented can build capacity simply by showing that the solutions to problems do not require external experts. All the information and expertise is already present and can be unearthed through dialogue between interested groups. Participatory approaches are sometimes viewed simplistically as fun, visual ways to generate interesting information. Unfortunately, many participatory processes stop at this point, with a large amount of unstructured information that may be taken away from those who generated it and conclusions drawn from it that are never checked back due to lack of time or resources. The main purpose, and the power, of any participatory approach is reflection on the material generated to identify what has real meaning (see section 2.1.3 below). Thus, the people who undertake this reflection and analysis stage have a great deal of influence over what results from a process. By taking away the information generated and analysing it remotely it is easy to misunderstand meanings whereas undertaking the process of reflection and analysis within the community and with the people that produced the original material not only massively increases the quality of the data, ideas and solutions that come out of the process but also enables those involved to gain confidence in their ability to represent their views to others. Guijt and Braden (1999) – discussing the importance of reflection in participatory processes – give the main benefits as:

- uncovering new information (through making connections with data already identified);
- limiting biases (cross checking that what is recorded is a faithful representation of peoples actual views);
- building up a clear picture of the situation that people are largely happy with and ironing out contradictory views or perceptions;
- avoiding a superficial action plan and knee-jerk reactions, looking deeper into the causes of the problems;
- facilitating action that has a broad ownership, taking account of many perspectives.

Rowley takes this further, illustrating how the process of reflection and analysis can be viewed as a funnel (see figure 3) with different tools being used to identify important issues, prioritise them, explore the key problems in greater detail and finally identify solutions to address these problems. At each stage the level of detail increases. If you stop the process of analysis at the initial, brainstorming stage, it is inevitable that the outputs will be superficial. By delving deeper into the causes of the problems and understanding more about why these issues are important and the reasons behind them, it becomes possible to identify realistic and relevant solutions. At each stage, judgements are made about which pieces of information are the most important to providing a clear picture of what is happening and thus identifying satisfactory solutions.

Facilitators of the process are responsible for ensuring the process of recording and presenting findings takes place and that the objectives of the process are revisited regularly to check that the process is still going in the right direction (or to rewrite the objectives

exploring tools (superficial and more in depth)

prioritisation tools

tools to identify causes

tools to identify solutions

tools to rank solutions (in terms of ease, expense)

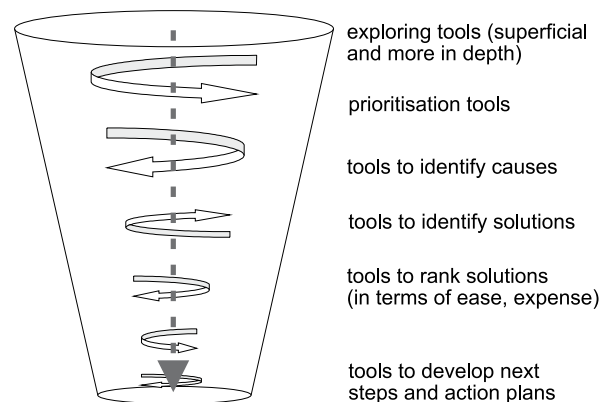tools to develop next steps and action plans

Figure 3: The Analysis Funnel adapted from John Rowley

if new information resulting from the process makes them irrelevant).

Different scales of change

One of the key challenges to any effective participatory approach is to link up good initiatives undertaken at the local level with influential people and policy makers. Without good links to people with influence over resources, or power to change structural constraints, nothing may actually change despite all the effort put into understanding things on the ground (see Rowley, 2006). Any changes to the way decisions are made can feel threatening to the established 'status quo' and people with power and influence may be very resistant to giving this up. If they are left out of the process and only presented with the final output they are unlikely to be supportive. They need to be convinced of the benefits of this new way of working. A good participatory process would involve a thorough analysis of the main individuals and groups that need to be involved in order to have a successful project.

Learning and Reflection

Learning in adults was described by Kolb as cycles of experience, reflection, generalisation (or conceptualisation) and active testing which leads back in to a new cycle of learning (Kolb & Fry, 1975).

In 'single loop' learning an individual (or organisation) becomes increasingly skilled in an activity as mistakes are learned from and the process is refined. 'Double loop' learning occurs where there is a paradigm shift in understanding enabling participants to think on a different level and to question the questions that are being asked or the assumptions behind them. 'Are they the right questions? Can they be improved in order to more clearly understand the issues?' This double loop learning enables people to question their own and others framing of the issues and it can open up new areas for exploration (see figures 4.1 and 4.2).

Learning in participatory processes is intended to lead to changes in the way things are done and thus requires shifts in understanding for us, either as individuals or groups. No one person is expected to have the answer, but everyone has a piece of the truth. By sharing ideas in an inclusive process it becomes possible to identify some imaginative and 'out of the box' solutions.

Learning does not just occur on the conceptual or intellectual level, other levels in the conscious and unconscious need to be considered in order to find
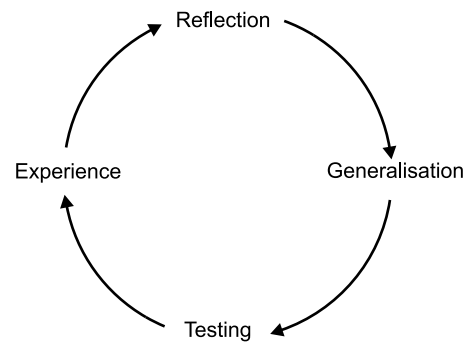
Fig 4.1: Single loop learning (quoted in Brockbank and McGill, 1998)
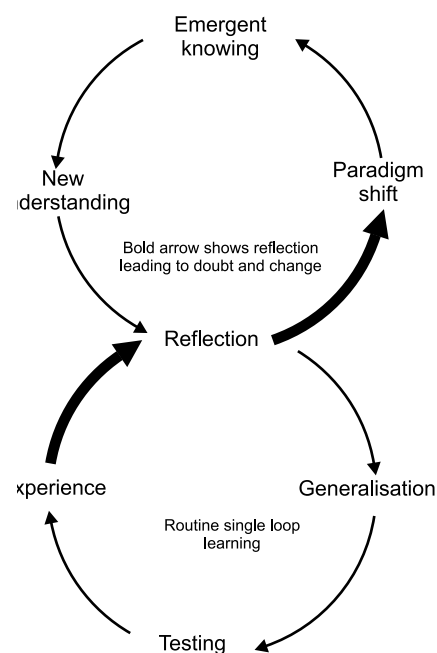
Fig 4.2: Double loop learning (after Argyris &

holistic solutions to complex problems. Similarly, change can occur on a number of different levels – emotional, conceptual, physical – including changes in the way we act, consciously or unconsciously, not just actions that result in tangible actions or material outputs. Bateson (2000) coined the term *deuterolearning* to describe the concept of improving the way we 'learn to learn' (also referred to as triple loop learning). Developing our capacity to question our understanding of what is going on is an important part of developing our capacity to identify what has real meaning in what we are finding.

Thus, a collaborative relationship between researchers and others involved in the research and development initiatives is likely to improve mutual understanding of the multiple perspectives of an issue and thus new knowledge about that issue can be co-constructed in the process. The challenge is to create new institutional arrangements and alliances to encourage greater learning (in a wider sense) with peer groups and with an awareness of new methodologies and approaches and an understanding of the ways in which we ourselves learn. On a practical level this often involves input of resources to allow people time to make links and build connections with others.

2.2 Governance, Social Policy and Accountability

Gaventa (2004) – talking of citizen participation – argues that there are two main approaches to participation. They are, firstly, participatory development – where the emphasis is on bringing pluralistic forms of knowledge into planning and policy processes (as in Participatory Rural Appraisal (PRA)), and secondly there are the political science and governance debates which involve strengthening the way in which citizens participate in policy development, and influence institutions and practice. In the former the focus is upon practice examples such as:

- the inclusion of hard to reach groups (ethnic minorities, elderly and youth groups and so on) and the inclusion of their views in development plans, also the addressing of 'social exclusion' themes such as poverty; and
- the bringing of public and lay knowledge into 'evidence-based' policy.

While in the latter, examples include:

- dealing with legitimate representation;
- systems of public accountability;
- policy advocacy and lobbying;
- rights education and awareness building;
- party formation and political mobilization.

In fact, these two approaches are analytical distinctions so – in reality – they are not mutually exclusive. Gaventa also argues that these are being brought together under the concept of participatory citizenship. This section investigates the second of the two approaches to participation in more detail before coming back to considering Gaventa's claim.

Changes to the public sector

Changes to the public sector over the last three decades have lead to the introduction of market forces in public services; privatisation, targets and performance related pay, the contracting out of services to name just a few changes. These changes are particularly evident in the UK (Dunsire 1999). This shift is often recognised as a move from 'government' to 'governance' (Stoker 1998), with traditional areas of state intervention being 'hollowed out' and instead occupied by a wide range of different actors, from the public, private and voluntary sectors. This shift has also placed a different emphasis on the role of the citizen, as Cornwell and Gaventa argue, 'state-centred conceptions of social policy often view citizens as recipients of state delivered programmes. Market led versions focus on the clients of social welfare as consumers, who participate through exercising choice from a range of services' (2000: 50). In the UK, Giddens described the role of the modern day citizen as 'no rights without responsibilities' (1998:66), reflecting the UK New Labour governmental model of a partnership between the individual and the state (Lister 2003). The modernisation agenda places public service users (not providers) at the heart of its aim to provide a more coordinated response to policymaking (Dobbs & Moore 2002). Whilst this is a response to changes in the British public sector, and the era of the 'new public management', it is mirrored throughout the high-income countries: there are also reverberations elsewhere.

The shift in the role of the citizen has lead to an increased emphasis on the value of participation in order to strengthen policy development and legitimacy. Citizen participation, it is argued, will improve the efficiency of public services through making government more accountable and democratic (Cornwall and Gaventa 2000: 58). There are two main ways in which participation is said to improve public services. Firstly, it can help target policy interventions, and therefore may lead to improved policy outcomes. Secondly, it can lead to an improved relationship between government and citizen.

Improving policy outcomes

The participation of stakeholders can help policymakers understand how best to target policy interventions. For example, in areas where the environment *per se* is not a priority, policies that encourage and highlight the practical and financial benefits of environmentally friendly behaviour may be more appropriate (Burning-

ham and Thrush 2001). By involving local people in making policy, environmental matters can be presented as more immediate, giving members of the community 'ownership' over their environment, and drawing on local pride (*ibid*). As discussed elsewhere in this Working Paper, local knowledge about local problems and potential solutions can also lead to improved outcomes. Here the PRA/governance spheres of debate merge.

In 2.1 we discussed the role of participation for promoting learning and reflection, with the ultimate aim of bringing about change in society. In this section, we would like to highlight a specific type of learning, *social learning* and its role in promoting policy development. Social learning theory as it is currently applied within public policy, emphasises how the individual actor can overcome the constraints imposed on her or him by external factors and, as Kemp & Weehuiszen (2005) put it, 'Social learning is often about values and other 'higher-order' properties such as norms, responsibilities, goals, and the framing of issues in terms of causes and effects' (*op.cit*: 4). Kemp & Weehuiszen sums up this new understanding of social learning and link it explicitly with policy learning as follows :

'Learning is coloured by organisational views, interests and organisational culture and that learning is often a function of individual and organisational goals and incentives. Learning is not just an informational process. Argyris and Schon (1978) have shown how people filter and manipulate information flows: employees avoid passing on negative information to their superiors, they try not to be too closely identified with new projects in case they fail, and managers involved in decision-making frequently employ information selectively in order to legitimate decisions reached on 'other grounds' ... Policy learning is a form of collective learning, since policy is designed and implemented by a range of organizations. In that respect, policy learning as a topic for research is closer to the literature on organizational learning than the literature on individual learning. An important aspect of policy learning is that it generally involves learning not of one organization but of a number of organizations. This adds complexity in terms of who learns what and why, since there is not only interaction between individual frames of thinking in an organization but also interaction between collective frames of thinking of different organizations'. (Kemp & Weehuiszen 2005: 7-8)

For social learning to occur, true stakeholder engagement must occur and expert discourses must also be translated and vice versa; social learning is about learning through transmission of information plus observation and the bringing to bear of personal attitudes.

At a general level, learning in the policy context implies a change in thought about policy, which contributes to the policy process (Eberg 1997, Sabatier 1993). At the heart of a learning approach is therefore 'the notion that policy makers and other actors can adjust to changing circumstances and to knowledge gained through experiences' (Fiorino, 2001). Policy learning is essentially for anything that aims to contribute to policy systems incorporating knowledge and understanding about the why and the how of policies and their outcomes; this knowledge is manifested within the policy cycle.

In multi-stakeholder engagement, one person's process is often the other person's tool or outcome. Thus, for planners and professionals the substantive issue is the process, but for citizens the issue is not the process but only a tool which is used by them as a means to an end. This will not change, but this situation needs to and can be made more transparent. In any situation where delivery needs the coming together of different sectoral interests we need social learning to occur. There are blockers to social learning and these include:

- blockers caused by power of perceived power relationships – ranging from pecking order to real or perceived disenfranchisement;
- blockers caused by language or lack of understanding – ranging from use of disciplinary jargon to access to 'black boxed' technologies;
- blockers caused by attitude – subtly different from the first in that here we are looking at politics with a small 'p' – in essence we are predisposed to agree with certain individuals or even types of individuals regardless of what they say. (Cuppen *et al.*, 2006).

Cuppen *et al.* suggest that we probably cannot design processes which overcome all of these institutional blockers at once. We probably agree, but groupings and combinations of structures and systems can be made to work to overcome all three.

Improving relationships

Participation is suggested to help improve the relationship between people and state, a relationship which is often cited as having become weakened, especially in terms of local government (Macnaughten *et al.* 1995; Pimbert and Wakeford 2001). Ravetz describes the process of participation as a two way form of social learning where not only do policymakers learn from members of the local community, but 'citizens … can learn from in-depth professional or political discourse,

with greater appreciation of its complexities and uncertainties, and with greater empowerment for devolved responsibility' (1999:340). By using different methods of participation, greater 'mutual understanding, recognition and respect' (LGMB 1995:3) on both sides can be achieved. It is also argued, that involving citizens in policy development can generate greater local commitment and resource – in other words, social capital (*ibid* 1995).

Bringing the policy spheres together

As discussed above, Gaventa claims that the participatory development and governance debates are beginning to be brought together through the concept of *participatory citizenship*. However, there is also increasing recognition that the ideals of participatory governance are not always realised. Local concerns are complex, processes can be dominated by particular interests, and events may be poorly attended (making individual events even more unrepresentative). People may be reluctant to attend participatory events through feelings of exclusion, or a perception that they are the domain of 'the usual suspects'. Further, as identified above, apparent 'consultation fatigue' can also be a factor of no apparent or transparent outcome. These factors (or a perception of them) can lead local politicians to express concerns over the legitimacy of participatory rather than representative democracy. Recognising these issues, Gaventa argues that whilst participation creates 'enormous opportunities for redefining and deepening meanings of democracy', the critical challenge is to 'ensure that the work promotes pro-poor and social justice outcomes' (2004:39). He further argues that by understanding the power relations (that he attributes to many of the issues discussed above) which surround and fill new spaces for democratic engagement, the broader agenda of understanding and promoting both participatory democracy and participatory development can be fulfilled (*ibid*.).

2.3 Public Engagement with Science & Technology

One specialist area which marks SEI from many other development institutes and organisations is the highly scientific nature of much of the Institute's work. There is a long academic, and growing practitioner-based, literature around what was once called the Public Understanding of Science (PUS) and is now more frequently referred to as Public Engagement with Science and Technology (PEST).[3]

Scientific Experts and Informed Citizens

Thomas Jefferson, quoted in Fischer's *Citizens, Experts, and the Environment* (2001) said that wherever the people are well informed, they can be trusted with their own government. But, nowadays, who can claim to be well informed enough about the scientific issues that underpin so much of our environment and development work except the scientists themselves? In 1959, C.P. Snow put forward the thesis in the BBC Reith Lecture that there was what amounted to an opposition between literary intellectualism at one end and proficiency in the physical and natural sciences at the other. Snow dated his realisation of this distinction to the 1930s; what we can say for certain is that there was a coming into common understanding that a reasonably well-educated or cultured person could not, now, be expected to be normally able to comprehend both the sciences and the arts. This state of affairs is not by any means the scientific community's entire fault although science is guilty of creating, along with other forms of knowledge and understanding, elites. Elitism fosters disciplinisation and sub-disciplinisation, and has given rise to mistrust and lack of understanding between the members of different disciplines and of science and scientists in general. This elitism was rife, as Wynne noted:

> The dominant approach in PUS research corresponds with the modernist enlightenment vision of science as the epitome of open thought, endemically self-correcting through its intrinsic ability and moral drive to apply scepticism to all its own commitments (1993: 232).

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3 What follows is based upon Forrester, J. (2006) 'Science and Public Participation: The Democratization of Science' in Blackwell Encyclopedia of Sociology edited by George Ritzer.

The term 'lay' was commonly used until the 1990s to describe those untutored in science thus emphasising the idea of a scientific priesthood or elite. In this age of late modernity, what Ulrich Beck calls the 'Risk Society' (Beck 1996), science plays an important part in all of our lives. Yet science is growingly criticised for its apparent inability to provide answers to pressing questions which concern the public. Crisis after crisis (most evident in the UK, but also elsewhere) present science seemingly at odds within itself and unable to provide policy-makers with a clear course of action. One possible reading of this scenario is that there is not so much a problem within science but within the interplay between science and its publics, in this case both 'the' public and the policy community. Rayner (2003) argues that social scientists have responded to the problems of public engagement with ever-increasingly sophisticated techniques to engage and to establish a role for the non-scientific expert which do not address the root issues:

> (…) the operation of international development aid programmes, particularly those of the World Bank. In many parts of the developing world, technical needs assessments, benefit-cost analyses, and environmental impact analyses, usually performed by consultants from donor countries, are likely to play a bigger role in shaping the people's lives than the operation of their local and national institutions or, hopefully, democratic governance (Rayner 2003: 164).

Wakeford also notes that there is a particular 'technology divide' between developed and less developed nations (Wakeford 2004). Indeed, Rayner is not alone in criticising the World Bank, Hughes (1998) suggested that (at that time) only FINNIDA (the then Finnish aid agency) gave clear unambiguous guidelines on stakeholder involvement. However, even in many 'Western-style' democracies members of the public are engaging and being engaged in the governance of science, but not in knowledge creation itself. In contrast, in some continental European countries citizen participation in science is seeing citizens more as co-creators of new knowledge alongside traditional experts, new knowledge that is both 'reliable' (after Gibbons 1999 – i.e. knowledge that is scientifically correct) and also 'socially robust' (i.e. that overcomes the elitism of traditionally-generated scientific knowledge).

Public Engagement in Science and Public Engagement with Science

Two major dimensions to public engagement may be distinguished as public engagement *with* science on the one hand and public engagement *in* science on the other. Stirling (2005) characterises the first more exactly as 'participation in the social appraisal of science and technology' while the other is also about knowledge production, as is illustrated by the title of the book *The new production of knowledge* published in 1994 by an international team of scholars (Nowotny *et al.* 1994).

There is a particular type of collective movement which seeks to create and disseminate new knowledge, particularly with respect to the environment. This movement has been noted by Elam and Bertilsson (2002) and also documented by Ziman (1996). Many small independent, international research and practitioner 'scientific' institutes (specialising in sustainable development and environmental issues) have grown up world-wide since the early 1990s and these institutes often work at local, national, regional and/or global levels to clarify the requirements, strategies and policies necessary for a transition to sustainable development. These institutes, it is argued (see also Ziman's 1996 thesis and Gallopín 1999), work in a new way compared to traditional academic institutes and it can be further argued that SEI is one such institute. As Durant put it:

> The ideals of equity between scientists and non-scientists and of informed public debate as the preconditions for forging socially sustainable public policies need to be translated into new processes of deliberative democracy (1999:317).

More recently, Wakeford suggests that:

> Just providing access to basic technologies [for people in developing countries] is not enough. People also need control over both the use of existing technologies and the development of new ones. The one way of ensuring that any technology will benefit people is to provide opportunities for them to participate in its development. Such processes should not only draw on their existing knowledge but also their assessment of particular circumstances in which the technology might be used. (2004: 3).

Paralleling the growth in 'new social contract scientific institutions', there has been an almost logarithmic increase in the number of initiatives to open up new spaces for science and the public to interact. In the UK, Sociology of Scientific Knowledge (SSK) practitioners (see Irwin and Wynne 1996 for one collection of their works) were suggesting that science needed to be, at the very least, studied in context and this is akin to our 'bottom-up' approach. Such practitioners made the argument that 'lay knowledge' should be considered alongside expert knowledge as epistemologically dif-

ferent but no less valid and SEI has been instrumental in developing that debate (see the York GIS-P example cited in section 3 of this Report). However, the application of social constructionist ideas needs to be handled carefully, as while the governance and application of science is clearly open to public engagement and participation, the inclusion of the public's (and publics') knowledge in the creation of 'new knowledge' is still a largely uncharted territory. Nonetheless, we have now moved from PUS to PEST (Public Engagement with Science & Technology) and PEST seems to be able to attract the interest of SSK practitioners and scientists alike and is more open to dialogue. Science is now expected to seek to democratise itself through engagement and the relevance of this to research on sustainable development is obvious.

In the last decade, many other rationales have emerged for encouraging public participation, particularly with environmental policy making spurs such as global climate change and, in particular, sustainable development (see Forrester 1999 and Gerger Swartling 2002) has shown that lay people are capable of engagement in highly technical debates over their own environments. Participative initiatives have been further spurred and legitimated by the participatory emphasis within Local Agenda 21. This was important in that it encouraged people to participate in the issues affecting their localities.

Some have adopted the pragmatic argument that public involvement will assist with the effective implementation of policy; i.e. when members of the public are consulted and engaged with they are more likely to lend their support to (or, at least, not oppose) science-based policy measures. Others have argued that in democratic societies, people simply have a right to a participatory role. Further, the argument has been made that people may have access to knowledge that is unknown to experts; local people may themselves count as experts about their own localities. Stirling (2005) has characterised these three rationales as:

- Normative democratic – in other words the motive is the engagement. It is simply people's democratic right to be involved in decision making in society and in an increasingly technocratic society this involves increased involvement in science policy.
- Instrumental – this rationale is different in that it has a purpose related to an output or outcome. Citizens are engaged in order to change their behavior, or to inform the creation of new knowledge. PUS research was clearly instrumental.

- Substantive – this is the most complex in that this rationale almost subsumes the other two, but at its most naïve it can be described that substantive engagement leads to 'better' decision. It can be argued that the move towards PEST sets the scene for substantive engagement to occur.

There will remain times when the public will be engaged 'only' in the governance of science; engaged in making decision about science funding, research priorities, and so on. There will also be times when what is required is engagement in the creation of new knowledge. The major methodological issues with science governance include: re-defining the 'norms' by which science works (after Merton's 1973 *The Sociology of Science*), deciding on the funding of science, the transparency of decision making within the governance of science and science research, and also the application of scientific knowledge (see also Ziman 1996). Thus, this level of engagement concentrates upon science itself, its own workings in the policy sphere and the public-science relationship where people's 'ambivalence over what to believe and the implications of commitment one way or the other witnessed a reflexive problematization of their social relationship with science' (Wynne 1993:239). The major methodological concepts or issues involved in public engagement in the creation of [new] knowledge are to do with the nature of that knowledge itself – what the concept's authors call 'mode-2 knowledge production' (Nowotny, Scott and Gibbons, 2001) – and where and how the conditions necessary for the growth of a 'socially distributed expertise' (*op. cit.*) may be fostered.

Science's new social contract: trust and transparency - but what about power?

As science becomes increasingly answerable to a range of publics including both funders and users, sociology has begun to suggest that 'new spaces' are needed to fulfil a new contractual arrangement between science and its primary constituency, society. Policymakers (see House of Lords 2002) warn against creating new institutions to provide these spaces, instead emphasising the need for trust and transparency in existing institutions. The focus, however, is on the need for transparency and trust; science still needs to re-establish relations of trust between science practitioners and members of different publics. One area where this is particularly critical is where science is deemed to suffer from a lack of certainty. The idea that under certain conditions of uncertainty (to

wit, 'post-normal' science) there should be extended peer review was one put forward by Funtowicz and Ravetz in a series of papers (see Yearley, Forrester and Bailey, 2001 for a fuller exposition). They sought to develop a theoretical framework for understanding on what grounds and under what conditions the public should be involved. Put simply, they said that where the scientists had no firm evidence on what to base a decision then the non-scientist's view was just as valid, but they also made the point that where there were high 'decision stakes' – in other words when the outcome of the decision might impact upon a large number of people – then under those conditions the public too should have a voice. This framework was particularly influential in the 1990s. It has fed into the underlying PEST principle that science itself should no longer be controlled by a restricted corps of insiders.

Wakeford (2004) suggests a number of cross-cutting questions that should be asked of [participatory] development projects'

- Is the objective to give participants opportunities to take control of issues that concern them fundamentally?
- Is the initiative under collective rather than hierarchical control? (and is is dominated by a technocratic elite?)
- Is adult literacy necessarily a pre-condition in the short term?
- Is there sensitivity to gender and other inequalities within the process?
- Are there safeguards against dominance by the agendas of a single stakeholder? (including the machinery of government).

Wakeford goes on to say that:

> To become meaningful, 'democratising technology' must move from being isolated institutional experiments towards becoming a core element of all governance processes, thereby widening the range of options everyone has in their lives. Many wealthier consumers can already exercise technology choice, most dramatically shown during the ongoing GM food controversy, by buying or boycotting a particularly technology in the marketplace. But a choice between technologies, even ones as far reaching as GM, is often not available to those communities living under the burden of long-term debt. If it is to mean anything, democratising technology must lead to those currently without spending power having the freedom to choose which technological future is best for them (2004: 33).

Finally, Rayner (2003) points out that evaluation of the performance of public participation is problematic because it is almost exclusively organised by the doer of the participation projects and it is on a project by project basis. He calls for systematic and cross-technique evaluation which we simply do not have (yet). This evaluation must assess how good it was for the participant as well as how good it was for the facilitator, researcher, donor or academic.

2.4 Participation and power

Power is identified as being of key importance in many definitions of participation. For example, the UK aid agency DFID in their manifesto on human rights (2000) defines participation as 'enabling people to realise their rights to participate in, and access information relating to the decision-making processes that affect their lives' (quoted in Chambers, 2005). Chambers himself argues that participation has 'no final meaning', that it is 'mobile and malleable, an amoeba, a sculptor's clay, a plasticine shaped as it passes from hand to hand'. He suggests that it is up to each individual to puzzle out for themselves how they should interpret and express it. This presents a problem if participation can be whatever a person wants it to be. In attempts to organise this, a number of ladders and spectra have been developed to try to categorise the different levels at which people can participate in a process. Some of these classifications of participation are illustrated below.

In her now famous article 'A Ladder of Citizen Participation' (1969) Arnstein considers public participation and its role in power distribution, illustrated in a ladder with eight rungs. The author viewed citizen participation as a form of citizen power, suggesting the definition 'the redistribution of power that enables the have-not citizens presently excluded from the political and economic processes, to be deliberately included in the future' (1969:216). As a metaphor for viewing the different levels of participation from non-participation to total citizen control, her ladders are impressive although the classifications she used are quite emotive (e.g. 'manipulation', 'therapy', 'placation') and over the past decades, they have been criticised and revised many times, including several modifications emerging from developing country settings (Abbott 1996, Choguill 1996). A more updated ladder of participation is offered by Pretty (1994) (see figure 5):

This can be further simplified into who has power over decision making with the spectrum ranging from stakeholders being ignored to stakeholders taking all

An additional level of participation can be added - that of **Catalysing change**, where community members influence other groups to initiate change.

Self-mobilisation. Stakeholders take the initiative. They may contact external organisations for advice and resources but ultimately they maintain the control. Likely outcome for stakeholders: very strong sense of ownership and independence.

Interactive participation. Joint analysis and joint action planning. The stakeholders themselves take control and have a common goal to achieve. Likely outcome for stakeholders: strong sense of shared ownership, long-term implementation structures.

Functional participation. Enlisting help in meeting the pre-determined objectives of a wider plan/programme. Stakeholders tend to be dependent on external resources and organisations. Likely outcome for stakeholders: can enable implementation of sound intentions, as long as support is available.

Participation by consultation. Asking for views on proposals and amending them to take these views into account. May keep participants informed of the results but ultimately, no real share in the decision-making.

Participation in giving information. People are involved in interviews or questionnaire based 'extractive' research. No opportunity is given to influence the process or contribute to or even see the final results. Likely outcome for stakeholders: generates information but that is all.
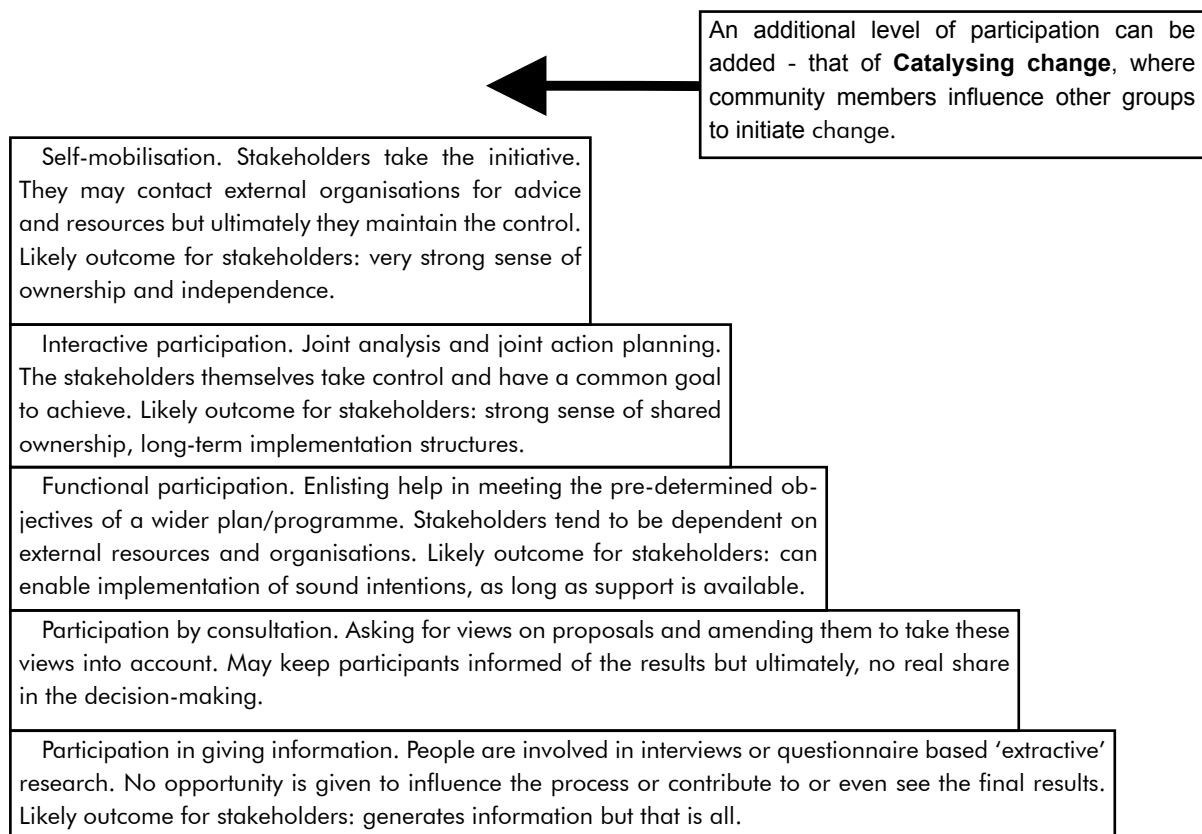
Fig 5: A Ladder of Participation (adapted from Pretty, 1994)

the decisions with every permutation in between (John Rowley: personal comment to one of the authors). From these ladders it can be seen that stakeholder engagement approaches vary from quite passive interactions, where the stakeholders are simply informed or provide information, to 'self mobilisation', where the stakeholders themselves initiate and design the process. Engagement closer to self-mobilisation is not necessarily 'better' because it is more participatory. Different levels of participation are appropriate for different stages of the project and given the experience of the research team. The questions we need to ask ourselves as researchers is who is making the decisions over all of the stages of the research we are engaged in. IIED completed a reflective study on their own participatory research approaches and investigated participation at each stage of the research cycle described as follows (Kanji and Greenwood, 2001):

- defining the research agenda
- developing the research proposal
- preparatory phase
- implementation
- analysis of results
- dissemination and action.

For a number of projects they looked at the level of participation for each stage using their own typology, the levels being distinguished as:

- compliance: where tasks and incentives are aligned but the agenda and process is directed by outsiders;
- consultation: where local opinions are sought, outsiders analyse and decide the course of action;
- cooperation: where local people work with outsiders to determine priorities; the responsibility to direct the process lies with outsiders;
- co-learning: where local people and outsiders share knowledge, create new understanding and work together to form action plans;
- collective action: where local people set their own agenda and mobilise to carry it out in the absence of outsiders.

Defining our own typology of relevance to the kind of work we do in SEI might be a good first step to helping us to define how we see participation and think

more deeply about what level is relevant for a specific piece of work. Robinson suggests that practitioners and researchers need to match 'the fitness of different methods to specific situations' (Robinson, 2003: 4), both of the overall project but temporally and situational within the project itself. He suggests a matrix for overall project consideration but the important take-home message that we add to Robinson's useful insights is that participation is an iterative process that is ongoing throughout a project and it will almost certainly change both in form and function as the project progresses. However, it is important to be honest with ourselves and with the people we work with about how they are being involved, how the information they provide will be used and - as far as possible- whether they have any power to influence decisions. The purpose of participation must thus be communicated for each situation.

When designing an engagement process, it is important to take into account the stage at which the engagement is occurring in terms of the policy making process, what decisions have already been taken and what positions are already fixed. It may be that the engagement, though very participatory in itself, is not effective because the scope is too constrained and there is no opportunity for developing creative solutions.

2.5 Components of a participatory approach

There are many different approaches to participation. The choice of which approach to use depends on the complexity of the issues of interest and the purpose of the engagement, both of which will be determined in the initial steps of the project, where a careful evaluation of the time and resources available for participatory approaches should also be performed. There is no 'one size fits all' formula but a number of tools and techniques that can be applied to suit a given situation. It is, however, beyond the scope of this Working Paper to describe and evaluate existing participatory methods, including the multitude of methods and techniques applied in the past and at present within SEI. Rather, this study focuses on the practical experience of adopting a participatory approach in different SEI projects and contexts, with the aim to promote organizational and inter-organizational learning for future efforts in the field of stakeholder engagement. On the basis of our findings, however, some general observations can be made here.

A 'good' participatory process has three parts: inclusive (often visual) methods and tools; a flexible

process; and a set of guiding principles. Participatory methods can yield useful information but much of the power, motivation (and excitement) is lost if there is no effort to embed them in a participatory process guided by participatory principles. Often project workers focus solely on the methods. To achieve a truly community owned and led project with outcomes that build capacity you need to invest time in thinking about the process. This is at least as important as the recommendations and results contained in the project report.

Participatory principles

There is no step-by-step method to guarantee a successful participatory approach every time. The principles used to guide the process are specific to the particular situation. Examples might be:
- that they involve and are relevant to the project end users (key stakeholders);
- that the methodologies used respect the knowledge and experience that all participants bring to the project;
- that there is an emphasis on learning (for everyone concerned) and knowledge for action;
- that the project team continuously and critically examines attitudes, ideas and behaviours;
- that the process acknowledges and addresses inequalities of power and voice amongst participating stakeholders;
- that there is an explicit aim to build capacity.

Process vs methods

'The speed with which the use of participatory approaches spread around the word was amazing, I wish I could say the same for participatory methodologies.' Meera Kaul Shah, 2003 (quoted in Chambers 2005)

The approach and the methods go hand-in-hand: spending time designing a participatory process is essential. This includes starting by defining clear objectives and goals that help to inform who needs to be involved at each stage. It is essential to allow time throughout the process to revisit the objectives in the light of new information and to ensure that outputs are relevant and that they truly reflect the needs, ideas and experience of all those involved. Only when the process is clear and the tasks for each stage sketched out, can tools to explore the key questions of interest be identified. Even then the tools should be used loosely and abandoned to substitute more appropriate ones if the situation demands.

3. EXAMPLES OF INTERNAL SEI PRACTICE

In this section we will present three examples of practice selected from SEI's work (up to 2006). The sample has been made on the basis of interviews and follow-up discussions with staff who had experience of participatory research and development initiatives. Further, we attempt to highlight some different types of SEI projects in different geographical settings. Together they show how good practice is about having a good process, which includes attention to the policy output and social and environmental outcomes. These examples also indicate that there are no right or wrong methods in participatory work, but there may be 'better' ways to pursue participatory approaches for sustainable development.

Lessons learned from SEI practice include that the time at which a project takes place can have a large impact on how influential it is. For example, the RAP-IDC South Asian network formation occurred just after the Indonesian forest fires which some thought brought air pollution to the top of the political agenda. This enabled the project to position itself at the highest policy level. The start-up of the APINA network in Southern Africa, in comparison, reveals how, despite the issue of regional air pollution being similar, it has never been on top of either the policy or scientific agenda in Southern Africa. The project was started by bringing together various stakeholders and presenting the issues from a scientific perspective. Only later did questions arise as to the attention of the policy makers. This reveals how the setting in which projects and research are formulated can be extremely dependent on the timing of external events. To some extent, as researchers, this is out of our hands but it is worth being vigilant and open to opportunities to make connections with events that arise that can influence policy processes.

Again using the RAPIDC as an example, our finding is that, in order to establish this ownership by stakeholders it became evident that the scientific arguments presented needed to be regionally specific and based in research from the region. Stakeholders resisted acknowledging the issues as long as no empirical findings from their region were presented. However, this was overcome in the project by accepting the need for generation of region-specific data.

The experience of SEI researchers in Vietnam reveals the importance of a good understanding of culture and political traditions on the research process. In hierarchical cultures where decision making tends to operate in a 'top down' manner, gaining the support of senior and politically influential players greatly determines the success of research projects. This particular cultural context means that junior researchers or policy makers are unlikely to take initiative on projects or move forward on activities unless they have the 'green light' from their managers. Moreover, in a country where there is now a strong political economy of research (Scott *et al.*, 2006) the importance of prior relationships and trust between external and local researchers cannot be underestimated.

Finally, a situation that most of us are likely to encounter in participatory research is finding barriers to participation in the form of organisations – or individuals within organisations – who, for one reason or another, deliberately or unintentionally, stymie the meaningful engagement of others. This is particularly the case where individuals act as 'gatekeepers' or contact persons. This person – whether in the research institute or partner policy or community organisation – can be a person who acts effectively as a catalyst for a participatory approach or they could be a barrier to it. Ensuring that these contacts are champions for a participatory approach is an important part of getting it right.

3.1 ENABLE: the Regional Energy Scale-up Initiative in East Africa

The first example illustrates the arrangement and outcome of a large multi-stakeholder workshop undertaken by SEI in East Africa in 2005[4]. The aim of the exercise was to support and facilitate the process of identifying and elaborating the content of a regional initiative in East Africa to scale-up access to energy services for urban and rural poor populations beyond a 'business-as-usual' approach.

The framework and setting in which the workshop was developed

'*Building Capacity in Energy in the Health, Education and Water Sectors for Poverty Reduction in sub-Saharan Africa*' (ENABLE) was supported by the European Commission's Directorate General for Energy and Transport (DG TREN), as a COOPENER action through the Intelligent Energy Europe (IEE) programme. It commenced in January 2005 and was completed in June 2007. The COOPENER actions of

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4   With thanks to Anders Arvidson for preparation of the background material

the IEE programme aimed to support and stimulate the activities of the European Energy Initiative (EUEI) for Poverty Eradication and Sustainable Development. The Coordinator of ENABLE was IT Power (UK) and the European partners were the Stockholm Environment Institute (Sweden) and Transenergie (France). The partners in Sub-Saharan Africa were IT Power East Africa (Kenya), TaTEDO (Tanzania), Africon Uganda (Uganda), QuinTsens (Senegal) and ASER, the Rural Electrification Agency of Senegal. ENABLE held a series of national workshops in Kenya, Tanzania and Uganda during the autumn of 2005. Parallel to this, the Energy Ministers of the East African Community and Rwanda with the support of UNDP and the German Technical Co-operation, GTZ, endorsed a draft regional strategy[5] for scaling up access to modern energy services. The similar objectives of the ENABLE project and the East African Community (EAC) initiative presented an excellent opportunity for ENABLE, UNDP and EAC to collaborate in support of the regional initiative. The draft regional strategy identifies priority energy services that need to be scaled up in East Africa in order to meet the Millennium Development Goals. Consequently, four energy targets were identified. As these targets were concerned with several different energy carriers, and aimed at different levels and end users, the strategy to meet them had to be broad and include many different implementing bodies, both within and outside the energy sectors. Following the endorsement of the draft regional strategy for scaling-up energy services, the Ministers of Energy requested that the East African Community, EAC and its member states (plus Rwanda) be further assisted in the development of a full regional strategy and implementation framework.

As the ENABLE project aimed to enhance the provision of sustainable energy services for the health, education and water sectors in East Africa and one of the four targets was directed specifically at these sectors, there are obvious overlaps between the EAC scale-up strategy and the ENABLE project. The ENABLE partners together with UNDP and the EAC Energy Committee started to explore how a joint collaboration might support the ongoing regional initiative through generating additional knowledge exchange and consultations. In

support of the Scale-up Initiative, the ENABLE team together with UNDP facilitated a three day consultative regional workshop hosted by the EAC to complement the ongoing processes of advancing the regional scale-up document into a corresponding work plan and investment programme.

The Workshop

Workshop structure and methodology
The overall objective of the workshop was to identify and analyse the processes and resources needed in order to implement the regional energy scale-up initiative and recommend actions that need to be taken in East Africa at regional, national and local levels. The workshop was to offer direct support to the EAC Energy Committee and a subsequent meeting involving major stakeholders in the region which aimed at identifying the principal elements of a regional energy access strategy and investment programmes that would be part of an EAC work plan.

The multi-stakeholder workshop was set up as an interactive working workshop, with a structure and facilitation to identify the processes and resources needed to implement the Scale-up Initiative by designing an EAC work plan, including the prioritisation of interventions. The event was designed to provide the participants with opportunities for real engagement, to be innovative and produce results. At the same time the boundaries of the discussions and the intentions from the sponsor's perspective were clear and this was well communicated. Generally there are certain conditions that need to be met in order to arrive at the expected results of a consultative workshop (see Box 1 below).

Box 1. Preconditions for success
- A controversial and highly complex issue that does not have a known answer
- Clear and transparent boundary defined by the process-owner
- Engaged and informed participants that bring a diversity of perspectives and interest to the discussion
- A structured method that supports the discussions and allows the participants to engage themselves and take responsibility
- A process-owner or sponsor that has not committed him or herself to a pre-conceived result

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5 'Scaling-up Modern Energy in East Africa to alleviate poverty and meet the Millennium Development Goals'. This document can be downloaded from the ENABLE home page: www.enable.nu

These preconditions were present which is also reflected in the results of the workshop and the actions that have been taken since.

The workshop brought together 48 participants from the Eastern African region and from Europe, representing various sectors (health, education, water, agriculture, environment, finance and planning), organisations (public, private and NGOs) and donors. Nine of the participants came from Europe and were part of the facilitating team or donor representatives. A majority of the participants (18) from the region represented the public sector. Seven of the participants represented the private sector in the region and six came from NGOs in the region. There were seven representatives from donors present in the region, with local UNDP staff constituting the bulk of this group of participants.

Boundaries for the discussions
The boundaries defined for the workshop were intended to focus the outputs on relevant and useful input to the ongoing East African energy access initiative. Thus, for each session, question and prioritisation the participants were asked to keep the following criteria in mind:
- the four targets from the scale-up strategy;
- High Impact, Low-Cost and Scalable solutions (HILCS);
- not interventions at the 'project' level but focus on programmatic and political activities;
- creativity and innovation without losing sight of the four targets.

Structure
The workshop was structured around five sessions. In four of the sessions the topics for discussion were pre-decided by the organisers and in the fifth session the topic for discussion was open to suggestion by the participants.

Session 1. The first session consisted of the opening and introduction to the objectives and scope of the workshop and an exercise to focus the attention on the topic of the workshop and instil an appreciation of the role that energy has in achieving the Millenium Development Goals (MDG).

Sessions 2, 3 and 4. Half a day was devoted to each of the sessions 2, 3 and 4, each covering one of the energy scale-up targets. The sessions were introduced by a short presentation on the challenges related to the target. Thereafter, discussions on a set of pre-determined questions (see Box 2) in smaller groups

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Box 2. Working group rotating questions
- What cross-sectoral institutional collaboration activities are necessary, to formulate and implement policies and programmes to achieve the target?
- What types of training and awareness raising activities are needed to achieve the target?
- What types of information collection and processing tools and methods are needed for planning, implementation and monitoring to achieve the target?
- What actions can minimize the cost of achieving the target?
- What actions will encourage private sector engagement in achieving the target? (financing, supply of energy goods and services)
- What actions relating to regional cooperation will contribute to the achieving the target?

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generated proposals for actions that need to be taken to achieve the targets. The material generated in each session was organised and presented on six large panels. Figure 5 provides a schematic overview of the structure and phases of the workshop methodology.

Parallel coordination team
During sessions 3, 4 and 5 a smaller coordination team worked in parallel to the main sessions with the task of further synthesising the results generated in the main sessions. The coordination team was asked to generate a matrix with actions grouped into appropriate themes and assigning these to either the regional, national or local level. The themes were left to the coordination team to identify whereas the responsibility or action level was pre-determined to be regional, national and local.

Prioritisation
When the coordination team had completed the three panels that synthesised each of the discussion sessions and the identified actions and identified at which level (regional, national, local) the action would be most relevant, the participants were asked to give priority to the actions that would lead to high impacts, low cost and scaleable solutions.
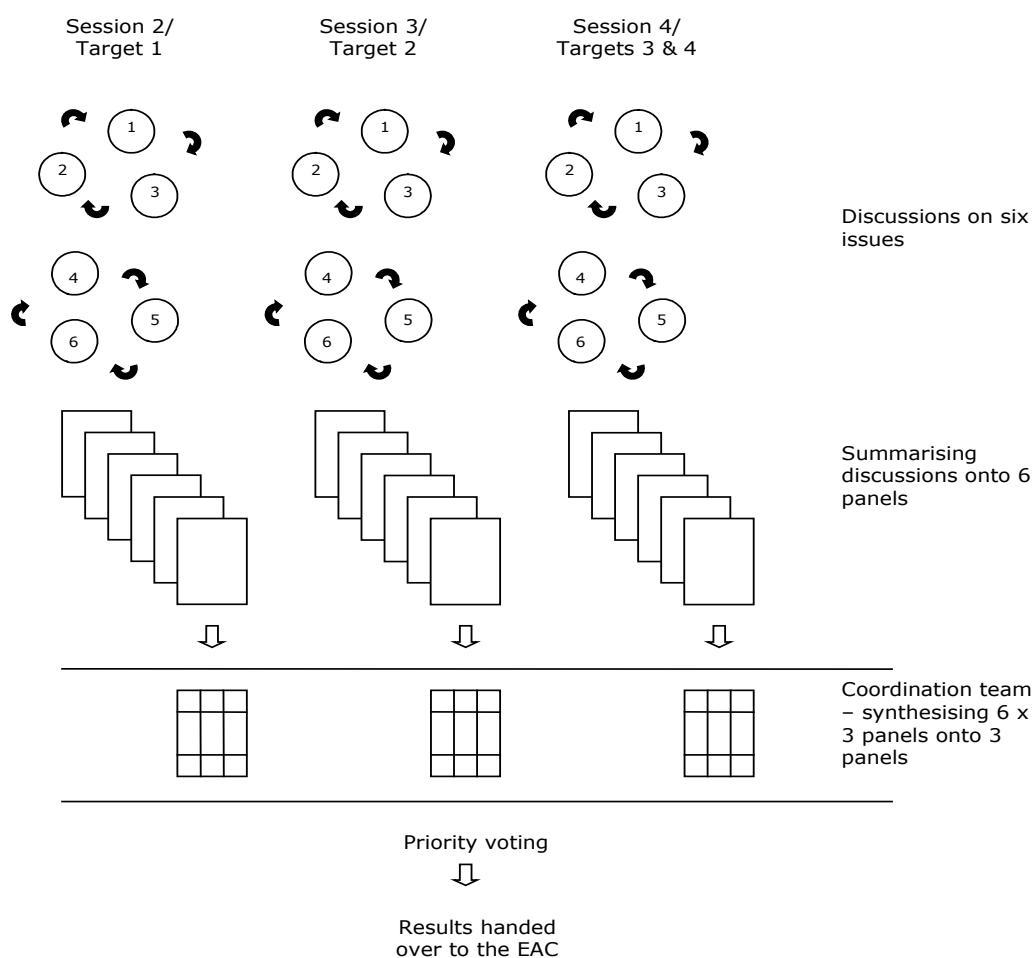
Figure 6: Schematic of the workshop steps

Output

The main output from the workshop was a set of thematically clustered interventions that participants saw as necessary to achieve each of the targets. In the workshop, the thematically clustered interventions were structured according to level of interventions (regional, national or local). Subsequently the proposed interventions were prioritised by the participants with reference to the perceived positive feasibility and effectiveness.

The workshop successfully brought out a consensus on the major elements that need to be considered in the eventual strategy, EAC work plan, and investment programmes and the priority activities associated with these elements (which essentially constitute a draft framework for the regional strategy and implementation framework). To achieve a broad agreement on a programme framework the workshop deliberately focused on energy access content based on the four regional energy targets. Broader issues such as proc-

ess, timing, institutional roles, etc. were not sufficiently addressed for the purposes of a regional strategy.

The results of the workshop fed directly into the 10th meeting of the EAC Energy Committee which was held back to back. The EAC further synthesised the results and formulated 14 recommendations to the EAC Council of Ministers and Head of State. The Council of Ministers and Heads of State considered and approved the recommendations on the 29th of March, 2006. The recommendations in themselves are reflective of, and provide the basic framework for, a regional strategy and for the work plan that will be eventually adopted by the EAC Energy Committee.

Achieving the EAC energy scale-up targets is truly an impressive undertaking. However, initiating the development process to deal with the targets of the scale up initiative is also a challenge. Two aspects in a development process are very important to address. The first one is efficiency, meaning that you arrive at results with

an effective use of resources. The scarce resource in the case of the EAC workshop was people's time (participants) and this often is true for many other multi stakeholder consultations as well. The second aspect of great importance is ownership: it is important to get the right level of ownership anchored to engine the development process. The way these two aspects were addressed in the EAC regional workshop was by integrating the thematic issues with the process and integrating the political will with the stakeholder participation.

The involvement of a person skilled in facilitation strengthened and advanced the project team in its preparations for, and execution of, the workshop and the project team was inspired by working with this expert. The preparation and designing of the participatory exercises in collaboration with this expert played a large role in shaping what was achieved.

This workshop represents an example of a multi-stakeholder engagement that is part of a larger process that will continue until 2015.

Discussion

This case shows that, with an appropriate participatory and structured process, based on a transparent and efficient consultation and participation expertise, a sense of ownership and active engagement can be attained among stakeholders. The resulting set of thematically clustered interventions was identified jointly by local people, involved experts and donors, on the basis of their experiences, knowledge and preferences. Moreover, the output of the multi-stakeholder workshop resulted in high-level political recommendations to be identified and shortly thereafter approved (2006). Thus, as well as resulting in relevant outcomes, this case also illustrates an example of a participatory process with clear policy relevance and opportunities for influencing policy-making. As noted, the positive outcome was contingent on the involvement of a participation expert throughout the entire planning and implementation processes. This is generally resource consuming, and many research and development projects are not able to invest resources in the hiring of participation experts due to budget constraints. This case study indicates that it may well be worth involving such expertise, given resources are available, but it should of course be put in relation to the scope and context of the study.

3.2 Enhancing local ethnic groups' participation in resettlement – a case in Vietnam

The second case illustrates a participatory process concerning a resettlement programme in the countryside of Vietnam[6]. Often resettlement, and in particular involuntary resettlement, is a *fait accompli:* the decision is most often taken by external interests represented by the state or by commercial companies and not by the affected peoples. If resettlement as such cannot be negotiated, how then can resettlement in any sense be 'participatory' as there seemingly is no choice?

In Vietnam (involuntary) resettlement is increasingly common along with the demands of economic development taking the form of hydropower exploitation, construction of industrial zones, irrigation and flood control systems, highways and bridges and other installations that need 'new space'. This is particularly challenging in Vietnam where there is not yet a national policy framework for resettlement, yet regulations on compensation and high population densities mean competition over appropriate land is high. Here we will describe the approach taken by SEI in a Sida funded initiative to solve this resettlement issue, while ensuring that the interests and needs of the local people were addressed.

The setting: Mountainous area, indigenous people and hydropower

Song Hinh district in Phu Yen province on the south-central coast of Vietnam is located in the mountainous areas in the western parts of the province, bordering the Dak Lak province (Central Highlands). Its 37,000 inhabitants, consisting of Ede, Bana ethnic origin and more recently Kihn population, make a living by agricultural cultivation, livestock breeding, fishing, hunting and collection of non-timber forest products. The Song Hinh River is relatively small compared to other rivers that have been exploited for hydropower in Vietnam and so is the capacity of the hydropower plant, 70 MW. Parts of the river have been diverted into a reservoir inundating approx. 4000 hectares of forest, cultivated land and bush land affecting about 2,100 people or about 500 households of whom a great majority are of the ethnic Ede and Bana groups indigenous in the

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6 Our thanks go to Eva Lindskog for providing the background material.

area. They were from 10 villages in three communes in the same district and resettled in 1998.

With loans and grants for technical equipment, personnel and environmental and social surveys, Sida supported a multi-purpose project, aiming at delivering basically three services: electricity, irrigation and fishery. In 1996, Sida decided to make a study to assess the policy framework and regulations of the resettlement. The result of the study (generally confirming that regulations and plans for compensation were in place) led to a proposal to Sida to assist in making the resettlement process more participatory. This intervention took place 1996 to 1998 and the experiences from these studies led to yet another proposal to Sida to make a continued follow up over several years in order to explore the long term impact of the resettlement in Song Hinh. Such a study took place 1998-2003 and is a SEI Report 'Resettled – but not restored - Evaluation of the Resettlement Process in the Song Hinh Multipurpose Project.'(Lindskog and Ngoc Long, 2004).

The benefits from 'People's Participation' in Song Hinh

Different from many other resettlement schemes in Vietnam and elsewhere, a particular feature in Song Hinh was that all affected peoples were able to move within the boundaries of the same district and within the three communes affected. The advantage is obviously that the area and peoples are well known. Local people are already related to each other in different ways, although some host population were worried about sharing already limited land with the newcomers.

Although the concept of 'people's participation' and 'Participatory Rural Appraisal' (PRA) was introduced by the donor community (multilateral, bilateral as well as International NGOs) in Vietnam in the early 1990s, in 1996 the concept was new in Song Hinh. The participatory process introduced began with a training workshop in PRA for all stakeholders involved. The aim of the training was to make the participants familiar with a number of PRA tools and then use them in order to share necessary information related to the construction of the hydropower plant and the resettlement. In particular, the workshop was an opportunity for the affected peoples to present their worries, concerns and demands.

Except for the people represented by traditional and government village leaders, local women leaders, individual farmers enjoying local people's confidence and

one representative from each of three communes and the host population, other stakeholders were represented by the authorities of the district; finally the project itself was represented by members of the Project Management Board (PMB). The 35 participants were divided into five working groups largely following the function of each participant. Thus three groups consisted of the affected peoples from each of the three communes, one the district authorities and one the PMB.

With the help of the selected PRA tools such as interview techniques, wealth ranking, transects, mapping and diagrams of different kinds, each group analysed the livelihood system, the social stratification, the reasons for poverty and hunger, and the risks and difficulties in the resettlement. The resettlement needs were ranked and the roles and responsibilities of the different stakeholders in the resettlement process were discussed.

One value of the inclusive participatory approach during the workshop itself lies in the fact that the higher levels of government (in this case represented by the district and the PMB) had to listen to reports made by traditional village leaders on the villagers' view on and demands in the resettlement. Since many participants of the Ede and Bana communities do not easily speak Vietnamese, their presentations were translated. Further, a strong benefit with the many of the PRA tools is that they are highly visual, thus it was easy for participants to make and follow presentations.

The practical outcome of the workshop was the agreement to establish Local Working Groups (LWG) representing the local people concerned in each of the three affected communes. The LWGs were to be responsible for increasing the influence of the Ede and Bana communities on issues important to the latter such as mode and amount of compensation, time planning, selection of house style, plots within the village, location of the village and cultivable land, etc. and generally act as an important information link between the Ede and Bana communities and the district and PMB representatives respectively.

Elements of community influence such as respecting the wishes of the local peoples regarding location of removed villages had been noticed before the existence of the LWGs. However, representatives of the affected peoples and the district have affirmed that the degree of their influence, the openness in reporting and the information flow increased considerably thanks to the activities of the LWGs. Responsible officials of the district have at several times expressed regrets that the LWGs

had to be disbanded after two years (1997 and 1998) of activities when the Sida funding ceased (an unfortunate and non-sustainable phenomena easily occurring in recipient-donor relationships).

According to findings of the project investigators, the impact of the participatory approach were:

- Higher degree of perceived participation and transparency, and a more clear definition of roles and responsibilities among all stakeholders.
- Thanks to the information network (through the LWGs) the accountability of the authorities became higher, in particular for the PMB.
- The affected peoples had a high degree of influence on the location of the resettlement, the location within the resettlement area, the design of the houses and matters related to the compensation. The compensation was regarded sufficient and fair (in the end; when complaints and claims were regulated thanks to the open discussion).

Critical issues in resettlement: Development for whom?

- From above it can be seen that there were genuine attempts to facilitate effective local participation in the Sida funded resettlement scheme in the Song Hinh area. Irregardless of the participatory approach adopted in the project, as we will see below, there were other complex, external factors that inhibited the resettlement process and resulted in negative outcomes in terms of sustainable livelihoods. The long term impact of the resettlement (evaluated in cooperation with the affected peoples during the period of 1998-2003) left the affected peoples in greater poverty and vulnerability than before the relocation (Lindskog and Ngoc Long, 2004):
- The basis for the local people's living is land and forest. The forest was however, 'closed' by the state and the land was not sufficient in quantity and quality.
- The benefits from the 'multi-purpose' project were supposed to be electricity, irrigation and fisheries. The electricity installations are too expensive for locals, the irrigation schemes were for other areas, not the affected peoples. The fishery in the new reservoir was contracted to an organization in the provincial town allowing no access to the local people.
- The compensation did not include a guarantee of sufficient land of good quality and extension serv-

ices and support to afforestation were left out of the compensation package.

- Food and income were not secured.
- Change of the gender balance in the affected communities was accelerated by the resettlement process. The women were slowly losing status when traditional land management and land use turned 'modern' through the land allocation to the 'head of household', who nowadays is considered to be a man, and through the change from mainly subsistence production to market-driven production of crops. The Ede and Bana women have also become the last to 'enter the societal affairs'. To be able to do so, knowledge in Vietnamese and a certain basic education are inevitable requirements. However, on a more general level women have fallen back considerably in comparison with men when it comes to the level of literacy in Vietnamese and other 'modern' knowledge that is taught in schools.
- The infrastructure fell apart: most wells are now dry, and roads and buildings are deteriorating.
- Thus, development here in form of hydropower construction was not a benefit for the people who are paying the highest costs. On the contrary, they are exposed to the highest risks starting from a situation where they are already among the poorest.

In summary, the above example from Song Hinh shows that:

- Participation is a fruitful force enabling local people to have an influence on conditions affecting their daily living.
- Development projects causing resettlement should include all costs in the budget, not only compensation. If the costs are too high for the developer then such a project should not take place.
- Resettlement (if necessary) should be part of a general socio-economic development plan with the participation of all stakeholders where risks and benefits are carefully weighed.

Discussion

This case from Vietnam shows that affected peoples, once they accept that they have no choice but to move from their normal residence, still may have certain opportunities to have an impact on a number of crucial issues: location of resettlement area, household location within the resettlement area, type and quality of the new housing. The example of resettlement in a province in central Vietnam highlights what is possible

to do within certain given conditions. The participatory process of the re-location, caused by the construction of a hydropower dam, was regarded as successful by the affected peoples. However, the long term impact of the resettlement and the hydropower construction resulted in a negative outcome for them, in terms of increased vulnerability and material and spiritual destitution. These were largely a result of factors such as denied compensation for land; limited benefits from the project itself; increased population by migration leading to lack of high quality land for cultivation, demands on affected peoples who were of the Ede and Bana ethnic (minority) groups to change to new modes of production without getting adequate support, and inadequate and unsustainable infrastructure (roads, schools, health stations, wells) that was a part of the compensation. A risk analysis (Lindskog & Vu, 2004) showed that the reconstruction of sustainable livelihoods after resettlement had largely failed. The study argues that if the participatory approach had been extended beyond the re-location itself, there would have at least been opportunities to mitigate the long-term negative impact of the resettlement. This is because the participation that took place brought different stakeholders together and increased the understanding among decision-makers about the capabilities as well as the vulnerabilities of the affected peoples. The participatory process also gave local people a voice and chance to influence if not for or against the resettlement, but at least their priorities within resettlement.

3.3 The Use of Participatory GIS in determining the City of York's Air Quality Management Area

The third and final example of SEI's work in the field of stakeholder engagement across the world illustrates yet another type of participatory project, and context in which SEI operates. This UK Economic & Social Research Council-funded research project applied a novel mapping technique, termed 'Geographic Information System (GIS) for Participation' (Cinderby, 1999) to promote citizen participation in the assessment of local air quality of City of York. Three cities were involved in the project (York, Sheffield and Bristol), they had been selected because they were at different stages in the assessment of their air quality (see Yearley *et al* 2003. York was at the earliest stage having performed its monitoring and modelling but not having declared its Air Quality Management Area (AQMA).

Background

(GIS-P) started as a process whereby local knowledge about an area could be discussed and then mapped for planning purposes. The methodology was initially developed in South Africa in 1997 to look at land resource use in communally managed villages, so it was a method of data capture – it used manual mapping techniques to capture dispersed, qualitative data into a GIS database. The benefit of capturing information in this way was that local knowledge about land use could then be compared and combined against other forms of spatial data to assist in answering questions posed by the villagers themselves and by other local policy stakeholders (Cinderby, 1999). GIS-P therefore originated differently to the majority of Public Participation GIS (PPGIS) methodologies mainly emanating from the US: GIS-P came from the background of participatory rural appraisal (PRA) and rural livelihoods development.

The need for a mapping tool

From 1998 onwards, metropolitan and city local authorities in the UK were forced by national government guidelines to identify urban areas that might be at risk from air pollution. In order to do this they needed to employ predictive computer models. Sheffield was one of the first to produce computer predictions of air quality and this provided an opportunity for researchers to look at what local publics thought of the model. Researchers from SEI in York found that the public had meaningful knowledge about technical subjects (Yearley, Forrester and Bailey, 2001). Further, they found that the focus group, especially when moderated by an independent facilitator, held promise as a tool for generating policy-orientated dialogue around environmental issues (Forrester, 1999) and could provide a platform for non-experts to interact with professionals on a more equal footing. This SEI work was also informed and inspired by the SEI Ulysses project mentioned earlier. Nevertheless, and particularly in the UK, the 'new knowledge' was largely created in a sphere outside of that within which policy actors and local authority technical experts normally worked. Fundamentally, there were two major shortcomings:

- Public knowledge was not fed into the policy system in any useful manner and;
- Public knowledge was little understood by technical experts or even by policymakers.

Nonetheless, there was, as the literature suggested, a valuable local knowledge 'out there' if only it could

be captured in a meaningful way (Wynne 1993, Irwin, 1995: Irwin & Wynne, 1996). The task, therefore, was to (re-) present this public knowledge in a way that was useful to the local authority scientific experts (and policy-makers) but which was still acknowledged as being 'owned' by the citizens whose knowledge it was. GIS-P held promise as a technique that might meet these criteria.

The SEI research team found that with respect to air pollution, citizens' views of problems are consistent with expert's views (*i.e.* that in the perception of the problem there is little difference between expert and non-expert) – yet locals often still feel that their views, and importantly their local knowledge, are not being taken into account. In one way, this disenchantment arises over the reluctance of local authority technical officers to engage in face-to-face discussion with members of the public. Face-to-face discussion – on a level platform, such as is provided by mediated group discussions – can allow concerned citizens to raise issues of concern to the mediator and have them dealt with in a measured fashion by the mediator or technical officer as appropriate.

The workshops

The GIS-P workshop method
GIS-P is a relatively new methodology that captures local stakeholder's knowledge in a spatial format suitable for incorporation into a digital spatial database (a Geographic Information System or GIS). As part of the project, it was decided to investigate the potential of this new methodology to capture public knowledge in a format suitable for use and comparison with information being produced by local authority planners and for incorporation into the computer modelling of air pollution (Cinderby & Forrester, 2005). Citizen consultation groups with different local interest groups (residents, campaign organisations and businesses) were organised. The GIS-P process involves four basic stages: 1. local stakeholder framing the issue(s); 2. spatial capture of public knowledge on the agreed issues on a hard copy (paper) map; 3. transfer of this hard copy data into a digital database; and 4. feedback of this transformed digital spatial data to the local stakeholders for comment, refinement and validation. This methodology falls within the broad church of PPGIS (public participation GIS) methods as laid down by Weiner *et al.* (2002) where delivery of public participation can include partnerships of university and community groups.

Framing the issue and recruitment
The initial phase of our GIS-P workshop involved participants discussing their understanding of the issue being investigated by the researchers. This phase is used to introduce the various participants to one another, begin to identify their concerns and knowledge and identify the key topics to be investigated spatially in the mapping phase. In York, the decision was made to focus attention on the identification of the boundaries of the AQMA using the criteria of air pollution as defined by national government. Before City of York Council (CYC) went public with its AQMA choices, two key groups for identifying local concerns of air quality were convened from residents of the three neighbourhoods included within the boundaries of the five zones identified as being in excess of government targets. Residents were recruited via an extensive leaflet drop, local radio, posters placed in shops and surgeries and personal invitation. As such, they did not necessarily reflect an unbiased cross-section of the population but represented people who were either concerned about air quality or else normally or often represented their ward at such meetings.

Discussions were facilitated and guided by SEI personnel so the participants were not completely free to set the agenda for the meeting. The participants could however frame the issues as they perceived them. Our framing of air pollution (based on their knowledge of the local authorities' activities) was initially concerned with the emissions from industry and road vehicles; however, local participants interpreted this issue in a much broader context. As Wynne notes:

> External experts may assume that the shopper's problem in the supermarket is to get the grocery list ticked off for the least cost; but this is a radically misleading simplification. The shopper is trying at the same time to juggle several other situationally specific objectives (Wynne 1993: 325)

Participants included a wide range of [additional] factors including odours and noise within the issue of local air quality. The fact that the research team was considered to be from outside the local political system allowed the researchers a more neutral facade, and importantly, once the issue of trust as to why they were there (*i.e.* because the Research Council paid them) was resolved – and they were thus perceived as being more neutral than others from within the local authority area. The fact that this research was funded by a national research council rather than being 'in the pay of the local authority' was a factor used to explain the project team's 'academic' inter-

est but issues of trust and local disaffection are address-able even when outside mediators are employed directly by a local authority (see Wild and Marshall, 1999).

Facilitating discussion and knowledge transfer

The opening discussion phase of the GIS-P process was felt to be useful in getting the participants talk-ing together and beginning to elucidate what the group knew or felt about particular subjects. However, at this stage of the GIS-P process many of the group members were very polite with regards to each other's opinions or knowledge even if what individuals were saying was contradictory. The mapping process of GIS-P later on forces groups to get past this polite stage as the mapping activity entails that opinions be translated into points. The process forces people to think and defend their ideas:

> This process of articulating good reasons in public forces the individual to think of what would count as a good rea-son for all the others involved. One is thus forced to think from the standpoint of all involved for whose agreement one is 'wooing'. Nobody can convince others in public of her point without being able to state why, what appears good, plausible, just and expedient to her can also be con-sidered so from the standpoint of all involved (Benhabid 1994 in Elam and Bertilsson, 2002).

Further, areas of disagreement in the group was quickly highlighted by division over the location, extent or classification attached to information added to the mapped knowledge. In this way, GIS-P can be seen as having advantages over other citizen consul-tation group discussions where the extent of disagree-ment may never be clear or, if expressed, resolved. The research team found it useful to tape-record this phase of the meeting for reviewing later. Some of the com-ments which could be spatially located, for example 'road x has bad traffic smells', were extracted from these recordings and built into the GIS-P database as text comments at specific locations on the map.

The GIS-P process involves encouraging the partici-pants to translate their local knowledge into a spatial form through a community or individual mapping exer-cise. The methodology employs the use of a suitable geographically referenced base map printed as a hard copy at an appropriate size and resolution. These large-scale maps are placed on a suitably sized table with access on all sides and multi-coloured highlighter and finer nibbed pens supplied. At a number of the meet-ings, a video camera was placed overlooking the table

so that researchers could assess later who had mapped what and in which order. This was found to be more useful than audio recording alone that resulted in tran-scripts such as 'it's worse over there than over here' – not the most easily identifiable spatially knowledge.

Once participants had orientated themselves on the map, the next stage was to spatially investigate the issues that they had identified in the first stage. The list of topics highlighted by participants was used as a prompt for what themes to add to the map. If in the discussion phase traffic pollution was identified as the main air pollution problem, the initial question posed by the researchers might be – 'can you mark the worst areas of the city for traffic pollution?' The next worse areas were then mapped until finally areas without traf-fic related air pollution were marked. No guidance was given on how to mark the information – participants were free within the group to choose how to draw their maps.

Adaptive process

Various solutions to the community mapping process were arrived at by the participants. At some meetings, each person took turns to mark their knowledge on the map. Some people discussed what they were going to draw on the map before making a mark (this was particularly noticeable at an all women group meeting convened in York). At other meetings one person domi-nated, carrying out the actual drawing, but the rest of the group were very careful not to allow anything to be added that they didn't agree with and volunteered what they wanted to see added. In general, this dominant drawer was not allowed to control the content of the map but was moderated by the group. At the least suc-cessful meeting (from a mapping viewpoint), attended by local business managers, all the participants tried to draw on the map at the same time. This multi-partic-ipant overlap meant that it was difficult to determine whether there was any consensus on what was being added and little discussion over how areas compared to one another. With hindsight, this could be prevented through a more structured – one-person at a time – process. It could even be imposed by only supplying one set of pens if it was felt vital to the process. Numer-ous studies have investigated how different groups – based on age, gender, income and education – relate to mapped data (MacEachren, 1995). A large variety of people attended the air pollution meetings with none of the participants apparently intimidated by the map-ping exercise. Indeed the mapping phase appeared to

make people who had been relatively quiet in the group discussion participate more fully as they wanted to see their information represented on the map and questioned some of what other participants were adding. In this respect, the GIS-P mapping exercise seems to hold advantages over many other forms of participatory planning and discussion.

Clear Output

Once the hard copy maps were agreed upon by the participants, they were taken away and transformed into a digital format. This was done with considerable care and involved feedback from the researchers present at the meetings to the technician who carried out the digitising. Once the public spatial knowledge was available in a digital format it was possible to produce on-screen maps that represented the information in a reasonable cartographic form. With the data successfully captured in the GIS database the next stage in the GIS-P process was to present the digital version of their knowledge back to the participants. This was achieved in two ways, hardcopy maps were produced or alternatively a portable computer and data projector were used to show people exactly how the data now looked. The advantage of producing hardcopy maps was that any amendments to the data could easily be indicated on the paper copy. The disadvantage was that people didn't get a clear impression of how the data was being stored or shown how comment and supporting information was being handled. This feedback stage of the GIS-P process was extremely important. It allowed for any mistakes or misinterpretations introduced during the digitisation to be identified. In addition, any visualisation techniques could be endorsed or rejected by the participants.

Due to the delay in transferring from the original hardcopy to the digital database (one to two weeks) a cooling-off period was also allowed between the initial group meeting and the reconvened feedback meeting. If anyone had added anything to the map that they now felt to be inaccurate or incorrectly classified, they had time to reconsider it more thoroughly. In one workshop an individual who had marked pollution as extending all the way along a road on reflection felt it probably improved beyond the cars queuing at a particular T-junction. The reconvened meeting allowed that person to reduce the size of the poor air quality polygon they had drawn. The group supported the person's knowledge as the street was closest to that individual's residence. This phase of the process also builds

on the level of trust between participants and the GIS-P researchers. The local participants can literally see what the researchers have done with their information, how it has been (re)framed and they can be updated on any future developments.

Policy relevance

As with the previous two examples, the timing and application of the participatory process was intended to make it more directly useful. In the case of this example, City of York Council had completed their predictive computer modelling work but had not declared an AQMA as the results had produced a dilemma for the local officers. The model indicated that five separate areas, each located on the city's inner ring road, would not meet the government threshold levels for NO_2 in 2005. The Council officers felt that keeping the five areas independent would limit the success of identifying and implementing management plans for the City. They had therefore identified an alternative AQMA which included the five areas and linked them using the city's inner ring road and major cross-centre roads. These linking areas were selected as they showed relatively high levels of air pollution but had not breached the guideline levels, yet offered a greater range of options for air quality management. In this respect, this option could be considered the council officers' knowledge map as it included information on their perceptions of problem areas and possible management solutions. However, the council officers' solution was not immediately accepted by the city councillors who required greater legitimacy. Thus, CYC initially thought to carry out public **consultation** in order to determine whether York residents would agree to a larger AQMA than that identified using the model output but we, at SEI, became involved in this public **participation** in identifying and declaring the extent of York's AQMA.

After the residents' meeting, a number of additional citizen consultation groups with particular sections of York's population were held in order to identify any additional areas of concern to residents. Whilst these meetings resulted in greater detail about specific pollution gradients and gave great insight into how people determined the areas they marked on the map, in general they added no new areas to those already identified from the ward meetings' consensus map.

The maps were utilised by the researchers in collaboration with CYC in a number of ways. For our purpose here, the most important was that the consensus map from the ward meeting was used in a wider consultation

with York residents. The consensus map was reclassified with the areas in the worst three classes of air quality combined into one class. The 'public knowledge' map already included the five areas identified by the model as being in excess of government thresholds, indeed these five areas were consistently in the worst classes of air quality mapped at all the citizen consultation groups showing a significant parallel between expert assessment of problems and citizens' conceptions of similar problems. The reclassified combined map produced a more extensive area than that identified by the Council's modelling activity or the Council officers' perception map.

The re-classified map was included on a questionnaire sent to nearly 5000 York homes and businesses. The map was one of three options for the possible extents of the city's AQMA. The other two options were firstly the five discrete zones identified by the model and secondly the council officer-knowledge map which linked these five zones together. The results of the questionnaire survey were an overwhelming endorsement of the AQMA identified through the GIS-P process. From the residential questionnaires, the return rate was 14% (a very high public response rate for CYC surveys according to the council marketing & communications officers involved). Of these 695 returned questionnaires, 63% of residents endorsed the selection of the GIS-P derived map as the AQMA for the city. The response rate from businesses was estimated lower by CYC. However; of the 51 returns received the majority of businesses (47%) were in favour of the larger AQMA identified by the citizen consultation groups.

This endorsement by the wider York population of the GIS-P-derived map resulted in this participatory, public knowledge-derived map being declared the official CYC AQMA. The use of participatory mapping to create a common understanding as a basis to bring together the technological assessment or 'evidence-based knowledge' about local air quality with the experience and concerns of local stakeholders and residents was, in this case, a success. City of York local authority officers and council members were sufficiently impressed with the technique that they supported the running of mapping groups to generate maps of local perceptions of problem areas of air quality and a political decision was made to use these maps rather than those based on technical assessment alone in the designation of the City's air quality management area and thus allowed members of the public to feed their views

more directly into environmental policy than previously possible.

Discussion
This case shows how if timing is correct within the policy cycle, and if researchers are involved early enough, a simple application of participatory methodologies (i.e. consultation) can be transformed into a more participatory approach to knowledge generation and policymaking. That GIS-P is participatory is hardly surprising given its roots in PRA. However, as section 2.2 (above) tells us, the UK public sector is one in which participation has mainly been to increase legitimacy and 'ideals of participatory governance are not always realised'.

The use of GIS-P here brought together a level of participatory governance with an understanding of public engagement with the science behind the policy issue to create a bottom up assessment paralleling the technical assessment. For reasons mainly to do with political legitimacy, but also because it strengthened the technical assessment, technical expert, policy maker and citizen alike favoured this bottom up assessment.

3.4 Some common themes from the examples
From these examples it is emerging that a clear purpose for any engagement with stakeholders is vital. Once this is agreed then it is possible to start to plan the process for the engagement and identify the level of participation that is relevant. Who undertakes this process is also important and attention should also be paid to who is setting the agenda and how those being asked to contribute view the way in which the issues have been framed. The method used should not dominate the research output. In each of these examples the policy relevance was enhanced by the fact that the participatory interventions were not made in isolation but were part of a larger, ongoing process. We suggest therefore that much attention need to be paid to all stages of the participatory **Process**, guided by a clear and relevant **Output,** ideally with a useful **Outcome** that feeds into current policies and strategies. The process can be revisited at any point and changed as new ideas and information emerges. It is not set in stone. Communication is a key part of any participatory approach and clear messages about the limits of the project are essential for everyone involved.

To make any piece of participatory work manageable it has to have controllable boundaries which must be observed. These boundaries have to be communicated

up front in order to avoid raising expectations. However, adopting a participatory approach – rather than just using participatory methods – requires the researcher to be open to outcomes and to not be in the business of guiding a set of people in a particular direction. If it is discovered that we do have a bias for a certain direction we should question whether this approach is appropriate, or, at least be open about our bias. As participatory researchers we need to be reflecting on our own biases as a matter of basic practice. Being able to do this takes time to think through what the purpose might be, what peoples' expectations are and what barriers might exist to full participation of those involved.

Further, as Fairhead & Leach (2003: 1) note, 'Development policy is increasingly rooted in global and regional conventions and regimes, and the science that supports these is increasingly internationalised' and good participatory practice allows science and expertise to work for the poor and the disenfranchised. It addresses 'the challenge […] not only how to build participatory governance at differing levels, but how to promote the democratic and accountable vertical links across actors and institutions at each level' (Gaventa 2004: 36).

Finally, the three examples show that participation is something which can be made to happen at different [policy] levels and in different ways. However, in general, participatory approaches – especially those involving 'end user' stakeholders – work best when they are grounded in practical and meaningful issues from the local perspective, even when discussions are strategic as with the ENABLE example. The scheme level issue of the two other examples show how a clear output should be targeted but the Song Hinh example in particular suggests that output must be followed through to outcome for the whole process to be truly participatory.

4. LEARNING FROM THE PAST, MOVING TO THE FUTURE

4.1 Past and present

Overall, this Working Paper brings out some of the tacit knowledge on stakeholder engagement and participation held within the organisation in order to promote internal learning and capacity building amongst staff in SEI. Ultimately, the objective is to promote the Institute's practice of participatory stakeholder engagement, and to share these findings with similar organisations that are interested in learning and sharing experience at all levels.

Following good participatory practice – and grounded theory practice – it is not for the authors of this report to determine a plan of action for the Institute. However, this study suggests that there could be a plan of action to improve SEI's work on stakeholder engagement and, arguably, make it more participatory. In this section we attempt to draw out the key lessons we have learnt so far from this enquiry into our practice in SEI and learning from relevant literature and the experiences of other organisations working in similar fields.

The case for making time to reflect on how we engage with our partners and stakeholders is clear. Our work in SEI is diverse: we work worldwide, using a multitude of approaches, and operate at different places on a number of levels, for example, from community level to supra-national, from practical to academic and policy focussed to scientific. What SEI stakeholder engagement practitioners have in common is that they work with other people, either with individuals or as groups at different stages in the research process ranging from full collaboration, from the concept stage onwards, to a single interview in the data gathering stage.

In our project we asked questions about our experience of these processes of engagement, focussing primarily on how we engage with stakeholders, rather than our research partnerships and collaborations with other academic institutions, although we acknowledge that this would also be worth attention: what is SEI's experience of managing processes of stakeholder engagement? What do we do well? What conditions support successful collaborations and engagements? In which contexts are participatory approaches appropriate and successful? What gets in the way, either organisationally, within SEI, or through the process of engagement? How might we change how we work to enable us to build more satisfying engagements with stakeholders that, we would argue, would also be more effective and productive? The purpose of this work was primarily to inquire into and learn from our experience from working with stakeholders in research and development efforts. However, in doing this we hoped we would also get a sense of how our approaches and thinking fitted with stakeholder engagement and participation practices more widely. Much has been written on the subject of stakeholder engagement with hot debates recently on the ethics of participatory approaches which took no account of power dynamics (can they really be participatory?). We were aware, however, that for

the purposes of this work we needed to be selective in our reading as the work of SEI fills a particular 'niche' in bridging science and policy on issues related to the environment and development that brings its own particular set of opportunities and constraints. There are, however, organisations that we felt sufficiently close to that we could compare our approaches to and learn from theirs (e.g. IIED, IDS, IISD, Action Aid). SEI is committed already to a participatory approach to development. SEI's Strategic Plan (2005-2009) states:

> 'Participatory approaches, stakeholder involvement in decision processes, and adaptive co-management of complex human and social systems, are increasingly seen as fundamental to sustainability.' (SEI Strategic Plan 2005-2009)

Our study indicates that amongst SEI staff there is great enthusiasm for developing our internal capacity to undertake engagement processes, particularly more participatory ones. The interviews we conducted showed that for this to become a reality there needs to be significant investment in training, as well as longer term support through mentoring and other resources, such as learning sets, access to information and spaces to share learning and advice.

The ENABLE case study (section 3.1) shows that, with appropriate participatory processes, a sense of ownership can be attained among stakeholders. The resulting actions can be identified jointly by regional people, involved experts and donors, on the basis of their experiences, knowledge and preferences. Thus, in this case, a more participatory approach led directly to action. The case from Vietnam (section 3.2) also shows that, despite the fact that the resettlement was external to the participatory processes discussed here, affected peoples may have certain opportunities to have an impact on a number of crucial issues, again allowing action to flow from their participation. The participatory process also gave local people a voice and chance to influence if not strategic issues, at least their priorities at the scheme implementation level. This latter point is reiterated in the UK case (section 3.3) which also shows how if timing is correct within the policy cycle, and if researchers are involved early enough, a simple application of participatory methodologies (i.e. consultation) can be transformed into a more participatory approach to knowledge generation and policy-making. From these examples it is emerging that a clear purpose for any engagement with stakeholders is vital.

Amongst SEI staff, there are a small number of experienced practitioners skilled in designing and running inclusive stakeholder engagements processes and events and participatory approaches. However, this empirical study indicates that there is a tendency for these people to focus on 'doing' participation rather than engaging with the conceptual and theoretical aspects of it. Those designing stakeholder engagements and using participatory processes often draw on previous project experience, picked up with other research and development organisations (often NGOs with which current staff work or have worked voluntarily) and their previous academic learning through PhDs etc. Opportunities to further develop the practice of staff may be lost as there is little time to reflect on the approaches used and share experiences internally to gain support and encourage creativity. If an approach works well enough there is a tendency to stick with it rather than spending time critically reflecting and considering what might be lost using this approach and what other approaches might bring.

There is a wide range of perspectives of what participation and participatory approaches are, should be, or can achieve in the projects. One of the tasks of this project has been to elucidate the views of SEI staff with experiences from stakeholder engagement across the world and analyse and document the findings in this Report (see section 1.1). From this initial position of understanding we can now begin to strengthen:

- how we engage and improve our interaction with stakeholders in our work (co-benefits);
- internal understanding of what is meant by 'participation' and participatory processes and what this might contribute to our work;
- SEI's ability to carry out participatory approaches to environment and development research and policy implementation;
- how approaches used in SEI relate to practice and thinking in other environment and development research organisations and the wider debate around the use of participatory approaches in research; and
- the implications of championing good practice in stakeholder engagement, particularly more participatory approaches, with their emphasis on organisational learning and reflection. We thus need to consider 'What is needed to support internal processes of learning within SEI'?

The benefits, we believe, of doing these and of strengthening our ability to carry out participatory

research will be not only to SEI but also to participants and end users/target groups. Notwithstanding, SEI is currently seen more as a practitioner rather than a driver of the participation agenda. For example, in Kasemir *et al*'s book *Public Participation in Sustainability Science* (2003) the SEI inputs come in the 'Experiences' and 'Forms of Participation' sections (Gerger Swartling, Nilsson, Downing, Lonsdale) rather than in 'Concepts' and insights or 'Future Perspectives'; similarly in both Hisschemöller *et al*'s *Knowledge, Power and Participation in Environmental Policy Analysis* (2001) and in Leach *et al*'s *Science and Citizens: Globalisation and the challenge of engagement* (2005) the SEI input (Forrester, Cinderby, Yearley, Bailey) is case-study based rather than scene setting. We believe that SEI has the potential to contribute both as practitioners and from a theoretical perspective, as academics. For example, Rowley and Lonsdale (work in progress) reflect on both the theory and practice of verification in participatory approaches. However, our study suggests that, in the field of participation, we in SEI need to develop our capacity as 'thinkers' as well as 'doers'.

For this to happen, we still need to deepen our understanding of what we do and what we want to do as an Institute. This Report is one starting point for such a process. The next stages require investment, particularly in terms of time and skills, in order to clarify our purpose in working with stakeholders as well as what support is needed to develop our internal practise. Training programmes such as on how to run inclusive meetings, facilitation and how to undertake participatory approaches would be possible and could be run using existing internal capacity, if available, or augmented by external practitioners. Experiential learning of how to design and run such approaches appears to be the most effective. Thus, incorporating training to take place early on in new projects with opportunities to reflect on what is working and what needs to change, during the lifetime of the project, would be a particularly effective approach. In parallel with this, we must build links with other environment and development organisations to share our ideas and experiences and learn from theirs in order to contribute more effectively to theoretical debates. SEI has a rather unusual niche in that it works in such diverse contexts and different levels in society whereas most organisations build up expertise with a particular level; either they engage well with local communities *or* they engage well with governmental policy makers, rather than doing both

simultaneously. But there are many things we can both offer to and learn from others in the field.

SEI's participatory research is frequently linked to definite policy objectives and processes of stakeholder engagement are often used to generate input to, and direct output from, sophisticated policy-support tools. Yet, as noted above, we often do this without formal training in the design of such engagements or in using participatory approaches. What are we missing by not investing in how we design and run the *process* as well as the *content* of these engagements? Basic group theory acknowledges that the groups that work most effectively pay attention to the individual needs of members in a group and the maintenance of the internal processes of the group, as well as the task of the group. Too often groups focus wholly on this task and ignore the individual needs and group functioning, reducing the possibility of the group to do interesting and innovative work (Benson, 2001).

4.2 The future

We conclude this report by sharing some ideas on steps for supporting the development of practice of stakeholder engagement with organisations such as SEI and how existing knowledge and understanding can be deepened and shared through dialogue with like-minded organisations and individuals.

Principles for Engagement

It is unrealistic to think that staff in any research and development organisation could, or should, have a single *way* of engaging with stakeholders or running participatory approaches given the wide range of levels and different contexts in which we operate. It would however be possible and useful to generate shared principles for ways of working: a common ethos that all can all sign up to. These principles are not intended to be proscriptive rules that impose control and dampen creativity (Chambers, 2005) but an agreement on a minimum set of values, objectives and or behaviours to guide how we operate. Examples might be: 'engaging with communities (or stakeholders) requires those involved to work actively to include people, especially those who are often left out'. Or 'a good process needs to include some flexibility' or 'there has to be time to reflect and check findings and explore more deeply some of the issues' (taken from the principles of the *Participatory Practitioners for Change* group principles http://www.ppfc-uk.net).

Methods need to be tailored, contextualised, and applied flexibly – not just applied out of the book. This means that institution – and those individuals who make up those institutions – need to understand (and experience) *how* and *why* things work so practice can be adapted and adaptable. From natural science we learn that: 'you only know how the system works when you can effect – and control – a change in the system'. Similarly, in order to design effective processes that the people we work with enjoy and value, we need to know how our approaches act to influence group dynamics and engagement.

Existing in-house expertise in participatory methods should be strengthened and it could be made known which practitioner-researchers might be called upon to discuss and bounce ideas off and - if necessary - get mentoring from for participatory elements of projects. This could be either a senior figure or a team with the skills and experience necessary and would be more effective if properly resourced. In addition, participatory approaches need to be flexible and suitable to a given context and, without sufficient in-house support, it is difficult for us to be anything more than proscriptive in application of methods. Training is available and as one researcher interviewed suggested that 'knowledgeable individuals within the Institute could act as a resource for all staff by summarizing what support is available externally'.

In addition to identifying internal 'expertise' we also recognise that undertaking these approaches requires support for researchers to reflect on what is emerging, what works well and what could be done differently. In some organisations, small 'learning sets' work well to provide such essential practical support. Staff who have had the opportunity to experience such sets confirm their value in challenging assumptions and developing practice in a constructive but safe environment and that, because of the feeling of safety and trust possible in a small group, huge shifts can be made which can dramatically improve practice.

Theoretical and empirical capacity building

We strongly believe that SEI and other like-minded organisations have some things to share to the debates around participation as well as simply the practice of participation. The interviews indicated that SEI certainly has something novel and interesting to offer the existing 'participation community'. Interviewees have also elicited concerns and ideas for how we could improve our participatory work further. One notable issue raised

is that we need to be clearer about what we do and our purpose in doing it to show what we – as an Institute rather than as disparate individuals – can offer. Thus we need to engage external organisations and individuals in debate, not just in undertaking project work but at a theoretical level as well and we should do this as One-Institute. Often these are organisations we are working with in another context and we simply need to change the dialogue we have with them.

To such discussions we can contribute our insight into the use of new technology or techniques in participation, insights on issues of spatial scale and level of governance, and – as an Institute – disseminating learning (and practice) from the 'empowerment' school of participation. With departure in the empirical findings, we suggest below what we see as the natural progression for participation within SEI and look at what we ought to do and where we want to go, how we think we might get there, and we then suggest we might invite our partners to discuss this. SEI has a long track record of research in partnerships and networks based on strong stakeholder involvement and we should mobilise these to help to position our theoretical contribution on participation.

This study starts a process whereby we seek to develop a shared 'One-Institute' culture as to the practical and theoretical bases for current activities within SEI and also to take stock and look to the future, while building on past successes. It is undoubtedly the case that SEI's participation practitioners are often too busy being project researchers to reflect upon the theory and further deepening their practice. The findings of this project suggest that SEI practitioners should seek to create the space to build not only upon their project work but also upon other academic work carried out by SEI personnel (e.g. Gerger Swartling, 2002 and Snell Pomfret, 2005). By doing this we can identify good practice and share experience on a very practical level on how to design and implement participatory processes and participatory techniques within our work. Moreover, by doing this we can also provide an ongoing resource for other SEI researchers, our partners and more widely. If we continue to practise these approaches without taking time for such reflection there is a danger that SEI will start to lose the ability to take the lead in terms of our own participation and participatory projects and the academic debates regarding participatory theory and practice. It is suggested that this Working Paper might form the basis of a position paper to set this process in motion.

To support this process, in the short term we suggest the arrangement of internal 'participation workshops' to identify participation expertise within SEI as well as what support is needed to promote good participatory practice; and what barriers exist in the Institute. Suggestion for topics raised by interviewed staff include:

- new technologies in participation;
- taking participatory engagement and participatory decision making into models and developing 'rules' for action;
- 'Visualisation Participation': new technologies and visualisations allowing us to get away from verbal-communication-focussed participatory methods;
- participatory models (tools) for policymakers (and decision makers) – allowing participants to 'play' with different policy options;
- use of software for participation;
- spatial scale and level of governance;
- bridging the levels of participation (village/district/ national and even up to regional). Involving governments and NGOs (and 'independent' communities). SEI stands out in engaging at regional policy levels, but how do we connect groups working at different levels?;
- bridging theoretical and practical issues (e.g. bringing theoretical considerations into practical settings);
- dissemination of learning (and practice) from the 'empowerment' school of participation to the development practitioners; and
- bridging the gap between scientific ('expert' knowledge and local, lay knowledge.

Another proposed activity is the organisation of an international workshop on stakeholder engagement to share the theoretical and empirical experience and contributions of SEI and others and to gather recommendations from others as to how to improve the Institute's participatory work and profile in the future, possibly linking it with emerging work in the institute on social learning. The workshop should be designed so that the outcome is mutually beneficial for SEI as well as the invited research organisations, in terms of promoting social learning and building partnerships. SEI could use its 'convening ability' to draw together and to formalise our thinking and generate internally (or in some cases commission from appropriate external actors) a number of very specific papers on generic aspects of participation research which can form the basis of such a workshop. Guiding principles on good practice in par-

ticipation and building appropriate partnerships could also be produced through dialogue to assist SEI staff in their future efforts in the field. Such an initiative would enable us to think more in terms of collaboration than competition (both internally and externally with partner organisations with shared missions to ours). This would benefit everyone in SEI.

As well as being able to be honestly self reflexive, genuine participation is also a lot about recognising and paying attention to power differentials between people: preparation for such a high-profile workshop would allow us to ask some seminal questions of our work. Who is setting the research agenda in SEI work? Who has the power? Whose questions are we asking, 'ours' or 'theirs': do we try to reconcile these two? Or are we simply doing 'stakeholder engagement' exercises using participatory methods? This latter is a valid thing to do but it is not Participation with a capital 'P' – the apogee of our continuum in Figure 1 – as that requires attention to the whole process and also a deep understanding of participatory principles.

As we have seen from the case studies, participation can – and should – lead to action. Thus, our work on participation and participation research (i.e. both the doing of participation and the theorizing about it) should not simply be reflexive and reflective. The theory of cycles of learning introduced in section 2.1 shows that moving from thinking to action (also see Figures 3 and 5) allows us – as a research and development Institute – little respite in this progress to action: but it is a progression in which we are travelling with friends and colleagues with whom we could share more.

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