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Social Learning for Ecological Literacy and Democracy: Emerging Issues and Challenges[1]

by

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Summary

In essence Farmer Field Schools (FFS) are a form of social learning, negotiation and effective collective action that focuses on society's relationship with nature. The spread and scaling up of FFS principles from integrated pest management (IPM) in rice to other areas have been remarkable. However, much still needs to be done. This paper discusses three broad challenges and emerging issues for FFS futures:

1. Social learning for ecological literacy and democracy. The dynamics of self discovery learning and participatory action are needed to expand knowledge of agro-ecology for sustainable agriculture, people-environment interactions and deliberative democracy.
2. Institutionalising social learning and participation. Different understandings and meanings of participatory development lead to fundamentally different approaches to mainstreaming social learning and participation
3. Re-governing food systems and the commons. New forms of governance are needed to safeguard the rights, livelihoods and environments of farmers and other citizens confronted by rapid and uncertain global changes.

Introduction

With the introduction of a training program to help farmers apply the principles of Integrated Pest Management (IPM) in rice production, the FAO-Government Cooperative program in South and SE Asia has been particularly innovative in pioneering an approach to farmer based learning and action, the Farmer Field School (FFS). The FFS works to strengthen farmers' capacity to observe, measure, analyse plant-pest-predator dynamics, to understand agroecological dynamics as a basis for management decisions and to conduct their own systematic experiments.

It is particularly noteworthy that the principles of FFS are now been extended from rice to other crops such as vegetables and cotton, from IPM to integrated nutrient management, plant breeding, participatory health monitoring and the management of natural resources, and from technical domains to broader engagement with policy

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issues, advocacy and local governance (see www.communityipm.org; FAO Mid Term Review, 2001).

Indeed, the spread, scaling up and institutionalisation of FFS principles have been/are remarkable. The movers and shakers who have given birth to and nurtured this social experiment are no less remarkable. Individually and collectively they have broken new ground,- both conceptually and methodologically. Of course much still needs to be done and this international workshop will explore the emerging issues and challenges that lie ahead. In this opening paper I want to emphasise and discuss three sets of key emerging issues for FFS futures:

- Social Learning for Ecological Literacy and Democracy
- Institutionalising Social Learning and Participation
- Re-Governing Food systems and the Commons

Social Learning for Ecological Literacy and Democracy

At heart, Farmer Field Schools (FFS) are a form of social learning, negotiation and effective collective action that focuses on society's relationship with nature. The early rationale and proponents of FFS for rice farming recognised that effective pest management required coordinated action at the community level. The aim was to make farmers experts in their own fields. They attended farmer field schools (FFS), which are schools without walls and spread over a single rice season, running one morning a week for 10-12 weeks. It was argued that farmers cannot simply cut their use of external inputs like pesticides and still expect to maintain output. External inputs must be substituted by labour, management skills and knowledge. Farmers must, thus, *invest in learning.*

A whole suite of innovative methodologies and procedures were then developed and used to facilitate and structure a process of self discovery learning and participatory action by farmers. As farmers gained new skills, capabilities and confidence, the need for new learning was in many cases accompanied by appropriate methodological and conceptual support by outside professionals acting in a facilitating role. The variety and depth of the social learning that has taken place in the Indonesia FFS-Community IPM Program is edifying in this regard. Agro-ecosystem analysis and methods for group dynamic were initially used to enhance farmers ecological literacy as it related to plant-insect ecology. Farmer IPM Trainers and Researcher/Scientists learnt facilitation and presentation skills and how to basic experimental designs to analyse and quantify ecological phenomena. Learning to analyse policy, deal with high level decision makers in Government, produce a newspaper with a print run of 10 000 are all key in enabling farmers to become organisers, planners, advocates and activists seeking to influence policy processes (Dilts et al, 2002).

The FAO-Government IPM program in Asia has developed organisational procedures, ways of working and cultural norms that are more consistent with the needs of local adaptive management and self–discovery learning for ecological literacy. Emphasis was placed on carrying out administrative tasks, planning, agricultural research and development as near to the level of farmer groups as was compatible with efficiency and accountability. Much of the organisational thrust was about strengthening local groups and institutions by devolving resources and removing hurdles to local planning

and action. These kinds of organisational reversals that put farmers and their innovations first are all too rare and offer challenging lessons to much of agricultural R&D worldwide.

Knowledge embedded in local experience

Analytical skills and the *sensuous* experiencing of dynamic local ecologies were key to re-designing pest control technologies that harmed both nature and people. After all, variation within and among agro-ecosystems is enormous. Daily, seasonal and longer term changes in the spatial structure of agricultural biodiversity[2] are apparent at the broad landscape level right down to small plots of cultivated land. Uncertainty, spatial variability and complex ecological dynamics emphasise the need for flexible responses, mobility and local level adaptive resource management in which farmers and local resource users are central actors in analysis, planning, negotiations and action (Gunderson et al, 1995; Pretty and Scoones, 1995; Swift, 1999). This calls for far greater appreciation of local farming practices and knowledge used by rural people to manage agro-ecosystems. This realisation suggested new practical avenues for technical support in which farmers' own priorities, knowledge, perspectives, institutions, practices and indicators gain validity.

The use of complementary methods from the social and natural sciences and the knowledge of local resource users were both needed to make sense of local ecologies. There are, after all, differently situated forms of knowledge about farming and nature, and each is partial and incomplete. Participatory learning and action is needed to bring together these multiple and separate realities, combining the strengths of modern science with local knowledge.

The kind of knowledge(s) that emerge(s) from this process of social learning has been well described by James Scott in his book Seeing Like a State (1998). He speaks of *"forms of knowledge embedded in local experience"* (Mêtis) and sharply contrasts them with *"the more general, abstract knowledge displayed by the state and technical agencies"*. *"Mêtis*, says Scott, is *plastic, local and divergent…It is, in fact, the idiosyncrasies of mêtis, its contextualities, and its fragmentation that make it so permeable, so open to new ideas"*.

The participatory forms of inquiry mediated by FFS and their networks also represent a fundamentally different orientation to the nature of knowledge. This kind of participatory, experiential understanding takes the living involvement with our surroundings seriously. Final objective answers matter less than a concern with processes of emerging democratic engagement. The quality and validity of this way of knowing cannot be judged from the narrow standpoint of positivist science alone. Criteria of validation and quality need to be much broader. One important criterion of quality is whether or not this social learning opens up new communicative spaces in which democratic inquiry can take place. Another is whether it has contributed to the emergence of a wide community of inquiry amongst divergent actors. In many ways, FFS based social learning is helping to "shift the dialogue about validity from a concern with idealist questions in search of "Truth" to concern for engagement, dialogue, pragmatic outcomes and an emergent, reflexive sense of what is important" (Bradbury

[2] Agricultural biodiversity comprises the diversity of genetic resources (varieties, breeds, etc.) and species used directly or indirectly for food and agriculture (including crops, livestock, forestry and fisheries) for the production of food, fodder, fibre, fuel and pharmaceuticals, the diversity of species that support production (soil biota, pollinators, predators, etc.) and those in the wider environment that support agro-ecosystems (agricultural, pastoral, forest and aquatic), as well as the diversity of the agro-ecosystems themselves.

and Reason, 2001). Coming to terms with this paradigm shift is a challenge for the wider research community.

The empowerment associated with experiential learning has also given many farmers the confidence to ask questions about *how* knowledge is produced, *why* and *for whom*? Many conversations with FFS alumni have reminded me of strong rationales for democratising science in an age of uncertainty by directly involving "extended peer communities" that include farmers, herders, forest dwellers, fisherfolk and other rural people in the production and sharing of knowledge. (e.g. Funtowicz and Ravetz, 1993; Kloppenburg, 1991). Asking these and other political questions on social exclusion is an important moment in the recovery of dignity and citizenship. This process of conscientisation and personal transformation emphasises the value of FFS based social learning for a re-invigorated democracy.

This social learning should ideally be allowed to be open ended, context specific and primarily internally driven. Nevertheless, -for the purposes of this International Workshop-, I suggest that new learning and knowledge may be needed for ecological literacy and democracy.

Ecological Literacy

i) Agro-ecological knowledge

In both low external input and high input agriculture, the goals of sustainability, productivity and equity may best be met through agroecosystem designs that enhance functional diversity at the genetic, species and landscape levels. A central challenge across the whole range of agroecosystems is to find alternatives to the input substitution approach and future dependence on costly and unreliable biotechnology packages. This can be achieved through an agroecological approach that seeks to break the monoculture structure and dependence on suppliers of off farm inputs through the design of integrated agroecosystems. By assembling a functional biodiversity within and around agroecosystems, it is possible to encourage synergisms that subsidise agroecosystem processes by providing ecological services, the recycling of nutrients and the enhancement of natural enemies of pests as well as provide diverse, quality foods and other farm products (Pimbert, 1999 and references therein).

However, much is uncertain and unknown about the structure and multiple functions of agricultural biodiversity. There are huge gaps in knowledge on the number of species living on Earth: estimates of total species numbers vary between 5 and 30 million and a mere 1.6 million species have been described to date. Knowledge on the functions of biodiversity, -synergies and complementarities, interactions within agro-ecosystems, ecological processes within soils and interactions with the atmosphere and water-, are rudimentary. An emerging picture describes the structure and functions of agricultural biodiversity in terms of variability, sudden as well as slow change, complexity and indeterminancy at different spatial and temporal scales. But there are considerable uncertainties and on-going scientific debates on the actual functioning and dynamics of ecosystems and landscapes (e.g. equilibrium versus dis-equilibrium ecology, views on succession, stability-diversity relationships, carrying capacity…).

Specific components of agricultural biodiversity are often directly implicated in the processes that structure agroecosystems at different temporal and geographical scales (from small farm plots to whole water/landscapes). Even highly complex landscapes like tropical irrigated rice or forests in the savannah transition zone of West Africa, are

apparently structured by a very few key variables (cf. Settle et al, 1996; Fairhead and Leach, 1996). Research over the past 20 years in applied ecology of managed systems shows that ecosystem and landscape dynamics tend to be organised around a small number of nested cycles, each driven by a few dominant variables (Gunderson et al, 1995; Holling et al, 1995).

"A small number of plant, animal, and abiotic processes structure biomes over scales from days and centimeters to millennia and thousands of kilometers. Individual plant and biogeochemical processes dominate at fine, fast scales; animal and abiotic processes of mesoscale disturbance dominate at intermediate scales; and geomorphological ones dominate at coarse, slow scales….the physical architecture and the speed of variables are organised into distinct clusters, each of which is controlled by one small set of structuring processes. These processes organize behavior as a nested hierarchy of cycles of slow production and growth alternating with fast disturbance and renewal" (Gunderson et al, 1995).

Identifying and understanding the dynamics these "structuring variables" provides a practical basis for sustainable agriculture and landscape management. This kind of ecological literacy is needed as FFS approaches are extended to other crops (cassava, cotton, vegetables…) and agronomic practices such as soil and nutrient management.

ii) Knowledge on people-environment interactions[3]

Both FFS approaches and principles are increasingly seen as relevant platforms for the management of natural resources and landscapes (forests, rangelands, water, common property resources). After all, the kind of social learning, negotiation and collective action associated with community based FFS lends itself to a mode of decision making needed for the local adaptive management of ecosystems, landscapes and the ecological services they provide (Rolling and Jiggins, 1998).
This is a welcome development. It does however invite us to look very critically at the knowledge on which our understanding of people-environment interactions rests.

Knowledge about biological and environmental processes is critical for the management of living systems and natural resources (genetic resources, wetlands, forests, rangelands, fisheries, protected areas…). This knowledge shapes society not only through technology, but also through instilling values and assumptions which motivate human beings and inform national policies.

For research and natural resource management bureaucracies in particular, knowledge about biological processes and people-environment interactions is a central element of organisational culture,-the combination of the individual opinions, shared knowledge, values and norms of the members of an organisation. Dominant views on the dynamics of living systems and people-environment interactions give rise to, and legitimate, particular organisational procedures, policies, technologies and professional practice that either deny or encourage diversity and popular participation in natural resource management. For example ideas about the functioning of relatively stable ecosystems feed into the formation of standard policies and scientific practices for conservation which are about external control by professionals and distant organisations. Conversely,

[3] This section is drawn from Pimbert et al (2000) and references therein.

notions of uncertainty, spatial variability and complex non-equilibrium ecological dynamics emphasise the need for flexibility, mobility and adaptive resource management in which local people are central actors in analysis, planning, negotiations and action.

Misleading, simplified and a-historical perspectives perpetuated by powerful bureaucracies and institutions have been a persistent feature of environmental policy making and interventions. Neo malthusian environmental policy narratives have been used by external bureaucracies to blame people for environmental degradation and justify imposing on them massive and widespread use of standard environmental management packages. To prevent further deterioration, official policies and bureaucracies have consistently defined local misuse of resources as the principal cause of destruction and excluded people from the management of biological diversity. All too often, *"by depicting resource users (the local ones) as wild, destructive (or illiterate, uneducated, backward or non-innovative), state resource management agencies think they can justify their use of militaristic environmental protection"* (Peluso, 1996).

These policy (or crisis) narratives are usually robust, hard to challenge and slow to change. They play a key role in policy and project level decision making. They structure options, define relevant data and exclude other views within bureaucracies and professional circles.

However, recent research has fundamentally questioned many of the crisis narratives and received wisdoms. A combination of historical analysis, social anthropology and participatory methods to understand resource users' knowledge and perspectives, and insigths from non-equilibrium ecology has challenged some of the environmental knowledge taken for granted by government bureaucracies and donors:

- Contrary to neo-malthusian assumptions population increase may not necessarily mean more environmental degradation and less biological diversity. More people can mean more care for the environment as shown by research in Sierra Leone and Kenya.
- Historical research in West Africa has shown dominant deforestation estimates to be vastly exaggerated. Many of the vegetation forms that ecologists and policy makers have used to indicate forest loss, such as forest patches in savanna are, according to the knowledge of local resource users and historical evidence, the results of landscape enrichment by people.
- New perspectives in ecology have challenged conventional views of drylands in Africa as stable ecosystems subject to decline and desertification once carrying capacity is exceeded. Rangelands are resilient and less prone to degradation and desertification than once thought. The new findings concord with the knowledge of many local herders and emphasise how rangelands are subject to high degrees of uncertainty, with high levels of spatial and temporal variability, and ecological dynamics characterised by sudden transitions rather than slow and predictable change.

Debunking enduring and dominant myths about how rural people, women and the poor interact and affect their environments may be a very important emerging challenge for FFS approaches applied to the management of natural resource and landscapes. Whilst not excluding specialist scientific knowledge, the kind of ecological literacy needed to

heal society's relationship with nature calls for flexible, plural and inclusive processes of social learning in which local people are central actors in analysis, negotiations, validation and action in the context of their own lives.

Social Learning for Democracy

By creating new spaces for farmers and citizens to directly influence decisions affecting their lives, FFS can *potentially* offer important experiential learning in the practice of democratic participation. FFS's often act as schools for democratic citizenship. Many FFS alumni have grown stronger in the belief that democracy without citizen participation and discussion is ultimately an empty and meaningless concept. This understanding of politics is often the starting point for a growing number of experiments and initiatives that have led farmer groups to expand their focus from solving agronomic problems (e.g. pest control) to engaging in advocacy work and reforms in policy processes and institutions.

These approaches generally aim to allow greater deliberation of policy and practice through the inclusion of a variety of social actors in consultation, planning and decision-making. There is an assumption that traditional forms of representation need to be supplemented by more direct forms of democracy. This social learning for democracy is significant because it is happening at a time when faith in representative democracy is declining for at least three reasons:

i) Political changes. In many countries representative democracy has been heavily criticised for its inability to protect citizens' interests. Marginalised groups in both the North and the South often do not participate effectively in such representative democracy.

> *From the perspectives of poor people world wide, there is a crisis in governance. While the range of institutions that play important roles in poor people's lives is vast, poor people are excluded from participation in governance. State institutions, whether represented by central ministries or local government are often neither responsive nor accountable to the poor; rather the reports details the arrogance and disdain with which poor people are treated. Poor people see little recourse to injustice, criminality, abuse and corruption by institutions. Not surprisingly, poor men and women lack confidence in the state institutions even though they still express their willingness to partner with them under fairer rules*[4].

ii) Lack of trust in professional expertise and science. Western science plays a central role in determining much of the content and practice of service delivery (e.g. health care systems) and the design of technologies that make up the built environment in which citizens live, work and spend their leisure time. Science has thus become increasingly drawn into policy-making as experts (scientists, engineers, health professionals, urban planners….) make decisions about social, economic and environmental issues to provide policy-makers with options. This involvement of scientific expertise has tended to remove decisions from democratic politics, allowing instead more opaque technocratic decision making to prevail in many cases.

[4] Narayan, D. C., Chambers. R., Shah, MK & Petesch, P (2000). Voices of the Poor: Crying Our For Change. Washington, DC, World Bank.. p.172

Trust in scientific expertise has been further eroded in the eyes of citizens because:

- People in industrialised and post-industrialised countries no longer view science as representing certain knowledge. Citizens are faced with a wide range of opinions from experts and counter experts in major scientific controversies. This undermines the positivist view of knowledge with its claims that any group of experts faced with the same problem should arrive at the same conclusions.
- The public understanding of science has also been increasingly informed by radical critiques which present science as an *embodiment of values* in theories, things, therapies, systems, software and institutions. And all these values are part of ideologies or world views, -with scientists immersed in the same cultural and economic conflicts, contradictions and compromises as ordinary citizens.
- Citizens feel themselves 'at risk' from science-based social and technological developments. For example, the recent crisis in European countries over BSE and GMOs have seriously undermined public confidence in scientific expertise. This has been compounded by evidence of collusion between some key government scientific experts and the commercial interests of industry.

iii) Uncertainty and complexity. The introduction of new technologies and all policy processes involves making decisions without being able to predict the effects of different courses of action. As the problems and systems dealt with become more complex and unstable, levels of uncertainty increase significantly. Environmental uncertainties and technological risks are particularly noteworthy in this connection. Environmental dynamics and effects are usually complex and long-term. Biophysical processes, such as climate change or interactions between GMOs and environment, are often characterised by non-equilibrium dynamics and high levels of instability. The traditional approaches of risk management and cost benefit analysis are inadequate "when we don't know what we don't know" and where "we don't know the probabilities of possible outcomes". Given such uncertainty in the face of complexity, "experts" and policy makers are seen as no better equipped to decide on questions of values and interests than any other groups of citizens. Perceptions of both the problem and the appropriate solution are value laden and differ enormously within society.

Policy debates on land privatisation and new technologies such as genetically modified organisms (GMOs) have recently become a focus of FFS work, particularly but not exclusively in Indonesia. Recent experiences in deliberative democracy on the future of food and farming in Andhra Pradesh and on GMOs and small farmers in Karnataka (India) may be relevant elsewhere in Asia (Pimbert and Wakeford, 2002; Action Aid, 2000) (Box 1). More generally, the participatory policy processes FFS increasingly engage with may benefit from the more systematic use of deliberative and inclusive processes. These include citizens' juries, citizen's panels, committees, consensus conferences, scenario workshops, deliberative polling, multi-criteria mapping, public meetings, and visioning exercises. These approaches and methods can differ substantially in detail but are all, to varying degrees, based on:

1. Deliberation is defined as "careful consideration" or "the discussion of reasons for and against". Deliberation is a common, if not inherent, component of all decision-making and democratic societies
2. Inclusion is the action of involving others and an inclusionary decision making process is based on the active involvement of multiple social actors, and usually emphasises the participation of previously excluded citizens.

Box 1 . Prajateerpu: Food Futures for Andhra Pradesh, India

Prajateerpu, a 'citizens' jury/scenario workshop' on food and farming futures in the state of Andhra Pradesh (AP), was an exercise in deliberative democracy involving marginal farmers and other citizens from all three regions of the state. The citizens' jury was made up of representatives of small and marginal farmers, small traders, food processors and consumers. Prajateerpu was jointly organised by the International Institute for Environment and Development (IIED), the Institute of Development Studies (IDS), the Andhra Pradesh Coalition in Defence of Diversity, The University of Hyderabad, AP and the all-India National Biodiversity Strategy and Action Plan (NBSAP). The jury hearings took place in Medak District, Andhra Pradesh, on June 25-July 1, 2001. Jury members also included indigenous (known in India as '*adivasi*') people. Over two-thirds of jury members were women. The jury members was presented with three different scenarios. Each was advocated by key opinion-formers who attempted to show the logic behind the scenario. It was up to the jury to decide which of the three scenarios is most likely to provide them with the best opportunities to enhance their livelihoods, food security and environment 20 years from now.

Vision 1: Vision 2020. This scenario has been put forward by Andhra Pradesh's Chief Minister, backed by a World Bank loan. It proposes to consolidate small farms and rapidly increase mechanisation and modernisation. Production enhancing technologies such as genetic modification will be introduced in farming and food processing, reducing the number of people on the land from 70% to 40% by 2020.

Vision 2: An export-based cash crop model of organic production. This vision is based on proposals from the International Forum for Organic Agriculture (IFOAM) and the International Trade Centre (UNCTAD/WTO) for environmentally friendly farming linked to national and international markets. This vision is also increasingly driven by the demand of supermarkets in the North to have a cheap supply of organic produce and comply with new eco-labelling standards.

Vision 3: Localised food systems. A future scenario based on increased self-reliance for rural communities, low external input agriculture, the re-localisation of food production, markets and local economies, with long distance trade in goods that are surplus to production or not produced locally.

The jury/scenario workshop process was overseen by an independent panel, a group of external observers drawn from a variety of interest groups. It was their role to ensure that each Food Future was presented in a fair and unprejudiced way, and that the process was trustworthy and not captured by any interest group.

The key conclusions reached by the jury – their 'vision' – included a desire for:

- Food and farming for self reliance and community control over resources
- Maintaining healthy soils, diverse crops, trees and livestock, and building on indigenous knowledge, practical skills and local institutions.

And opposition to:

- The proposed reduction of those making their living from the land from 70%-40% in Andhra Pradesh
- Land consolidation and displacement of rural people
- Contract farming
- Labour-displacing mechanisation
- GM crops - including Vitamin A rice & Bt cotton
- Loss of control over medicinal plants, including their export

Prajateerpu shows how the poor and marginalised can be included in the policy process. The jury outcomes will hopefully encourage more public deliberation and pluralism in the framing and implementation of policies on food and agriculture in Andhra Pradesh, thus contributing to democratic governance.

http://www.iied.org/agri/IIEDcitizenjuryAP1.html; Pimbert and Wakeford, 2002.

Institutionalising Social Learning and Participation

Large scale FFS and Community IPM approaches have become flagships for those seeking to institutionalise participatory learning and action in a variety of settings. Advocates of "participatory development" also emphasise the relevance of community based FFS approaches for building those assets (human, natural, physical, social, financial) crucial for the sustainability of livelihoods (DFID, 1999).

This is perhaps not surprising. The concept of "participatory development" has gained new vigour over the last two decades, -partly as a result of the evident failures of top down, standardised development, the retreat of the State in service and technology delivery, and the emphasis on market based solutions in a globalised economy. But whilst the words are the same, the meanings given to "participation" and "participatory development" vary considerably.

Three broad visions and understandings of "participatory development" are summarised in table 1. As we think about the participatory learning and action associated with community based FFS, it is important to bear in mind the similarities and differences in these approaches to participatory development. The divergences shown in table 1 primarily relate to human values and are significant because they highlight the ideological framework which actors consciously or unconsciously adopt in their work. Human values and subjectivity enter the theory and practice of participatory development by:

- defining what to think about and how to think about it
- informing the choice of problems/options and the way to tackle/deal with them
- setting limits on the thinking and imagination of scientists, policy makers, donors as well as NGO staff and local actors.

Table 1. Participatory Development Paradigms

	Business as usual	**Technical fix,- the market is the solution**	**Structural change**
Goal	making our projects more efficient	making our projects more effective	multiple economic, ecological and social goals
Target	singling out 'target groups' as objects of development projects	reforming policies and institutions to allow for regulation by the market	multiple linkages with diverse actors; broad coalitions and alliances for social change
Principal methods for analysis and planning	logframes, Agroecosystems analysis, Rapid Rural Appraisals (RRA), questionnaires, beneficiary assessment, cost-benefit analysis	logframes, Agroecosystems analysis, RRA, participatory Rural Appraisals (PRA), cost benefit analysis, market surveys	Agroecosystem analysis and complementary participatory methodologies, deliberative democracy, advocacy, coalition building, direct action
Dominant role and relationships	enlightened technocrat and benevolent paternalism	provider of market based solutions	genuine partnerships and power sharing
Boundary conditions	broader context unacknowledged - everything remains as	broader context unaddressed: everything beyond the	explicitly concerned with changing the broader context of

	is: property rights, land tenure, social relations, decision-making structures & processes	intervention remains as is; economy and markets treated as given, but subject to some intervention	people's lives: social and ecological goals, many futures possible
Development goal	improved products and services	more kinds of interventions mediated through the market	minimise the need for external intervention, self reliance
Diversity (social and ecological)	low	low to medium	high

The organisations involved in these approaches to participatory development are, to varying degrees, aware that they need to change and move away from top down, standardised practices. The main reasons given for professional re-orientation and organisational transformation vary and are not necessarily the same for all actors. They include the need for flexibility and cost effectiveness, the need to respond adaptively to dynamic change and to a diversity of social and ecological conditions, the recognition that satisfiers of fundamental human needs differ in time and place[5], and being able to deal with open ended uncertainties. As a result, both public sector and private sector organisations involved in environment and development are challenged to shift from being implementers to enablers of local planning and action.

In practice however, three different patterns of organisational change or transformation are emerging:

1. Privatisation. This strategy seeks to replace public provision with market based, private provision of services and technologies (e.g. improved seeds and livestock; corporate services and know how for the management of agroecosystems). Supporters of this approach to organisational change believe that private contractors can often give a more efficient service because of the nature of competition within the private sector and superior resource management capabilities.

2. Public service reform. This approach seeks to preserve the notion of public provision but argues for the radical reform of the way policies, services and technologies are designed and delivered by bureaucracies. This argument has also been applied to many large NGOs who need to shift their approach to environment and development. Supporters of this approach either give primary emphasis to enhancing the *responsiveness* of public sector/NGO service provision or to the *democratisation* of government/NGO service and technology provision.

i) The technology/service/policy responsiveness approach is essentially concerned with the reform of government and NGO bodies as productive and administrative systems. Key organising metaphors here are *consumer* or *client driven*. This approach typically emphasises

[5] A definition of the 'good life' implies different ways of satisfying fundamental human needs. Max-Neef and his colleagues have identified nine fundamental human needs, namely: *subsistence* (for example, health, food, shelter, clothing); *protection* (care, solidarity, work, etc.); *affection* (self-esteem, love, care, solidarity, and so on); *understanding* (among others: study, learning, analysis); *participation* (responsibilities, sharing of rights and duties); *leisure/idleness* (curiosity, imagination, games, relaxation, fun); *creation* (including intuition, imagination, work, curiosity); *identify* (sense of belonging, differentiation, self-esteem, and so on), *freedom* (autonomy, self-esteem, self-determination, equality). (Max-Neef 1989).

listening to the consumer/client, becoming more accessible to the consumer/client and speaking to the consumer/client.

ii) The technology/service/policy democracy approach views government bureaucracies and NGOs as political systems. Key organising metaphors in this approach are *citizens* and *collective action*. It seeks reforms through changes in power relations and in who controls the planning, design, delivery, monitoring and evaluation of policies, technologies and services.

I return to the privatisation strategy in the last part of my paper and offer three comments for now on the public service reform approaches:

1. In both the "client responsiveness" and "democratisation" route to reform (2(i) and 2(ii) above) organisations engaged in FFS approaches are, to varying degrees, challenged to transform themselves. Local adaptive management and large-scale participation for self-discovery learning and action do not mean that state bureaucracies and other external organisations have no role. But they do challenge bureaucracies and organisations to assume different roles and responsibilities. In particular, existing bureaucracies and professionals will often need to shift from being project implementers to new roles that facilitate local people's analysis, planning, action, monitoring and evaluation. The whole process should lead to local institution building or strengthening, so enhancing the capacity of people to take action on their own.

Training of agency personnel in participatory principles, concepts and methods must be viewed as part of a larger process of reorienting institutional policies, organisational cultures, procedures, financial management practices, reporting systems, supervisory methods, reward systems and norms (Absalom et al, 1995; IIED-IDS, 2000; Thompson, 1995). In both government departments and non governmental organisations, the challenge for top and middle management is to design appropriate institutional mechanisms and rewards to encourage the spread of participatory methods within the organisation (see Box 2). Without this support from the top, it is unlikely that social learning and participatory approaches that enhance local capacities and innovation will become core professional activities.

BOX 2. Transforming organisations for social learning and participation

Key actions for reformers working for more accountable organisations (local and national government, NGOs, private sector) include:

- Diversify the governance and the membership of budget allocation committees of public sector planning, services and research institutes to include representatives of diverse citizen groups. Establish procedures to ensure transparency, equity and accountability in the allocation of funds and dissemination of new knowledge
- Encourage shifts from hierarchical and rigidly bureaucratic structures to "flat", flexible and responsive organisations
- Provide capacity building for technical and scientific personnel to foster those participatory skills, attitudes and behaviour needed to learn from citizens (mutual listening, respect, gender sensitivity as well as methods for participatory learning and action)
- Ensure that senior and middle management positions are occupied by competent facilitators of organisational change, with the vision, commitment and ability to reverse gender and other

discriminatory biases in the ideologies, disciplines and practices animating an organisation.

- Promote and reward management that is consultative and participatory rather than verticalist and efficiency led. Establish incentive and accountability systems that are equitable for women and men
- Provide incentives and high rewards for staff to experiment, take initiatives and acknowledge errors as a way of learning by doing and engaging with the diverse local realities of citizen's livelihoods in urban and rural contexts
- Redesign practical arrangements, the use of space and time within the workplace to meet the diverse needs of women, men and older staff as well as their new professional obligations to work more closely with citizens and other actors (time tables, career paths, working hours, provision of paternity and maternity leave, childcare provisions, mini sabbaticals, promotion criteria…)
- Encourage and reward the use of gender disaggregated and socially differentiated local indicators and criteria in monitoring and evaluation as well as in guiding subsequent technical support, policy changes and allocation of scarce resources.

2. Both the "service/technology/policy responsiveness" and "democratisation" approaches emphasise the need for bureaucracies to change to more people centred, process oriented and learning organisations. But despite these similarities, there are fundamental differences in the framing assumptions, underlying values and political vision embodied in these contrasting approaches to change. The "service/technology/policy responsiveness" approach resonates with visions of participatory development based on a mix of business as usual and technical fix /market based solutions. And the "democratisation" route fits within a participatory development paradigm that emphasises structural change and many possible futures (see Table 1).

3. The "democratisation approach" often emphasises the need to institutionalise FFS mediated activities at the community level rather than tinker within boundaries set by the State. For example, efforts are aimed at laying the foundation for a field management system that can 1. support the institutionalisation of IPM at the village level and 2. influence the context in which FFS implementation and IPM institutionalisation is taking place. It is assumed that only farmers can "institutionalise" FFS mediated activities at the community level. Rather than spend time and efforts in seeking to reform state bureaucracies and their ways of working, the challenge is to strengthen local assets (human, natural, physical, financial, cultural) for sustainable livelihoods. Linking local actors into broad federations based on trust, reciprocity and common norms is also seen as a way of capturing power back from centralised, top down agencies. Institutionalising social learning is thus framed in ways that could potentially transform governance structures through political participation, face to face discussion and empowered federations that include more people and places. This approach raises many challenges and risks. Perhaps much can be learnt from moments in history when citizens experimented with new forms of direct democracy and confederated power, as was done in Spain prior to World War II (Box 3) and elsewhere (Bookchin, 1998).

Box 3. Learning from history: control from below in Spain

During the Spanish Civil War (1936-1939), the peasants of Andalusia and Aragon established communal systems of land tenure, in some cases abolishing the use of money for internal transactions, setting up free systems of production and distribution, and creating a decision making procedure based on popular assemblies and direct, face to face democracy. A system of workers self-management was set up in numerous cities including Barcelona and Valencia. Factories, transport facilities, utilities, retail

and wholesale enterprises were all taken over and administered by workers committees and unions.

Source Bookchin, 1994.

Re-Governing Food Systems and the Commons

Many have remarked on how empowering FFS based experiential learning can be. The evolution of the Indonesian FFS federations is particularly noteworthy in this connection (Dilts et al 2002). However, we need a reality check and ask: "where is power concentrated today? How is globalisation[6] changing the power to define reality? Where do farming communities stand in an age of global restructuring"?

Farmers and the agro-ecosystems they manage are embedded in wider food systems. These food systems include not just the production aspects of food and fiber but also the preparation of agricultural inputs, processing, distribution, access, use, food recycling and waste. Food chains from the point where food/fibres originate to where they are consumed and disposed of are important components of the food system.

The emerging global food system is particularly noteworthy in this connection. The model of the individual farmer dependent on suppliers of off farm inputs and on the corporations that process, distribute and sell food and fibres produced on the farm is spreading beyond the USA. New trade agreements, policies, technologies and services are opening up hitherto remote areas to the global economy. Powerful food processors and retailers in the North are extending contract farming to source food that is produced at lower cost or to better standards (including organic!) in developing countries. At the same time, many of the technologies offered by mainstream agricultural R&D and the private sector are financially expensive and/or inappropriate for diverse and risk prone contexts. Increasingly, farmers everywhere are experiencing the cost-price squeeze that has led many farmers in the USA and Europe to go under or diversify their livelihoods out of desperation. In the process, both the local and global environment are usually degraded through neglect, the use of biodiversity displacing and pollutive technologies or fuel hungry long distance transportation. In sum, the diversity of localised food systems[7] is being collapsed into an integrated, more linear global system based on the principles of comparative advantage, standardisation, geographical division of labour and control by a few large transnational corporations (TNCs) and trade agreements. This has led to an unprecedented concentration of corporate power in the global food system,- particularly at the retailing end of the food chain (Box 4).

Box 4. Concentration of corporate power in the global food and farming sectors

1. *In farm inputs*

Concentration in the input sector proceeded at a very fast pace in the 1990s. Six companies now control 80 percent of *pesticide* sales, down from 12 in 1994. There were US$15 billion of amalgamations in the US *seed* industry alone in the period 1995-2000. From a food systems perspective, input manufacturers

[6] By globalisation I mean the ever increasing integration of national economies into the global economy through trade and investment rules, privatisation and technological advances, and driven by institutions like the World Trade Organisation (WTO) and bilateral trade agreements. Globalisation is very different from the process of "internationalism" which refers to the positive global flow of ideas, culture, technology and knowledge, together with growing international understanding and cooperation.

[7] Localised food systems start at the household level and expand to neighbourhood, municipal and regional levels.

– as suppliers to the least profitable sector of the agrifood system, namely farming – are in a strategically weak position. Survival will depend on strategic alliances with processors and retailers around food quality, safety and quality.

2. *In processing*
Partly out of necessity to exercise countervailing economic power to retailers, processing industries are also rapidly consolidating their economic and market power. The economic power of the top eight food multinationals has been compared to that of half of Africa. In 2000, US$87 billion in food industry deals were announced, with Nestlé, Philip Morris and Unilever emerging as the Big Three of global foodmakers. The justification for such massive accumulation of market power is "*to have more clout in the consolidating retailing environment*". We are likely to see a growth in networks and cross-ownership between food processing and the seed sector, in which the farmer is contractually sandwiched, just a step away from the farmer as renter rather than owner of contracted crops or livestock.

3. *In retailing*
In both the EU and US, it is *retailers* who determine what *food processors* want from *farmers*. Retailers are the point of contact between the majority of OECD citizens and the rural economy. The supermarket sector is most concentrated in the EU, but is also rapidly consolidating in the US. In the nine years since the Earth Summit, US food retailing chains have concentrated dramatically, with the five leading chains moving from 19 percent control of grocery sales to at least 42 percent . Since 1992, global retail has consolidated enormously and three retailers – Carrefour, Ahold and Wal-Mart – have become truly global in their reach. In 2000, these three companies alone had sales (food and non-food) of $300 billion and profits of $8 billion, and employed 1.9 million people. It is predicted that there will be only 10 major global retailers by 2010.

Source: Vorley 2001

Powerful TNCs use a variety of official and unofficial instruments to impose three basic freedoms central to the neo-liberal credo of international competitiveness and comparative advantage: freedom of investment, freedom of capital flows, freedom of trade in goods and services (George, 2000).

As an official organisation, the World Trade Organisation (WTO) is particularly responsive to the demands of TNCs for internationally binding rules in favour of total freedom of trade in goods and services. With little or no public oversight, corporations actively shape WTO negotiations on the liberalisation of trade on goods, agricultural products and intellectual property. Areas such as health, education, culture, the environment, and energy are also corporate targets under the emerging General Agreement on Trade in Services (GATS) (George, 2001).

These trends are directly or indirectly affecting the livelihoods of people working at different points in the food chain,- in the inputs sector (seeds, fertilisers, credit..), in food and fibre production (fisheries, forests, farming, livestock rearing…), in food processing and distribution, and food retailing (from corner shops and town stores to supermarkets). To different degrees, many of the existing localised food systems and the emerging global food system are being restructured through these processes (Pimbert et al, 2002).

Community based FFS and their social networks are thus increasingly caught in the contradictions of today's governance system. Whilst the trend towards devolution gives rise to community based participatory processes, globally defined rules such as the WTO-TRIPs agreement (e.g. patents on seeds and medicinal plants) and privatisation (land, water, forests, public services) are undermining the control which local resource

users have over their environments, knowledge and institutions. Globalisation and the concentration of economic power in the hands of TNCs and finance markets proceeds with a simultaneous process of devolution and decentralisation. The conventional divides between the local and global are becoming largely irrelevant as a result. The emerging challenge therefore is to explore new forms of governance that safeguard the rights, livelihoods and environments of local resource users and citizens confronted by rapid and uncertain global changes over which they have little or no control.

These challenges are enormous. They cannot be taken up by the FFS and farmer organisations alone. To address these emerging issues, social learning and informed action by FFS networks, farmer federations and their communities of interest will depend on facilitated exchange of ideas and experiences between rural communities in the North and South, between producers and consumers of food, between professionals and citizens all engaged in a deliberative and inclusive process. Ideally, the latter should reflect the core principles of FFS and build up relations of trust, common norms and rules, reciprocal mechanisms and new forms of connectedness.

For sure, an expansion of *political* democracy to include more people and places in shaping the policy process, technologies and institutions is clearly important and necessary. But an analysis of how power is increasingly exercised and mediated today suggests that the issue of *economic* democracy is fundamental for change. Widening *economic* democracy is now a key overarching condition for the mainstreaming of FFS based social learning for ecological literacy and participation.

In practice, levelling the economic playing field for participatory learning and action calls for *mutually reinforcing* and radical structural reforms. Among these, the regeneration of more localised economies and culture merits closer attention. The idea here is to re-localise *plural* economies that combine both subsistence and market oriented activities. Several mutually reinforcing enabling policies have been identified to bring about such transformation for diversity, decentralisation and democracy (Box 5).

Box 5. Policy reversals for diversity and localisation

Economic reforms

- Reorientation of the end goals of trade rules and aid such that they contribute to the building of local economies and local control, rather than international competitiveness
- Reintroduction of protective safeguards for domestic economies, including safeguards against imports of food, goods and services that can be produced locally
- A site-here-to-sell-here policy for manufacturing and services domestically and regionally
- Localising money such that the majority stays within its place of origin and helps rebuild the economies of communities
- Local competition policy to eliminate monopolies from the more protected economies and ensure high quality food production, goods and services
- Restriction of the concentration and market power of the major food corporations and retailers through new national competition laws and international treaties
- Mechanisms to ensure that the real costs of environmental damage, unsustainable production methods and long distance trade are included in the cost of food
- Fund the transition to more localised economies and environmental regeneration by introducing taxes

on resources and on speculative international financial flows (US 1500 billion dollars is traded every day on foreign exchange markets alone. Most of it is purely speculative and has nothing to do with the real economy)

Natural Resource Policies

- Redirect both hidden and direct agricultural subsidies towards supporting smaller scale producers to encourage the shift towards diverse, ecological and equitable and more localised food systems,-in pastoral, fishing, farming and forest based communities as well as urban and peri-urban contexts.
- Land reform and property rights,- redistribution of surplus land to tenants and sharecroppers; secure rights of access and use of common property resources, trees and their products
- Protect the rights of farmers to save seed and improve crop varieties and livestock breeds. Ban patent-like legislation on genetic resources important for food, health and agriculture.
- Increased funding for and re-orientation of public sector agricultural research and extension towards participatory approaches and democratic control over priority setting and technology validation.
- Introduction of a two-tier system of food safety regulations: stricter controls on large-scale producers and marketers and a simpler, more flexible, set of locally determined regulations for small-scale localised enterprises.
- R&D and financial support for decentralised and sustainable energy production based on renewable energy.

Sources: Hines, 2000; ATTAC, 2000 ; Pimbert, 2001.

These reversals for diversity and localisation aim to offer more individual and collective opportunities to engage in many different activities outside,- and unmediated by-, the market, wage work and commodity production. Re-embedding economics in society (cf Polanyi, 1957) is all about providing the structural means by which citizens can manage their own affairs through face to face processes of deliberation and decision making.

I do not claim that these ideas will be relevant to your own contexts or visions of the future. But we need to start talking more openly about the relationship between FFS based learning and the choice of food, farming and development futures. And agree to disagree in the spirit of open learning and democratic deliberation.

On that note let me conclude and thank you!

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