

PTD CIRCULAR

Six-monthly update on Participatory Technology Development



Photo: Bernd Schimpf

As more and more programmes are becoming actively involved in PTD, issues of participatory monitoring and evaluation (PM&E) of the PTD process and results are coming to the fore. Some of these issues will be addressed at the next meeting of the St Ulrich Group, the founders of this *PTD Circular*. The focus will be on **'Complementary Assessment Methods for a Wide Range of Actors'**. We will examine experiences with the complementary use of qualitative and quantitative methods of PM&E in PTD, looking at questions such as:

- What information do the different actors in the PTD process need?
- What methods are appropriate for different actors in different contexts to learn from assessments of their experiments?
- How can the resulting information and learning points be documented?
- How can the PTD process be tracked over time and translated across actors so that all can learn from it?

As has become tradition in the St Ulrich meetings, we will also hold an information market, monitor the progress of our peer contracts in PTD-related activities, brainstorm in 'dreamtime' about what we would like to do in the future, and then capture some of our dreams in peer contracts. We will meet at St Ulrich in the Black Forest of Germany on 27-29 September 1998 and, as ever, every-

one pays his or her own way. Further information can be obtained from Jutta Blauert (j.blauert@ids.ac.uk) and/or Barry Pound (b.pound@gre.ac.uk).

A new initiative is growing out of the St Ulrich meetings: three members (LBL, ETC and Hagmann) have recently joined forces to start up a training and coaching programme to support farmer innovation and experimentation. The name of the programme shows that the 't' and the 'c' accompany innovation: **tINNOVATEc**. The mission is to help integrate and institutionalise PTD, including participatory agricultural extension, approaches in large governmental and non-governmental organisations (NGOs). The programme will try to facilitate change by coaching the client organisations as well as local training and support agencies in making this change to participatory forms of technology development and extension in agriculture. More information can be obtained from Jürgen Hagmann (JHagmann@aol.com), Ueli Scheuermeier (uscheuermeier@access.ch) and Laurens van Veldhuizen (l.van.veldhuizen@etcnl.nl).

The idea of the **Dare-to-Share Fair**, first raised by the St Ulrich Group in September 1993, is catching on (see Berg 1997 under Annotated Publications). Now the Dutch are planning a similar event, tentatively scheduled for May 1999 in The Hague. More information about it will be given in the next *PTD Circular*.

Trying out alternative (non chemical) forms of pest control in Cameroon

The number of **electronic discussion groups** has been growing by leaps and bounds in the last couple of years. In the section 'Electronic Networking', we include the addresses known to us. Please inform us of any other electronic sources of information on PTD in agriculture and natural resource management known to you but not mentioned yet in this issue of the *PTD Circular*.

In any case, most of you should already be aware of the **PTD list**,

which was set up by the St Ulrich Group and is open to all who are interested in discussing issues of PTD. If you are not yet on the list and would like to join, just send the message '%subscribe' to the list server coordinated by Wietsje Bruinsma (ptd-l@etcnl.nl). For people who are still confused about 'What is PTD?', the updated draft by Ueli Scheuermeier (18 June 1998) on this question is available through the list, or by contacting uscheuermeier@access.ch directly. At the moment, the discussion is hopping around PTD 'frogs' in the 'desert' of conventional agricultural research and extension. ■

● ANNOTATED PUBLICATIONS

AME. 1998. **Agriculture Man Ecology Phase IV progress report July-December 1997**. 45 pp + appendices. AME Programme, ETC India, POB 7836, J.P.Nagar, Bangalore 560078, India (amebang@giasbg01.vsnl.net.in).

India, cotton, farmer experimentation, groundnut, pest management, rice

The progress report includes several sections about how AME is learning by doing PTD together with farmer groups and NGOs experimenting with ways of improving groundnut, paddy and cotton production. Despite very erratic rains, the farmers got significantly better yields from their experimental than their control plots, and are keen to continue the experimentation next year.

Arevalo M, Guijt I & Saladores K (eds). 1998. **Participatory monitoring and evaluation**. Special issue of *PLA Notes* 31. 91 pp. International Institute for Environment and Development Sustainable (IIED) Agriculture and Rural Livelihoods Programme, 3 Endsleigh St, London WC1H 0DD, UK, Fax +44-171-3882826, Email sustag@iied.org

Bangladesh, Burkina Faso, Ecuador, Nepal, Palestine, Philippines, institutionalisation, monitoring and evaluation, participatory approaches

Includes 6 experiences selected from those presented at an international workshop on PM&E held in the Philippines in November 1997 and hosted by the International Institute for Rural Reconstruction (IIRR). The workshop brought together numerous examples of PM&E from NGOs, government agencies, donors, community-based organisations and research institutions. The overview paper 'Tracking change together' draws on the workshop discussion and other literature, highlights new purposes and methods of PM&E, and addresses practical issues and emerging challenges. For more information about the workshop documentation, contact Mae Arevalo, IIRR, Silang, Cavite, Philippines, Fax +63-46-4142420, Email etd-iirr@cav.pworld.net.ph

Berg C (ed.) with text by Yvonne Mabile. 1997. **Dare to Share! Dare-to-Share Fair at the 9th Conference of the International Soil Conservation Organisation (ISCO), Bonn, 26-30 August 1996**. 140 pp, 30 colour photos. US\$ 25. Margraf Verlag, POB 1205, D-97985 Weikersheim, Germany (margraf@compuserve.com).

Africa, Asia, Latin America, Pacific, natural resource management, soil conservation

The idea of the Dare-to-Share Fair, first raised by the St Ulrich Group in September 1993, is spreading. This

book brings the highlights and major issues of the exhibition of experiences in soil conservation and natural resource management that ran parallel to the 1996 ISCO Conference in Germany. These include extension through horticultural experimentation by village women extension agents in Sudan, innovation and experimentation by farmers in conservation tillage techniques in Zimbabwe, and testing and adaptation of maize-legume intercrops by farmers in Mexico.

Blackburn J & Holland J. (eds). 1998. **Who changes? Institutionalizing participation in development**. 199 pp. Intermediate Technology Publications (ITP), 103-105 Southampton Row, London WC1B 4HH, UK.

institutionalisation, participatory diagnosis, participatory planning

This book deals with the scaling up of participatory learning methods, with particular reference to PRA. The problems encountered are highlighted by numerous authors in a variety of development settings. The book emphasises the type of changes required for scaling up and institutionalising the use of participatory methods. Organisational change, notably within the implementing agencies themselves and among donors, comes out as one of the keys to effective implementation of participatory methods.

Blom M & Makuni J. 1998. **Conducting experiments in Sesheke District, Zambia using Participatory Technology Development: an action research**. 100 pp. Sesheke Advisory Center, Sesheke, Zambia.

Zambia, action research, farmer experimentation, farmer organisation, institutional aspects

A project within the Zambian Department of Agriculture had promoted farmer group development through Training for Transformation (TfT), focused on problem analysis and leadership training. PTD was seen as a natural follow-up to TfT. The project chose indigenous pesticides as the focus of farmer experiments, but later realised that the farmers were more interested in crop diversification. The PTD process was documented from the introductory workshop through the experimentation to the final workshop. The misunderstandings and mistakes of project and advisory staff, who were themselves learning to deal with the concepts of PTD, are frankly discussed. It proved easier to introduce

PTD at farmer level than at institutional level. Substantial organisational changes would be necessary in government services before a PTD approach could be embedded.

COMPAS. 1998. **Experimenting within farmers' worldviews**.

100 pp + annexes. ETC-COMPAS, PO Box 64, NL-3830 AB Leusden, Netherlands.

farmer experimentation, indigenous experimentation, indigenous knowledge, institutionalisation

Report on the inception workshop of COMPAS (Comparing and Supporting Indigenous Agricultural Systems) held in Leusden in February 1998. COMPAS acts as a platform for inter-cultural dialogue and encourages experimentation with local concepts by indigenous institutions. The inception workshop was attended by 14 representatives of COMPAS partners from around the world. In the report the various elements of a methodology to enhance indigenous development are discussed: joint learning with the rural population, strengthening cultural identity, conducting local experiments, organising farmer-to-farmer exchange, self-development, training and networking. An overview is given of the activities carried out by the COMPAS partner organisations. The last chapter is a compilation of interesting workshop presentations by various resource persons.

FAO. 1997. **Community based IPM case studies**. Food and Agriculture Organization Intercountry Programme for the Development of Integrated Pest Management in Rice in South and Southeast Asia. 145 pp. (no address given)

Asia, action research, farmer organisation, farmer-scientist interaction, farmer-to-farmer extension, farmer training, peanuts, rice

Documentation of numerous case studies in the Asian intercountry rice program that illustrate the various approaches basic to the development of community-based IPM. The themes of the cases are training, post-Farmer Field School activities, forums that support networks among farmers and trainers, the development of IPM farmer groups, and innovation. Focus is on the farmers as implementers of IPM. One interesting case is about an IPM field school in the context of a public elementary school, involving 10 and 11 year old pupils.

FAO. 1997. **Report of a rural women's evaluation of an environmental project in Noza, Kanak**

Valley. 14 pp. FAO Interregional Project for Participatory Upland Conservation and Development, POB 574, Quetta, Pakistan.

Pakistan, environmental indicators, participatory evaluation, participatory research, rural women

Using photographs relating to project activities, women participants in an upland regeneration project identified the most important activities for evaluation and compiled a list of indicators. An evaluation team composed of women from various villages in the project area planned and carried out the evaluation themselves. The description of the methods for eliciting and prioritising quantitative and qualitative indicators would be useful for PTD facilitators and farmers trying to draw up indicators for monitoring and evaluating their experiments.

Farrington J. 1998. **Organisational roles in farmer participatory research and extension: lessons from the last decade**. *Natural Resource Perspectives* 27. 4 pp. Overseas Development Institute (ODI), Portland House, Stag Place, London SW1E 5DP, UK (nrp@odi.org.uk and <http://oneworld.org/odi/>).

NGO-GO linkages, participatory extension, participatory research, policy

Reviews broadly two approaches to participatory research and extension. One that is common among NGOs focusing on a limited number of communities aims at empowering farmers, often develops innovative methods, but usually requires considerable resources. The other, more common in government institutions, has larger coverage but often reaches the better-off farmers. The paper analyses the respective strengths and weaknesses of these two approaches and formulates recommendations aiming at better linkages between the two.

Fetien Abay, Waters-Bayer A & Mitiku Haile. 1997. **Traditional practices and farmers' innovation in land husbandry: some examples from Tigray, Ethiopia**. Paper presented at ICRAF/MUC Workshop on Land Husbandry in the Highlands of Ethiopia, 10-14 Nov. 1997. 21 pp. Mekelle University College, POB 231, Mekelle, Tigray, Ethiopia (mekelle.university@telecom.net.et).

Ethiopia, farmer innovation, indigenous knowledge, soil and water conservation

As part of the Africa-wide programme Indigenous Soil and Water Conservation (ISWC), Mekelle

University is collaborating with governmental and non-governmental organisations in discovering indigenous innovations in land husbandry. Examples of innovations by men and women farmers and by groups include: trapping silt and water to create new fields, infiltration furrows, manuring through diverted water, modifying the traditional irrigation system, and farmer-manufactured wheelbarrow and one-ox plough. Differences between richer and poorer farmers in ability to diffuse their innovations are discussed. The innovative farmers and groups form entry points for PTD activities involving research and extension agencies.

Floquet A. 1998. **Monitoring and assessing the impact of participatory research for technology development on soil fertility management in southern Benin**. 4 pp. Special Research Programme (SFB 308), University of Hohenheim, O2 BP 331 Gbagamey, Cotonou, Bénin (uniho@bow.intnet.bj).

Benin, action research, agroforestry, cover crops, monitoring, mulch, soil fertility

Since 1994, 531 tests have been carried out by farmers, who compare one or more technologies with their own cropping practices. They choose from technologies involving agroforestry systems, planted fallow, selective management of natural regrowth in cultivated fields, cover crops, and simultaneous fallow with pigeon pea. The research team advises the farmers in installing and managing the tests. The impact of farmer participation in testing and adapting the technologies to different site conditions is being assessed in terms of impact on: development and adoption of the technologies, long-term regional trends in land availability and productivity, local institutions, and research and extension institutions.

Gündel S. 1998. **Participatory innovation development and diffusion: adoption and adaptation of introduced legumes in the traditional slash-and-burn peasant farming systems in Yucatan, Mexico**. Kommunikation und Beratung: Sozialwissenschaftliche Schriften zur Landnutzung und Entwicklung 21. 120 pp. Margraf Verlag, POB 195, D-97990 Weikersheim, Germany (margraf@compuserve.com).

Mexico, cover crops, farmer-to-farmer extension, indigenous knowledge, innovation, legumes, shifting cultivation, sustainable land management

Legume-based green manuring was successfully introduced elsewhere in

DESIGNING EXPERIMENTS WITH FARMERS

INTENDED LEARNING EFFECT

Trainees gain insight into how farmers can be supported in selecting topics for experimentation and deciding how they will carry out the experiments. This is achieved by means of 'learning-by-doing': the trainees are guided by a facilitator through the actual preparation and implementation of a design workshop with farmers.

CONTEXT OF APPLICATION OF THIS MODULE

CEOSS, a Coptic NGO, is implementing the Agro-Environmental Pilot Project in two villages in Minya Governate in Middle Egypt, with Dutch funding (NOVIB and ICCO). The project is testing the PTD approach. An initial PRA revealed that disposal of household wastewater and garbage was a major problem for the women, whereas male farmers gave high importance to reducing the cost of chemical fertilisers. Community discussions about the outcome of this PRA led to consensus to focus the project on garbage recycling and improved use of fertilisers.

The project began in January 1997 with a PTD training workshop for CEOSS staff. This included an experimental design workshop with one of the farmer groups which had agreed to work with the project. The design workshop was, at the same time, a learning experience for the CEOSS staff and the start-up of planning PTD experiments with farmers. The participants consisted of 8 CEOSS fieldstaff and coordinators, 10 farmers from the village of Sharoona, and a PTD facilitator.

LEARNING ARRANGEMENTS

The 3-day design workshop focused on the cluster of PTD activities called 'Looking for things to try'. The objective was to reach agreement between farmers and CEOSS staff about what to test in farmers' trials, by following these five steps:

1. Drawing resource flows for farm enterprises (resource flow diagrams)
2. Identifying problems and options to solve them (pair-wise ranking)
3. More detailed problem analysis (problem tree)
4. Options for farmers' experiments (ranking)
5. Experiment idea-sheets

This module was designed by Jean-Marie Diop from ETC and Peter Laban from ILEIA and given the title 'Participatory Identification of Problems and Options' (PIPO). The five steps in PIPO are given in the boxes on the next page.

HOW DID IT GO?

The resource flow diagrams were made by small groups of 2-3 farmers, who drew the inputs and outputs from one of their farm fields, using coloured pens on flip-chart paper on the floor in the CEOSS training centre (making these drawings in the field on the soil with all kinds of small materials was considered too childish). One farmer from each subgroup explained the diagram to all workshop participants, and used it to pinpoint the subgroup's main concerns in farming. In the following discussion, some farmers already proposed potential solutions (e.g. mixing chicken and cow manure for fertiliser).

In their daily assessment of the workshop process, the CEOSS staff and the farmers recognised pair-wise ranking of the farmers' main concerns as a very interesting exercise for prioritising problems. It did not take much longer to explain the problem tree to the farmers, although it was more difficult for those who could not read. Nevertheless, this was not a major obstacle and the farmers found that the tree was a useful way to see the hierarchy and logic in the problems. The CEOSS staff were impressed with how the tree brought out numerous reasons for farmers' actions, giving a much more complex picture than the initial view of the staff.

The farmers determined which of the causes in the problem tree could be tackled by them in the form of a trial in the next cropping season. They decided to test ways of reducing the use of chemical fertiliser by better use of manure and compost, and were helped to draw up an idea-sheet for this experiment. This PTD approach encouraged farmers to take a lead in the discussion, which they did very quickly. The facilitator urged CEOSS staff not to come in too soon with their own ideas for solutions. The staff later observed that this had been very important, as it led to the farmers' taking more responsibility for the experimental process afterwards.

Step 4 was not followed in great detail, as the initial ranking of the problems depicted in the tree was already enough to orient the choice of experiment. Once they had decided to test different combinations of fertilisers, the farmers entered into lively discussion on various aspects related to trial design, such as how large the sample plots should be, where they should be situated in their fields, and the need to compare old and new ways of

doing things. However, the 3 days were too short for deciding on the specific layout of the trials, the materials needed and the methods of monitoring. This was done in a follow-up meeting with the same group of farmers.

The initial 3-day workshop led to agreement between farmers and CEOSS about what they wanted to try out together, what they wanted to find out (the effects they hoped the new technology would bring), a general timetable for the experimentation, and the division of responsibilities between the farmers and CEOSS. The farmers considered the experiments as their own; they asked CEOSS only to provide some support in terms of external linkages and technical advice.

The experience of preparing and implementing the design workshop and evaluating the process enabled the CEOSS staff to continue discussion of trial design with these farmers and to carry out a series of experimental design workshops with other men's and women's groups. The staff members were open in their criticism of themselves and the external facilitator, e.g. they noted that farmers' attention had been drawn too quickly to compost-making. They concluded that they should pay more attention to various options in the discussions with farmers.

The experiment idea-sheet was very powerful in helping everyone come to conclusions; it basically served as an agreement among the farmers themselves and with CEOSS as to how to continue in the near future. It was obvious that the idea-sheet would need reviewing after the experiment had been designed in more detail, also with the advice of scientists. Only then can the questions about HOW and WHAT MATERIALS be fully answered.

Reports on the series of PTD workshops and the farmers' experiments can be obtained from Peter Laban, ILEIA, POB 64, NL-3830 AB Leusden, Netherlands (p.laban@ileia.nl) and Gamal Zakaria, CEOSS, POB 50, Minya, Egypt (g.zakaria@ceoss.org.eg).

References

- Lightfoot C, Noble R & Morales R. 1991. *Training resource book on a participatory method for modelling bioresource flows*. Manila: ICLARM.
- Little F & van de Geer L. 1995. *Participatory problem analysis in Objective Oriented Project Planning*. Course materials for 'Design of Community Forestry'. Wageningen: IAC.
- Veldhuizen L van, Waters-Bayer A & de Zeeuw H. 1997. *Developing technology with farmers: a trainer's guide for participatory learning*. London: ZED Books.

1 Drawing resource flows for farm enterprises

- Make field walks to farmers' activities and discuss all kinds of things related to these activities.
- Ask farmers to summarise main information about their farms in a drawing. Start with the main components of the farm (fields, well, irrigation canal, etc.). Avoid making the drawing yourself. The farmer is your teacher.
- Ask farmers to continue the drawing by identifying inputs and showing flows by arrows.
- Same as above, but now for outputs.

Source: Lightfoot et al. (1991)

2 Identifying problems and options

- Discuss the resource flow diagram and let farmers indicate bottlenecks.
- List the bottlenecks and determine priorities by means of ranking tools. Agree on the most important problem(s) to be tackled.
- For each of these problems, let farmers list relevant possibilities for improvement.
- Brainstorm on examples of farmers' experiments that relate to these problems and possibilities for improvement.

3 More detailed problem analysis

- Take one of the prioritised problems identified in Step 2.
- Make a list of causes and effects of this problem (on flipchart or using Metaplan cards).
- Start building a problem tree by showing the effects of the problem (this is often easier than starting with the causes).
- Same as above, but now for the causes.
- Discuss which of these causes can be tackled by farmers themselves.
- Agree on the cause to be addressed in farmers' experiments.

Source: Little & van de Geer (1995)

4 Options for farmers' experiments

- Consider the selected problem/cause and brainstorm on possible (also partial) solutions to this problem, starting first with those already tried out by some farmers.
- Do a ranking exercise to determine the most interesting options: first a pair-wise ranking to determine the criteria, then a matrix ranking using these criteria.
- Agree on potential solutions that can be tried out more systematically in farmers' experiments.
- Reconfirm the purpose of the farmers' experiments: What do we really want to find out?
- Brainstorm on farmers' and more scientific indicators to monitor and evaluate results of the farmers' experiments: relevance, viability and sustainability.

5 Experiment idea-sheets

Make sure that everyone agrees on the following:

Title of the experiment: (fill in at the end)

- WHAT will we try out?
- WHAT EFFECT(S) do we hope for? What do we want to find out?
- WHY is this important to us?
- HOW will we carry out this trial?
- WHO will do what? (division of responsibilities between farmers and project)
- WHO will try out the idea for us? The following farmers:
- WHEN will WHICH actions be taken?
- WHAT MATERIALS do we need?
- What are FARMERS' INDICATORS to monitor and evaluate the experiments?

Source: Veldhuizen et al. 1997, based on an idea by Ueli Scheuermeier, LBL

Central America, and appeared promising for overcoming the constraints of Mayan farming in Yucatan. A participatory analysis was made on the function and potential role of the minimum-tillage system within the traditional slash-and-burn farming. Local knowledge was identified and used in modifying and adapting the innovation. The methodological aspects of participatory innovation development are described in 4 phases - appraisal, convergence, experimentation and reflection - and considered within the context of a new actor network including *campesinos*, researchers and NGOs. A model for participatory innovation development and diffusion is outlined. The book is written in a format accessible to agricultural researchers and rural development workers.

Hagmann J, Chuma E, Connolly M & Murwira K. 1998. **Client-driven change and institutional reform in agricultural extension: an action learning experience from Zimbabwe.** *Agricultural Research and Extension Network Paper 78*. 13 pp. ODI, Portland House, Stag Place, London SW1E 5DP, UK (agren@odi.org.uk).

Zimbabwe, agricultural extension, farmer participation, innovation, institutionalisation, participatory approaches

Describes the development and institutionalisation of a participatory approach to innovation development and extension which took place through an action-learning process in Zimbabwe. The major conclusion is that such processes require far more than simply training staff in participatory methods, but need also commitment from all actors, sound strategies, flexible methodologies, a conducive atmosphere for learning, and a focus on human relationships.

ISPA. n.d. **ISPA Bulletin 3-9.**

Participatory extension series 1-7 (each 5-7 pp). Indo-Swiss Project Andhra Pradesh, VBRI Premises, Shantinagar, Hyderabad 500 028, India.

India, livestock, participatory diagnosis, participatory planning, training

Technical communications produced by the Indo-Swiss Project in Andhra Pradesh for their extension staff. The 7 bulletins, which deal in a very practical way with improving the performance of extension, cover the following topics: 1) Our farmers and their animals, 2) Participatory extension for livestock development, 3) Gender in livestock sector, 4) Communication in extension, 5) Participatory rural appraisal for

livestock development, 6) Management tools for livestock extension, and 7) Farmers training.

Katz E. 1998. **Towards community owned extension: observations on participation and other aspects from the Aga Khan Rural Support Programme in Pakistan.** 53 pp. Agricultural Advisory Service (LBL), CH-8315 Lindau, Switzerland (lbl@agri.ch).

Pakistan, agricultural extension, community development, gender, participatory approaches

Case study analysing the approach to participation applied by the AKRSP in Pakistan. Strong elements of the extension approach are the promotion of both Village and Women Organisations, the community-managed savings and credit programme, the physical infrastructure schemes, the strengthening of women's position, the concept of community-owned extensionists, and an atmosphere of trust built on transparency and accountability. Critical elements were the lack of regular PTD activities, confusion about role performance, existence of two parallel extension structures, equity issues and a high level of subsidy. A summary of this report can be found in LBL's *BeraterInnen News* 1/98: 21-27.

Loevinsohn M, Meijerink G & Salasya B. 1998. **Enhancing capacity to manage resources: assessing the Farmer Field School approach.** Paper presented at 2nd meeting of Integrated Pest Management Network for the Caribbean, CARDI/CTA, Kingston, Jamaica, 4-6 Feb. 1998. 7 pp. ISNAR, POB 93375, NL-2509 AJ The Hague, Netherlands (m.loevinsohn@cgnet.com).

Kenya, botanical pesticides, economic aspects, integrated pest management

An evaluation of the Farmer Field School (FFS) model as applied in Kenya's Coast and Central Provinces found that it permitted 'rediscovery' by farmers of principles known to scientists and other farmers, but was not well suited to 'discovery' situations where neither farmers nor others have answers to the problems. In such cases, there is a need for intensive participatory research, with greater concentration on experimentation, in order to develop suitable solutions. This does not happen in FFS with only a few non-replicated trials and only indirect links to research.

Marake MV, Prasad G, Mokuoane PM, Molumeli PA & Ntoanyane M. 1997.

Innovative Rural Action Learning Areas (IRALAs) in Lesotho: final report 55 pp. Institute of Southern African Studies, National University of Lesotho, P.O. Roma 180, Lesotho.

Lesotho, farmer innovation, indigenous knowledge, natural resource management, soil conservation

Report from the Environmental and Land Management Sector of the Southern African Development Community (SADC) on experiences with Innovative Rural Action Learning Areas. Lessons from successful cases of local-level land management by farmers and groups were discovered and disseminated to other farmers. Innovative farmers were brought together to tour and analyse selected cases. The farmers later presented their cases to development practitioners, researchers and policymakers at a national workshop. Brief descriptions of all 38 cases are included.

Mulleriyawa R & Backhaus C. 1997. **Participatory Technology Development as an approach to rural extension** Paper presented at the Workshop on PTD, Gannoruwa, September 1997. 13 pp. NWP Dry Zone Participatory Development Project, New Secretariat Building, Dambulla Road, Kurunegala, Sri Lanka.

Sri Lanka, agricultural extension, institutional development, participatory extension, training-and-visit

Reviews 6 approaches to rural extension followed in Sri Lanka, the last of which is PTD. Experiences with PTD within the country are presented not to promote this approach as the new overall extension approach in the country but to draw out major lessons that can be applied effectively in many ongoing efforts to arrive at more participatory extension.

Ooi PAC. 1998. **Farmer participation in IPM action research.** Paper for International Conference of IPM: Theory and Practice, Guangzhou, China, 15-20 June 1998. 12 pp. FAO Programme for Community IPM in Asia, 38B Jln. Jati Padang Raya, Pasar Minggu, Jakarta Selatan 12540, Indonesia (pacoipm@ibm.net). See also: **Dragonflies in rice fields.** Email list-server FPR-IPM-postmaster@cgnet.com on 30 March 1998.

Indonesia, farmer experimentation, farmer innovation, integrated pest management, rice

Action research is being developed as a follow-up to Integrated Pest Management (IPM) in rice. Three case

studies are presented on how farmers carried out research to better understand the rice ecosystem. The third case is also presented in the FPR-IPM listserver: the story of an innovative farmer who, after attending a Farmer Field School, used observation and experimentation designed to encourage dragonflies to stay in his rice fields and protect them from brown plant-hoppers. Now scientists are helping him collect data to validate his results.

Ooi PAC. 1996. **Experiences in educating rice farmers to understand biological control.** *Entomophaga* 41 (3/4): 375-85. FAO Programme for Community IPM in Asia, 38B Jln. Jati Padang Raya Pasar Minggu, Jakarta Selatan, Indonesia (pacoipm@ibm.net).

Asia, adult education, biological control, farmer experimentation, integrated pest management, rice

Describes personal experiences of educating rice farmers about biological control through farmers' own enquiry and experimentation, within the context of an IPM strategy to help farmers become better farm managers. The Farmer Field School curriculum is being developed to enable farmers to continue ecological studies and experimentation after FFS. As follow-up, trainers should be continuing to support farmer groups carrying out their own studies, where possible, in collaboration with national researchers.

Rivas Espinoza A & Zamora Gonzalez E. 1998. **The spirit of innovation - a key to the future: experience of the Campesino to Campesino program (PCaC) in the buffer zone of the BOSAWAS Reserve.** *Forests, Trees and People Newsletter* 35: 14-19. Swedish University of Agricultural Sciences, Box 7005, S-75007 Uppsala, Sweden (ftp.network@ibutv.slu.se).

Nicaragua, bufferzone management, cover plants, farmer innovation, farmer-to-farmer extension, tree products

The PCaC is trying to stem smallholder colonisation of a large rainforest reserve by addressing the cause of migration: decreasing soil fertility. Farmers are learning from other farmers how to test new crop combinations, including 'fertiliser beans' as cover crops. This stimulated innovation that has evolved into collection of forest seeds, community forest management and income generation from forest products.

Röling N & Wagemakers M (eds). 1998. **Facilitating sustainable agriculture: participatory learning and adaptive management in times of environmental uncertainty**. 318 pp. Cambridge: Cambridge University Press.

institutional aspects, policy, sustainable agriculture

Examines the implications of adopting more ecologically sound agricultural practices, at the level of both the individual farmers and large-scale agro-ecosystems. The emphasis is on human and social aspects, learning through participatory approaches, and appropriate institutional support and policy structure. Examples from around the world are given.

Scarborough V, Killough S, Johnson J & Farrington J (eds). 1997. **Farmer-led extension: concepts and practices**. 214 pp. ITP, 103-105 Southampton Row, London WC1B 4HH, UK.

farmer-to-farmer extension, natural resource management, participatory extension

Synthesis of an international workshop in the Philippines that brought together over 70 farmers, extensionists, managers and policymakers promoting farmer-led approaches to agricultural extension. The workshop distinguished between 1) farmer-to-farmer extension organised by farmers and 2) participatory extension aimed at involvement and influence of farmers but organised by government or NGOs. Farmer-to-farmer extension has potential especially when numerous interesting new technologies are available to spread and adapt, in a socio-political environment conducive to farmer-level solidarity, and when resources are available for the human resource development initially required. The second type of extension can be applied on a wider scale only if public-sector extension is prepared to give up part of its power and become responsive to farmers' interests and initiatives. As the case evidence presented from numerous countries follows the logic of the overall discussion, the analysis goes deeper than is usual in documents coming out of workshops.

Scherler C, Forster R, Karkoschka O & Kitz M (eds). 1998. **Beyond the tool kit: experiences with institutionalising participatory approaches of GTZ supported projects in rural areas**. 243 pp. Germany Agency for Technical Cooperation (GTZ), POB 5180, D-65726 Eschborn, Germany, Fax +49-6196-796109.

agricultural extension, institutionalisation, natural resource management, organisational development, participatory approaches, rural development

Twelve case studies of GTZ experiences in institutionalising participatory approaches (PA) to rural development. The articles deal with institutionalisation of PA in agricultural extension programmes (Sudan, Thailand) and in district development planning (Indonesia, Kenya, Ghana); participation in natural resource management at user group, village and intervillage level (northern and southern Burkina Faso); implications for support organisations of participation in community development (Tanzania, Philippines, North Africa); and participation and organisational development (Zimbabwe). Specifically PTD approaches are described in the Sudan and Zimbabwe cases. A French translation is being prepared.

Scheuermeier U, Zellweger T & Schmidt P. 1998. **Enhancing accountability by reversing the flow of funds: results of two think-tanking workshops illustrated with examples from the field**. *BeraterInnen News* 98/1: 8-15. LBL, CH-8315 Lindau, Switzerland (lbl@agri.ch).

Chile, Mali, South Africa, Uzbekistan, accountability, donors, funding, institutional development

Putting financial resources under the control of envisaged end-users will greatly enhance their opportunities to influence the agenda and the quality of the services provided. Various ways to realise this new perspective on participation were analysed in 2 workshops organised by LBL in Switzerland. In present practice, donors provide resources directly to service organisations, extension agencies or NGOs for their participatory development activities. In programmes in 4 countries, experiments are being made with alternative funding mechanisms. First lessons from these experiences underline the importance of ensuring that the funds are used according to their intentions and that end-users' capacity for financial management is developed. The presence of a functioning banking system seems to be a precondition to make this new approach work.

Schmidt P, Etienne C & Hurlimann M. 1997. **Participatory extension: insights from three agricultural development projects in Africa**. 120 pp. LBL, CH-8315 Lindau, Switzerland (lbl@agri.ch).

Guinea Conakry, Mali, Zimbabwe, institutional implications, participatory extension, policy

From the analysis of 3 agricultural development projects in Africa, this study tries to identify the main principles of effective participatory extension, as well as practical methods to implement this approach. Looking beyond the field implementation, the study also addresses the wider institutional context.

Schmidt P, Stiefel J & Hurlimann M. 1997. **Extension of complex issues: success factors in Integrated Pest Management**. 100 pp. LBL, CH-8315 Lindau, Switzerland (lbl@agri.ch).

Indonesia, Nicaragua, Pakistan, Philippines, Thailand, farmer experimentation, farmer-scientist interaction, farmer-to-farmer extension, integrated pest management, participatory extension, sustainable agriculture

It is frequently argued that strong farmer-extensionist interaction is necessary in efforts to achieve sustainable agriculture, especially in very diverse agro-ecological environments. The report looks at this by studying the experiences of 5 IPM programmes that were successful in their extension efforts in relatively complex situations. The cases include the widely published IPM programme in Indonesia, but also experiences of NGOs and the private sector. Based mostly on secondary information, the study is an interesting and systematic synthesis of recent experiences, paying attention to the exten-

sion approach itself, research dimensions and links, and institutional arrangements.

Selener D, Chenier J & Zelaya R. 1997. **Farmer-to-farmer extension: lessons from the field**. 140 pp. IIRR, AP 17-08-8494, Quito, Ecuador (daniel@iirr.ec.ec).

Ecuador, Mexico, Nicaragua, case studies, community development, farmer-to-farmer extension, farmer participation

Outcome of 2 workshops in Latin America, analysing field experiences of farmer promoters using the farmer-to-farmer extension approach. The first part of the book deals with design, organisation, implementation and coordination of agricultural projects led by farmer promoters. The second part gives 5 case studies from Ecuador, Mexico and Nicaragua.

Sutherland A, Martin A & Salmon J. 1998. **Recent experiences with participatory technology development in Africa: practitioners' review**. *Natural Resource Perspectives* 25. ODI, Portland House, Stag Place, London SW1E 5DP, UK. (nrp@odi.org.uk and <http://one.world.org/odi/>).

Africa, farmer experimentation, farmer groups, NGO-GO linkages, participatory research, policy, PPA, stakeholder analysis

AUDIOVISUALS

Learning together through participatory extension: a video on an approach developed in Zimbabwe. Producer/director John Riber, executive producer Jürgen Hagmann. 42 min. English. Media for Development Trust, 135 Union Ave, POB 6755, Harare, Zimbabwe, Fax +263-4-729066 (MFD@Mango.zw).

Zimbabwe, adult education, innovation, participatory extension, rural development

Shows the steps taken by a development agent in practising a participatory extension approach (PEA) with farmers in Zimbabwe. The agent and the farmers together learn and develop innovations in technical and social fields. The film can be used to create general awareness of PEA or as an aid in facilitating training/learning programmes for extension agents. A booklet describing the approach in detail and a training manual are also available.

Mweru Ebutala Bwesu: The lake is our bank, filmed by Rien Valk, Stug Videoprodukties, Het Nieuwe Land 8, POB 3011, NL-6802 DA Arnhem, Netherlands, Tel: +31-26 3510281; Fax: +31-26-3700357.

Zambia, fishery, natural resource management, stakeholder analysis

This video documentary on resource management of a Zambian fishery shows a typical social dilemma situation in which different actors have different views about the reasons behind the problem situation and especially about how to tackle it. Community-based management seems to be the best option.

Summarises the main results of a review undertaken by ODI and its partners of recent experiences with PTD in Africa. The 9 cases reviewed are funded by British development aid and focus on participatory research, rather than participatory extension. In a concise and accessible form, the paper presents main lessons and methodological and institutional recommendations. Targeting and selection of farmers or farmer groups for collaboration in the programmes was a major concern, in terms of both reaching the poorer households and representativeness of farmer collaborators for a larger section of the community. At the institutional level, projects are strongly recommended to look at the wider group of potential stakeholders in the PTD activities and to initiate specific activities to mobilise their involvement.

Walsum E van, Lanting M & Jangal J. 1998. **From peanuts to platforms: AME's approach to training NGOs in integrated watershed management.** 20 pp. AME Programme, ETC India, POB 7836, J.P. Nagar, Bangalore 560078, India (amebang@giasbg01.vsnl.net.in).

India, organisational development, sustainable agriculture, training, watershed management

Discusses the approach of the Agriculture Man Ecology (AME) Programme, which aims to help build the organisational capacities of NGOs and to contribute to the establishment of negotiation platforms of various interest groups in sustainable land use. AME works in Karnataka, Andhra Pradesh and Tamil Nadu States on the drought-prone Deccan Plateau of south India. The training approach starts with a concrete entry point, using PRA and PTD methods, and moves gradually into 'Stakeholder Concerted Action' in managing eco-systems.

Walter G, Wander M & Bollero G. 1997. **A farmer-centered approach to developing information for soil resource management: The Illinois Soil Quality Initiative.** *American Journal of Alternative Agriculture* 12 (2): 64-72.

USA, farmer-scientist interaction, information, participatory research, on-farm research, soil management

The Illinois Soil Quality Initiative is a multi-disciplinary initiative to develop soil quality and health indicators that can assist farmers in developing sustainable farming practices. Data on soil characteristics as used by 35 farmers

were gathered. Through conducting on-farm experiments the indicators were assessed by the participating farmers as to their accuracy and practicality. On this basis, farmers suggested strategies for communicating soil quality information and recommended new directions for research.

OTHER PUBLICATIONS

Diop JM. 1998. **Farmer experimental design workshop for LEINUTS project in Kenya: a low-potential-area case.** Paper prepared for ETC-NL Internal Workshop on the Farmer Experimental Design Process, 23 June 1998. 12 pp. ETC, POB 64, NL-3830 AB Leusden, Netherlands (jm.diop@etcnl.nl).

Kenya, on-farm experimentation, organic farming, soil fertility

Diop JM & Laban P. 1998. **Guidelines for farmer workshops to initiate the experimental design process, used in the CEOSS/NOVIB Agro-Environmental Pilot Project in Egypt.** Paper prepared for ETC-NL Internal Workshop on the Farmer Experimental Design Process, 23 June 1998. 3 pp. ETC, POB 64, NL-3830 AB Leusden, Netherlands (jm.diop@etcnl.nl).

Egypt, organic fertiliser, waste recycling, women's participation

Groot A. 1998. **Methods and techniques for participatory problem solving: a reference box.** Dept of Communication and Innovation Studies, Wageningen Agricultural University, Hollandseweg 1, NL-6706 KN Wageningen, Netherlands (Annemarie.groot@alg.vlk.wau.nl)

manual, participatory methods

Harmmeijer J. 1998. **Participatory evaluation of CARE small dam livelihood security project in selected communal areas in Bikita and Mwenezi Districts, Masvingo Province, Zimbabwe.** 10 pp. Joanne Harmmeijer, ETC Zimbabwe, 31 Hazel Rd, Mandara, Harare, Zimbabwe (secuntd@harare.iafrica.com).

Zimbabwe, common property management, equity, gender aspects, institutional aspects, participatory evaluation, participatory methods, visualisation, water management

Holland J & Blackburn J. 1998. **Whose voice? Participatory research and policy change.** 254

pp. ITP, 103-105 Southampton Row, London WC1B 4HH, UK.

Nepal, Gambia, Guinea, India, Jamaica, Madagascar, Pakistan, Scotland, Zambia, agricultural policy, case studies, poverty assessment, participatory research, PRA

Pantuliano S. 1998. **Participatory evaluation: the experience of ACORD Red Sea Hills Development Programme.** 13 pp. ACORD, Dean Bradley House, 52 Horseferry Rd, London SW1P 2AF, UK (acord@gn.apc.org).

Sudan, community development, equity, gender aspects, local organisation, natural resource management, participatory evaluation, pastoralism, methodology, sedentarisation, visualisation

Scoones I. 1997. **Replicating islands of success.** *Appropriate Technology* 24(3): 5-9.

Zimbabwe, food security, institutionalisation, participatory extension

Smith SE, Willms DG & Johnson NA (eds). **Nurtured by knowledge: learning to do participatory action research.** 281 pp. US\$ 25. IDRC, POB 8500, Ottawa K1G 3H9, Canada.

case studies, community development, knowledge systems, participatory action research, social change

World Bank. 1997. **Mali: a participatory approach to livestock development.** *Findings* 95. 4 pp. Knowledge, Information and Technology Center, Africa Region, World Bank, 1818 H St NW, Rm J5-171, Washington DC 20433, USA (pmohan@worldbank.org).

Mali, agropastoralism, livestock production, pastoralism, policymaking, PRA, stall fattening

NETWORKING

FARM, the Farmer-centred Agricultural Resource Management Programme working in 8 Asian countries, brings out bulletins on Farmer Field School Integrated Soil Management (FFS-ISM). Numbers 3 and 4, which appeared in 1998, describe how FFS led to Chinese farmers' independent experiments with new soil-management and tree-pruning practices, and how FFS in Thailand are designed to encourage farmers to learn from other farmers, as well as from ISM facilitators. The bulletins are free of charge. *Contact: FARM Programme Coordinator, FAO/RAP, 39 Maliwan Mansion, Phra Atit Road, Banglumppoo, Bangkok 10200, Thailand (famasias@ksc15.th.com).*

Honey Bee, the voice of creative farmers, artisans, pastoralists and other grassroots innovators, is now in its ninth year, and continues to bring examples of local innovation and experimentation. The latest issue of this newsletter includes information about how farmers deal with gram-pod borers, how women store seeds and how farmers have bred a new broad bean variety. *Available through: Anil Gupta, Editor, Honey Bee, Indian Institute of Management, Vastrapur, Ahmedabad 380 015, India (honeybee@iimahd.ernet.in).*

National Workshop on Participatory Technology Development. The Working Group on PTD in Sri Lanka organised a one-day workshop in September 1997 to create awareness about the PTD approach in various government agencies. The PTD approach was pioneered in the country by the members of the Working Group, which consists

TRAINING REPORT

Laban P. 1998. **3rd PTD/LEISA training workshop for the CEOSS agro-environmental pilot project in the Sharoona-Nassareya area, Middle Egypt.** Main report 29 pp. Annex 1 (Overhead sheets in English and Arabic) 39 pp. Annex 2 (Handouts) 24 pp. Coptical Evangelical Organization for Social Services, PO Box 50, El Minya, Egypt.

Report on PTD training facilitated by a member of ETC staff on behalf of NOVIB, for CEOSS, an NGO active in helping farmers solve agricultural and environmental problems. The training workshop was the third in a sequence. The report contains the workshop proceedings and covers the topics: farmer-to-farmer extension, sustaining the PTD process, and monitoring, recording and documenting the process. The overhead sheets in both English and Arabic languages are compiled in Annex 1 and the handouts in Annex 2. See also PTD Training Module in this issue of the *PTD Circular*.

of numerous bilateral projects and NGOs, working together often with government departments. The workshop reviewed the positive results obtained in the field; experienced farmers, men and women, played an important part in this. The workshop succeeded in widening the debate on PTD and its role in agricultural extension. A follow-up activity is planned for 1998, aimed at reaching the highest levels of agricultural policy-making. *Further information and workshop report: PMHE, PO Box 154, Kandy, Sri Lanka (pmhe@slt.lk).*

Natural Resource Management and Self-Help, a German project (NARMS/RMSH) that promoted participatory learning, recently came to a close, but their publications can still be bought. Examples are *Promoting participation and self-help in natural resource management* and *Process monitoring. Publications and list available from: Universum Verlagsanstalt, Postfach, D-65175 Wiesbaden, Germany (101353.1251@compuserve.com).*

PTD Pilot Projects in the Netherlands. The Dutch agency NOVEM, mandated to promote energy conservation in the Netherlands, has carried out 4 pilot projects in which farmers were encouraged to work with support agencies to monitor and review their energy consumption and develop ways to reduce it. A short paper (unfortunately in Dutch) summarises the main methodological lessons from these pilot schemes. *Contact: NOVEM-Agro, Attn: Constan Custers, POB 8242, NL-3503 RE Utrecht, Netherlands.*

ELECTRONIC NETWORKING

People interested in discussing the theory, methodology and practice of participatory approaches are in contact with each other by means of the following electronic discussion lists:

AGNET, set up by the Agricultural Research and Extension Network of the Overseas Development Institute, facilitates discussion around issues raised in their network papers. To join, send an email to agnet-request@odi.org.uk giving your name and email address.

FPR-IPM list, set up by the Systemwide Initiative for IPM of the Consultative Group for International Agricultural Research (CGIAR), provides a forum for people and institutions interested in fostering Farmer Participatory Research in Integrated Pest Management. To subscribe, send an email to listserv@cgnet.com with the message 'subscribe FPR-IPM'.

GP-NET, set up by USAID as a Global Participation Network enables development practitioners world-wide to discuss their experiences in applying participatory approaches. For information about how to subscribe, contact Chanya Charles (ccharles@aed.org).

NRMgroup-PRGA list, set up by the Systemwide Initiative on Participatory Research and Gender Analysis of CGIAR, aims at evolving creative participatory methods of research by drawing on the experiences of NGOs, scientists and farmers and by facilitating communication between these actors. Membership is based on invitation, but all who are actively concerned with NRM issues are welcome to join. Contact Brij Kothari (brij@iimahd.ernet.in).

PARTalk, set up by the Participatory Action Research Network at Cornell University, USA, provides a forum for discussion of experiences with stakeholder participation, action for positive social change, and research to help those affected make better decisions. For information about how to subscribe, contact Carla Shafer (CS13@cornell.edu or listproc@cornell.edu).

PRA Discussion List, set up by the University of Guelph, is devoted to participatory community development. To subscribe, send an email to listserv@uoguelph with the message 'subscribe PRA' and your name.

PTD list, set up by the St Ulrich Group, is open to all who are interested in discussing issues of Participatory Technology Development. To subscribe, send an email to ptd-l@etcnl.nl with the message '%subscribe'.

For those who want to browse and gather, here are some web addresses of sites dealing with participatory research and development:

Electronic Development and Environment System (ELDIS):
<http://www.ids.ac.uk/eldis/eldis.html>
Manual on Publication Participation in Environmental Decisionmaking:
<http://www.rec.org/REC/Publications/PPManual/cover.html>
Participatory Action Research:
<http://www.parnet.org/home.cfm>
Participatory Initiatives:
<http://tdg.uoguelph.ca>
Resource Centre for Participatory Learning and Action:
<http://www.iied.org/resource/>
World Bank Participation Sourcebook:
<http://www.worldbank.org/html/edi/sourcebook/sbhome.htm>

Many organisation that deal with PTD issues can be found in the OneWorld web site (<http://www.oneworld.org>). These include IIED, ILEIA, ODI, Oxfam etc.

We are not particularly well informed about French-language electronic discussion lists and web sites devoted to participatory approaches. However, ***Naviguer sur Internet: Guide des ressources consacrées au développement rural en Afrique*** gives francophone readers a good overview of sources (both French and English) of electronic information on rural development in Africa. Available in both printed and electronic form from: Inter-Réseaux Développement Rural, 32 rue le Peletier, F-75009 Paris, France, Fax +33-1-42465424 (intereso@imaginet.fr).



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PTD Circular Six-monthly update on Participatory Technology Development Number 9, August 1998

The aim of this circular is to make documented experiences on Participatory Technology Development (PTD) in Low-External-Input and Sustainable Agriculture (LEISA) known to a wider audience, especially people working in the field. This circular hopes to bridge the information gap by letting people know about recent publications, workshops, training activities and audiovisuals on PTD.

Documents mentioned have either been published recently, or have recently come to our attention. If you have new information in the field of PTD, please let us know, mentioning the source, and send us a copy.

Documents mentioned in this circular should be ordered directly from the source. If no source is given, photocopies are available from ILEIA at cost price.

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