



**Report of the Final Workshop
Of the Pilot Project
“From Web to Field to Web”
Integrating internet-based information into agricultural
training and extension services and information
management systems for smallholder farmers
3 – 7 October 2006, Thika, Kenya**



Pesticide Action Network Germany (PAN Germany)
Hamburg, December 2006

Pesticide Action Network (PAN)

Founded in 1982, the Pesticide Action Network is an international coalition of over 600 citizens groups in more than 60 countries, working to oppose the misuse of pesticides and to promote sustainable agriculture and ecologically sound pest management.

PAN Germany was established in 1984 as part of this global network and has continually been involved in initiatives to reduce the use of hazardous pesticides and to promote sustainable pest management systems on a national, European and global level.

Acknowledgement

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We also thank Agromisa for their financial support.

Impressum

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Abbreviations

AIC	Agricultural Information Center
ALIN-EA	Arid Lands Information Network East Africa
CBO	Community-Based Organisations
FF	Focal Farmers
FFS	Farmer Field School
FORMAT Kenya	Forum for Organic Resource Management and Agricultural Technologies
FRC	Farmer Resource Centre
GOK	Government of Kenya
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
ICT	Information and Communication Technology
ICIPE	International Centre for Insect Physiology and Ecology
IFOAM	International Federation of Organic Agriculture Movement
ILEIA	Information on Low External Input and Sustainable Agriculture
IP	Implementing partner
IPM	Integrated Pest Management
IPM-FFS	Integrated Pest Management-Farmer Field Schools
IRC	Institutional Resource Center
JKUAT	Jomo Kenyatta University of Agriculture and Technology
KARI	Kenya Agriculture Research Institute
KIOF	Kenya Institute of Organic Farming
M & E	Monitoring and Evaluation
NALEP	National Agriculture and Livestock Extension Programme
NARO	National Agriculture Research Organisation
NOC	Network Operations Centrex
OKN	Open Knowledge Network
OISAT	Online Service on Non-Chemical Pest Management
PAN	Pesticide Action Network
PELUM	Participatory Landuse Management
PPMD	Plant Pest Management Database
SEA	Safe Environment Association
SIDA	Swedish International Development Cooperation Agency
TOT	Training of Trainers
UMADEP	Uluguru Mountains Agricultural Development Project
WOUGNET	Women of Uganda Network

1. Organisation and objectives

The International Workshop “From Web to Field to Web” was organized by PAN Germany in cooperation with PELUM Kenya. The workshop programme was developed by PAN Germany. Collaborating partners of PAN Germany in the implementation of the workshop have been PELUM Kenya and ICIPE (International Center for Insect Physiology and Ecology). Misereor, IPMEurope and CTA (Technical Centre for Agricultural and Rural Cooperation) provided financial support. The Workshop took place at the conference facility of ICIPE, Nairobi/Kenya. PELUM Kenya, based in Thika, was the local counterpart and organized the local logistics.

The goals of this workshop were to come up with a comprehensive understanding of an effective and efficient information flow “From Web to Field to Web”, the fine-tuning of the parameters and factors which are significant for the adoption of OISAT *Info* by training and extension services, the determination of contributions of the workshop participants towards gaining additional insights into the factors determining the adoption of OISAT *Info* and how that could be put into practice, and the strategization of the next steps towards the dissemination of OISAT *Info* through a network-based approach.

In line with the goals, the workshop was set out to achieve the following results:

- The technical infrastructure, equipment, and costs are analysed, evaluated and recommendations drawn.
- The process of managing an internet-based information resource centre is analysed, evaluated and recommendations drawn.
- The process of field validation for the testing of internet-based technical information (from OISAT *Info*) is analysed, evaluated and recommendations drawn.
- The process of documentation, farmer evaluation and identification of best practices to be fed back to OISAT *Info* is analysed, evaluated and recommendations drawn.
- The factors for applicability and usefulness of internet-based information for farmers are identified.

2. Participants

The workshop was attended by 37 participants. From the five pilot project partners 21 persons attended the workshop, 3 strategically selected participants came from the neighbouring countries Ethiopia, Uganda and Zambia, one participant was from the donor Agromisa, one participant was from PAN Asia-Pacific where OISAT will be promoted next through their network and three participants were from PAN-Germany. A complete list of participants is given in Annex 1.

3. Workshop Strategy

Apart from the representative of PAN Asia & Pacific and the donor Agromisa all participants of the workshop have been involved in various ways in the pilot project. Key actors have been the collaborating partners and focal farmers as they are representing typical users of OISAT *Info*.

Using the framework of the preparatory workshop at SACDEP in March 2005, the available project documents, the documents for the final workshop and the field visits by the workshop participants, the parameters for a successful implementation of OISAT among agricultural training and extension services have been examined and recommendations have been

said: Africa has been left out of many revolutions, therefore we must take care that we are not left out of the internet revolution.

The Ministry of Agriculture as a major player in the generation of extension and delivery of extension messages/information is taking positive steps to participate in the development of web-based information systems. Having recognized the critical shortage of manpower in the agricultural extension, it has employed over 300 young graduates to take charge of the new extension programmes. Most of them have been deployed in the divisions. The Ministry has identified the divisions as the focal areas of its extension services. It is the aim of the Ministry to equip all divisions with computers and where there is no electricity generators have already been purchased. The Ministry has also embarked on the revitalization of Agricultural Training Centres and now several of them have already been provided with laptops in order to bring electronic information closer to the farmers. One of the disappointing factors, however, is the poor internet infrastructure even in some of the major town.

I wish to thank the organisers PELUM Kenya, in collaboration with PAN Germany and Agromisa for their efforts and dedication in organising this workshop. I wish to extend my gratitude for all the participating institutions and hope that the participants will come up with a workable plan of action and other recommendations. I hereby declare this workshop open.

5. Introduction, key areas, workshop process and programme

by Dr. Gabriele Stoll, PAN-Germany

To begin with, I would like to recall the purpose of the pilot project, as it was defined in the project proposal.

Purpose of the pilot project

“Through the pilot project, the OISAT dissemination and the conditions for the adoption of the non-chemical pest management practices by poor farmers, illiterate farmers and women farmers, will be field-tested.

As a result of the pilot project, the principles and methodology of integrating OISAT *Info* successfully into training and extension services is understood and can then be promoted to other training and extension services and networks in the subsequent dissemination phase.”

Key areas of the pilot project as defined at the preparatory workshop in March 2005

- Training (PC, OISAT, Pest identification)
- OISAT information retrieval
- Field validation, documentation and feeding back to OISAT
- Repackaging of information
- Exchange and communication
- Stimulate community process
- Dissemination

Process of final workshop

1. Looking back
Inputs of all collaborating partners => Analysis through 4 WGs=> Recommendations
2. Field visit
Seeing => Interacting => Working groups => Recommendations
3. Looking forward
Key learning points => Larger future context
 - a. PAN-Germany/OISAT *Info*
 - b. OISAT Process among users in Kenya and beyond

6. Presentations by the collaborating partners

6.1 Introduction on the overall pilot project process

by Zachary Makanya, PELUM Kenya

6.1.1 History and Processes

International workshop in March 2004

PAN Germany organized a workshop at ICRAF, Nairobi/Kenya together with CABI ARC Nairobi/Kenya with the following objectives:

- Introduction of OISAT *Info* to representative users.
- Receive recommendations from the participants prior to finalization of the OISAT database to suit to the needs of the users.
- Initiate the establishment of an informal OISAT PartnerNetwork.
- Explore collaboration in the dissemination of OISAT *Info* among agricultural training and extension providers.

Key outcomes of this workshop were:

- Develop an OISAT user manual.
- Implement a pilot project for field-testing OISAT *Info*.
- Organize a preparatory regional workshop in Kenya.
- Clarify positioning of OISAT.
- Provide full text documents / cases of non-chemical pest management practices.
- Promotion of OISAT.
- Work through existing training and extension networks.
- Consider sustainability.

Regional workshop in March 2005

This second workshop was held in Kenya in March 2005 at ICIPE, Nairobi/Kenya with the following objectives:

- To fine-tune the design and approach of the pilot project for the integration of OISAT *Info* into the training and extension services of the collaborating partner organisations.
- To formulate methodologies and approaches on the pilot field testing of OISAT *Info* and on how to feed back the results from the field experiences to the OISAT database.
- To develop strategies for the larger dissemination based on the key factors to be identified during the pilot project.

OISAT partners in Kenya

1. Overall project managers. PAN Germany
2. Coordinating partner in Kenya: PELUM Kenya
3. Implementing partners:
 - SACDEP Kenya
 - ALIN EA
 - SACRED Africa
 - KIOF

Characterization of the project partners

1. Coordinating partner
 - needs to be a stable organisation with an extensive contact network for dissemination.
 - should be centrally located and accessible.
 - should be experienced in a variety of networking tools.
2. Implementing partners
 - should be experienced in working with grassroot groups and project implementation.
 - should have an effective agricultural information and extension programme and service.
 - should be able to mainstream OISAT into its existing extension programme.

6.1.2 The OISAT Pilot Project

Key funding partners and activities funded

- Misereor through PAN Germany (Ksh 1.370.000), mainly for the purchase of equipment.
- Bread for the World (Ksh 5.073 300).
- Agromisa (Ksh 1.350 000) for pre-workshop activities, dissemination forums and the final workshop.

Summary of the budget allocation (Ksh)

	PAN Germany	Bread for the World (1)	Bread for the World (2)	Agromisa	Total (Ksh)
SACDEP	312.500	866.520	140.875	0	1.319.895
KIOF	312.500	866.520	140.875	0	1.319.895
ALIN-EA	312.500	866.520	140.875	0	1.319.895
SACRED-Africa	312.500	866.520	140.875	0	1.319.895
PEUM-Kenya	120.000	836.220	140.875	1.350.000	2.513.720
Total Ksh	1.370.00	4.302.300	771.000	1.350.000	7.793.300

6.2.3 Training conducted

Type	No. of villages	FF. No. trained	CF. No. trained	Observations and Recommendations
Computer	4	7	27	
OISAT <i>Info</i>	4	7	40	Focus was the introduction on ICTs, practice use of computers, use of CD-ROMs, info mapping – local info access and communication systems etc. During ICT workshop, Kyuso did not have Safaricom network- hence NO lessons on accessing Internet
OKN Installation and Networking Workshop		7	20	Participants included local leaders, extension staff and farmers. Use of GPRS was launched, however, one has to travel 60 km to access the Safaricom network.

6.2.4 Outreach

Type of outreach	No of contacts
Information open day and FRC launch	> 200 visitors attended
Type of visitors: MOA staff from the district and divisions, students, teachers, local farmers, NGO representatives	> 1300 have been recorded

6.2.5 OISAT information repackaged

Type of repackaging	Assessment
5 major articles and publications	Mostly done at the IRC which is well equipped to generate, analyse and document field activities
Reproducing and distributing of OISAT CD-Roms	The IRC reproduced more OISAT <i>Info</i> CDs and distributed to 10 local development organizations upon request after they red published articles on OISAT <i>Info</i> .
Local traditional songs	The Kyuso farmers formulated traditional songs during the FRC launch.
Radio programmes	In collaboration with the Agricultural Information Centre, the Kyuso 4 th farmers forum was featured in the national channel KBC radio, SIKIO LA MKULIMA 'The farmers Ear'. This programme helped to spread OISAT news nationally as many farmers listen to this programme to get farming tips. There was also overwhelming feedback from local communities and more visitors went to the centre for info.

B. Conclusions and recommendations

6.2.6 Lessons learnt and observations

Staff and institutions

- Team spirit and partnerships among NGOs, government, local leaders and communities is critical for successful implementation of any project.
- The Kyuso info centre serves a wider community whose info needs are quite varied (farmers, students, teachers, extension staff, local leaders etc).
- Farmer Field Schools are an important vehicle for the diffusion from farmer to farmer.

Farmers

- Need for farmers to plan pest management right from the planting time and incorporate preventive measures.
- OISAT *Info* is practical, cheap and easy to use by farmers.
- Farmers are willing to pay for services that can enable them reduce costs of production at farm level which contributes to the financial sustainability of the FRC.
- Use of a local resource person (FRCA) was advantageous for farmers because they communicated OISAT *Info* in their local language.
- The selection of FF who play other roles in society supported the dissemination because they command respect by the communities.
- The choice of Kyuso for the project was strategic in that farmers are 'info thirsty' and marginalized. This FRC is central and easily accessible by the community.
- There is enthusiasm among young farmers to learn ICTs and also to use OISAT *Info* at schools and homes.

Community

- Farmers confidence in the use of OISAT *Info* and the open sharing of other ITK technologies among them contribute to stimulate the OISAT project.
- Repackaging information for radio programmes is very effective and reaches a large number of people.
- The use of a multimedia approach disseminates information to people at different levels. For example the article that appeared in the STD newspaper was useful for the communication with various stakeholders.

Others

- The installation of solar energy offers a good source of power in remote regions where there is a lack of access to the Safaricom network. In addition to powering the ICT equipment, solar energy is also used for lighting at night, charging mobile phones etc.

6.2.7 Difficulties encountered

- Severe prolonged drought.
- Fluctuating Safaricom network – GPRS only works where network is strong.
- Solar inverter had to be changed.
- Poor rural communication infrastructure.
- The costs of some project materials were higher and some items like info repackaging were not budgeted.
- A project of this magnitude needs more staff time for follow up, experimentation, documentation, monitoring etc.

- Short pilot timeframe.
- Emerging pests like “ngetani” need research. Unavailability of some recommended materials. Making formulations takes time. Some farmers are impatient and don't wait for the solutions to mature. They prefer a quick preparation and immediate results.

6.2.8 Impact

a. Staff and institutions

- Improved staff capacities, specifically on ICT, pest management and networking.
- The FRC acquired appropriate equipment, solar energy, ICT etc., which made staff work easier.
- Access to rich and practical database of pest management info raises the competency and service of staff and organisation.
- Increased human capacity at the divisional level – FRCA and community volunteer.

b. Farmers

- Increased farmers competencies in pest management, ICTs and documentation of local knowledge.
- Farmers have decreased production costs to produce healthy food.

c. Community

- Increased collaboration and confidence in the implementation of joint projects involving international agencies, NGOs, government and communities.

d. Other

- OISAT *Info* supports environmentally friendly agricultural production.

6.2.9 Challenges

Farmers

- The preparing of formulations takes time and is tedious. Most farmers prefer quick preparations and prompt results and are therefore impatient with the recommended formulation procedures. However, the cost reduction is encouraging.
- The health benefits also give more drive in preparing the formulations.
- In order to benefit from the recommended cultural practices and preventive crop pest management practices, farmers should adapt their workplan right from the planting time to achieve best possible pest prevention.
- Farmers are willing to pay for OISAT information services as they can see that the use of OISAT practices can reduce production costs. This contributes to the sustainability of the OISAT approach.

OISAT

- OISAT *Info* is practical, cheap and easy to use by farmers.
- Repackaging OISAT information for radio programmes was very effective in reaching a large number of potential users.

FRC

- Team spirit and partnerships among NGOs, government, local leaders and communities is critical for successful implementation of any project.
- The Kyuso Info Centre is used by a diverse spectrum of users with varied information needs, specifically farmers, students, teachers, extension staff, local leaders etc.
- Involving local resource person, specifically the FRCA was advantageous, because they contributed translating OISAT information into local languages.
- The selection of focal farmers who are respected by the community because of their engagement in other local social functions proved useful.
- The choice of Kyuso as a location for the FRC was a good decision because the farmers in that area are marginalized and information thirsty. The FRC is centrally located and easily accessible by the community.
- The multimedia approach pursued disseminates information to people at different levels. For example the article that appeared in STD newspaper attracted the attention of representatives from various organisations.
- Farmer Field Schools (FFS) are an important vehicle for the diffusion of OISAT from farmer to farmer.
- The installation of solar energy offers a good source of power in remote regions where there is lack of grid. In addition to powering the ICT equipment, the solar is also used for lighting at night, charging mobile phones etc.

6.2.10 Recommendations

The following recommendations were suggested by ALIN EA:

OISAT Info

- More time should be given to capacity building, especially for farmers.
- Information on storage and livestock pests and their control should be added.
- The documentation of field validation should be improved and simplified as there are many simple ways of capturing farmers experiences. Farmers themselves need competencies in this area so that they can fully participate.

Equipment

- The installation of solar energy equipment should be accompanied by maintenance training or the provision of a manual. The inverter should be identified very carefully.
- A photocopier can contribute to reduce printing costs.

Others

- Recognition of all stakeholders at all levels is important. In most cases farmers are forgotten by organisations.
- Exchange visits should be encouraged among farmers to stimulate the information flow among the users.

6.3 Report of KIOF

by Shem Mecheo

A. Presentation of facts and achievements

6.3.1 Assessment of the location for access to internet/OISAT

Parameters	FRC/CLRC	IRC
Type of visitor	Farmers, agricultural extension staff, government officials e.g. D.A.O, local administrators (chief, ass. chiefs), students, primary school pupils.	Students, agricultural extension staff, trainers.
Physical access	Easily accessible to farmers and community members.	IRC easily accessible.
Provision with power and internet access	The FRC is located in a quite remote area away from public power and telephone lines.	Reliably supplied with power and internet access.
Recommendation	The FRC should remain in its current locality from where it can serve very well the surrounding community.	The IRC should also remain at its current location. It acts as a suitable backup resource centre.

6.3.2 Technical equipment for accessing the internet / OISAT

Parameters	Observations	Recommendations
Access to the internet.	Connectivity and access were good. Internet network worked well.	More solar panels could be added.
Equipment/ Hardware	IRC and FRC were adequately equipped.	
Cost	Budget was adequate.	Pay-based system should be explored.
Stability of set-up	Security was problematic.	Security has been increased through a 24h guard service.

6.3.3 Training conducted

Type	No. of villages	FF. No. trained	CF. No. trained	Observations and Recommendations
Computer	4	7	27	Farmers are highly interested Farmers need time to learn Training needs more computers
OISAT	4	7	27	Farmers very interested in OISAT information Some methods take time and are tedious OISAT information dissemination should proceed and be scaled up.

6.4 Report of SACDEP

by Anne Wanja Murangiri

A. Presentation of facts and achievements

6.4.1 Assessment of the location for access to internet/OISAT

Parameters	FRC/CLRC	IRC
Type of visitor	Farmers, agricultural extension staff, government officials e.g. D.A.O, local administrators (chief, ass. chiefs), students, primary school pupils, business people from the shopping centre, others.	Same as FRC/CLRC.
Duration of visit Timing of visit (when do visitors typically search for information)	Mainly took a minimum of two hours. Mostly in the evening just before dusk. Before the rains/planting.	One visit took about half an hour. Frequency of visits was higher than at the FRC.
Characterization and services of location	Easy access and high number of visitors Sale of mosquito nets for income generation.	Staff at IRC can always attend to visitors. Synergy through cross-interest of visitors.
Advantages	Security ensured (police station) located near main road. Farmers live nearby. High attractivity because it is innovative.	High frequency of visitors. Electricity and internet connectivity were good. Comprehensive information beyond OISAT available at the IRC.
Disadvantages	Lack of power	-
Recommendation	FRC to be maintained in its locality so that it can be of help to the surrounding community	IRC also to be maintained as it is very helpful in repackaging and also as backup resource centre.

6.4.2 Technical equipment for accessing the internet / OISAT

Parameters	Observations	Recommendations
Access to the internet	IRC and FRC are adequately equipped Was on and off due to Safaricom booster at the district. In most occasions the farmers used the CD.	Inverter was not stable. Power was often down during rains. Maintenance of equipment should be taken into consideration.
Equipment/Hardware	Easy to operate but functional inverter was not stable. Power was often down during rain. Mouse had to be replaced.	Training on managing of solar power system is needed.
Cost	Farmers are able to contribute to the running costs.	Pay-based system should be used from the beginning.
Stability of set-up	No major problems observed as technical experts were available.	Technical expert should be near the reach of the farmer's learning centre to cut down maintenance costs.

6.4.3 Training conducted

Type	No. of villages	FF. No. trained	CF. No. trained	Others trained	Observations and Recommendations
Computer	4	7	30	21	Farmers are highly interested. Youth was very eager to learn. Training needs more computers. Introduction needs time and repetitions because everything is new. Solar power breakdown and low boosters prevented access to internet sometimes.
OISAT	4	7	160	36 youth 30 business people	Enthusiasm and interest in practical use. Training time was rather short. OISAT should include the use of local pest-controlling plants, which are familiar to the farmers. Use of OISAT in many local languages.
Insect identification	2	7	55		Concept of pests and beneficials should precede the training, if possible work with translation. Farmers proved able to identify insect pests. Some farmers were colour-blind which made the pest identification difficult. Pest and beneficial training should be continuous. Children and employees of farmers should also be trained.

6.4.4 Outreach – Farmer Sharing Forum

Type	No. of villages	FF. No. involved	CF. No. involved	Observations and Recommendations
Meeting 1	2	7	35	Farmers used the FSF to actively share their know how and experiences regarding OISAT and pest management. The FSF meetings were a good platform for themes beyond OISAT, including the sharing of existential fears (drought). Farmers used the opportunity for trading which contributed to their income generation. Sharing and trading could be included more systematically to enhance impact.

6.5.2 Technical equipment for accessing the internet/OISAT Info

Parameters	Observations	Recommendations
Access to the internet	Very unstable access especially at the FRC.	Switch to the use of gadgets that give stable access.
Equipment/ Hardware	The equipment chosen was functional.	Regular maintenance to avoid deterioration.
Cost	Cost of purchase of equipment difficult for FRC, but affordable for IRC.	Regular maintenance to avoid deterioration.
Stability of set-up	Physical set up was stable. Internet access was unstable.	Switch to use of gadgets that give stable access.

6.5.3 Trainings conducted

Type	No. of villages	FF. No. trained	CF. No. trained	Observations and Recommendations
Computer	8	4	7	IRC trained the FRC assistant on computer use. IRC supervised FRC assistant train the 4 FF. FRC continues to train more of its members on computer usage (4 more farmers trained). FRC also trains non-members on computer usage (7 CF trained).
OISAT	8	4	25	FF plus an entire group of 25 farmers was trained on the use of OISAT by using the OISAT CD-Rom as the internet access was unreliable. CFs were usually trained by hand outs made from requested portions of the CD.
Insect identification		35		<ul style="list-style-type: none"> ▪ Workshop was facilitated by an entomologist (Dr. Ogema). ▪ Participants went through their farms collecting insects/pests. ▪ These were then gathered, classified & described. ▪ This training should be a continuous process. ▪ The most common pests were aphids, caterpillars, rats, stem borers, flies, locusts & cut worms.

6.5.4 Outreach

Type of outreach at FRC -1-	No of contacts
People seeking information during pilot project. Particularly farmers, extension workers, administrators and business.	> 470
Major field days. The field days exhibited the OISAT technology and other related technologies.	468
Ministry of Agriculture and the provincial administration staff occasionally visit the FRC to get information on OISAT and also to help the group with other technical information based on their field experience. The local MOA extension visits the FRC almost daily.	7

Type of outreach at FRC -2-	No of contacts
NGO workers, Researchers, Students, Farmers	Over 200 reached either by going to them or them coming to FRC
Farmer Forum Farmer forums done during the regular groups monthly meetings. These have gone on since the beginning of this year 2006	Average of 35 participants per monthly meeting

6.5.5 OISAT information repackaged

Type of repackaging	Assessment please give your assessment of the affectivity and costs etc. from each of these re-packaging methods
Print-outs from OISAT Website and CD for farmer training	These are quite effective as the information once printed is readily available. It is cheap since many users can share one copy. However it is limited in that only small portions of the entire information can be printed at a time and it does not take care of updates.
Videos	Enhances the understanding of the listeners as they both listen and watch. However the cost of production is high and needs specialised gadgets for the presentation.
Publishing of OISAT information in local magazines, newsletters and brochures	Can attain very wide distribution and since they are produced regularly can take care of updates. However, the costs can be considerable.
Mass media	Mass media reach a large audience in very short time. Updates can quickly be communicated via radio, TV and newspapers. However, it is impossible to keep track of the impact.
Farmer to farmer	This is the most appropriate method for learning as there is interaction between the teacher farmer and the student farmer. This methods achieves the highest adoption rate. However, it is very slow and will take a long time to reach the same number of farmers reached using the above methods.

6.5.6 Field experimentation conducted

Names of villages	No. of farmers	Key crops/ key pests	Control method tested	Key results
Khachonge Lwanda Lurende Nalondo Chwele Musese Bokoli	25	Maize - Borer Beans - Maggot Kales - Aphids Cow peas - Aphids	Ash Rotation Chillies/ Garlic	Very effective but tedious. Works well when right crops are used in rotation. Effective, but the preparation is cumbersome, specifically irritating the skin.

B. Conclusions and recommendations

6.5.12 Conclusions

OISAT is a noble approach to environmental friendly pest management and at all cost should be effectively taken down to the current FRCs/IRCs, then replicated to as many other areas as possible as it is also an effective production cost reduction approach. More time and resources should be given to stabilise the approach in the communities and to validate the OISAT practices.

Discussion

On the issue of politicians and policy makers, it was put forward that they should be involved.

Inform the MOA officially about OISAT as this is the way how the information can be taken up by the MOA. In this way the dissemination of OISAT at national level can be assured.

Gabriele said that they tried to invite MOA representatives. There is a need to contact them directly, particularly now that certain issues of common interest (KTI, validation, etc) came up in this workshop.

Jane Kahithe Ndung'u of MOA was to facilitate the OISAT introduction to the MOA office in charge.

Q. Gabriele asked what kind of contact between PAN Germany and the IP shall exist in the future.

A. The contact should be organised as during the pilot project through the coordinating partner, PELUM Kenya.

Q. How can pest problems be solved which are not addressed in OISAT?

A. This can be solved with the help of local organisation and research centres like ICIPE. Also, Universities can be approached for insect identification. This can be facilitated by MOA.

Gabriele said it would be good to establish linkages with expert services and support institution (e.g. who can be approached) and which are outside of OISAT.

7. General Observation of Farmers

7.1 Simon Kariuki, FF KIOF

The pilot project has been of importance because it makes information more readily available in the community. Many materials required by OISAT concoctions are available in the community, such as urine and ash. Tested formulations are effective to protect tomatoes.

When comparing conventional farming and ecological farming using OISAT methods, the ones practising ecological agriculture benefit more because the expenses are less and the yield is higher.

Farmers request that the project should continue. They also propose that information on animal husbandry/livestock should be integrated in the OISAT database.

7.2 Celestine Simiyu, FF SACRED-Africa

There are 32 major crops in the community, but in the OISAT pilot project, they focused on 5 crops only (banana, sugar cane, maize, vegetables, coffee). The major pests are caterpillars, banana weevils, moles, etc.

Some of the OISAT methods used are tomato leaves against coffee pests. Human urine was used as fungicide. Jewel warned the group that there are limitations in using urine (e.g. should not use urine from animals taking antibiotics, etc.).

Accessing the Internet to enter OISAT is expensive, thus, information was downloaded from the internet café. Using of CD is also useful.

7.3 Florence Gitau, FF SACDEP

The FRC in Kaihundu opens Monday-Friday. When the community inhabitants come to the centre to charge their phones, OISAT is also introduced to them.

Most of the plants used for concoctions grow in the community.

She mentioned the common pest problems in their major crops coffee and maize, and informed on the concoctions which were used as curative measures during the pilot project. Also bar-soap mixed with water proved to be an effective curative measure.

Eyesight problems due to age and illiteracy were observed to be the major difficulties during the pilot project.

Yields are higher. OISAT costs nothing, only labour. Preparing the concoctions is not too laborious.

7.4 Julius Mwonga Matei, FF Kyuso/ALIN

FRC is not connected to the internet, instead they use CD Roms.

Julius Matei mentioned the common pests in the area and that the concoctions proposed in the OISAT database controlled insect pests satisfactorily. However, for some insect pests no control measures are included in the OISAT database yet.

Economically seen, the cost of production was lower than before, while at the same time, the yield did not decrease. Therefore, OISAT contributes to increase the income from the yield.

The FRC was well used, especially during the rainy season.

Preparing chilli concoctions is causing irritations.

Some formulations take time to prepare, especially when large farms had to be sprayed.

In the FRC, if farmers come and ask for information, they download information from the CD, print and give it to them.

8. Working Groups “Assessment of the Pilot Project”

Four working groups have reflected and elaborated on four key thematic areas of the pilot project. The basis for the parameters to be discussed under these four thematic areas are the objectives of the pilot project. To recall them, they are summarized below:

Gender aspects

Regarding the gender perspective, men visited the centres in search for OISAT information more often in most centres. Women do more the practical work in the field and identify the problems in the field and the information needs. Men then look for solutions to these problems at the FRCs and the women apply them subsequently at the farms. It is particularly the middle aged people who come seeking for OISAT information since the younger people are busy looking for jobs or working.

Sustainability

A key issue for OISAT is the sustainability of the operation of the FRCs. This addresses particularly the financial independency. The centres have started offering various income generating services such as:

- Mobile phone charging
- Type setting and printing
- Member contributions
- Selling airtime
- Library services
- Selling seeds
- Computer training
- Selling value adding products
- Integration of other information projects e.g. OKN
- Selling products from demonstration plots
- Renting out of chairs and meeting hall

Discussion

During the discussion of the results of this working group, the following additional findings and aspects were identified:

- Repackaging of OISAT information into a communication form that can be used by illiterate people is important because about 60% of the visitors of the FRCs are illiterate.
- Regarding the proposed age of FRA Assistants of up to 35 years, it was argued that up to this age, candidates tend to be more healthy, have a good eyesight and energy.
- FRC staff should be paid in order to ensure motivated staff and sustainability of the FRC.
- A combined payment of FRC staff may have to be found between funds generated through other services at the FRC such as phone charging etc. and payments of farmers for the information provided (information instead of pesticides).

8.2 Thematic Area 2: Field validation

8.2.1 Feasibility of validation methodology

In the preparation workshop, six parameters for the field validation were defined. During the final workshop, an updated format, based on the experiences during the pilot project, should be elaborated. Due to lack of time, this was not included in the final workshop.

Based on the experiences during the pilot project, the following observations and suggestions were shared:

Observations and suggestions:

- Quantifying the materials to be used for the herbal formulations used was a challenge.
- Due to the drought, field validation and a clear assessment of experiments was often difficult.
- The quantification of pest infestation into “moderate, heavy, none” as suggested proved not sufficient and needs more fine-tuning. It was not very clear what is moderate or heavy. There is a need for a more scientific input in what is “heavy” or “moderate”.
- The distribution of the pests in the field were very uneven.
- The size of the farm also influences the field validation outcome. However, the field size of the various plots used for field validation varied considerably.

Proposed adaptations for field validation:

a. Specify in more details the data collection of pest populations, e.g.

- Army worm: number of pest per square meter (no/m²).
- Aphid counting: number of plants affected.

b. Control effect of treatment:

Does control effect occur after 1, 2 or 3 times spraying.

Can we be more exact by using quantitative data, e.g. number of individuals (per m² or numbers of plants affected).

c. Yield:

Several parameters determine the yield such as variety, planting time, rains, weeding, etc. Yield can only be considered if the treatment is carried out under conditions where all other factors are constant.

- On mango or papaya, the yield cannot easily be measured, e.g. weight by sacks or crates.
- It is proposed to provide weighing equipment (spring balance?) for weighing sacks in order to become more exact.

d. Compare the control effect of OISAT treatment with chemicals.

e. Availability of raw material for treatment:

The availability may be depending on cost or presence (located nearby).

Farmers tend to chose OISAT methods for which they find materials growing nearby, therefore the choice is also depending on the local conditions. Farmers generally would not buy non-chemical pest control materials, particularly plant parts. Unavailable plants are not considered by them.

In the case of unavailability of certain plant materials, farmers can obtain these through farmer exchange visits. Another response can be to substitute a proposed plant by a related species, which is easier available locally.

*f. Introducing new plants may become a weed problem, see example of *Prosopis juliflora* / *mathenge*.*

g. Ease of application/side effects:

Add: Ease of preparation/formulation at farm level

Description is more important than classifying 1/2/3

8.2.2 Future use of field-validated new treatments

- The documentation of field validation is a typical task of extension workers. SACDEP proposed that documenting is not enough. In addition, documentation of field-validation needs interview with the farmer and a person to person assessment.
- In case of illiteracy, it is impossible for farmers to do the documentation on their own. For such situations, another documentation set-up should be defined.
- Documentation of the field-validation should not only be done at the end of a cultivation cycle but throughout the cultivation period.

8.2.3 What is required to complete a full field validation process “From Web to Field to Web”.

a. Design

Farmers and extension workers experienced difficulties in conducting the field validation with the format developed during the preparatory workshop. When implementing, they found the format and language too vague. Their suggestion is to make the field validation design more visual instead of verbal.

b. Collaboration between EW and farmer in field validation:

Project was new to all, therefore, a good collaboration from the start was important. The mutual understanding increased with collaboration.

c. Role of extension worker in the field validation

The extension worker (EW) of most IPs was also involved in other activities of the respective organisation. As a consequence, the EW was sometimes not at the location of the field validation at the right time. Reduced understanding and output is the result. As a countermeasure it was suggested that it would be desirable to assign an extension worker full-time to this task, based at the site.

d. Competencies:

The workshop topic on field validation was elaborated too short during the preparatory workshop. Therefore, this issue was not well enough understood. Julius did not talk about field validation in his role as focal farmer until the extension worker brought this point in. But because it came in later, almost towards the end, the documentation was incomplete, as some information was not collected from the start.

e. Mobilization of indigenous knowledge through the pilot project?

Yes the pilot project could contribute to this. For example, people who knew already about the use of neem, easily understood the methods of use proposed in OISAT. Most traditional methods are not yet quantified or verified.

f. Legal implications

The MOA can only recommend methods, which are scientifically approved. Control methods which they recommend have to be approved by the Pest Control Products Board. This Board determines the use of specific products and methods for the use in specific crops and against specific pests. The members of the working group agreed that validation is necessary to ascertain that it works also for others who want to apply it.

g. Feeding field validation information back to the OISAT database

If everybody is giving feedback, it is too messy, so the route is from farmer to FRCA to IP to PELUM. However, a direct line can be better, between farmer and person accepting the validation. A clear protocol has to be defined for this.

Discussion

- The representatives of the MOA found it at times difficult to classify OISAT information. Generally they are disseminating information which is “approved” by the Government as scientific. For OISAT information no such procedure exists.
- Clarification was recommended regarding the status of organic agriculture and indigenous knowledge and the dissemination of such information within the policy framework and structure of the MOA.
- Seeking collaboration with the MOA on the status and use of databases such as OISAT was recommended.

8.3 Thematic Area 3: Experiences at the community level on implementing OISAT

The purpose of this thematic area was to understand more on how OISAT enters into the community beyond the direct project measures. We tried to determine which mechanisms take place that carry the direct measures further or which develop horizontally.

8.3.1 Were trainings conducted on the use of a computer, searching info in the OISAT database and insect identification effective?

Yes, the one week training was effective. Also learnt how to search for information and insect identification. The insect mountings are helpful in the identification of pests. FRCA underwent extra training.

Improvements suggested:

- Consider continual training.
- More computers are recommended as number of farmers increase.
- Bigger converter to ensure solar power supply.
- Regarding insect identification, printouts of major pests and diseases and their control should be supplied because the computer was not always on due to instable power supply.

Users of OISAT apart from focal farmers and CF

- Students of institutions of learning.
- Researchers at the IRC.
- Extension service providers.
- Herbalists, trainers.

How can these additional users be integrated into the OISAT process?

- Encourage them to use the practices which they get from OISAT and to report their experiences back to OISAT.
- Establish forums of OISAT users and include all interested parties e.g. researchers.
- Determine task sharing by inviting researchers or lecturers to share their information in the proposed forums.

8.3.2 Which processes have been generated in the participating communities through OISAT?

- Downloading information which is then re-packaged by printing and translation to local language.
- The farmers organised a monthly meeting where they were also given the information to try on their farms. At the next meeting the findings were shared and successes and failures discussed.
- The focal farmers tested the OISAT practices on their farms which served at the same time as demonstration plots. This raised the interest of farmers not directly involved.

8.3.3 How could the FF farmers meet the interest in OISAT from other farmers and parties such as the MOA and other stakeholders?

- The MOA information desks were also used to disseminate the information.
- The publication of information from OISAT and results of their use was encouraged.
- Awareness was created among other interested parties including the searching of OISAT in cyber cafes.
- Networking among extension service providers was enhanced.

8.3.4 How can the OISAT process be stimulated in the community, particularly by the FF and the EW?

- Demonstration and field days
- Sensitisation during barazas
- Inviting MOA extension staff to their meetings
- Documentation, publication

8.3.5 How effective is the extension and communication of OISAT among farmers?

- For the implementing partners it is quite effective. At Maragua the FF met once a month.
- Could be more effective if the collaboration between the IPs and other extension providers would be organized from the very beginning of project.
- For the MOA it may not yet have been very effective as it was not included in main planning of their activities. Therefore, they have not yet fully participated.

8.3.6 Which gender, age and literacy-related observations did you make regarding use of OISAT in the community?

- Most interest in OISAT came from women. In some instances, due to the local culture, men have the last word in what is done on the farm. This leads at times to a slow implementation. However, generally men do not interfere with the activities of the women.
- OISAT is mainly used during the growing season and it is the women involved in most of the activities at this time. Also they are involved in fetching water, which is a key component of many control practices described. Men are mainly involved when cash crops are involved.
- Youth, especially the male youth, is not active in Maragua. However, the youth is gaining interest because of the attraction of the computer. Young women are less involved.

- Literacy level: For the aged, it may be a more difficult to learn the use of the computer. Most aged farmers receive information from the literate ones and also through group discussions. In addition, they learn through practicing.

Discussion

The role of the FF was discussed and it was clarified that the FF should train other farmers in computer and OISAT use, support them in field validation and demonstration in the field. He or she should collect data, help with translation into local languages and with the repackaging of information according to the most suitable local communication tools.

Q. The question of criteria for the selection of FF was also raised.

A. In one area, the person (Celestine) has been there so when OISAT came, he was tapped. In other areas, they were chosen because they were active already, computer literate and aggressive in their work.

It was agreed that key criteria for the selection of FF are:

- be a charismatic personality in their community
- professionally active above average in their community
- literacy plus computer literacy

8.4 Thematic Area 4: Examination of the dissemination of OISAT

8.4.1 Analysis of the strength and weaknesses of the various levels involved in dissemination and recommendations for the dissemination strategy of OISAT

Category	Strengths	Weaknesses	Recommendations
<i>Among farmers (sharing forums/FF; cross visits; sharing)</i>	<ul style="list-style-type: none"> ▪ Practical/applicable ▪ Effective learning ▪ Enhances exposure ▪ Problem sharing & solving ▪ Research oriented ▪ Effective feedback ▪ No language barrier ▪ Higher adoption rates 	<ul style="list-style-type: none"> ▪ Information distortion ▪ Slow in reaching decisions 	<ul style="list-style-type: none"> ▪ Clear targeting improves information flow ▪ Include a documentation system for the various types of sharing
<i>EW & Trainers</i>	<ul style="list-style-type: none"> ▪ Regular contact with farmers/farmer groups ▪ Good technical understanding 	<ul style="list-style-type: none"> ▪ Limited feedback from farmers ▪ Low EW : Farmer ratio 	<ul style="list-style-type: none"> ▪ Frequent follow up required for implementation & feedback ▪ Work with organised farmer groups during training sessions

Category	Strengths	Weaknesses	Recommendations
<i>IPs to other multipliers</i>	<ul style="list-style-type: none"> ▪ Quick rate of dissemination ▪ Reliable transmission of messages ▪ Enhanced stakeholder collaboration & participation 	<ul style="list-style-type: none"> ▪ Protocols may hinder speedy dissemination ▪ Complications regarding ownership of success ▪ Variations in quality of dissemination & implementation (IP, AEZ, Target Groups) ▪ Danger of dead ends with some multipliers 	<ul style="list-style-type: none"> ▪ Strong coordination of the IP dissemination process is suggested
<i>To politicians & other decision makers</i>	<ul style="list-style-type: none"> ▪ Quick rate of dissemination ▪ Good communication and convincing skills are required 	<ul style="list-style-type: none"> ▪ Vested interests may lead to information distortion ▪ Non implementation of disseminated messages by targets 	<ul style="list-style-type: none"> ▪ Involve the politicians at the initial planning
<i>To mass media</i>	<ul style="list-style-type: none"> ▪ Quick rate of awareness creation 	<ul style="list-style-type: none"> ▪ Danger of misinformation ▪ It is costly ▪ Difficult to assess impact & get feedback 	<ul style="list-style-type: none"> ▪ Information verification prior to publication

8.4.2 Examination of the role of the IP management in the facilitation of the OISAT process (internal and external) in training and extension organisations and recommendations?

Internal roles

- Get information from the CP (PELUM)
- Facilitate accurate acquisition, generation & dissemination of information
- Management of funds
- Facilitate FRC activities
- Facilitate feedback from FRC to OISAT
- Dissemination by extension workers and trainers
- Support the sustainability process of the FRC

External roles

- Reach out to other multipliers
- Facilitate widespread & accurate dissemination
- Dissemination to politicians
- Dissemination via mass media

Recommendations

- IPs should facilitate a holistic approach to the support of farmers covering the areas of farm production; soils, water, seeds, pests & diseases, marketing etc.
- IPs should maintain constant communication with the Coordinating Partners (PELUM & PAN Germany)
- IPs should seek supplementary support to promote OISAT

Discussion

- Regarding the linkage with Government it was highlighted that it is of key strategic importance to make OISAT known among policy makers. They should not only be informed, but also actively involved in the next stage.
- It was suggested to identify the best information flow mechanism within the MOA in order to disseminate OISAT through these structures.
- The MOA participants were offering their support to paving the way for OISAT into the MOA structure at the highest level.
- Collaborating institutions should be identified for services complementary to OISAT, e.g. insect identification.

9. Reports of the coordinating partners and PAN AP

9.1 Report of PELUM Kenya

Maryleen Micheni

Maryleen Micheni summarized in her report the major facts characterising the implementation of the OISAT pilot project. Then she looked into the challenges, which the pilot project faced during the implementation and finally she presented her view of the lessons learned and of the sustainability of OISAT among the implementing and coordinating partners.

9.1.1 Outreach

In her presentation Maryleen Micheni looked at three levels of outreach:

Collaboration with the Ministry of Agriculture

This is a very strategic collaboration because the new government pursues a collaborative policy with other rural development agents. OISAT is considered as highly useful by the representatives of the MOA and they suggested that OISAT should be proposed to the Permanent Secretary of the MOA, which is the highest decision-making body.

Summary of the collaboration with representatives of the MOA

- Collaborated with 86 extension workers
- Distributed OISAT CD-Roms among the representatives of the MOA
- Published an article on OISAT in the RD Bulletin

Farmer Resource Center

The FRC is the focal point for the outreach of OISAT to farmers. The following aspects have been identified to be of importance for the functioning of the FRCs.

- a. The equipment with solar energy is very key to the project. However, the cost were higher than budgeted. Also at some of the FRC, the capacity had to be increased in order to ensure a sufficient supply of power.
- b. The internet connectivity at the FRCs was poor. The coverage of the Safaricom network was by far insufficient to reach to rural areas. Therefore, CD-Roms must still substitute the lack of direct access to the Internet.
- c. The FRC Assistant played an important role as link between the IP and the farmers. All IPs had chosen personalities who also hold other public positions in the community and therefore are a recognized authority.

Institutional Resource Center

The IRCs played a particular role in disseminating information among other programs and networks but also in the conversion of OISAT information into other forms of communication:

- a. OISAT was shared with other networks and collaborating partners, particularly with JKUAT, AIC, KARI, Nyanza Rift, Schools, Colleges and NALEP.
- b. The repackaging of OISAT information was mostly done by the IRCs. The most common forms of repackaging were the production of leaflets, newspaper and newsletter articles, radio broadcast, brochures, demonstration. The cost involved were higher than planned. Thus, repackaging should be more thoroughly planned and calculated in future activities.

Farmer to Farmer Extension

This extension method proved very effective for OISAT. The focal farmers received many invitations to give talks to other community groups, schools, churches and field days. On average, 200 persons have learned of OISAT *Info* directly from each of the focal farmers. With 4 implementing partners and 7 focal farmers of each IP involved, 5600 persons have been reached directly by all focal farmers during the pilot project.

Ecofest 2006

This festival is intended to raise public attention to OISAT. In 2006 more than 200 visitors were attending.

9.1.2 Capacity Building Process

Capacity building is of high importance. Besides the introductory training which had been provided during the pilot project, a continuous follow up training should be offered.

Specific observations and recommendations made were:

Pest Identification Training

- always use also the name of insects in the local language.
- elaborate samples of insects (mounting, in alcohol) to which the farmers and extension workers can refer to for comparison after the training.

ICT Workshop

Farmers were very keen in learning to operate the computer and searching for information. At least 50% of the total farmers trained in ICT can access OISAT *Info* on CD and/or Internet on their own. In addition the youth is highly interested. Therefore, it is recommended to

respond to this interest. The gender aspect however, should be taken into consideration as it can be observed that it is particularly the male searching for information whereas the women are the ones who are applying the methods identified in the field.

9.1.3 Challenges

External factors

The project funds came in late. Therefore, the implementation of the project was delayed. During the first cropping season of the implementation, a drought occurred in most project areas. Therefore, the pilot project was conducted under untypical conditions.

Roles and responsibilities

Particularly at IP level, the staff adhered not always to the roles and responsibilities as assigned to in the project proposal.

Coordination with PAN Germany

Communication was sometimes delayed on both sides.
Some formats for the documentation had still to be clarified in the ongoing pilot project, which resulted in delays.
Some reports were sent back and forth for clarification.
Some formats given by PAN Germany were long and repetitive.

Documentation and reporting

Reporting was often delayed.
Documentation was inadequate.
Formats provided were not always fully utilized.
On a few occasions, reports were untrue.

FRC

Transport during coordination at the FRC level was not always easy.
No technician on site at the FRC.

Copyright

The copyright on the information from farmers to be fed back to the Internet should be clarified.

9.1.4 Lessons learned and next steps

- Training farmers on ICT needs to be gradual and regular in addition to an initial intensive training.
- The EW has to be well equipped and updated with ICT skills.
- There is a need to incorporate the rural youth in ICT Trainings.
- Simplified documentation formats for farmers, who should work very closely with the EWs should be elaborated.

Meanwhile

- The IPs continue upgrading their ICT equipment especially the GPRS since this is not very expensive to run at the FRCs.
- OISAT information dissemination by PELUM Kenya continues to its member organizations, and by the IPs in their networks and stakeholder organizations.

- PAN Germany should contribute to establish the necessary strategic linkage with the Ministry of Agriculture.

9.2 Report of PAN-Germany

Dr. Gabriele Stoll

Dr. Stoll examined the architecture of the pilot project particularly from the perspective of communication during the ongoing process and also looked into the requirements for successful funding of the future dissemination of OISAT.

9.2.1 Challenge Communication

The OISAT Pilot project was jointly fine-tuned during a workshop in March 2005 in Kenya. Despite having tried to provide a tool for all possible upcoming situations, gaps remained. The following have been identified:

- Very few communication tools existed or were used between PAN Germany and the Kenyan partners:
 - => mainly email communication and
 - => reports
- PAN Germany had no insight into the „Inner Climate“ among the project partners and the actual implementation of the pilot project due to lack of adequate communication tools. In regular intervals a skype conference was conducted between the Director of PAN Germany, Carina Weber, the OISAT Coordinator Dr. Gabriele Stoll and the OISAT Information Manager, Dr. Jewel Bissdorf, as a means for levelling off and for a direct sharing of the progress of the project and possible adaptations.

Solution proposed:

- PAN Germany felt, that it is quite difficult under a remote collaboration scheme, to be close to the implementation. Even though from the result, we were quite impressed, certain aspects that remain to be improved, particularly the step “From Field to Web”, could have been addressed earlier. Therefore, PAN Germany proposes to hire a representative at the locality who will monitor and evaluate the project implementation regularly and propose to the head office on how to continue the collaboration .

9.2.2 Challenge Funding

- A variety of funding cycles because of several donors (different donors with different conditions)
- Drought influenced the implementation of the field-validation which is a key component of the pilot project

Solution proposed:

- A shared document showing the various funding and reporting cycles.
- Negotiation of the responsibilities for financial issues with the donors for a common time pattern for the reporting.

Discussion

Comment was made that the communication through PELUM is recommended. Having somebody from PAN Germany may not be effective.

The Representative from the MOA said that they can be invited in the future meetings of the participating organisations even as observers.

On the issue of funding, Gabriele said that they will report what has been achieved so far in the pilot testing. PAN Germany will negotiate with the donors for continuation.

9.3 OISAT Training Workshop, 11-13 September 2006, NIPP Hanoi

Dr. Jewel Bissdorf, PAN Germany

Dr. Bissdorf reported on a workshop in Vietnam, which had as intention the exploration of how OISAT could be introduced into Vietnam with its very different preconditions. The workshop was organized by the National Plant Protection Institute (NIPP) and funded by Bread for the World.

Her report included also an update on the OISAT database.

9.3.1 Workshop programme

1. Opening program
2. Introduction of OISAT (browsing into the OISAT web; how to prepare training materials out of OISAT *Info*; demonstration of sticky board trap).
3. Presentation of 10 studies and experiences of non-chemical pest management in Vietnam by resource speakers and by the participants.
4. Field visit to Gia Xuyen, Hai Duong province.
5. Action planning on OISAT into the current farmers' practices and extension practices.
6. Closing program.

9.3.2 Experiences learned

- Bio pesticides are used in Vietnam, because they are subsidised by the government and therefore, the farmers can obtain them free of charge.
- OISAT *Info* cannot be used in Vietnam unless it is translated into the local language.
- A communication gap exists in the promotion of OISAT to Vietnamese extension workers and farmers.

9.3.3 Proposed activities to be undertaken

By NGOs

- Translation of OISAT documents that are appropriate to the Vietnamese situation.
- Establishment of model farms using OISAT *Info* and IPM practices.
- Participation of six farmers/women's groups.
- Capacity building on non-chemical pest management practices.

By NIPP

- Make on-the-field researches on the plant extract formulations of plants common in the locality.
- Focus on extract formulations that will suit to the local conditions.

By Government extension workers

- Communicate OISAT to the farmers once selected documents are translated into Vietnamese.

9.3.4 Recent OISAT Info updates

- Additional 4 data sets on plants in pest control
- Photos on insect pests and weeds
- Addition of tea and sesame under crops
- Inclusion of report of ALIN under the full text documents - T&E

9.4 Gilbert Sape, PAN AP

Mr. Sape reported that PAN AP is doing work in 11 countries in the Asia-Pacific area. Operating as a network, they collaborate with around 100 organisations. Chemical pesticides is a big issue in the whole region. PAN AP is just about starting a new project in the Mekong region which is a focal area of the organisation. This project, which will start in 2007, will be implemented in cooperation with FAO, NGOs and the chemical industry.

Because of the large problems of pesticide misuse, and the need to offer alternatives, PAN AP is interested in a closer cooperation with the OISAT project of PAN Germany. Particularly Cambodia is becoming the dumping ground for pesticides which are produced in the region, e.g. pesticides from China and Thailand. Therefore, Cambodia - which has strong farmer groups - will be a key country in their new project. In Vietnam, pest management is mostly linked with governmental institutions but not independent.

Summary of an interview with the SACDEP Extension Worker for Kaihungu FRC, Anne

Question	Response
1. What are your regular extension activities?	ICT training Interpretation of pests and disease information Consultations with farmers Field visits Hosting visitors
2. Do you keep record of your field activities?	Yes. Both in hard and soft copies at FRC and at IRC. Farmer activities Accounts Dissemination reports Management reports etc.
3. What support do you provide to farmers?	All those listed in (1) above Networking Information on other farming activities Personal help
4. How often do you visit farmers fields?	Normally once a week on Mondays. When other need arises.
5. What are farmers' common problems?	Inadequate liquid cash Excessive tasks especially for women Emerging pests Notorious rodents 'Cold war' from some non members (Neighbours) Inability to market some of their produce
6. How many farmers are you working with?	Directly with 17 farmers (Kaihungu FG) Indirectly with 35 farmers (Kaihungu FG neighbours)
7. Are you using OISAT in your T&E?	Yes. I do use it. Management of pests such as stem borer, banana weevils, potatoes beetle and coffee aphids Management of diseases such as tomato and potato blights
8. Do you have any difficulty using OISAT?	No difficulty in using OISAT as a tool. The only challenges are inadequate power supply and poor connectivity to internet.

11. Drawing of conclusions and recommendations

The drawing of conclusions and recommendations for other training and extension services was conducted through four parallel working groups. This session was an important link between the pilot project and the agricultural training and extension services which shall be addressed in the next stage both by the Kenyan partners and by PAN Germany through its network.

11.1 Recommendation 1: Preparation and planning of the introduction of OISAT in training and extension programs

11.1.1 Farmer level

- For expanding OISAT, work with organised farmers groups.
- The existing group practising OISAT should be open enough to accept other farmers.
- Farmers should be closer to each other.
- There should be a higher number of focal farmers involved and their contribution should be strengthened, particularly in training new farmers and in conducting field validation.

11.1.2 FRC level

- Consider the possibility of a mobile outreach for example using a laptop and CD-Rom.
- The FRC should be strategically located, where people mostly converge such as the church or market.
- A communication budget for EW and FRCA to coordinate must be taken into consideration.
- The FRCA should have another assistant to secure the place and perform other tasks.
- The FRCA should be capable to troubleshoot technical matters in the centre.
- The FRC should have a terms of reference/guidelines to help the FRC deal with properties (e.g. computer, other equipment) in case the project ends.
- The FRC should explore means for sustainability e.g. by providing other services.
- More computers in the FRC to train more other farmers, and photocopier for the distribution of the information search results.
- Introduce a fee system for farmers so that they also contribute something into the FRC (e.g. money to buy equipment).

11.1.3 Government level

- MOA and NALEP pursue the focal area approach involving different stake holders in the specific areas. This could be the entry point for OISAT to be part of the MOA system. If the stake holders would agree to have OISAT, and if it gets approved, then it can become part of the system and attain national outreach.

11.1.4 Other recommendations

- Introduction can be done through exchange visits to an existing centre.
- Transport support for the EW.

Discussion

Carina mentioned that PAN Germany has elaborated print-outs on specific crops using OISAT information. These could be given to the FRCs. Also, there is a field guide on how to control pest on corn, string beans, mangoes and cotton. All these could also be burnt on CD-Roms.

Participants said that these print-outs are a suitable additional source of information. In case of lack of electricity, these can be used by the FRCs and can also be brought to the field by FRCA.

Noah supported the idea of a mobile equipment. How many computers should the FRC have? At least 2 or depending on the number of farmers visiting the FRC.

How about farmers contributing money to buy equipment? Participants said that this is possible, at least something that is not out of reach.

On the involvement of the government, there should be awareness raising among the government to support OISAT.

Examine the government structure to look into possible entry point. For example, NALEP centres have computers and internet connection and OISAT can compliment the information that already exists.

Incorporating OISAT into existing work of the MOA such as the world food day, etc. was also recommended.

11.2 Recommendation 2:

Key factors of successful adoption and the scaling up of OISAT by partners

This working group elaborated recommendations on four levels. At first they focused on the partners, which have already been involved in the OISAT process and who will continue to play a key role in the promotion of OISAT within Kenya but also in the East African region. Then they looked at the potential for adoption and scaling up at the national level in Kenya, including the national structure. In addition they looked into the Eastern African region because some of the collaborating partners are part of regional networks and thus they can act as a springboard for the dissemination beyond Kenya. At last, the group looked into some general recommendations which are based on principles that are valid independent of the location.

11.2.1 Already implementing partners

- Increase the number of focal farmers and spread this concept in different areas.
- EW should work with focal farmers while the focal farmers work with a manageable group of community farmers.
- Each IP should increase the number of farmers according to their capacity. They should also look at other avenues for the spread of the information e.g. Farmer Field Schools, CBOs, NALEP, existing services that are working, stakeholders forums etc.
- Identify and foster capacities of the IPs in terms of personnel and equipment before scaling up.
- Introduce OISAT to other collaborating organisations, target institutions like universities, schools, include OISAT in curricula.
- Scaling up has to go hand in hand with training on the related topics IT and pest identification.
- Use young farmer clubs.
- Sensitise agriculture teachers through the Ministry of Education.
- Exchange visits (cross-cutting across all levels).

11.2.2 National level

- OISAT team should develop a document based on the lessons shared from this workshop that can be used to influence policy.
- There is a need to look at how OISAT can be made sustainable.
- Use reputable mass media effectively.
- There is need for OISAT leaders to meet the permanent secretary or other high ranking officials in the MOA and research institutions.
- KARI should be involved.
- Hold stakeholder sharing forums at provincial and regional levels.
- Use agricultural and commercial trade fairs/shows.
- Create strong networks and use strong national networks e.g NGO Council, KOAN (Kenya Organic Agric Network).

11.2.3 Regional level

- Use forums like this workshop to share information with partners in other countries.
- Introduce OISAT to strong networks at regional and international levels.
- Make use of regional and international media.
- Use other journals and publications e.g LEISA.
- Share the workshop report.

11.2.4 General recommendations on scaling up

- Farmer's feedback to OISAT was not up to expectations. Validation results needs to be worked on and information on what has been used shared. There is need to design an improved instrument that will help capture information from the farmers to the web.
- Not well adopted by farmers, information accessed needs to be also demonstrated. There is need for more time like one or two more seasons before scaling out.
- Need for a more detailed analysis of benefits, including the perceived economic benefit.
- To see the impact of information, there is the need to work with farmers who had not been doing organic farming. There is also need to work with farmers who have been using chemicals as opposed to those using ITKs so as to gauge the impact.
- The scaling up should be localised because the farmer is the best researcher but there is need for effective feedback to the partners.

Discussion

The young farmers club can be included as well, also the Ministry of Education.

The available information is not available yet to recommend for up-scaling, thus, there was a suggestion to extend the pilot test.

Carina clarified that all information in the OISAT database has been validated by peers and experts.

11.3 Recommendation 3: Support and competencies required

For the development of recommendations, the group made two assumptions:

- The candidates are available and trustworthy
- FRCs are owned by the farmers

Based on these assumptions, the group elaborated the following key competencies for the various categories of levels and persons involved in the OISAT process as of now:

11.3.1 Extension worker

Competencies required	<ul style="list-style-type: none"> ▪ ICT knowledge ▪ Communication skills ▪ Language knowledge ▪ Interpersonal skills ▪ Crop management skills ▪ Extension methodologies ▪ Documentation and report writing skills ▪ Basic research skills (especially for validation) ▪ Team building skills
Support needed	<ul style="list-style-type: none"> ▪ Incentives (motivating) ▪ Logistical support (transport, stationery, phone) ▪ Training (computers and crop/pest management) ▪ Basic equipment (computer etc)

11.3.2 FRC Assistant

Competencies required	<ul style="list-style-type: none"> ▪ ICT trainable ▪ Local language ▪ At least O levels minimum ▪ Experienced and practising farmer ▪ Interpersonal skills ▪ Leadership skills ▪ Management skills e.g. financial and other recording skills
Support needed	<ul style="list-style-type: none"> ▪ Incentives (motivating) ▪ Logistical support (transport, phone) ▪ Training (e.g. record keeping) ▪ Measuring material ▪ Empowerment in reporting their own experiences

11.3.3 Focal Farmer

Competencies required	<ul style="list-style-type: none"> • Ability to read and write • Ability to understand and articulate the OISAT concept • ICT knowledge • Experienced and practicing farmer • Interpersonal skills • Leadership and group dynamic skills • Innovative
Support needed	<ul style="list-style-type: none"> • Incentives (recognition, motivating) • Logistical support (transport, phone) • Training • Exchange visits

11.3.4 IRC Assistant

Competencies required	<ul style="list-style-type: none"> ▪ Information management skills, communication skills, ICT skills, interpersonal skills, documentation and report writing skills, networking skills etc. ▪ Resource management ▪ Management skills e.g. financial and other recording skills
Support needed	<ul style="list-style-type: none"> ▪ Equipment ▪ Continuous/regular updates on OISAT ▪ Training ▪ Support to train others in the organization ▪ Logistics ▪ Goodwill from management ▪ Motivation

11.3.5 IP management level

Competencies required	<ul style="list-style-type: none"> ▪ Rural development oriented ▪ An existing extension and training component in place ▪ Management and fundraising capacity ▪ Networking capacity
Support needed	<ul style="list-style-type: none"> ▪ Policy support by government ▪ Funding ▪ Updates from PAN-Germany and PELUM ▪ Interpretation of instruments and agreements that have influence on OISAT ▪ Actualising the roles/tasks of all stakeholders

11.3.6 Coordinating partner organisation

Competencies required	<ul style="list-style-type: none"> ▪ Effective/efficient communication system ▪ Strong network ▪ Good monitoring and evaluation system
Support needed	<ul style="list-style-type: none"> ▪ Feedback from the top and bottom ▪ Funds

11.3.7 Coordinator

Competencies required	<ul style="list-style-type: none"> ▪ Knowledgeable and experienced in networking, lobbying etc. ▪ Aggressive ▪ Management skills ▪ Governance skill ▪ Interpersonal skills ▪ Fundraising skills
Support needed	<ul style="list-style-type: none"> ▪ Constant communication flow ▪ Equipment availability

Discussion

In addition to the assumption, it should be included that support could from the group themselves and the community, both material and financial support

On the job description, it is very intense. However, the assumption is that PAN will work with existing structures. Thus, the EW has been chosen by the IP already.

Therefore, the job description could still be used for IPs when they choose their EWs.

On the incentives, one of these could be money. On the issue about incentive, Gabriele suggested to have separate discussion on this after all the reports.

There was a suggestion to remove the O levels minimum as qualification for FRC Assistant as this is too rigid and gender biased. This discussion has not been resolved.

The suggestion for the ICT knowledge be changed to ICT trainable is accepted.

On the issue of the qualification for focal farmer, the listed descriptions will be maintained as that is the ideal but this is not absolute.

11.4 Recommendation 4:

Expansion of OISAT *Info* and quality management; linkages between PAN G and the implementing partners

This working group essentially stressed that there is still need to improve on the validation part of the OISAT process. This part should be implemented in a more scientific way by fully involving the farmers in a participatory way. Thus the foundation will be laid for entering OISAT into larger formal structures.

11.4.1 Levels of expansion:

- Increase the number of focal farmers, number of FRCs, number of IPs or number of countries.
- Equip the FRCs with the necessary tools for pest identification e.g. lens, and specimens.
- Before expanding, are we really sure that OISAT information works? Group recommends to continue validation and economic assessment for at least 1 or 2 years.

11.4.2 Up scaling of the validation process:

- The IPs should link with recognized scientific institutions such as Universities, KARI, ICIPE for backstopping.
- Key validation steps need guidance and acceptance from higher levels.
- Involve crop protection scientists from e.g. KARI or university students in the actual field validation.
- Liaise with the Extension-Research liaison officer of MOA at national level, or with the District Stakeholder Forum to express demand and support for scientific backing.
- Farmers themselves should be main actors in reporting for validation.
- The EW should be selected according to crop protection expertise or, if no such EW are presently employed by IPS, EW to be trained on crop protection management.
- Put the reporting format on-line, so that farmers can directly report to PAN-Germany.
- Review the guidelines for field validation in collaboration with recognized institutions regarding
 - validation plan, specifying roles, timing, tasks of farmers and extension workers, with input from researcher.
 - observations and measurements.
 - comparison with what other farmers are doing in the community.

11.4.3 Content expansion

- Recognition of farmers to share indigenous knowledge, e.g. through exchange visits , awards, certificates etc.
 - Keep wide view between the whole farm practices and applications.
 - Consider pests and diseases as a symptom of unhealthy farm, or weak soil.
 - Include the underlying ecological principles.

11.4.4 Expansion to new IPs or new countries

- Start with exchange visits for farmers and staff for exchanging of knowledge and ideas.

Discussion

Build up a collection of preserved insects (pests, beneficials) at the FRC for training and teaching purposes in the future.

African farmers are very slow in giving information if they are not paid, according to one of the participant. It was clarified that this recognition can also be given in other forms such as giving credit as the source of information.

Field validation should be done by farmers with the help of EW.

If we want the field validation to be scientifically recognised, then it should be collaboration with research institutions.

11.5 Recommendation 5: OISAT Vision (5 years time frame)

11.5.1 Outreach

Farmer level

- Use existing extension structures including farmer to farmer exchange visits within and outside the country.
- Establish demo farms using OISAT methods, using different crops; including demo farms in the actual farmers fields.
- Conduct regular farmer field days/ open days/ exhibitions to inform about OISAT and to demonstrate how it works.
- Increase the number of focal farmers.
- Set targets: 20% of the farming population using OISAT by 2012.

National level

- Reach to as many existing information centres as possible (distribution of CDs to libraries, NGO/CSO support groups, etc.).
- Have trained resource person/s to work on the popularisation OISAT (e.g. working with information centres).
- Conduct an annual exhibition of OISAT at national level.
- Have a national body to link all the networks working on IPM and for OISAT to use this body.
- Use the existing structures (e.g. NALEP/SIDA) to popularise OISAT.

Different countries/ international

- Use existing network structures with regional outreach to expand OISAT in different countries in Africa (e.g. PELUM, PAN)

11.5.2 Collaboration

Develop collaboration with:

- MOA.
- Student agriculture clubs in primary & secondary schools.
- Existing registered groups (CBOs) with the Ministry of Culture and Social Services.
- Research Institutions and Universities to help in validation through scientific researches.
- Ministry of Education for OISAT to be included in the curriculum.
- Control bodies such as PCPB (Pest Control Products Board, Kenya Plant Health and Inspectorate Services KPHIS, Kenya Bureau of Standards, IAALD).
- Marketing Board for promotion of OISAT.
- Regional collaboration with regional organisations like PELUM, ASARECA, RAIN.
- International collaboration with IFOAM, FAO/FFS.

11.5.3 Upscaling

Content/Information

- Integrate information on livestock (diseases and parasites).
- Information on storage pests.
- Information on diseases.
- Regular updates on field pests and diseases.
- Information on seeds selection (to ensure quality).
- Regular upgrade of existing equipment for FRCs (e.g. inverters, availability of laptops and CD-Roms for EW so they can provide information offline).
- Enable partners the OISAT CD-Rom updating from the OISAT website.
- For documentation, design easy to use instruments to use for reporting back to OISAT (e.g. simple questionnaires, divided by type of crop), have them in local languages. This is both for farmers and extension workers.
- For the repackaging of information, continue to work with the world space radio to enable users who don't have access to internet can get it through the radio offline.

11.5.4 Sustainability

Farmer level

- Offer intensive training for farmers on OISAT.
- Farmers should have a high motivation and a sense of ownership.
- Strengthen farmers associations.
- Determine the economic benefit of OISAT for the farmers.
- Increase participation of development agencies and funding partners (both local and international) in the support of OISAT activities.
- Ensure constant update of the information provided (reporting, exchange of information).
- Strengthen the capacity of farmers for resource mobilisation and management.

National level

- Invest in human resources to sustain OISAT- particularly the EW, IRC Assistant (strengthen leadership, management, good governance).
- Ensure transparency and accountability of the FRC.
- Strengthen collaboration between partners and agencies to cut down on costs.

Regional/International

- Have a lead coordinating agency like PELUM and have OISAT integrated in their work at the regional level to ensure sustainability of OISAT.

Discussion

On the issue of OISAT formulations for sale as products, Carina Weber said these discussions were already held in Germany. PAN Germany is refusing such an idea because the approach is pro-pesticide. Also, the registration of bio-products is a difficult and tedious and this is big business.

Gabriele Stoll went back to the genesis of OISAT – to reduce the cost of sharing information, availability of information for free, etc. Thus, the idea for PAN Germany to “pay” people to read the “book” is unthinkable.

It was clarified by Rob Witte that it was agreed in the working group that the key point is not monetary compensation, but rather the recognition of farmers as the source of information.

Jewel Bissdorf said that the system of recognition is already there in OISAT and that all information PAN Germany published is properly recognised/sourced.

It was agreed that incentive is not primarily monetary but recognition. PAN Germany does not have capacity to provide any monetary incentives. OISAT is simply a book made available in e-form for affordability. Cash incentives if any should not necessarily come from PAN Germany. Incentives could be as basic as recognition.

12. Future plans of the implementing and collaborating partners

In this session, we wanted to look ahead and identify, how each partner involved in the pilot project can promote OISAT by using the means available within the framework and the particular feature and strengths of its organisation.

12.1 Propositions from PELUM by Maryleen Micheni

- Writing regularly articles on OISAT.
- Informing on OISAT in its E-bulletin which appears every 2 months.
- Publishing a lengthy article in Ground-up magazine on the workshop.
- Produce OISAT calendar, shirt, caps.
- Create OISAT links in every PELUM websites.
- Disseminate OISAT to Universities.
- Conduct a regional workshop on OISAT mid-next year.
- Conduct regular meetings with IPs to re-valuate and plan continually.

12.2 Propositions from SACRED Africa by Johnston O Tungani

- Will have activities to ensure the financial sustainability of the FRC through e.g. charging of mobile phones, training, computer use, printing services plus an increase of the farm productivity.
- In case there is another phase of OISAT, SACRED Africa will work really hard on validation.
- Continue dissemination.
- Training programme for students on sustainable agriculture will be offered.
- Will continue collaborating with partners and implementers.

12.3 Propositions from SACDEP by Anne Wanja Murangiri

- Will do documentation on OISAT.
- Promote further OISAT to CAP (community agriculture programme).
- Will include OISAT in technical trainings.
- Incorporate OISAT in their magazines.

12.4 Propositions from KIOF by Shem Mecheo

- To financially sustain the FRC, KIOF will offer photocopier, phone charging, and printing services.
- Scaling-up and dissemination of information on OISAT in their extension programmes
- Include OISAT in their training programmes.

- Continue strengthening partnership with IPs.
- Train student to utilise OISAT information in researchers and studies.
- Publish information on OISAT in their magazines.
- KIOF and the Egerton University are planning a degree on SA; OISAT could be integrated in their training.

12.5 Propositions from ALIN by Noah Lusaka

- Will share information on OISAT in their magazines.
- Scale up their FRC through collaboration with NALEP.
- Will publicise OISAT *Info* on their website.
- Will repackage information from OISAT for radio broadcasting.

12.6 Propositions from MOA by Stephen Kioko

- For the MOA extension workers, OISAT is a big boost.
- OISAT will be used by EW to assist the farmers.
- Linkages with partners particularly in validating OISAT information can be enhanced.
- MOA programmes can be used to dissemination OISAT (e.g. cotton production programme).
- The e-government, which Kenya is promoting, will help in information dissemination of OISAT information.
- The mobile extension desk will be used to disseminate OISAT information.
- MOA field days will be used as well for the promotion of OISAT.
- Information on OISAT will also appear in MOA magazines.

12.7 Propositions by Christine Nabulime for Uganda

- Will share information on OISAT with other organisations in Uganda.

12.8 Propositions by Bayissa Geleta Negera for Ethiopia

- There is a huge pesticide problem in his country and he is hoping to promote OISAT through his organisation as a strategy for the urgently needed pesticide reduction.

12.9 Propositions from Agromisa by Rob Witte

- Agromisa offers its publications, which resource centres and farmer groups can use. They are also available online.
- Should expand OISAT from plant protection to animal health (livestock) and he can link PAN Germany with veterinary students/groups.
- New publication of Agromisa will refer to OISAT as possible source of solutions.
- Rob Witte is willing to link with potential sources for support for the validation work.
- Rob Witte offers to link African groups with institutions in the Netherlands if needed.

12.10 Propositions from PAN AP by Gilbert Sape

- Will popularise OISAT in the People's Convention on Natural Resources in November in Thailand, will distribute CDs on OISAT.
- Will pilot test OISAT in one country in the Mekong Delta Region.

Guiding principles for the OISAT project based on the recommendations of the Final Workshop

Steps:

- 1. Identify key stakeholders of the OISAT process in Kenya
- 2. Define roles and responsibilities of the various players of the project

Key Stakeholder Level	Specific Stakeholder	PELUM	PAN Germany
Policy - Level			PAN Germany responsible for strategy
Research Institutions	ICIFE, KARI, KEFRI, Universities	Coordinate field validation with research institutions, farmers and extension workers	PAN Germany is in direct contact with - Research (ICIFE?) - PELUM for framework
Government Institutions	MOA (Key agent) MoEST	PELUM to establish direct contact to Policy Level (P.SI.)	
CSOs	IPs, Church-based Organisations, others	PELUM to coordinate with various CSOs	
Farmers	IPs, MOA	Use of OISAT Field validation Feedback	

Annex 1: Programme

FROM WEB TO FIELD TO WEB

Integrating OISAT into Training and Extension Services

Organised by
PAN Germany
in Co-operation with PELUM Kenya

03.-07. October 2006
at SACDEP, Thika, Kenya

Collaborating Partners

PELUM Kenya
SACDEP
KIOF
ALIN
SACRED Africa

Financial Supporters

Agromisa
Misereor
Bread for the World

Day	Hour	Activity	Moderation
03.10.06	08.00	Introduction / Climate setting	Marlyeen
	08.00 – 10.00	Welcome addresses PAN Germany PELUM Kenya Agromisa Potential of OISAT in agricultural training and extension Official Opening	Chair: Zachary Carina Weber Eliud Ngunjiri Rob Witte Ministry of Agriculture, Mwingi Ministry of Agriculture Hq
	10.00 – 10.30	Tea break	
	10.30 – 11.00	Introduction, goal, objectives, workshop process and programme	Gabriele Stoll
	11.00 – 12.00	Introduction on the overall pilot project process	Zachary Makanya
		Introduction to the thematic areas to be discussed in the working groups to analyze the input of the implementing partners	
	13:00	Lunch break	

	13.45 – 15.15	Report of the representatives of the collaborating partners - ALIN, Noah Lusaka - KIOF, Shem Mecheo	Chair: Carina Weber
	15.15 – 1	Coffee break	
	16.00 – 18.00	Continuation - SACDEP, Anne Murangiri - SACRED Africa, Johnstone Tungani - PAN Germany, J. Bissdorf, G. Stoll - PAN-AP, G. Sape	
	18.30	Dinner	
	20.00	Marketplace: Participants present their work and organisation by displaying their products, books etc.	
04.10.06	08.30 – 10:30	Recap of the previous day	Chair person: Polly Wachira Jewell Bissdorf
		Introduction of the activities of the day	Gabriele Stoll
		General observations of farmers -Simon Kariuki -Celestine Simiyu -Florence Gitau -Julius Matei	
		Agreement on the thematic areas to be discussed in the working groups	
		Breaking into groups to work on the thematic areas	
	10.30	Tea break	
	11.00 – 12.10	Working groups to discuss 4 thematic areas Thematic area 1: Thematic area 2: Thematic area 3: Thematic area 4:	Reference for questions regarding contents: PAN Germany
	12.20 – 13.00	Group presentations and discussion in the plenary (Thematic area 1 + 2)	Chair: Gabriele Stoll
	13.00 – 14.00	Lunch break	
	14.00 – 14.40	Group presentations and discussion in the plenary (Thematic area 3 + 4)	Zachary Makanyka
		Experiences of the coordinating partners - PAN Germany - PELUM	Gabriele Stoll Maryleen Micheni
	16.00 – 16.30 h	Tea break	
	16.30 – 18.00 h	Development of guidelines for the field visits	Jewel Bissdorf
05.10.06	Morning	Field Visit to Nyangithambo FRC Two farmer farms Presentation of the CLRCs accomplishment at	Chair: Jewel Bissdorf & Maryleen Micheni

		the site. Structured discussion with the local community.	
12.30 – 14.00		Lunch break	
	Afternoon	Continue field visit to <ul style="list-style-type: none"> ▪ Kaihungu FRC ▪ Two farmer fields <p>Presentation of the CLRCs accomplishment at the site. Structured discussion with the local community.</p>	
	18.30	Dinner	
	Evening	Free	
06.10.06	08.30	Recap of the field visit	Noah Lusaka
	08.40	Drawing of conclusions and recommendations through parallel working groups Analysis, evaluation and recommendations for other training and extension services	Chair: Gabriele Stoll
		Introduction of the activities of the day Finalising of the thematic areas Breaking into groups: <i>Recommendations 1: Preparation and planning of the introduction of OISAT in training and extension programs</i> <i>Recommendations 2: Key factors of successful adoption and the scaling up of OISAT by partners (integration previous discussion in workshop 2005)</i>	
	10.30 – 11.00	Tea break	
	11.00 – 12.30	<i>Recommendations 3: Support and competencies required (management, extension worker, farmers, others)</i> <i>Recommendations 4: Expansion of OISAT Info and quality management; linkages between PAN GERMANY and the implementing partners</i> Recommendations 5: OISAT vision (5 years time frame)	
	13.00 – 14.00	Lunch break	
	14.00 – 15.30	Presentations of working groups 1-3 and discussion	
	15.30 – 16.00	Tea break	
	16.00 – 17.30	Presentations of working groups 4-6 and discussion	

07.10.06		Future collaboration	
	08.30 – 08.40	Recap	Rob Witte
	08.40 – 10.30	Future plans of the implementing and collaborating partners	Gabriele Stoll
	10.30 – 11.00	Tea break	
	11.00 – 12.30	Perspectives of the use of OISAT in Kenya in the national context	Gabriele Stoll
	12.30 – 14.00	Lunch break	
	14.00 – 14.30	Evaluation	Jewel Bissdorf
	14.30 – 15.30	Closing of the Workshop and Handout of Certificates	SACDEP
	15.30	END OF WORKSHOP	

Annex 2 : List of Participants

PAN Germany Final Workshop of the Pilot Project “FROM WEB TO FIELD TO WEB”

NO.	NAME OF PARTICIPANT	ORGANIZATION	LANDLINE NO.	EMAIL ADDRESS	MOBILE
1.	Maryleen Micheni	PELUM-Kenya	067-31686	maryleen@pelum.net	0723 540 417
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