SESSION 9: INFORMATION EXCHANGE

Introduction by the Secretariat

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SESSION 9

INFORMATION EXCHANGE

Slide 2

Structure of Session 9

• Introduction

• Presentations by invited speakers on related activities in the sub-region

• Panel Discussion

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Objectives of Session 9

1. understand the information exchange provisions of the Convention

2. understand the possibilities for exchanging information on hazardous chemicals through the operation of the Convention

3. identify opportunities for information exchange within countries and among countries in the sub-region

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Introduction

Key Provisions of the Convention

Opportunities for information exchange through the operation/implementation of the Convention

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Key Provisions of the Convention

Article 14 - Information Exchange - Key Elements

• outlines the type of information to be exchanged including scientific, technical, economic information for the chemicals within the scope of the Convention

• notes that countries shall protect any confidential information as mutually agreed

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Article 14 - Information Exchange

Key Elements

Identifies information that is not to be regarded as confidential including:

• information referred to in Annexes I and IV and in the safety data sheet to accompany exported chemicals

• the production date and the expiry date of a chemical
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**Article 14 - Information Exchange**

**Key Elements**

- Information on precautionary measures including hazard classification, the nature of the risk, relevant safety advice and summary results of toxicological and ecotoxicological tests

Provides a mechanism for countries to request information on transit movements through their territories

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**Opportunities for information exchange**

A principal theme is facilitating access to information - wide range of opportunities for countries to:

- receive information on hazardous chemicals and
- share information and experience with countries facing similar concerns

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**Opportunities for information exchange**

- REGISTER OF DNAs
- PIC CIRCULAR
- EXPORT NOTIFICATIONS
- DECISION GUIDANCE DOCUMENTS (DGDs)
- WEBSITE

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**i) Register of Designated National Authorities**

Constitutes a ready made set of contacts among countries

- opportunity to follow-up on reported notifications for banned or severely restricted chemicals or proposals for severely hazardous pesticide formulations
- share experience and information on issues of common interest

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**ii) PIC CIRCULAR**

Provides information on hazardous chemicals

- Distributed every six months (June - December)
- Provides general information on implementation including: status of ratification
- Chemical/country specific information:
  - four appendices

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**ii) PIC CIRCULAR**

Provides information on hazardous chemicals

- Appendix I banned or severely restricted in participating countries
- Appendix II pesticide formulations causing problems under conditions of use
- Appendix III list of the chemicals subject to the interim PIC procedure
- Appendix IV import decisions of participating countries

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**iii) EXPORT NOTIFICATION (Article 12)**

Where a chemical is banned or severely restricted with in an exporting country they are to send an export notification to the importing country

- prior to the first export following adoption the regulatory action and
- before the first export in any calendar year

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**iii) INFORMATION TO ACCOMPANY EXPORTED CHEMICALS (Article 13)**

- where they are to be used for occupational purposes, a safety data sheet that follows an internationally recognised format is to be sent to the importer
- are subject to labelling requirements that ensure adequate availability of information with regard to risks and/or hazards to human health or the environment
iv) CHEMICALS IN THE INTERIM PIC PROCEDURE

Decision guidance documents (DGDs)

• define the chemical subject to the Convention
• outline the basis for the relevant regulatory actions
• identifies further sources of information

v) Rotterdam Convention Website

www.PIC.INT

• primary source of information on the operation of the Convention, the chemicals subject to the Convention and candidate chemicals
• updated as new information becomes available
• e-mail accounts: pic@fao.org  pic@unep.ch
ROTTERDAM CONVENTION
Use of PIC and other international Information for the Safe Management of Chemicals
REINER ARNDT, GERMANY
Windhoek, Namibia, 17. - 21.02.2003

SAFE CHEMICALS MANAGEMENT PRINCIPLES
• Life Cycle Analysis Production, Marketing, Trade (Export, Import), Transport, Storage, Industrial Use, Consumer Use, Recycling, Waste
• Regulatory Activities
  - Chemical Products (Authorization, import permit, Notification, import control, Classification, Labeling)
  - Pollution Prevention
  - Consumer, Worker, Air, Water, Soil, Waste

CONTROLLED CHEMICALS
• Drugs
• Cosmetics, Food Additives
• Pesticides (PIC category p)
• Non Agricultural Biocides (PIC category p)
• Industrial Chemicals (professional, consumer use) (PIC category i)
  Basic chemicals, solvents, colorants, additives

CHEMICAL CONTROL TOOLS
• Legislation
• Data Collection (Testing, Evaluation)
• Risk Assessment (Hazard, Exposure)
• Risk Benefit Analysis (socio economic factors)
• Risk Management Decision (criteria)
• Information (GHS, PIC, POP), Awareness
• Enforcement

INTERNATIONAL CHEMICALS SAFETY
• Stockholm Convention (multilateral ban) Env.
• Montreal Protocol (multilateral ban) Env.
• Rotterdam Convention (information, trade, unilateral restrictions) Env., Work., Cons.
• GHS System (information) Env, Work., Cons., Transp.
• ILO Convention 170 Worker
• Basel Convention Waste

PIC OPPORTUNITIES for Safe Chemicals Management
• national coordination, DNA art 4
• Information about chemicals art 5,6,14
• Information with chemicals art 12, 13
• Risk assessment/management art 10
• Enforcement of import, export regulations
• Implementation art 15
  Government, NGO, public
**INTERNATIONAL INFORMATION for Safe Chemicals Management I**

- Other Conventions, GHS
- UNEP SDS Chemicals
- IPCS EHC, CICADS
- OECD Exichem database
- EU IUCLID database
- EU Risk Assessments
- EU PIC Edexim Database

**INTERNATIONAL INFORMATION for Safe Chemicals Management II**

- Chemical management instruments
  - UNEP/IPCS Risk Assessment
  - UNITAR Implementation GHS (planned)
- UNITAR/IOMC
  - National Profile
  - Key elements chemicals management
  - Risk management plan for priority chemical

**RESPONSIBILITIES for Safe Chemicals Management**

- **Producer/Exporting Countries**
  - Generation of information (hazard)
  - Risk assessments, Risk management
  - Information C/L, SDS, RA, RM, assistance
  - Production of less hazardous products
- **User/Importing Countries**
  - Awareness raising (hazard, risk C/L SDS)
  - Availability of information
  - Regulatory framework for safe use
  - Implementation, Enforcement (resources)

**PRIORITIES for Safe Chemicals Management**

- **All chemicals (inventory?)** 10000+
  - General pollution prevention/protection strategies
- **Hazardous chemicals (list?)** 1000 +
  - (GHS, ILO 170) hazard/risk specific prevention/protection strategies
- **Banned, restricted Chemicals** 100 +
  - (POP, Montreal, PIC) chemical specific action

**SAFE CHEMICALS MANAGEMENT IMPLEMENTATION**

- Analysis (National Profile)
- Diagnosis Chemical Problems
- Implementation
  - Priorities (criteria)
  - Resources
  - Enforceability
- Evaluation
Information Exchange on Industrial Chemicals in the Southern African region

Jan F Goede
19 February 2003

Submitting country response slow, because:
- Industrial chemicals have no central registration/notification process
- Extensive environmental law reform in progress
- Several departments involved: Trade, Health, Foreign Affairs, Water, Agriculture while Department of Environmental Affairs and Tourism is the DNA

Progress in South Africa
- Ratified Rotterdam Convention 2002
- Awareness raising during WSSD 2002 Johannesburg
- POP's National Implementation Plan launch Feb 2003
- Planned NIP for PIC later 2003/4; 2003 workshop on implementation on Globally Harmonized System of Classification and Labeling of Chemicals (GHS)- SA & Zambia

Current networks in Southern Africa:
- SADC 14 countries have two experts on ICRC (PIC)
- SADC general information exchange project launched recently
- Relevant government departments network through NEDLAC with NGO, labor, business inputs
- Governments research institutes and bodies (Medical Research Council, Council for Scientific Industrial Research, Agricultural Research Council)
- Industry associations like Chemical and Allied Industries' Association, Petroleum Industry Association, Chamber of Mines

Current networks in Southern Africa: (continued)
- Conferences (WSSD, 5th session on POPs)
- Fund for Research into Industrial Development, Growth and Equity (FRIDGE) studies with multi-stakeholder steering committee (labor, NGO, Business, government)
- FRIDGE projects include:
  - Socio-economic impact of Asbestos phase-out in SA
  - Information exchange project
  - Globally Harmonized System
  - ...several others
**NEPAD- “Framework for the Action Plan for the Environmental Initiative”**

- Health and Environment cross-cutting theme
- Includes industrial waste and pollution, pesticide poisoning, POPs and Stockpile of obsolete pesticides

**NEPAD- Current projects related to PIC**

- National Implementation plans for management of POPs (includes PCBs)
- Regionally-based assessment of PTS
- Chemical information exchange
- PCB identification projects
- Atmospheric issues in developing countries

**Banned/ restricted substances South Africa or regions**

- Aldrin- withdrawn ’92
- Arsenic- inorganic banned ’83 except citrus use
- Atrazine- banned ’77; industrial use ’95
- Binapacryl- no registrations since ’88
- Chlordane- ’93 except citrus; ’00 complete
- 2,4-D dimethylaminle and esters ’91
- DDt- ’83 except malaria control by gvt
- Dieldrin- banned ’83
- Dinoseb- ’95
- DNOC- ’01

**Banned/ restricted substances South Africa or provinces**

- Endosulfan- ’70
- Endrin- ’80
- Gamma-BHC (lindane) ’71; BHC ’83
- Heptachlor- ’76
- Mercury compounds- ’83
- Monocrotophos- ’97
- Parathion- limited uses since ’93
- Phosporus containing compounds ’79
- 2,4,5-T- ’89

(National Department of Agriculture 2000©)

**Case study- Asbestos**

- Existing legislation focuses on protection on worker health and safe disposal
- 1998: SA cabinet decision to phase-out asbestos
- 2001: Last asbestos mine closed in SA, Zim source remains
- 2002: Initiated socio-economic study to determine phase-out period and details
- 2002: Declining use- half of 8000 tpa building & construction products (40% decline from ’00)

**Current PCB status**

- PROCUREMENT: Departments/ companies have procurement contracts stipulating "new" transformer oils have to be PCB free
- RECONDITIONING: Reconditioners collect/ recondition transformer oils in situ or on an exchange basis. Only transformer oil with PCB <10 ppm is returned to systems
- RESIDUALS: Residual PCB levels in transformer oils decreasing since topping up with PCB free product or reconditioned material. Levels >50ppm indicate concern (Stockholm)
- DISPOSAL: Agreements ensure PCB containing waste material does not end up as furnace fuel. Note waste disposal as hazardous waste most likely- note Basel provisions

**Case study: phase-out of PCB’s**

- Additive in transformer oils
- Market-driven process helped phase-out
- Oil reclamation/ recycling lowers rate of phase-out
- Awareness of trade names thanks UN publication
- Many ISO 14001 management systems adopted in industry with specific PCB phase-out targets
- Soil remediation remains a long term issue

**Case study- Asbestos**

- 1/2003: Socio-econ FRIDGE study completed
- 6/2003: Last asbestos fiber due from SA milled fiber stockpiles
- 2003: Asbestos cement (50% of use) replaced by cellulose fibers cement
- Selected uses probably will remain but alternatives widely available
- Total job loses probably few hundred; cost impact few hundred million ZAR. Several timeframes for phase-out under consideration
Challenges

• Building capacity in Southern Africa
• Enhancing communication in SADC and beyond
• Prioritizing industrial chemical risks
• Understanding socio-economic impacts
• Improvement of Env. analytical capacity
• Monitor & prevent illegal traffic in toxic/dang. products
• Establishment of an Information Management System

Conclusions

• Progress slow but under way; speed depends on level of information exchange
• Cooperation critical between all stakeholders in resource restrained environment (governments, industries, NGO’s, Labor)
• Focused capacity building project to assist countries implement interim PIC procedure is required.

Responsible Care: a Chemical Industry foundation to strengthen the safe management of chemicals towards sustainable development goals

Responsible Care

• Global ethic
• Continuous improvement in health, safety, environment
• Training employees
• Working with customers and communities

Responsible Care: implementation

• Guiding principles
• Adoption of title and logo
• Management Practice Standards
• Quantitative Indicators of Performance
• Communication with stakeholders
• Encouragement on commitment
• Independent verification

Chemical Industry approach

• Development of global capacity building action plan
  – national level
  – international
• Potential national partners: government, labour, NGO’s
• Potential international partners: UNITAR, UNEP

Elements of partnerships

• Links to Agenda 21
• Complementary to Type 1 outcomes
• Objectives and targets
• Activities
• Implementation strategy
South African Capacity Building Study

- ICCA funded assessment with a view to developing a global capacity building initiative
- ICCA to present a capacity building event during the WSSD
- CAIA managed the assessment for ICCA

Approach to Assessment

- Compiled questionnaire based on Chapter 19
- Consulted key stakeholders
- Telephone interviews
- Compiled assessment report and worked shopped with stakeholders

Priority areas

- Chemical information
- Information dissemination
- Risk management
- Product stewardship
- Emergency response

Chemical Industry partnership: South Africa

- Links to Agenda 21
- Activities from the case study
- Complementary to Type 1 outcomes
- Alignment with African Action Plan
- Implementation strategy

Pilot project outline (1)

- Activities
  - GHS implementation
  - Information dissemination
  - Education, training and awareness
  - Product stewardship
  - Emergency response
- Co-ordination and implementation mechanisms

Complementary to Type 1 outcomes

- Ratification of Conventions
- Strategic approach to chemicals management
- Adoption of the Globally Harmonised System
- Encouragement of partnerships
- Promote efforts against illegal trafficking
- Support capacity building
- Specific support for Africa

Alignment with African Action Plan

- Harmonisation of classification and labelling
  - Implementation of GHS
- Information exchange
  - Information dissemination: support sought
  - Links with UNEP pilot project
- Risk reduction programmes
  - Poison centres
- Capacity building

Way forward

- Develop pilot project further
- Consider proposal as part of ICCA partnership initiative
- Seek additional support
- Explore possibility for Type 2 partnerships for Africa
Risk Reduction in the use of Agrochemicals: Views of the Agrochemical Industry

Norbert Locher
Director technical development Syngenta

1. CropLife
- CropLife International (ex GCPF, ex GIFAP) : Global association of agrochemicals producers
- R&D Companies : BASF, Bayer, Dow, Du Pont, FMC, Monsanto, Sumitomo, Syngenta
- Regional offices in all continents. CropLife Africa and Middle East in Amman (Jordan)
- One of the main targets: Promotion of an efficient and safe application of agrochemicals

www.croplife.org

2. Benefits of Agrochemicals
- Secured harvest
- Return of investment in the crop
- Improved quality
- Easier transport
- Work reduction

3. Risks and Side Effects of Agrochemicals
- Toxicity towards users
- Behaviour in the environment
- Effects on non target organisms (wild life)
- Crops contaminated with residues and consequences for the consumers
- Accidents during transport and storage
- Waste and stocks of expired products
4. The User

Problems:
- Exposure to the product (skin and inhalation) during the preparation of the spray mixture and the application
- Technical equipment
- Awareness about the risks of the products

Solutions:
- Less toxic products, i.e. organophosphates >> pyrethroids
- Granule formulations instead of powders, SL instead of EC
- Educated Users, certified applicators
- Protective clothes
- Label recommendations
- Maintenance of the technical equipment

5. The consumer

Problems:
- Too high dosages
- Too short pre-harvest intervals
- Persistent compounds
- Too high residues in crops

Solutions:
- Less persistent products which degrade rapidly
- Education of the user, farmers training
- Label recommendations
- Regulatory framework
- Residue Monitoring

6. The Environment

Problems:
- Water contamination
- Reduction of beneficials populations
- Hazard to wildlife and aquatic organisms
- Persistent compounds
- Too high residues in crops

Solutions:
- Compounds degrading rapidly
- Selective compounds saving beneficials
- Integrated crop management and protection
- Untreated buffer zones around surface water areas
- Label recommendations

IPM: Observation, Prevention, Intervention

Prevention - indirect measures
- Promote natural antagonists
- Location
- Crop rotation
- Host plant resistance
- Site management
- Sanitation
- Irrigation

Observation - decision tools
- Def. of econ. thresholds
- Forecasting systems
- Diagnostics
- Expert systems
- Scouting methods
- Traps

Intervention - direct measures
- Chemical
- Biological
- Mechanical
- Rate & timing optimization
- Bio-technological
- Correct & safe application

7 steps to IPM compatible use of products

- Use correct dose and appl. technique
- Use the right product for each problem
- Base spray decisions on measured pest pressure
- Scout your crops, monitor your pest
- Know your beneficials
- Know your pest
- Follow an IPM program

IPM Label: GALTI Western Switzerland

- Use of all appropriate IP measures
- Record all data on control interventions
- Verify use of pesticides based on monitoring
- Use admitted pesticides only
- Use certified equipment
- Soil analysis every 5 years
- Attend training course on IPM
- Accept regular checks on farm

7. Products Quality and Packaging

Problems:
- Products out of specification, with reduced efficacy
- Some generic products containing high levels of impurities and other by-products of the active ingredient
- Fake products
- Packages difficult to open and resulting in contamination of the hands

Solutions:
- Products with good shelf life stability under local conditions
- Strict official regulations ensuring a high quality of the products
- Frauds control
- Packages with wide opening, easy to open and close
8. Storage, Distribution and Transport

Problems:
- Bad storage conditions, deficient stock maintenance
- Damaged containers, leakages
- Traffic accidents

Solutions:
- Education of the distributors on optimal storage
- High quality packings, tested for resistance to all storage conditions of transport and storage (UN norms)
- Safety data sheets compulsory in warehouses and trucks

9. EU Review Process: Existing a.i.s

- Existing substances to be reviewed within 12 years
- Progress report to Parliament in 2001
- Extension of review period possible via Commission Regulation

Inventory 1993 approx. 905 Chemicals + 17 Biologicals registered in at least one member state

Current Status Phase 1:
- 94 chemicals, included: 16 not included: 19 pending: 55
  - 13 Syngenta compounds, 6 included, 1 withdrawn
  - 580 compounds
  - Not supported: approx 400 compounds

10. EU Review Process: Existing a.i.s

Active Substances

- Approved: 460
- Withdrawn: 10
- Pending: 55
- List 1: 340
- List 2: 160
- List 3: 160

9. Conclusions

- Positive balance between benefits and risks of agrochemicals
- Official regulation necessary
- Education of users and distributors important
- Cooperation between authorities and industry desirable

9. PIC and the EU Review Program

PIC = Prior Informed Consent
- EU administration thinks to notify at least some of the non-supported or banned actives to the PIC secretariat
- CropLife position:
  - Only notification if concerns for human health or environment
  - Only notification based on complete risk assessment made by country members
  - No notification if active is on biocide list
  - No notification if active is registered in another OECD country
INTRODUCTION

The activities of PAN international are coordinated from 5 regional centres:

- PAN Europe
- PAN North America
- PAN Asia Pacific
- PAN America
- PAN Africa

Our principal objective is the sensitisation of populations about the dangers linked to pesticides (use) but also the emergence and the development of a collective conscience for a better regulation of chemical pesticides in view of the protection of health and environment against the dangerous consequences of pesticides.

As a matter of fact, in Africa, several pesticides, which are very dangerous, are used in an anarchic and excessive way, provoking enormous harm to the environment and to the populations.

We can cite the endosulfan (which caused the death of more than 70 people in Benin in 1999), the TBC Granox and the T Spinox (which had provoked the death of 22 people and made a hundred of injured persons in Senegal), and the WHO classes Ia and Ib pesticides, the Pops etc.

Besides, the climate socio-economic, and cultural conditions in Africa, do not encourage the use of protecting equipment.
INTRODUCTION

We are undertaking the following actions, in order to reduce risks linked to pesticides:

– Monitoring of pesticides use (collection of information about poisoning; Research on pesticides effects and consequences)
– Sensitisation on the dangers of pesticides
– Training and information on alternatives
– Studies on the regulation of pesticides in Africa.

Monitoring of the pesticide use

The aim of this activity is:

• to provide to the populations evidence on problems and harm caused by pesticides
• to procure to the Civil Society some instruments of advocacy,
• to provide to the decision-makers some tools to help in decision-making.

Monitoring of the pesticide use

Data base on pesticide poisoning cases in Senegal

Since 2001, PANA FRICA has been collecting information on poisoning linked to pesticides with the objective of:

– Establishing a cartography of poisonings in SENEGAL
– Better understanding the causes of poisonings
– Giving to the Senegalese authorities some tools for helping decision making

Monitoring of the pesticide use

• The results of our investigations allowed to remove some ambiguities raised by the part B of report form filled by the team of SNGE
• Indeed, the team goes to the field to fill the report form 2 month after the last incidents and certain information can’t be obtained
• In several report form, there is a big gap (90 days) between the exposure period and the date of incident
  – in reality, the first cases was occurred in June-July during the period of sowing

Monitoring of the pesticide use

• we are also presently testing the part B of the pesticide incident report form and the report form on ecological incidents
• The first results of these tests are that
  – We haven’t need a certain level of literacy to fill the part B of the pesticide incident report form and farmers can easily understand the questions of this form; however certain information can be lost when the report is done a long time after the incident (exposure period, climatic conditions, adverse effects, copy of the label, …)
  – We can’t give for the moment our comments on the ecological incident report form because we have began to test it in January

Monitoring of the pesticide use

– For the cases occurred in September, There is a strong presumption that the exposure period was not the usual period of seed treatment and sowing (May—July) because there has been others contacts with the pesticides
• Information on common use of theses 2 pesticides and the others present in the area
• Information on socio-economy (sharing out of agricultural tasks,

Monitoring of the pesticide use

• In the framework of the elaboration of our data base and also the implementation of PIC procedure, PAN Africa and PAN UK aim to inform and train African NGOs in the PIC procedure so that to:
  – make NGOs more familiar to the PIC procedure, and also to the other pesticides conventions
  – let them able to assist efficiently in documenting evidence of poisoning
Monitoring of the pesticide use

Research on the use of endosulfan in cotton growing
- This research project implemented in Benin, Senegal, Mali, and Cameroon has as an objective to:
  - Analyse and examine the utilization of endosulfan in the Cotton Crop
  - To collect information on poisoning cases related to endosulfan
  - To analyse the endosulfan residue in the human bodies and the cattle
  - To study the acute toxicity of endosulfan on “Paederus Riftens”, which is a coleopteran (beetle) depredateing the cotton pests, in laboratory, as well as the of risk in full field.

Monitoring of the pesticide use

Research on the use of endosulfan in cotton growing
- The research has to be pursued in Mali
- The presence of endosulfan in the urine proves that it is present in the bodies of the cotton producers.
- The research has to be pursued in Mali

Monitoring of the pesticide use

Some utilizations of the results of these activities
- The results of these works can be utilized in the PIC procedure
- The results of our investigation about the poisoning linked to Granox and Spinox have been used by he Senegalese authorities and the ICRC 3 in the frame of notification made by Senegal as regards the PIC procedure concerning these 2 severely hazardous pesticides formulations.
- The Civil Society in the frame of their lobbying activities uses the results of investigations made on endosulfan.

Sensitisation and information on the hazards of pesticides

Our sensitisation and information activities on the dangers linked to pesticides are made through:
- The PAN Africa specialized documentation Centre on chemical pesticides, IPM, sustainable agriculture and biodiversity. It consists of more than 2000 works and it is visited by researchers, students, pupils, journalists, professionals, and agricultural producers.
- Posters and calendars containing information:
  - On dangers that pesticides represent on health and environment
  - On effects and consequences of methyl bromide on the ozone layer

Sensitisation and information on the hazards of pesticides

A few result indicators of these activities:
- All these props are largely distributed and appreciated in Senegal and in the other countries, during the several meetings, which we participate to.
- The local press in Senegal or other written material regularly cite some of the articles of the Pesticides and Alternatives Bulletin.
- We regularly receive letters from the bulletin’s readers of different countries, encouraging us the pursue on ; some of these letters are published in the bulletin section “letters to editors”.
- We also largely spread the results of own research on pesticides and intoxication cases, especially to the decision makers so that they possess tools helping them in decision making in issues related to pesticides.
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**Studies on the regulation of dangerous pesticides in African countries**

- to provide key information on the use of pesticides belonging to the PIC list and the POPS pesticides as well.
- to identify the alternatives developed to replace the PIC and POPS pesticides.
- Results of these works have been published in 500 copies for each country and distributed for free.

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**Information-Training on pesticides alternatives**

**Training on Integrated Pest Management (IPM)**

The objectives of the training in the area of Integrated Pest Management (IPM) are:

- To sensitize the producers on the dangers linked to pesticides
- To provide to producers means to let them able to take the most appropriate decisions concerning the management of their fields
- To reduce the recourse to pesticides

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**Information-Training on pesticides alternatives**

**IPM on market gardening crop for the benefit of women**

The evaluation of the training has enabled to gather that the women:

- Have become much more sensitive to the problems associated with the use of pesticides.
- Have well mastered the methodology related to the observation of plots.
- Are able to distinguish between certain useful insects (as spiders and ladybirds) from the pest.

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**Information-Training on pesticides alternatives**

**IPM on market gardening crop for the benefit of women**

- Women have understood the process and the necessity (of having) zoos containing insects as a means allowing them to distinguish pest from useful insects and to comprehend their behaviour within their plots and fields.
- The returns obtained in their LID plots have convinced them about the performance and pertinence of the LID method. Thus, some women producers have voluntarily applied the method on 2 ha of okra, without any chemical pesticide and they have obtained satisfying results.

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**Information-Training on pesticides alternatives**

**IPM on cotton growing**

- 450 cotton producers have been trained since August 2000.
- The trained producers are able to:
  - Distinguish certain useful insects as compared to rodents
  - Have understood the process and the necessity of having zoos containing insects
  - Have become much more sensitive to the problems linked to pesticides utilization

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**Information-Training on pesticides alternatives**

**IPM on cotton growing**

- And some of them have reduced the number of pesticides spraying on their cotton plots: they make 2 to 3 sprayings where the SODEFITEEX (para-statal Company managing the cotton industry in Senegal) is actually asking them to make 6 to 7 sprayings.

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**Information-Training on pesticides alternatives**

**IPM on cotton growing**

- The results obtained in the LID plots have convinced them about the performance and pertinence of the LID method.
- And some of them have reduced the number of pesticides spraying on their cotton plots: they make 2 to 3 sprayings where the SODEFITEEX (para-statal Company managing the cotton industry in Senegal) is actually asking them to make 6 to 7 sprayings.

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**Information-Training on pesticides alternatives**

**Researches on traditional knowledge and natural techniques used in crop protection in Senegal**

- They aim at making the inventory and the evaluation of traditional or natural knowledge in the area of improvement of the soils fertility, the fight against rodents in crops, seeds and harvests.
- This research has enabled to gather that there are several indigenous practices and techniques that can valuably compare and replace the chemical pesticides.
- The results of these works have been transmitted during a restitution workshop.
Information-Training on pesticides alternatives

In the framework on pesticides alternatives sensitisation we made also several publications including:

- Booklet that provides information on the fundamental principles of biological agriculture. 500 copies of this brochure have been freely distributed.

- IPM publication that gives a few pieces of information on the integrated fight against the enemies of crops in sudano-sahelian Africa. It gives light on the natural fighting principles and methods against the enemies of food, commercial and industrial crops encountered in Africa.

CONCLUSION

- We call all the DNA to collaborate with NGOs in the framework of the implementation of the PIC procedure because being close to grassroots organizations and pesticides users, they can be helpful in documentation of poisoning incidents.