Food and Agriculture Organization of the United Nations

Office of Evaluation

"Capacity Building related to Multilateral Environmental Agreements in African, Caribbean and Pacific (ACP) countries - Clean-up of obsolete pesticides, pesticides management and sustainable pest management project"- GCP/INT/063/EC

Final Evaluation Report

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Office of Evaluation (OED)

This report is available in electronic format at: http://www.fao.org/evaluation

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We hope that the presented conclusions and recommendations will contribute to the continuous improvement of the project and to the achievement of the expected results.

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Evaluation team

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Acronyms

ACP	African, Caribbean and Pacific countries
AGP	Plant Production and Protection Division, FAO HQ
AGPP	Plant Protection Service of FAO
APVMA	Australian Pesticides and Veterinary Medicine Authority
ASP	Africa Stockpiles Programme
BH	Budget Holder
CAHFSA	Caribbean Agriculture Health and Food Safety Agency
CARDI	Caribbean Agricultural Research and Development Institute
CARICOM	Caribbean Country & Common Market
CEMAC	Central African Economic and Monetary Community
CBD	Convention on Biological Diversity
CEO	Chief Executive Officer
CGPC	Coordinating Group for Pesticide Control Boards of the Caribbean
CILSS	Comité permanent inter-états de lutte contre la sécheresse dans le Sahel
CLI	Crop Life International
CMDT	Compagnie Malienne pour le Développement du Coton
COAHP	Comite Ouest Africain pour l'homologation des pesticides
COLEACP	Europe-Africa-Caribbean-Pacific Liaison Committee
COTED	Council for Trade and Economic Development
DANIDA	Danish Agency for International Development
EC	European Commission
ECOWAS	Economic Community of West African Countries
EMP	Environment Management Plan
EMTK	Environmental Management Tool Kit
FAO	Food and Agriculture Organization
FFS	Farmer Field School
GEF/PAS	Global Environment Facility/Pacific Alliance of Sustainability
GTZ	Duetsche Gesellschaft fürTechnische Zusammenarbeit
HOAFS	Heads of Agriculture and Forestry Services
IGO	International Governmental Organization
IICA	Inter-American Institute for Cooperation on Agriculture
INSAH	Institute of Sahel
IPM	Integrated Pest Management
IVM	Integrated Vector Management
IPPM	Integrated Production and Pest Management
KEMI	Swedish Chemical Inspectorate
LoA	Letter of Agreement
MDG	Millennium Development Goal
MEA	Multilateral Environmental Agreements
M&E	Monitoring and Evaluation
MoA	Ministry of Agriculture
MoE	Ministry of Environment
MoU	Memoriam of Understanding
NGO	Non-Governmental Organization
NIP	National Implementation Plan (of the Stockholm Convention)
OAS	Organization of American States
OED	FAO Office of Evaluation

PAN	Pesticide Action Network
PACD	Project Activity Completion Date
PCA	Pesticides Control Authority
PCU	Programme Coordination Unit
PIF	Project Identification Form
PIR	Project Implementation Review
PMU	Project Management Unit
POPs	Persistent Organic Polluants
PPCM	Pacific Pesticide Management Committee
PPE	Personal Protective Equipment
RA	Risk Assessment
REA	Rapid Environmental Assessment
SAICM	Strategic approach to International Chemicals Management
SODEFITEX	Société de Développement des Fibres Textiles
SPC	Secretariat of the Pacific Community
SPREP	South Pacific Regional Environmental Programme
TCP	Technical Operation Programme
ToC	Theory of Change
ToR	Terms of Reference
ToT	Training of Trainers
UCT	University of Cape Town
UEMOA	Union Economique et Monétaire de l'Afrique de l'Ouest
UNEP	United Nations Environment Programme
USA	United States of America
USAID	United States Agency for International Development
WAPRC	West African Pesticides Registration Committee
WB	World Bank
WHO	World Health Organization

Executive Summary

Background and purpose of the evaluation

ES 1. The final evaluation of GCP/INT/063/EC, the European Commission (EC) programme on *"Capacity Building related to Multilateral Environmental Agreements (MEAs) in Africa, Caribbean and Pacific (ACP) countries*" managed by FAO Office of Evaluation (OED), took place from February 10 to June 30, 2014 and was conducted by an independent team of four consultants.

ES 2. The EC programme consisted of two components: (1) support to regional MEA hubs; and (2) support to the implementation of specific MEAs. FAO executed a subcomponent of component 2 entitled "The clean-up of obsolete pesticides, pesticides management and sustainable pest management" (the project).

ES 3. The project began in April 2009 and was supposed to end in March 31, 2013. A no-cost extension until 31 December, 2013 was granted primarily to complete the on-going safeguarding and disposal activities. The overall EC contribution to the MEAs Programme is equivalent to Euro 19.5 million, of which Euro 4,448,220 (US$5,760,109.34) supports the FAO project GCP/INT/063/EC

ES 4. The programme had the overall objective to strengthen capacity in ACP countries to implement, comply with and enforce MEAs. It included two components: (1) enhancement of regional, sub-regional or national capacity related to MEAs, and (2) supporting the implementation of specific MEAs. The Food and Agriculture Organization (FAO) is responsible for the implementation of the subcomponent "The clean-up of obsolete pesticides, pesticides management and sustainable pest management" which is part of component 2 (herein referred to as the project). The project was intended to assist ACP countries in identifying and moving towards the elimination of obsolete pesticides stockpiles, while building capacity to manage pesticide throughout their lifecycle, thus preventing further accumulation.

ES 5. The evaluation purpose was to assess FAO's performance during the first phase of the project with a particular focus on results achieved since the 2011 mid-term evaluation. The recommendations formulated as a result of the final evaluation are expected to serve the implementation of the second phase.

Methodology

ES 6. The evaluation focused on results achieved since the MTE assessing in particular to what extent the project succeeded in achieving the following:

- enforcing pesticide registration and post registration regulation
- reducing the use of pesticides and improving the use of alternatives to conventional chemicals.
- strengthening the use of systems to manage statistics on import, use and current stocks of pesticides
- improving the management of empty pesticide containers and small pesticide stocks

ES 7. Three complementary techniques were used to evaluate the performance of the project: (i) a review of relevant project documentation pertaining to the planning and implementation of the project; (ii) semi-structured interviews with key informants during the field visits; and (iii) observations by the consultants. These three techniques were used to cross-check and validate information; an essential step when qualitative and/or semi-quantitative appraisal methods are used.

ES 8. A questionnaire was administered in the semi-structured interviews. It provided evaluators with a consistent tool to assess the project's performance and to get a feeling of the situation in ACP countries.

ES 9. The key informants included primarily government officials from the Ministries of Agriculture, Health and the Environment, EC Delegations, FAO Representations, sub-regional and regional offices, civil and private sector organizations, and service providers.

ES 10. . FAO Lead Technical Unit, the Plant Production and Protection Division (AGP) provided technical information on the actual implementation of the project throughout its process.

ES 11. The evaluation team visited separately representative sample of countries in the three ACP regions.

Conclusions

1. *Project's relevance to the needs and priorities of beneficiaries' countries and to public regional global good aspects.*

ES 12. The project was conceptualised to assist countries in eliminating obsolete pesticides and preventing the build-up of new stocks through better pesticides management. The project satisfactorily defined the key building blocks required to achieve the primary impact, which was to "improve environmental management and sustainable development focusing on management of pesticides for environmental health - quality of life, sustainable agriculture - quality of growth and protecting the global commons.

ES 13. Evidence gathered during the evaluation process reveals that the project, with its underlying theory of change, has responded to needs and priorities of beneficiary countries. Many individual governments have addressed to FAO official requests for assistance to eliminate obsolete pesticide stocks or to resolve other aspects of pesticide management.

2. *The extent to which the project reduced the use of pesticides and improved the use of alternatives to conventional chemicals.*

ES 14. Sound pesticide management and pesticide use reduction are being performed in many countries where capacity was strengthened, the PSMS deployed, technical guidelines followed, and IPM practices adopted. The project made significant progress in achieving its goal which was to reduce adverse impacts on human health and the environment from excessive and poorly managed pesticide use. Its performance could have been greater if the project was not confronted with serious challenges such as lack of funds, limited capacity and external constraints. Because of these difficulties, the implementation of all planned activities could not be achieved within the agreed timeframe.

3. *Utilization of systems to manage statistics on import, use and current stocks of pesticides*

ES 15. A coherent and comprehensive inventory of obsolete pesticides and risk assessment were successfully completed for all targeted countries with the exception of Dominican Republic and Haiti in the Caribbean. The majority of these countries have validated and uploaded the data collected from the inventories.

4. *Did the project improve the management of empty pesticide containers and small pesticide stocks*

ES 16. In many countries including Benin, Botswana, Jamaica, Kenya, Mali, Suriname, Swaziland and Trinidad, all or significant portions of obsolete pesticides have been safely packaged and ready for export. In many of them, the safeguarded pesticides have been centralized in secured locations. In some of them, the obsolete pesticide stockpiles have been removed for destruction. The rest of these countries have planned or are implementing disposal operations. The scope of these disposal operations was limited because they are costly and project funds were insufficient.

5. *To what extent the project succeeded in enforcing pesticide registration and post registration regulation*

ES 17. Work is in progress in many countries on the enforcement of pesticide registration and post-registration regulations at country level and on harmonized pesticide legislation and regulation systems at regional level.

ES 18. Other cross-cutting outcomes of the project have been (i) the post-graduate distance-learning course on pest risk management for regulators convened at UCT; (ii) several training, workshops and events organized to enhance capacity building and foster consultation, collaboration and coordination within the three regions; and (iii) increased communication among stakeholders, consciousness to shift to alternates to chemical pesticides, and awareness to obsolete and hazardous pesticide management and use, particularly at household level. These have also maximized the impact of the project and formed the basis for a change in behaviour and in making better decisions at national and regional levels.

ES 19. It is expected that most of the project impacts and outputs achieved by the project described above be sustained. Developing countries have presently other priorities to feed, educate and heal populations. To these strategic priorities, the care for people welfare and the environment should be included and considered as core values. There has been a move in this direction by most governments through the project. During Phase 2 of the project, a strategy should be put in place to enable more commitment of ACP countries to the project.

ES 20. Given the broad scope of the project and relatively limited available funds, it was concluded that financial resource management was generally done to a satisfactory level by assisting countries to access additional funding mechanisms (TCP, leverage) and employing many cost-saving actions(hiring local consultants, having training venues in situ, etc). However, there is a greater need to disaggregate budget by components. This would allow for a more in-depth analysis of financial resource management of the project.

ES 21. A rigorous and clear assessment of gender equity and integration issues was not addressed in the conceptualization of the project. Such an analysis among stakeholders and beneficiaries is crucial in profiling the driving-force for achieving project efficiency,

effectiveness and impact. There are serious concerns regarding the inappropriate use of pesticides in the home and its association with health issues, especially respiratory and dermatological problems in children and young adults. Most of these homes are headed by females. Therefore, the generation of information on gender issues is crucial if there is to be a significant change in the perception, behaviour and management of pesticides to ensure sustainable agricultural systems and a better quality of life for the rural and urban poor.

ES 22. The institutional arrangement from the viewpoint of FAO as the lead project implementer, providing and technical support, was generally viewed as the most efficient and effective approach to develop and deliver the programme of work on obsolete pesticides and pesticides use and management. Nonetheless, FAO was criticized for not sufficiently engaging some local stakeholders e.g. some government ministries, to facilitate a better understanding of project components, the roadmap to change, the roles of coordinating bodies, and general outcomes. It is apparent that the project received satisfactory assistance from the FAO regional offices.

ES 23. The opportunity of working with FAO on the project resulted in significant positive impact on the national and regional strategies aimed at the elimination of obsolete pesticides while building capacity to effectively manage pesticides and prevent future accumulation. Such development is not only vital for the protection of human and environmental health but also for socioeconomic development. Unfortunately, there were insufficient quantification of the reduced incidence of poisoning and deaths from pesticide misuse and mismanagement in targeted countries. This indicator is crucial for measuring project impact on human health.

ES 24. The evaluation team assessed the potential sustainability of the project. Generally, there is a high probability that the benefits provided by the project may continue after its termination, taking into account that it has made a great investment in capacity building, the completion of the obsolete pesticide inventory, the development of the PSMS, and the provision of guidelines and other undertakings for the overall management of pesticides. The work on IPM and alternatives is core to FAO and the project contributed to the momentum of these activities particularly in the SPC. However, countries commitment and ownership, continuous budget allocations, policy and regulatory reforms, maintained capacity building, and investments are also essential and can be promoted by FAO's increased investment in communications and awareness activities

ES 25. Given the satisfactory results achieved during its first phase, the project deserves to be supported for its second phase in order to consolidate the achievements and to expand the results to other countries.

ES 26. The overall satisfactory performance of the project suggests that the second phase should continue along similar aims and objectives, provided the various deficiencies are effectively addressed. This is necessary to ensure that the elimination of obsolete pesticides, pesticides management and sustainable pest management will be competently executed.

Recommendations

Recommendation N. 1 – to FAO and Donor

Given the satisfactory results achieved during its first phase, the project deserves to be supported for its second phase in order to consolidate the achievements and to expand the results to other countries. The second phase should continue along similar aims and objectives, but should

address highlighted deficiencies. This is necessary to ensure that the elimination of obsolete pesticides, pesticides management and sustainable pest management will be competently executed. In particular improved monitoring and clearer reporting line should be introduced.

Following issues should be considered in the second phase of the project:

For Africa - with reference to alternatives to conventional hazardous pesticides, Phase 2 of the project should develop an action plan providing a clear vision and the way forward for scaling up IPM alternatives in the region.

For Pacific - Work on the regional registration system and regional institutionalization of the PSMS is considered very important for the Pacific region, but is inherently slow. This work should be continued under Phase II of the project, and the progress actively managed by FAO in close consultation with SPC.

For the Caribbean - Satisfactory progress has been made by increasing public awareness on the issue of obsolete pesticides in the context of the environment and public health risks. These activities need to be continued and targeted at all stakeholders including the farming household levels where women can play important roles to alleviate the use of pesticides and their containers. Work on: (i) creation of a functional harmonized pesticides legislation and registration system using PSMS and (ii) pesticide residue monitoring and the elimination of obsolete pesticides are also deemed important to the region and should be continued in Phase 2 of the project.

Recommendation N.2 - to FAO

FAO should ensure that governments include management of obsolete pesticides in the national policies and strategies. There is an urgent need to continue updating the legislative, policy and institutional/social frameworks for sound pesticides management and pest reduction to address "counterproductive" policies such as subsidies to pesticides and centralized purchase at both the national and regional levels. All stakeholders, including the farming households, should be involved in these efforts in a transparent, effective, participatory and consensual manner if the re-occurrence of stockpiles of obsolete pesticides is to be drastically eliminated.

Recommendation N.3 – to FAO

FAO should further explore and test adoption of IPM, good agricultural practices with less reliance on pesticides, other alternate pest management strategies and soil cleaning-up/remediation methods in ACP countries.

Recommendation N.4 - to FAO

TCPs were developed in the Pacific with the aim of financing additional key activities. These were not funded as the FAO Sub-regional Office advised that they are inconsistent with the priorities included in the FAO CPF for the Pacific region, and developed without sufficient regional consultation. It is recommended that in the future AGPM staff working on TCP Facility proposals consult closely with the FAO Sub-regional office as well as the CPF ensuring that clear references are made to country priorities. TCP Facility projects are decided on the sub-regional level, and funds are limited, so regional buy-in to plan activities is essential to them being funded.

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1 Introduction

1.1 Background and purpose of the evaluation

1. Prior to the EC-funded project, a plethora of studies conducted by national and international institutes concluded that the state of obsolete pesticides was in dramatic and relentless decline not only in ACP countries but worldwide, regardless of the ecotypes and climatic zones. The most significant and comprehensive referential database bearing this out were the Multilateral Environmental Agreements (MEAs).

2. MEAs are international treaties and conventions on the environment. They address environmental issues of global concerns by obligating their respective Parties to undertake joint and individual actions to achieve their objectives in such areas as climate change, biological diversity, desertification, ozone layer protection, sound management of harmful chemicals and hazardous wastes, trade in endangered species of wild fauna and flora, conservation of migratory species of wild animals, and coastal and marine environment.

3. By ratifying MEAs, all Parties - both developing and developed - concur that environmental governance at the national, regional and global levels is critical for the achievement of environmental sustainability. The MEAs help developing countries and countries with economies in transition protect themselves from adverse impacts of global environmental problems. Most of these countries lack the capacity to manage their stockpiles of obsolete pesticides. Generally, they turn to the international organizations to provide assistance.

4. FAO developed a series of key analytical and synergistic studies of past activities, experience and events on the management of obsolete pesticides within the broader area of agriculture, natural resources and the environment. This has greatly contributed to the formulation of the Capacity Building related to MEAs projects. The EC was the first key partner to pledge for this venture and became the precursor of the EC-funded programme.

5. The programme has the overall objective to strengthen capacity in ACP countries to implement, comply with and enforce MEAs. It includes two components: (1) enhancement of regional, sub-regional or national capacity related to MEAs, and (2) supporting the implementation of specific MEAs. The Food and Agriculture Organization (FAO) is responsible for the implementation of the subcomponent "The clean-up of obsolete pesticides, pesticides management and sustainable pest management" which is part of component 2 (herein referred to as the project). The project is intended to assist ACP countries in identifying and moving towards the elimination of obsolete pesticides stockpiles, while building capacity to manage pesticide throughout their life-cycle, thus preventing further accumulation.

6. The project began in April 2009 and ended initially in March 31, 2013. A no-cost extension until 31 December, 2013 was granted primarily to complete the on-going safeguarding and disposal activities. The overall EC contribution to the MEAs Programme is equivalent to Euro 19,5 million, of which Euro 4,448,220 (US$5,760,109.34) supports the FAO project GCP/INT/063/EC.

7. The project was operational in Africa, Caribbean and Pacific regions in the following countries:

- **Africa**: Benin, Botswana, Cameroon, Kenya, Burkina Faso, Chad, Cape Verde, Gambia, Guinea Bissau, Mali, Malawi, Mauritania, Niger, Senegal and Swaziland;
- **Caribbean**: Antigua and Barbuda, Bahamas, Barbados, Belize, Cuba, Dominica, Dominican Republic, Grenada. Guyana, Haiti, Jamaica, Saint Lucia, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Suriname, Trinidad & Tobago; and
- **Pacific**: Fiji, Samoa, Solomon Islands, Vanuatu and Tonga.

8. Country based activities in the respect of the regional undertaking were implemented in a staged approach involving:

a. **Stage 1:** A detailed situation analysis (including inventory, environmental risk assessment (RA), emergency safeguarding and review of pesticide management capacity through legislation/IPM/life-cycle management);

b. **Stage 2:** An implementation phase where risk reduction through disposal and remediation are completed alongside institutional strengthening.

9. A second phase of the project has been approved (ACP/MEAs 2) for a period 23 May 2013 - 22 May 2017, and has the same overall objective of promoting environmental sustainability in ACP countries by supporting and strengthening institutions and stakeholders involved in the mainstreaming and implementation of MEAs in these countries.

10. An independent mid-term evaluation (MTE) was conducted in August-September 2011. Its main objective was to (i) assess the project achievement against agreed outputs, (ii) guide the remainder of the project in terms of its focus and direction and (iii) recommend actions and measures to achieve the project objectives as planned in the project document.

11. The MTE appreciated the progress made by the project to achieve expected results, namely the obsolete pesticide inventory, safeguarding, safe disposal and sound management. The evaluation also highlighted the main challenges and some difficulties encountered in implementing the planned activities within the agreed framework. These were due primarily to lack of funds and limited capacity in some countries. A set of 17 recommendations were formulated to strengthen the overall implementation of the project and its impact in the project zone of intervention. The MTE strongly recommended *"continued support of the project in order to achieve all the planned activities, as well as the initiation of a second phase of the project to allow extension of the strategies developed to new countries and to meet the growing demand for assistance in eliminating obsolete pesticide stocks or in addressing other aspects of pesticide management"*.

12. Post-MTE activity reports have shown that the project has taken immediate actions to address the recommendations formulated by the MTE to strengthen its impacts.

13. The purpose of the final evaluation is to evaluate FAO's performance during the first phase of the project with a particular focus on results since the 2011 mid-term evaluation. This evaluation aims to assess the overall results of the project and analyse them against the OECD/DAC evaluation criteria of relevance, effectiveness, efficiency, impact, and sustainability. The recommendations formulated as a result of the final evaluation are expected to serve the implementation of the second phase.

14. The evaluation was requested by the European Commission. It was coordinated by FAO Office of Evaluation (OED). FAO Lead Technical Unit (AGP) provided technical information on the actual implementation of the project throughout its process.

1.2 Methodology of the evaluation

15. The evaluation was conducted by an external and independent team of four (4) consultants to ensure a high degree of neutrality and objectivities in the production of the evaluation results. The team of evaluators had the professional competence in project evaluation, sector and regional expertise in pesticide management and field work capacity in ACP countries. It was composed of Mr. François Faye and Mr. Said Ghaout, respectively team leader and co-team leader, Dr. Richard A. I. Brathwaite and Ms. Melanie Ashton.

16. The final evaluation took place in the following ACP countries: Benin, Burkina Faso and Mali in Africa; Jamaica, Saint Lucia and Suriname in the Caribbean; and Fiji and Samoa in the Pacific. Except Saint Lucia, the same samples of countries visited during the mid-term evaluation were revisited during the final evaluation. In those countries, the evaluation could measure the changes which have occurred within the timeframe between the two evaluations.

17. The evaluation was conducted in the period of 10 March - 30 June, 2014. The evaluation focused on results achieved since the MTE assessing in particular to what extent the project succeeded in achieving the following:

- enforcing pesticide registration and post registration regulation
- reducing the use of pesticides and improving the use of alternatives to conventional chemicals.
- strengthening the use of systems to manage statistics on import, use and current stocks of pesticides
- improving the management of empty pesticide containers and small pesticide stocks

18. The full list of key evaluation issues addressed by the evaluation is provided in the Evaluation ToRs, Annex 1 of this evaluation report.

19. Three complementary techniques were used to evaluate the performance of the project. These techniques were: (i) a review of relevant project documentation pertaining to the planning and implementation of the project; (ii) semi-structured interviews with key informants during the field visits; and (iii) observations by the consultants. These three techniques were used to cross-check and validate information; an essential step when qualitative and/or semi-quantitative appraisal methods are used. The documents consulted are listed in Annex 2. The questionnaire to be administered in personal interviews was then developed. The questionnaire, designed to assess project's performance, was addressed to a large audience of formants and stakeholders including senior government personnel, the private sector, NGOs as well as key local beneficiaries and partners. The questionnaire administered in the semi-structured interviews is attached in Annex 4. The questionnaire has three sections:

20. The first section was to verify the relevance and efficiency of the results achieved since the inception of the project and the MTE.

21. The second section was to determine if the priorities of ACP countries and the expectations of beneficiaries and stakeholders have been effectively met.

22. The third section of the questionnaire was to assess the project's instruments, the way they were delivered, the way they were used and the impact they achieved.

23. The key informants met during the field visits included primarily government officials from the Ministries of Agriculture, Health and the Environment, representatives of EC Delegations, FAO, regional organizations, estate managers, civil and private sector organizations, and service providers. The list of persons met is shown in Annex 3

24. The consultants visited separately the countries in the ACP regions: Mr. François Faye and Mr. Said Ghaout, Benin (17-20 March), Mali (21-25 March), Burkina Faso (17-29 March). Dr. Richard A. I. Brathwaite visited Jamaica (09-13 March), Suriname (19-22 March), and Lucia (23-26 March). Ms. Melanie Asthon visited Fiji and Samoa (10 - 21 March). This evaluation report is structured on the format presented by OED with some acknowledged adjustments to meet the evaluation specificities. Key limitations and constraints to the evaluation, and the actions taken to overcome them included:

- Consultations were undertaken only with stakeholders based on eight countries out of about forty targeted countries;
- There were no indications in the ToRs of the MTE and this evaluation concerning the rationale leading to the selection and representations of countries toured during the field visits;
- Considering that only limited participating countries were visited, the evaluation team was aware of the fact that the thorough understanding of the documents to be reviewed was a prerequisite for a fair evaluation of the project;
- In Africa, the three countries visited were from West Africa. The questionnaire was sent to non-visiting countries. The responses were very insignificant and untimely;
- Some stakeholders were not available to be interviewed during the field visits. Where possible interviews were conducted with these stakeholders via Skype or Internet after the mission.

2 Context of the project

25. Virtually all ACP countries have accumulated large stocks of obsolete pesticides over the past six - seven decades. These stockpiles pose serious threats to human health and the environment. Various factors contribute to the accumulation of obsolete pesticides in ACP countries. The main factors include:

a. Pesticides are banned while still kept in store;
b. Sub-standard warehouses, poor stock management;
c. Overstocking as a result of poor assessment of requirements or difficulties in forecasting outbreaks of migratory pests;
d. Inappropriate formulations;
e. Weak and under-resourced entities controlling and managing pesticides throughout their life-cycle;
f. Poor quality containers;
g. Reintroduction of pesticide subsidies under commodity schemes;
h. Unsolicited, inappropriate and excessive donations; and
i. Aggressive sales promotion by the pesticide industry.

26. In the targeted countries, farmers often choose to use highly toxic pesticides because they are cheaper and more readily available than less hazardous products. Import and regulatory controls are weak in most of these countries particularly in road entry check points. In addition, borders lines are quite long and very porous, hence poor quality and illegal pesticides are often introduced into local markets with little or no control at all. "*We have 80% of the products that are beyond our control although we have the UEMOA, ECOWAS and CILSS legal texts governing the importation and storage of pesticides",* statement made by Dr. Antoine N. Some, CILSS/CEO (Workshop of the Committee of Pesticides, Jan. 2013 in Dakar, Senegal).

27. At the time of project formulation, many countries became more conscious that (i) obsolete pesticide stockpiles posed serious threats to human health and the environment and (ii) increasing use of and exposure to pesticides and other agrochemicals constituted major occupational hazards. Efforts have been made in recent years to improve the management of pesticides. Casualties are severe and include acute poisoning, cancer and reproductive impairments, and death.

28. A few external partners have been involved in clean-up and disposal operations of the pesticides, which they donated when pesticides became obsolete. They included mainly Belgium, DANIDA, Finland, GEF, GTZ, Japan, Netherlands, Sweden, AusAID and the USA working mostly in collaboration with FAO.

29. These operations consisted essentially of repackaging of pesticides. Records shows only one case of reformulation of old stocks of pesticides in usable forms for agriculture. Such attempts have been insignificant compared to the bulk of obsolete pesticides piled-up in most of countries. Their destruction in situ is impossible because countries do not have safe pesticides disposal facilities. Alternatives have been to ship them to Western countries for destruction. Safe disposal operations present a logistically complex and expensive undertaking, the costs of which cannot be supported by the limited resources of countries or by the project limited funding resources. So, leveraging activities were deemed necessary due to the broad scope of countries' needs and priorities. This funding approach was considered vital to the effectiveness of development and execution of obsolete pesticide disposal outside the ACP countries.

30. Efforts have been made in recent years to improve the management of pesticides. Countries have ratified international agreements, developed regulations, adopted more efficacious purchasing systems, imposed controls for illegal dumping of hazardous wastes, reinforced tighter border controls and developed Integrated Pest Management (IPM) programmes to reduce reliance on pesticides. In light of this, the use of some pesticides have been prohibited due to the prolonged and adverse impact on the environment, age, deterioration, change of specifications of use and/or domestic and international laws. However, the key challenge is the implementation of these agreements as structural weaknesses limit the capacity for enforcement in most countries.

3 Analysis of project concept and design

31. Using the theory of change (ToC) process, the project was conceptualised to assist countries in eliminating obsolete pesticides and preventing the build-up of new stocks through better pesticides management. The project satisfactorily defined the key building blocks required to achieve the primary impact, which was to "improve environmental management and sustainable development focusing on management of pesticides for environmental health - quality of life, sustainable agriculture - quality of growth and protecting the global commons.

32. Without understanding the project context and the situational analyses as a starting point of this long process of study and discussion-based learning and scrutiny, the concept and design of the project could not be fully perceived. Since 1994, AGP through the Programme on the Prevention and Disposal of Obsolete Pesticides (PDOP) sounded the alarm about the existence and the dangers of obsolete pesticide stocks. AGP was able to identify the main issues related to pesticide stockpiles in developing countries as well as to draw out a very important sequence of lessons learned from the diverse activities and situations that have yielded both positive and negative results in handling pesticide stockpile accumulation.

33. Bearing in mind the information gleaned from various studies, surveys and data gathering exercises in various disposal and safeguarding projects, and considering the global approach offered by the MEAs, AGP took the lead of addressing the obsolete pesticide problematic issue. It began bringing critical thinking to bear on assumptions around the obsolete pesticide issue and making the views on how the issue is expected to be effectively addressed. This critical mass of information gathered by AGP through a decisive thinking process made the theory of change dynamic, rigorous, specific and targeted to the countries' expectations.

34. In the above context, FAO's has a comparative advantage over any entities to manage the obsolete pesticide portfolio. This is unanimously recognized. With the technical assistance of FAO, ACP countries and EC developed the MEAs project, prioritized requirements, agreed upon outputs, inputs and outcomes and determined the level of finance needed for each project component. Depending on the agreed levels of priorities, different aspects of the project have been put into motion with other donors' subscriptions and contributions. This leverage mechanism was also initiated by FAO. Obviously, donors working as partners and all pulling in the same directions has been preferable to the situation as it used to exist in the past with a plethora of bilateral donors working independently and inefficiently at high costs without palpable achievements. Improving relationships with partners and stakeholders by identifying opportunities for dialogue and collaboration have also been an asset to be also granted to FAO.

35. After analysing the log-frames (Annexes 5 and 6) and work plans, and information collected during field visits, the evaluation team concluded that the project was built primarily on assumptions and considered that the log-frames of the project are living guiding frameworks more realistic than the alternative inflexible log-frames. Though not always executed in a timely manner particularly in the Caribbean and the Pacific, the log-frames allowed for updating and refining project activities as the project progressed.

36. Notwithstanding this, the overall project logic is theoretically sound. The numerous delays in producing outputs and outcomes, suggest that assumptions made regarding the stakeholders' commitment and resources, adequacy of available budgets to achieve agreed priorities, and the general context within which the project was implemented were not always consistent. That is, the implementation framework of the project was positioned in a conceptual environment, which did not adequately reflect the comparative cultural and economic differences and diversity existing in most targeted countries. This emphasises the urgent need for: (i) functioning national institutions and regional hubs; and (ii) FAO sub- and regional offices. These structures can more appropriately assess the contextual environment in real-time, and harness and streamline the capacity and capabilities among the participating countries in the regions. There remains a need to critically assess the roles, responsibility and accountability of key stakeholders and launch a more dynamic public awareness campaign to sensitise or encourage beneficiaries to identify with the socioeconomic benefits of the removal of obsolete pesticides from the environment and the food supply chain.

37. In summary, it is concluded that though ambitious in scope and limited in available resources, the project concept and design were variously acknowledged. Appreciations were mixed. They were generally rated satisfactory. It must be noted that weaknesses in the design of the project implementation framework in the Caribbean and in the Pacific have resulted in inefficiencies, mainly due to diffused lines of responsibility and accountability, ineffective communication, and resource limitations. There were major setbacks in achieving outputs, even in circumstances where causal relationships and logical flow were cleared and sound.

38. This conclusion is in agreement with the MTE report, which states that *"the logical framework is generally both appropriate and realistic in terms of addressing adequately the priorities set by countries but considers its outputs very ambitious given the number of concerned countries, scope of work to be completed within a four-year span and the limits of the available resources."*

39. The central idea of the project approach was that arrays of distinct but interrelated actions are taking place, all working towards a common goal. Collaboration, communication, coordination and capacity building were inherent conditions for this approach to succeed. It should also be noted that in its current context, the approach primarily provided financial support to the management of obsolete pesticides through donors' buy-in. This was the best channel to address obsolete pesticides in countries since the cost of cleaning-up obsolete pesticides was too great to be supported by the project alone.

40. The policy and legislation supporting the implementation of the clustered conventions (Basel, Rotterdam and Stockholm) and other regional ACP institutions (CILSS, UEMOA, ECOWAS in Africa, the Coordinating Group for Pesticide Control Boards (CGPC) in default of the Caribbean Agriculture, Health and Food Safety Agency CAHFSA) in the Caribbean, and the Secretariat of the Pacific Community (SPC) and the Secretariat of the Pacific Regional Environment Programme (SPREP) in the Pacific have been influential and contributed in revising national and regional legislations and regulations, and developing strategies to assist countries in including the environment as a priority in their strategic planning exercise. However, at the project design phase, the issue of obsolete pesticides and pesticide management was not always apparent in the policies and strategies of countries as the numerous ministries at government level have its own set of legal texts, procedures and strategies. Nonetheless, it can be concluded that the project design was relevant based on (1) consultations with the major stakeholders of countries to identify and prioritize areas for intervention during the inception phase and (ii) the subsequent development of tentative work plans for the implementation of the identified priorities areas.

41. The list of key stakeholders and targeted beneficiaries who participated in the project design is quite exhaustive. They comprise:

- policy-makers at ministerial level and regional inter-state organizations concerned with improved pesticide use and management and policy development towards sustainable agriculture;
- national staff active in inventory, disposal and prevention activities;
- NGO groups active in non-functional literacy and awareness raising on the negative impacts posed by uncontrolled use of pesticides at grass-root level; and
- farming household exposed to IPM activities and less use of pesticides.

42. The project also identified the following indirect beneficiaries:

- local populations potentially or actually exposed to obsolete and POPs pesticides through contaminated air, water and food;
- consumers threatened by over-use of pesticides in food production; and
- farmers using more than the recommended doses of pesticides, or banned and obsolete pesticides.

4 Analysis of the implementation process

4.1 Project Management

43. The project is managed by the Project Coordinating Unit (FAO/PCU) based in FAO headquarters at the Pesticides Risk Reduction group of the Plant Production and Protection Division (AGP). This group provides overall project management and technical advisory services. Over thirty years worldwide, it has been responsible for the implementation of related projects (over 30 worldwide). Thus, complementarities between the project and other related programme/project activities could be ensured. The PCU is composed by the Unit Coordinator, two technical officers working at half-time and one Information Management Clerk. The Unit Coordinator is also the scheme budget holder (BH).

44. The project documents indicate that, as the project continues to expand at regional and national levels and performs key activities, the limited PCU staffing will no longer be able to meet the increasing field demands from its headquarters. To meet the needs and challenges of countries and become more responsive and closer in delivering services, the PCU will transfer some of its responsibilities to FAO regional and sub-regional offices located in ACP countries, and provide backstopping. Thus, in the Pacific the project was to be coordinated through the FAO sub-regional offices in collaboration with regional organizations, such as the Secretariat of the Pacific Community (SPC) and the Secretariat of the Pacific Regional Environment Programme (SPREP). In the Caribbean, the project implementation was coordinated also through FAO sub-regional FAO Offices with regional organizations: the Coordinating Group for Pesticide Control Boards (CGPC) in default of the CAHFSA. In Africa, the coordination was assured by project coordinating committees chaired by national focal points and the overall FAO project Coordinator.

45. Most key informants from national and regional entities involved in managing the project classified the management approach used as "top-down," referencing that the project was driven directly from FAO headquarters without full participation of key stakeholders in the three regions. In addition, FAO-sub units provided barely any information on the project to countries. They clearly indicated to the evaluation team during the field visits, that they were not much acquainted with the project activities as the project was multilateral. Such centralised management approach adopted by PCU for what concerned the day to day implementation issues even in the interest of efficiency were often associated with: reduced productivity; ineffective collaboration between stakeholders and institutions; and significantly delays in completion of project activities. The majority of the key stakeholders met during the field visits were not involved in the management of the project. Others were unaware of the projects existence. Some thought that the project was already completed in 2011. The evaluation team noted that the annual reports highlighted major project events and milestones, but they did not clearly outline what outputs were intended to be completed or achieved, against what was actually achieved in any given year. This lack of transparency and accountability made it difficult for the evaluators to: deduce project achievements; to assess any remedial activities; or to glean an understanding of the internal review processes. There was also evidence of a lack of

adequate and/or timely funding and mobilization of human resources. This resulted in the delay of many activities in the obsolete pesticides inventory and RA component, and had spill-over effects on other functionally related components.

46. However, it cannot be concluded that these shortcomings were solely due to top-down approach as it is evident that there was a mixture of both top-down and bottom-top approach. This mixture was probably not in perfect balance at all times to allow for: (i) greater clarity of project goals among stakeholders and visibility of internal organizational processes; (ii) more efficient and effective coordination and control of the project's progress; (iii) more useful collaborations among organizations and institutions; and (iv) a greater harvesting and use of collective intelligence.

47. Project management was therefore criticized as being ineffective at times because:

- There were too many layers of authority and bureaucracy, which resulted in untimely actions, redress, and budgetary and resource adjustments.
- The project coordinating committee members and entities at national and regional level including PCU charged with executing the project had various other roles and substantial duties. This meant that project issues were not always adequately understood. Therefore, the quality and realistic decision-making on project planning and execution (work plans, time and resource adjustments) were negatively affected and not always done in a timely manner.
- The FAO regional and sub-regional offices had various other roles and substantial duties. Therefore, the follow-up and counselling on project planning and execution (work plans, time and resource adjustments) were negatively affected and not always done in a timely and participatory manner.
- Inadequate engagement of relevant government ministries, particularly those of agriculture, health and the environment.
- Turnover of key staff members in PCU and regional offices. Some key FAO technical officers have been re-assigned elsewhere. Stakeholders in the African region expressed deep concern on the departure of the PCU technical officer in charge of their region because of his constant availability and knowledgeable guidance, and the key role he played in the implementation of the project.
- Asymmetric awareness of the project components and roadmap among key stakeholders including FAO offices in the field.
- Lack of visibility of the project in the field not only by stakeholders but by its own precursors. Some FAO Representations did not know that the project was operational in their countries. Most EC Delegations were unaware of the existence of the project.

48. Notwithstanding these management issues, the project produced quality and useful outputs and outcomes. Most stakeholders met during the evaluation appreciated the continuous support provided by AGP/PCU through backstopping missions and email correspondences. Local consultants have provided countries with technical inputs of high quality. To a large extent, the management of project activities in various components was more efficiently and effectively done by the local consultants and contractors hired by FAO than by activities that were steered by national implementing agencies. Furthermore, the project components were less satisfactorily managed at national and regional levels than those by FAO/PCU team.

4.2 Financial resources management

49. The project funding allocation was not sufficient to achieve significant progress for all activities identified by countries. A strategy was, therefore, structurally formulated to synergize and liaise with other programmes or initiatives to maximize the impact of the project by using part of the funds as seed funding to leverage additional funds. These funds came mainly from GEF/ASP and FAO/TCP as shown in the following table.

Table 1. Twin projects and initiatives to leverage complementary funds in ACP countries

Country	Project	Status
	Africa region	
CILSS countries	SAICM project on the implementation of a training manual on inspection of pesticides and post registration activities	Ongoing
	GEF Disposal Of Obsolete Pesticides Including POPs And Strengthening Pesticide Management Of The Comité Permanent Inter-Etats De La Lutte Contre La Secheresse Dans Le Sahel (CILSS) Member States (FSP)	Submitted to donor
Benin	GCP/BEN/055/JPN "Contribution to disposal, control and promotion of alternatives to Endosulfan and other obsolete pesticides and contaminated materials in Benin"	Operational
	GEF Project on Disposal of POPs and obsolete pesticides and strengthening life-cycle management of pesticides in Benin	Submitted May 2014
Botswana	GCP/BOT/011/GFF A proposal to develop a pesticide management system along with the development of a container management strategy for old pesticide containers	Operational
Cameroon	TCP project to pilot pests and pesticides management in North Cameroon	Operational
	GEF : Disposal of Existing Stocks of Obsolete Pesticides and Associated Wastes	Submission planned for mid 2014
Kenya	TCP project on pesticide life cycle management	Closed in 2013
Malawi	TCP project on pest and pesticide management	Closed
	GEF PPG on Pesticide Risk Reduction in Malawi	Operational
Mozambique	GCP/MOZ/101/GEF on pesticide life-cycle management	Operational
	UTF/MOZ/107/MOZ on Disposal of Obsolete Pesticides and Associated Wastes in Mozambique	Operational
	SAICM on Highly Hazardous Pesticides phasing out	Operational
Swaziland	TCP project to cover the removal of 100 tons of obsolete stocks	Operational
	Caribbean region	

	PIF on Improved management of agrochemical life cycles in the Caribbean and Central American region jointly with UNEP	Submitted in October 2013
	Pacific Region	
Fiji, Samoa, Tonga, Solomon Island and Vanuatu.	TCP Capacity building to promote adoption of techniques to reduce hazardous pesticide use in Pacific agriculture	Operational
	UNEP/FAO GEF project on POPs for the Pacific Islands	Operational

50. The project duration was extended to 31 December 2013 with no-cost extension due to some delays in implementation as well as identification of additional activities. In line with changing circumstances and revised priorities, some of the original allocations were altered. This resulted in a budget revision in May 2012. The budget distribution per region was as follows:

Table 2. Revised budget distribution as of May 2012 in ACP countries

	Budget in Euro	Budget in US dollar	Percentage of the budget (%)
Africa	1,121,978	1.469,145.36	25
Caribbean	693,385	907,935.24	16
Pacific	298,895	391,381.03	07
Cross-cutting	2,333,962	3,056,146.37	52
Total	4.448,220	5.824,608.00	

51. The budget allocated to cross-cutting specific activities represents 52% of the overall budget. Africa benefited from 25% of this budget, followed by Caribbean (16%) and Pacific (7%). Details of expenditure by region and budgetary line are shown in Table 3. The expenses incurred by the project represent 98.9% of the overall budget. They were mainly used for salaries (31%), contracts for technical services (22%), capacity building (training plus travel) (20%) and consultants (13%). The unspent money (1.1%) is to cover the cost of the final evaluation and the preparation and translation into French of the terminal report.

52. A component-by-component breakdown of the project budget was requested during this evaluation to facilitate further analysis of these figures. However, AGP advised that the budget allocation per component was *"not available for Phase I. This was not a requirement of the FAO internal financial reporting system neither of the donor*."

53. Without the aforementioned requested information or any information on annual expenditure, full analysis of the budget and rate of delivery was not possible. However, it is clear from the information provided that the initial budget for the Pacific region was reduced from US$1,070.00 to a final reported expenditure of US$391,381.08, i.e. a total reduction of US$678,618.92. The reason for such a huge cutback was explained by AGP as being due to the expectation of TCP funds being made available, and the funds were therefore reallocated to Africa. However, such an approach is inconsistent with the concept of using project funds to

leverage additional funding for the region. By reallocating money to Africa, AGP attempted to leverage additional funds for use instead of project funds, not in addition to project funds. The Pacific region was also said to have incurred US$442,357.28 in cross-cutting benefits. Such benefits were to include: building on the PSMS; participation in Postgraduate Diploma in Pesticide Risk Management at the University of Cape Town; and communication, awareness and information sharing. However, the PSMS is not instituted in the Pacific and only two students have been funded for the Postgraduate Diploma in Pesticide Risk Management programme. The remaining expenditure remains unexplained.

54. The disaggregation of budget data not only by region, but also by country, and by component would allow for a more in-depth analysis of financial resource management and more transparency. Notable cost-saving actions that have been undertaken in the project include: (i) the use of the local capacity and expertise from the regions in the area of pesticides management and use, and public awareness; (ii) the training of local experts to serve as focal points and in-country trainers in areas such as obsolete pesticides inventory, as supervisors to contractors, and to be trainers in aspects of pesticide use and management; (iii) the cascading effects of local personnel working with the foreign companies, like the case of Veolia ES Field Services Ltd. in the Caribbean, contracted to execute the safeguarding and repackaging phase.

55. Notwithstanding, the underpinning strategy of the financial resource management approach, which was to consolidate existing initiatives so as to maximize the gearing and leverage effects of the FAO component to the MEA project in the ACP countries, was deemed appropriate. Though this funding mechanism, many project activities have been ensured. Such a strategy allowed for more efficient management of limited financial resources, while maximizing project delivery and impact. The project was conceptualised so that ACP-MEA funds managed by the Pesticides Risk Reduction group of FAO would be used as seed money to begin work on priority areas identified (stage 1) by the implementing countries. AGP/PCU would further use the project to leverage additional funds from international donor agencies for the completion of various components such as the disposal of obsolete pesticides. Although this financial strategy was well-articulated in project documents, countries seemingly expected FAO to provide, source and make available all the resources required for implementing aspects of stages 1 and 2. This may partly explain why advocating for and leveraging timely contributions (funds and in-kind) from governmental and non-governmental institutions was poorly executed.

56. Despite the broad scope of the project, the inertia of some countries and relatively limited available funds, it is concluded that financial resource management was done to a satisfactory level. The project approach was generally viewed as flexible, efficient and cost-effective to develop and deliver the problematic issue on obsolete pesticides and pesticide use and management.

Table 3. Expenditure by region and budgetary line

	Budget v2	Expenses					
Row Labels	Total Budget(USD)	Cross-cutting	Africa	Caribbean	Pacific	Total Expenses	Balance
5011 Salaries Professional	1,529,180	1,516,786	0	0	0	1,516,786	12,394
5012 Salaries General Service	287,535	287,228	0	0	0	287,228	307
5013 Consultants	864,991	296,789	239,189	147,423	73,071	756,472	108,519

5014 Contracts	1,031,135	194,623	533,679	350,000	194,488	1,272,790	-241,655
5020 Locally Contracted Labour	1,426	-6	1,433	0	0	1,426	-0
5021 Travel	1,025,715	163,426	449,528	240,153	121,926	975,034	50,681
5023 Training	203,980	69,584	48,286	38,036	0	155,906	48,074
5024 Expendable Procurement	148,577	3,587	78,725	50,840	0	133,152	15,425
5025 Non Expendable Procurement	22,506	3,567	20,590	0	0	24,157	-1,651
5027 Technical Support Services	22,836	17,457	2,241	0	0	19,698	3,138
5028 General Operating Expenses	225,817	80,600	55,611	56,847	1,896	194,955	30,862
5029 Support Costs	381,049	343,012	0	0	0	343,012	38,037
5040 General Operating Expenses - external common services	14,911	27,743	0	0	0	27,743	-12,832
5050 General Operating Expenses - internal common services	64,948	52,346	0	0	0	52,346	12,602
	5,824,606	3,056,743	1,429,282	883,300	391,381	5,760,706	63,900

4.3 Efficiency and effectiveness of institutional arrangements including Government's participation

4.3.1 Institutional arrangements

57. The majority of stakeholders in Africa and the Caribbean deemed the institutional arrangements from the viewpoint of FAO as the lead project implementer, providing technical support, the most efficient and effective approach to develop and deliver the portfolio on obsolete pesticides and pesticide use and management. This was mainly because of FAO's mandate, technical expertise, networking capacity, ability to leverage access to funds and information, and general reputation as an international organization. Nonetheless, most interviewees during the field visits noted that FAO did not sufficiently engaged local stakeholders for e.g. national and regional institutions, FAO sub- and regional offices and Representations, to facilitate a better understanding of project components, radical changes in the roadmap, budget and outcomes.

58. The evaluators who visited the African and Pacific regions noticed that most of the persons met in the FAO Representations had a limited knowledge of the project because "it is implemented by FAO headquarters". There was also confusion in Benin between the GCP/INT/063/EC project and the GCP/BEN/065/JPN projection and the GEF-funded ASP implemented by the World Bank in Mali.

59. On the basis of working more closely with local stakeholders in the Caribbean region, IICA was suggested as an institution that might have been more appropriate to implement this project. IICA, however, does not have as much experience and technical expertise as FAO to execute such a project.

60. In the Pacific region, staff from the SPREP noted that communication and activities under the project were intermittent, and the FAO sub-regional office lacked capacity and was not informed on project activities. SPREP also pinpointed the top-down approach of the project management, affirming that the project was essentially "delivered from Rome". SPC staff were under the impression that the project was completed in 2011 and SPC's project completion report is dated 2012.

4.3.2 Government's commitment and support to the project

61. Evidence that supports governments' commitment to up-scaling project components was not apparent in most countries. Governments' commitment to the project in terms of the provision of financial and human resources was generally inadequate. So were their engagements to providing institutional and logistical support. Nevertheless, government officials consulted during the field visits were very concerned with the risks posed by the unwanted build-up of obsolete pesticide stocks on human health and the environment. Undoubtedly, the political will to address the problem of obsolete pesticide stocks exists in most countries. In the past decades, countries made efforts to establish a ministry of the Environment, ratify international conventions dealing with the environment, develop National Environmental Action Plans (NEAPs), strengthen capacity building and participate fully in the project. The evaluation team also concurs that project-trained technicians' attitudes and professionalism were enhanced mainly because of the project.

62. Most governments apparently did not provide adequate budgetary allocations for the operational costs of the ministries concerned with the management of the environment and relied mostly on donor assistance for the removal of obsolete pesticide stockpiles. This reliance generally curtailed the effectiveness of project activities, corrupted the sense of governments' responsibility and did not auger well for the sustainability of project outcome.

63. The roles and responsibilities of institutions involved in management of the project have been often ambiguous. Communication among national stakeholder's institutions, focal points and FAO was deemed poor and untimely in some cases in the Caribbean and Pacific regions. It must be noted that working with groupings of countries had limitations because countries moved at different paces. There were cases in the obsolete pesticide issues, the project left some countries behind because they did not complete their inventories or get government endorsements at the right time. On regulatory matters, the project has been held back waiting for countries to align themselves to common position. In worse cases, there have been matters with political implications with countries for which FAO had limited ability to change. Thus, in some cases there was a kind of laissez-faire attitude meaning that they went with the flow, in other cases they actively sought external funding as is evident by the development of several proposals, other cases there was a re-prioritisation of activities, and reallocation of resources.

5 Analysis of results and contribution to stated objectives

5.1 Achievements at Outputs level

5.1.1 Regional Priorities in Africa

64. The main achievements towards the project outputs in Africa, as reported by countries and annual project reports, are hereby described and summarized:

West Africa sub-region

- ***Benin***

65. Following the ban of Endosulfan in November 2009, the project extended assistance for its disposal. FAO organized three scoping missions in 2010 resulting in the consolidation in geo-referenced maps of stocks of obsolete pesticides and associated wastes during a national training on the use of PSMS in May 2012. These included: 600 tons, 30,000 empty containers and a large stock of soils contaminated with Diedrine. The complete data base on registered and obsolete pesticides was validated in September 2012. These stocks were then centralized in various locations in the country and ready for disposal. Meanwhile, five participants from Benin attended a ToT in 2011 to be acquainted with the PSMS tool for the conduct of their country inventory according to international standard.

66. The project resources were used successfully to leverage an amount of US$2.5 million from the Japan International Cooperation Agency (JICA) through the GCP/BEN/065/JPN project titled *"Contribution to disposal, control and promotion of alternatives to Endosulfan and other obsolete pesticides and contaminated materials"*. JICA co-financing will contribute to the disposal of a stock of Endosulfan estimated at 350 tons, the recycling of 30,000 empty containers, the safeguarding of the soils contaminated with Dieldrine, the development of a pesticide management strategy, other activities on pesticide inspection, quality control, communication, and building awareness.

- ***Burkina Faso***

67. The main initial project activities were focused on capacity building. Nine technicians benefited first from the regional training on the inventory of obsolete pesticides and related wastes in July 2011. Another training course on PSMS data entry and uploading/validating inventory was organized in June 2012. About 100 tons of public obsolete pesticides and 60,000 empty pesticides containers were inventoried, uploaded into PSMS and validated during the last year of the project. About 50 percent of the obsolete pesticides are detained by SODEFITEX parastatal. There is also an important quantity of non-homologous and obsolete pesticides entering the country from neighbouring countries through the porous borders which is not yet inventoried.

- ***Chad, Mali, Mauritania, Niger and Senegal***

68. In these Desert Locust front line countries, FAO contracted the accredited laboratory of Gembloux to reanalyze for quality control the existing stocks of pesticides used for the control of Desert Locust.

69. In 2008 FAO in collaboration with the Wageningen University of the Netherlands experimented on the remediation of pesticide contamination sites in Mali and Mauritania. The technique used is named Land Farming. The results have been very successful. Four months after planting, the analyses showed a decrease by two orders of magnitude of organophosphate concentration in the soil. Six months later the same soil was free of organophosphate insecticide as well as carbamate. However, this innovative technique has very little effects on the organochlorine concentration which degrade very slowly.

70. This technique offers a low-technology and cost-effective method for decontaminating polluted lands. It has allowed the reclamation of 3 sites in Mauritania and 6 of the 15 contaminated sites in Mali. To these remaining 9 sites, the CNLCP pesticide depot for Desert Locust control in Gao needs to be added for decontamination. During a rebellion attacks in 2012, this depot was entirely destroyed. More than thirty equipped vehicles and 65 containers of 13,000 litres were poured in and in the vicinity of the base. Based on these conclusive results, FAO plans to introduce land-farming to other countries wherein soil contamination is an issue.

71. Training on the preparation of disposal tender specifications was held in February 2008 for ASP/Mali staff. In 2012, Mali was at the stage for attributing a tender for disposal of the stocks of 600 tons of obsolete pesticides out of nationwide stockpiles estimated at 1,100 tons that had been already identified. The military coup in March 2012 stopped the operation. After the democratic elections in 2013, the safe disposal operations resumed. The transportation and elimination of the obsolete pesticide stockpiles are expected before the end of 2014.

72. With ASP, Mali possesses an expertise in pesticide management. A protocol was developed between FAO and ASP/Mali for the implementation of PSMS in the CILSS members states. Another protocol was also developed between FAO and PAN/Africa to prepare a strategy of regional communication on the impact of pesticides and the promotion of alternative methods to pesticides in the CILSS countries.

73. In Niger, a national inventory took place in November 2012. About 150 tons were inventoried in sixty locations. The data was uploaded into PSMS in March 2013.

74. A training in PSMS was held in Chad in 2013. The purpose of the course was to train participants for collecting inventory data, entering, validating and managing the data. The training also covered data collection for prioritizing of sites based on their environmental risks, container management and quality control.

Central Africa sub-region

- ***Cameroon***

75. Two main events took place in 2009. The training course on the safe inventory of pesticides was organized and the completion of the national inventories of obsolete pesticides and associated wastes in collaboration with CropLife International (CLI) outreach programmes. About 100 tons of obsolete pesticides are currently being safeguarded by CLI.

76. After a training session on PSMS organized in 2010, data collected during the national inventories was entered into the PSMS along with the list of registered pesticides in the country.

77. In February 2012, GEF approved a project identification form (PIF) on the "*Elimination of POPs and obsolete pesticides and strengthening pesticide management in Cameroon*". The

full size project is being finalized for submission to GEF Secretariat for co-financing under GEF5. This new project aimed at strengthening technical and institutional needs for the strengthening of the national capacity to reduce pesticide risks and to develop a country-level strategy on pesticide life cycle management.

East Africa sub-region

- ***Kenya***

78. The project identified approximately 200 tons of obsolete stocks. An Environmental Management Plan (EMP) was prepared to collect and safeguard the obsolete stocks. A contribution of FAO and CLI Clean Farm allowed the award of a contract for the disposal of approximately 30 tons of obsolete pesticides. A contract was awarded for shipment and disposal of the stocks to the United Kingdom. Safe disposal operations were completed in 2013.

- ***Malawi***

79. The project inventoried approximately 400 tons of obsolete stocks to safeguard and dispose. The project also supported the completion of an EMP for obsolete stocks which were safeguarded in collaboration with the CLI-supported Clean Farms project. A TCP project on pesticide life-cycle management was approved in 2010. Later, a Rapid Environmental Assessment (REA) of sites and sample collection were undertaken to prioritize sites. A contribution from the project allowed the award of a contract for the shipment and disposal of approximately 4.4 ton of obsolete methyl bromide to France for environmentally sound disposal. The methyl bromide was shipped in March 2013.

Southern Africa sub-region

- ***Botswana***

80. Funds from the project were allocated to co-finance a GEF project on remediation of contaminated sites, safeguarding and disposal of stocks and management of old pesticide containers. The GEF project was launched in April 2012. Using the project resources, obsolete pesticide stocks were centralized in Gaborone and the baseline data from the inventory uploaded into PSMS. An EMP was developed and approved. It includes the disposal of approximately 100 tons of obsolete pesticides. A contract was awarded in early 2014 for the safeguard and disposal of part of the stocks under the GEF-funded project.

81. The project supported two members of the Plant Protection Service to complete the UCT pesticide management course. The government adopted PSMS as the main tool to manage pesticide import, distribution and usage.

- ***Swaziland***

82. A FAO/ACP project supported the completion of the inventory of 80 tons of obsolete pesticides and the entry of all data into the PSMS in October 2011. The TCP also procured all the safeguard materials and the participation of one pesticide regulator in the UCT pesticide risk management course organized in March 2012. An EMP was developed and approved by the Swaziland Environmental Authority in December 2011. Safe disposal operations will be completed later in 2014.

83. An overview of the project's achievements per output is given in Table 4.

Table 4. Africa - Project achievement per output

Output	Africa Regional priorities	Achievements
1	Training- Capacity building	- Training on inventory and PSMS use has been completed in all the target countries (Benin, Botswana, Burkina-Faso, Chad, Cameroon, Malawi, Mali, Mozambique, Niger, Kenya, Senegal and Swaziland). - The number of persons trained is much higher than 50 set as indicator in the log-frame
	Obsolete pesticide Inventory	- Necessary equipment to undertake inventories was supplied to countries - Most of the project countries have completed their inventories (Benin, Botswana, Burkina Faso, Cameroon, Malawi, Mali, Mauritania, Niger, Kenya Senegal and Swaziland) (Inventory conducted in Burkina Faso concerned the public sector and therefore needs to be updated to include the private sector). - All the data have been uploaded into PSMS and database is now accessible to countries, donors and private sectors.
2	Pesticide safeguarding	- Safeguarding of existing obsolete stocks has been completed in Botswana, Kenya, Malawi, Mali, and partially in Cameroon. - Swaziland and Benin: safeguarding is ongoing As an additional activity a new standard FAO framework contract for safeguarding and disposal was produced.
3	Disposal of obsolete pesticides	- Disposal was completed in Kenya (31 tons). - Swaziland (80 tons), and Benin (350 tons) have awarded contract and disposal operation will be completed in mid-2014. (In Benin, the death of the project focal point in January 2013 hampered the activities resulting in some delay to achieve the operation. New project focal point was appointed and disposal will be completed in mid 2014.) - For Mali (600 tons): The contract for disposal was awarded in 2012 and the shipment operation was stopped due the political conflict (military coup) but planned for 2014
4	Enforcement of common registration in CILSS countries	- Review of national pesticides legislation in line with sustainable agriculture international reference standards completed in Cameroon and Benin; - Independent evaluation of the common pesticides registration and post registration in CILSS countries completed and validated; - Extension of common pesticides registration in 9 CILSS countries to 17 countries in Sahel and West Africa; the implementation body is COAHP instead of

		CSP. - A regional programme on Integrated Pest and Pesticide Management in Sahel and West Africa to be co-financed by GEF, ECOWAS, UEMOA and EU submitted - Development of national action plans on pesticides management (import, quality control/inspection, containers management)
	Communications and awareness	Awareness rising on alternatives to Endosulfan done in Benin for nearly 700 farmers and several extension agents and local policy-makers. Country and regional specific material developed.

5.1.2 Regional priorities in the Caribbean

84. In the Caribbean, progress was made in all countries to complete national inventories of obsolete pesticides to formulate plans for their disposal and to use PSMS to support regional harmonization of pesticide registration. The centralisation and safeguarding of obsolete stocks in Trinidad, Jamaica and Suriname took place in December 2013. The disposal of these stocks and the safeguarding and disposal in the remaining countries will occur in 2014. A project proposal to eliminate the obsolete pesticides that have been inventoried under the project has been developed and submitted to GEF for funding. In preparation for the disposal, project funds were used to centralize and safeguard some of the obsolete stocks.

85. Although a less tangible nature, the funds provided by the project for members from the countries to attend (CGPC) meetings, and the increased communication and collaboration between countries allowed for a greater cross-fertilisation of ideas and lessons learned among stakeholders on a national, regional and international level. Such cross-fertilisation was essential in project development, execution, and evaluation. Cross-fertilisation is further sustained through the CGPC Inspector's link on Facebook, which was created to promote the effective use of pesticides and toxic chemicals and minimise risk to human health and the environment. It will also be essential in the regional harmonization of legislation and registration of pesticides. The project did produce tangible outputs in these areas, such as a review of the legislation by a consultant and a review of registration requirements. However, the problems of implementation and execution remain largely a political issue, which FAO has limited power to influence. These are two areas where much progress is still needed.

86. Table 5 summarizes the efficiency and effectiveness of outputs related to project components. Results from this evaluation showed that outputs related to components 1 and 2, which are more tangible and quantifiable, were ranked as the best result of the project. A coherent and comprehensive inventory of obsolete pesticides has been completed across all targeted Caribbean countries with the exception of the Dominican Republic and Haiti. This represents a high quality and meaningful output that allows for the development and eventual execution of a strategic and well-costed plan for disposal of obsolete pesticides.

Table 5: Summary of efficiency and effectiveness of outputs related to project components.

Project components- outputs	Efficiency[1]	Effectiveness[2]
Obsolete pesticide inventory and risk assessment	Low	High
Pesticide safeguarding	High	High
Obsolete pesticide elimination	NA[3]	NA
Legislation	Low	Low
Pesticide post registration management capacity building	Moderate	
Public awareness	Moderate	High
Harmonized registration	Low	Low
Residue monitoring	Low	Low

[1]Efficiency refers to the time taken to achieve objectives in the context of resources used in the project. Efficiency ratings that is, low, moderate, and high are based on the results from the semi-structured interviews.
[2]Effectiveness refers to how useful the outputs achieved in the project were in attaining short, medium and long-term outcomes and the primary impact. Effectiveness ratings that is, low, moderate, and high are based on the results from the semi-structured interviews
[3]NA - not applicable because the activity has not started.

87. Concerning Component 1 "inventory of obsolete pesticides", some inventories were not achieved without delays, challenges (resources and communication) and other inefficiencies that varied from country to country. For example, the Dominican Republic and Haiti did not execute an inventory of obsolete pesticide and provided no reasons why this was not completed. Grenada reported that it had no obsolete pesticides and suggested that stocks were lost during Hurricanes Ivan and Emily, which hit the country in 2004 and 2005, respectively. This was an unexpected output and if this is indeed the case, it represents a potentially serious environmental and socio-economic hazard, which must be further investigated and addressed. The challenges incurred with inventorying obsolete pesticides included: turn-over of persons trained to conduct the inventories, appointments to other positions, transportation, access to stocks stored in remote areas, conditions inside storage shelters or sites were characterized by high relative humidity and temperature, communication, data clarification and verification.

88. Significant progress has also been made with regards to Component 2 *"safeguarding of obsolete pesticides."* To date, approximately 57% of the total estimated obsolete pesticide stocks in thirteen Caribbean countries have been safeguarded. This represents approximates 161.4 tons in three countries (Jamaica, Trinidad and Tobago, and Suriname) out of a total of 280.5 tons estimated in the thirteen countries. Although the safeguarding project component was by far, more efficiently executed than the inventorying of obsolete pesticides, it was not achieved without challenges. These challenges were mainly related to repackaging and securing a central storage location for safeguarding obsolete pesticides and included: bureaucratic delays, inaccuracies in the PSMS inventories, haphazard storage of obsolete pesticides in warehouses.

89. Overall, given the conditions, inconsistent data quality, short time and limited resources, the contractor has done a highly commendable job safeguarding the stocks of obsolete pesticides.

90. In the case of Trinidad and Tobago, a central storage location for safeguarding obsolete pesticides was approved relatively quickly and easily. This was not the case in Jamaica and Suriname, where national authorities have proposed locations but these locations have not yet been approved by the relevant ministries or institutions. This mirrors the situation in some

smaller countries but in others, a central storage location has not been identified. It must be noted that selection of a central storage area is arguably more challenging in small island states mainly due to dynamics of smaller land area, population (size, spatial and density distributions), and environmental sensitivities. In such islands, obsolete pesticides are stored in multiple locations from which they can generally be more easily transported in the advent of disposal; larger quantities are safeguarded on the original sites and small amounts are transported to and safeguarded in selected government facilities. In any case, the safeguarding actions undertaken in Jamaica, Suriname and other smaller Caribbean states significantly reduce risks associated with obsolete pesticides. UN approved operating procedures, however require that repackaged stocks be centralized and secured to facilitate shipment and subsequent destruction. Safeguarding stocks at multiple locations does complicate the issue of security and the capacity to limit tampering of repackaged material, so as to reduce human and environmental risks. This deficiency needs to be quickly addressed particularly in the small island states.

91. The scope for disposal of obsolete pesticides in the region was limited by operational logistics, cost and limited project funds. Moreover, all repackaging and safeguarding activities in participating countries must be completed before obsolete pesticides can be shipped. The project will fund the disposal only from Jamaica, Suriname, and Trinidad and Tobago, where the majority of obsolete pesticides are located. However, the day of shipment has not yet been determined and is pending the approval of funds for the fourth quarter of 2014. Nonetheless, several plans and projects have been or are currently being developed to eliminate obsolete pesticides that have been inventoried in the other Caribbean countries under the project. GEF has approved a grant to develop a full project proposal, which includes the disposal of obsolete pesticides from countries as a major component. The GEF project will dispose of all inventoried pesticides from all countries. Countries not included are those that have not ratified the Stockholm Convention (Haiti and Granada), these that were already included in other projects (Belize and Cuba) for political reasons However, the inability to facilitate the completion of this component in all Caribbean countries remains the single-most disappointment of and critique by many stakeholders of the project.

92. Numerous training workshops were held with stakeholders including customs officers and pesticide control operators, which covered in part or completely FAO standards on: (i) inventory, (ii) repackaging, (iii) prevention and accumulation of obsolete and usable pesticides (iv) storage and transport, (v) disposal of obsolete pesticides, (vi) risk assessment of obsolete pesticides, (vii) quality control and pesticide registration of disposal of obsolete pesticides and (viii) pesticide management policies of obsolete pesticides. Interestingly, participants of these workshops rated the training as highly relevant and of a high quality but admitted that they still had a less than satisfactory knowledge of FAO standards. This speaks to the effectiveness of such training activities and suggests that a more systematic plan, probably over a longer period, is needed to ensure greater assimilation and application of information. Notwithstanding this, all participants admitted that several aspects of training influenced the way they will handle or manage pesticides on a daily basis. These aspects included pesticide safety and risk management, handling and management of obsolete pesticides and PSMS.

93. Training workshops facilitated by the project also resulted in a greater awareness of IPM and other best technical practices. The public awareness component of the project also yielded communication materials on pesticides handling, storage and use, which has been disseminated to most countries. The Pesticides Control Boards of some countries have been using such of the material during the Caribbean-wide observance of Pesticides Awareness Week in their public awareness and relations activities. However, to improve effectiveness in multilingual countries

such as Suriname, there is a need to translate these materials into the language that is most widespread, particularly among farmer households.

94. An overview of the project's achievements per output is given in Table 6.

Table 6. Caribbean - Project achievement per output

Output		Progress
#1	Training	All countries: completed
#2	Inventories	Suriname: completed Antigua & Barbuda, Bahamas, Barbados, Belize, Cuba, Dominica, Guyana, Jamaica, Saint Kitts & Nevis, Saint Vincent & The Grenadines, Saint Lucia, Trinidad & Tobago: submitted Dominican Republic, Haiti, Grenada: ongoing
#3	Safeguarding	Discussion on possible contribution from the countries to the safeguarding process has been initiated. Exploration of logistical possibilities and costs initiated
#4	Disposal	Identification of a temporary/interim storage site for the obsolete stocks from other countries to facilitate Eventual disposal under discussion. Submission of a proposal for disposal to GEF
#5	Pesticides Legislation	Proposal for a regional harmonized registration scheme presented to the countries PSMS module for sharing pesticide registration data being populated with country data
#6	Communication and Awareness	General communications strategy developed and Presented to the countries. Specific outputs prepared and provided to countries including leaflet, calendar, videos on containers triple-rinsing and understanding pesticide labels. These were repeated annually for different themes.
#7	Monitoring of pesticide residues is a recurring Issue in the region. Capacity building support	Collaboration with USDA to raise awareness and develop capacity for residue monitoring and compliance Training on: Rotterdam Convention; biopesticide registration; residue monitoring and equivalence determination

5.1.3 Regional priorities in the Pacific

95. The following activities were planned for Component 1:

a. review of legislation (1.1), including the completion of gap analysis of legislation, drafting of new legislation, and adoption of new legislation;
b. harmonization of pesticide legislation (1.2), including the completion of gap analysis of registration process in targeted countries; registration system development; adoption of new registration system;
c. PSMS training (1.3) including recruitment of PSMS consultant, supply computer equipment, and training of staff from SPC and governments; and
d. information exchange and capacity building /training (1.4), including the development of a pesticide regulators forum for information exchange and discussion, and training of pesticide regulators.

96. On the new legislation, pesticide legislative reviews were completed for Samoa and Tonga. On the regional registration system, according to the MTE updated log frame, the outline of the registration system was developed, but TCP funds were required to institutionalize, and operate the system for a 2-year trial system. These TCP funds were not approved and therefore the system is not yet operational. In September 2013, at the Fifth Regional Meeting of Heads of Agriculture and Forestry Services (HOAFS) meeting, a proposal for a harmonized registration system was discussed. In November 2013, a MoU was prepared between Fiji, Vanuatu, Tonga, Samoa and the Solomon Islands, under the auspices of the "Framework for Action on Food Security in the Pacific 2011 – 2015. The meeting also agreed to establish a Pacific Regional Pesticide Regulators Forum, the "Pacific Pesticide Management Committee (PPMC)."

97. According to AGP, the MoU is currently under evaluation by FAO Pacific and SPC. The draft MoU provides for SPC to: carry out the function of pesticide pre-registration process for appropriate pesticides registered and used in either New Zealand or Australia; conduct appropriate field testing trials to reconfirm the optimum rates under local conditions; and provide of a list of conditioned pesticide candidates available for the countries to chose from and register at national level. Although all planned registration activities were not completed under Phase I, all stakeholders consulted agreed that a regional registration system was important for the Pacific region. Review of the ACP/MEAs project document reveals that institutionalization and operationalization of this system will be a key focus in Phase II.

98. The following activities were planned for Component 2 on contaminated sites: engagement with countries and request for data on known and suspected contaminated sites; review of existing data on contaminated sites; risk quantification via sampling plan; and remediation plan development and project proposal preparation.

99. The MTE noted that the focus of this component shifted from contaminated sites, to pesticide burial sites. In response to this shift, the FAO provided training for key SPREP and Government of Samoa staff in the assessment of contaminated sites. Samoan Government staff then conducted site assessments of sites of concern, and SPREP undertook the assessment in Fiji. The Fiji assessment found no evidence of buried pesticides, and recommended no further action. The Tonga assessment was undertaken by a consultant. No contamination was found in the samples.

100. In addition to the above, the project collected, repackaged, shipped and disposed of 3,357Kg of obsolete pesticides from an agriculture store in Samoa. As a result of collaboration established with SPREP, FAO and UNEP are about to initiate a new GEF-funded programme on POPs release reduction through improved Management of Solid and Hazardous Wastes in the Pacific.

101. Activities completed differed markedly from those planned in the log frame, but according to anecdotal evidence from stakeholder interviews, did so in response to country needs. According to discussions with SPREP, this work will be continued in the GEF/PAS project, which FAO is involved in as co-Implementing Agency. Under this project, some FAO managed funds will be used to investigate potentially contaminated sites in the Solomon Islands.

102. The following activities were planned for Component 3 on "container management": assessment of existing containers recycling initiatives in the region; roll-out of strategy; recycling/treatment of collected containers; and the development of an evaluation report.

103. Container management activities focused on Samoa and an assessment of options for the collection and recycling of pesticide containers in Samoa was completed in 2011. The roll-out of a strategy, of recycling treatment of containers was not completed. The MTE reported that a detailed feasibility study was scheduled to be completed in late 2011, followed by the initiation of collection of the containers and establishment of a system to run for collection of materials under the supervision of a contractor. It was envisaged that equipment be supplied by the GE/FPAS project to process the containers into useful products, and that this approach would be replicated under TCP funding.

104. A TCP project proposal was developed in the second half of the project, but funding was not granted. According to FAO the roll-out of the container management strategy in Samoa will be completed under the GEF/PAS project, which began in late 2013. It appears that project resources were used to develop the TCP during 2012 and 2013, in an effort to leverage additional funding, instead of focusing on delivering project outputs.

105. The following activities were planned for Component 4 on "alternatives to chemicals" and IPM: baseline assessment; project document development; and approval of project documents. These activities were completed and extended under the IPM TCP project.

106. The following activities were planned for Component 5 on "communications and awareness": establishment of communications teams in Solomon Island and Vanuatu; development of communications strategies; endorsement of strategy; production of materials and pilot roll out; evaluation of pilot roll-out in Solomon Islands and Vanuatu; and re-evaluation of evaluation and roll-out in the region.

107. As part of the project, an SPC information officer visited the two target countries, Solomon Islands and Vanuatu and conducted a situational analysis of the present knowledge, attitudes, awareness and practices on pesticides. The exercise developed baseline data and a communications media strategy targeting the use of pesticides use by farmers and other stakeholders including importers and distributors. The strategy included three approaches: (i) conduct education and awareness to increase knowledge on pesticides use in agriculture, livestock, forestry, public health, and environmental sectors; (ii) increase awareness on alternatives to pesticides and strengthen linkages with commercial farmers successfully using natural pesticides; and (iii) strengthen communication channels with relevant government agencies delivering social services to rural areas to piggyback pesticide information. The information officer also developed and produced communication materials. The strategy was not endorsed, nor rolled out under the project. SPC's LoA Completion report (March 2012) indicates SPC's involvement in the project was completed in December 2011.

108. An overview of the project's achievements per output is given in Table 7.

Table7. Pacific - Project achievement per output

Output		Progress
1	Inventory Training	Completed under a previous project. No stocks from Public Sector except for Samoa
2	Safeguarding	Completed in 2012
3	Disposal	Samoa, completed in 2012

4	Assessments of contaminated sites	Niue, Fiji, Samoa and Tonga: completed Soil analysis did not confirm contamination. Anecdotal reporting of buried pesticides in Tonga.
	Enforcement of regulations, a regional; Harmonization of regulations; Management of pesticide container; Management, stockpile disposal and contaminated site remediation	MoU between SPC and countries drafted GEF proposal for container management approved TCP proposals finalised but not funded
	Communications and awareness	Material developed, but strategy not implemented.
5	Promotion of IPM on vegetables	Project funds were utilised to prepare the FAO TCP on IPM.IPM Training of Trainers and Farm Field Schools conducted on *Brassica* crops in Fiji, Tonga and Samoa;

5.1.4 Integrated cross-cutting project activities

Pesticide stock Management System (PSMS)

109. PSMS is a web-based database tool developed by FAO initially to manage pesticide stocks for locust control. It has been upgraded in the framework of the project to include a comprehensive inventory of usable and obsolete stocks, identify their registration status, monitor their quality control and their further movement in the country, and use up to the disposal of old and new obsolete stocks and empty containers. However, its key function is the risk Assessment to prepare Environmental Assessment Reports and Environment Plans for disposal operation; As a result of its importance, over forty countries use the new PSMS.

110. The PSMS allows also monitoring the pesticide life cycle of each drum /containers from reception in a country up to its recycling through a system of bar code. The scope of this database was recently broadening to cover all sectors of pesticide use: agriculture, forestry, aquaculture, animal health, and public health. PSMS now includes a standard list of uses, crops and pests available in English, French and Spanish.

111. The project concept paper has recognized that most ACP countries lack technical managerial, institutional and financial capacity to develop the necessary policy and regulatory conditions to properly manage pesticides, clean-up contaminated wastes/sites and the destruction of obsolete stocks of pesticides. PSMS training and workshops have been instrumental for building capacity and project implementation.

112. National and regional training and workshops were organized by the project on PSMS different subject matters related to the project priorities and wide activities. They targeted a large and diverse audience from high-level echelons of relevant ministries to NGO and field technicians. They took place mostly in ACP countries and many lecturers were local experts, making capacity building quite cost-effective.

- ***Africa***

113. PSMS was firstly deployed in the African Stockpiles Programme (ASP) Phase 1 countries: Ethiopia, Mali, Nigeria, South Africa and Tanzania. It was extended to Eritrea and Mozambique for the management of obsolete pesticides and associated wastes. The number of PSMS users has increased from 6 to 40 countries excluding IGOs, consulting firms and contractors working to eliminate obsolete pesticides.

114. In the first year implementation of the project, the common registration of pesticides emanating from the PSMS was only adopted to nine countries. It was extended in 2012 to thirteen countries. From there on to the end of the project life, 17 new countries, all from West Africa and State members of the *Comite Ouest Africain pour l'Homologation des Pesticides (COAHP*), have adopted the PSMS common pesticides registration system.

115. Since the Mid-Term Evaluation in 2011, the PSMS has been redesigned in some aspects to enforce post-registration activities. This up-date includes (i) the regional inspection and quality control of pesticides using the existing Harmonized System code on the request of the Economic Community of West Africa States (ECOWAS) and (ii) the Pest Control Practices and Monitoring System to identify alternatives to POPs and conventional pesticides commonly used for production intensification.

116. CILSS has been very active to promote pesticide management coordination in its State members. The Executive Secretariat of CILSS approved in 2011 an action plan to extend the PSMS network initiated by ASP/Mali in all CILSS countries. The overall objective of the network is to provide support to the National Committee of Pesticide Management (CNGP) in each CILSS member country to implement the common pesticide registration and post-registration regulations to prevent the accumulation of obsolete pesticide stocks and to protect human and animal health, the environment and biodiversity. An action plan was submitted to FAO for technical assistance and funding through a TCP. A letter of Agreement (LoA) between FAO and the Project Management Unit (PMU) of ASP-Mali has been developed for the implementation of PSMS planned activities in CILSS countries and Benin, the pilot country for the remaining countries of Western Africa/ECOWAS member countries.

117. The system was successfully used, with the assistance of FAO, to allow triangulation1 transfer of 150,000 liters donations of certified pesticides products from the Desert Locust Front including 50,000 liters from Mauritania to Libya and Chad, 18,000 litres from Senegal to Chad, 62,000 litres from Morocco to Niger and Mali and 20,000 litres from Algeria to Chad. In May 2009, Mali donated 10 000 litres of certified pesticide products to the Red-locust affected countries in Eastern Africa (Malawi, Tanzania and Mozambique). Recently, through a similar operation using PSMS 230,000 litres of useable pesticides were transferred from Morocco and Mauritania to Madagascar which is facing a serious migratory locust plague. With the PSMS, this kind of operation contributes to reduce the existing huge quantities of pesticides accumulated in Africa for locust control.

118. In the Central African Economic and Monetary Community (CEMAC) member countries, Cameroon which is a member of the inter-state Pesticide Committee of Central Africa

1 Triangulation refers to arrangements in which a donor funds the repacking and movement of a stock of pesticides from a country that has an excess stock to a country in direct need of the product concerned.

(CPAC) under the African Union/Inter African Phytosanitary Council is the lead country for running the PSMS in the Central African countries. The first national PSMS workshop in Central Africa was organized in Cameroon. The purpose of the workshop was to train representatives of the Ministries of Agriculture, Public Health and Environment as well as NGOs on data entry of useable and obsolete pesticides, registered pesticides, importers and distributors into PSMS. Good progress was made on the entry of data collected in 2009 which resulted in the list of registered pesticides in Cameroon. Expertise and capacities built in the countries under this phase of the project need to be extended to CEMAC member countries.

- ***Caribbean***

119. To date, the PSMS tool is the most important tangible output, which can be used in collaboration with all stakeholders, for sound pesticide management and pesticide reduction in the countries. The PSMS tool can be instrumental in facilitating the capability of the territories to harmonize pesticide management activities. Unfortunately, in-depth training in PSMS was not done in the project. Therefore, the extent to which stakeholders can use the full capability of PSMS for sound pesticides management and pesticides reduction in the countries is limited. This is viewed as a major shortcoming in the conceptualization of the project. However, such in-depth training in PSMS now falls outside the scope of the project but should be addressed in subsequent interventions.

120. Project training sessions in general and specifically on PSMS allowed for cross-fertilisation of a number of senior technical advisors from different ministries concerned with pesticide management.

- ***Pacific***

121. On the institutionalization of a centralized database, the PSMS at SPC, the project annual work plan indicates that this was planned for 2011. The 2nd Annual Report explains that the institutionalization of the PSMS forms part of the overall harmonization of pesticide registration across the region. It noted that countries will provide SPC with their list of registered products which will be entered into the PSMS system. It explains that as part of this effort staff at SPC will be trained in the use of PSMS with data entry planned before the end of 2011. As part of this initiative, work will proceed on the design of the harmonized system for pesticide registration in collaboration with members of the New Zealand Food and Safety Administration, and the deployment and use of PSMS will be an integral part of the discussions during this period.

122. According to the 3rd Annual Report, at the third meeting of pesticide regulators held at APVMA in Canberra, in September 2011, progress in the Pacific region was reviewed and a series of actions and areas where remaining funds should be focused proposed. According to the report, it was decided that PSMS training of SPC staff had "been delayed based on a decision to develop a regional system for pesticide registration in the Pacific and a need to deploy the system at SPC at a time when it would be of use. The project will support the deployment of PSMS at SPC." As such, the PSMS training was not been completed, nor has the PSMS been institutionalized at SPC.

Diploma on Pesticide Risk Management (DPRM)

123. The DPRM is a post-graduate distance-learning course on pesticide risk management. The course was a result of a joint venture between FAO, UTC and the Swedish Chemical Inspectorate (KEMI). It is aimed at providing the necessary support to pesticide regulators to

allow them to administer pesticides at the national level in accordance with the International Code of Conduct on The Distribution and Use of Pesticides published by FAO and WHO. In total, 22 students graduated from the first three classes.

124. Two classes have graduated. The third class is at its second and last year of implementation. Beneficiaries of the third edition of the course have set up an informal network which is basically a forum for discussion and exchange of information on various issues regarding pesticide regulation. The fourth edition of the course has begun in February 2014.

- ***Technical guidelines on pesticide life-cycle management***

125. FAO started to develop a series of technical guidelines related to pesticide life-cycle management in 1995 i.e., prior to the launching of the EC project. The current list of guidelines has been highly appreciated by countries, especially by technicians active in the cleaning-up operations of obsolete pesticides. There are 37 guidelines. The most recent ones include:

- Inventory of pesticides
- Environmental Management Tool Kit (EMTK), volume 1 (risk assessment)
- Environmental Management Tool Kit (EMTK), volume 2 (storage and transport)
- Environmental Management Tool Kit (EMTK), volume 3 (environmental assessment)
- Environmental Management Tool Kit (EMTK), volume 4 (implementation of safeguarding and disposal options)
- Prevention of accumulation;
- Container management;
- Pest and pesticide management policy;
- Development and use of FAO and WHO pesticide specifications;
- Quality control of pesticides and registration of pesticides.

126. Translation into French of Volumes 1 and 2 have been completed. The other guidelines are currently translated in French and edited before publication. Translation into Spanish and Arabic of these documents has been commissioned.

127. In addition, and under the project a pilot container management scheme has been established in the cotton production areas in Mali. The pilot scheme is organized through the parastatal cotton company, Compagnie Malienne pour le Développement du Textile (CMDT), the sole supplier of pesticides to cotton farmers in the Malian cotton belt. The company requires contracted farmers to return empty containers for recycling. Currently 100% of the pesticide containers are being returned to CMDT but only 25% are triple rinsed and 77% are stored securely. None of the empty containers are currently recycled.

Integrated Pest Management (IPM)

128. AGP worked in collaboration with the World Bank for the dissemination and adoption of IPM in many countries. IPM and Farmer Field School (FFS) regional and national programmes are ongoing in over 100 countries including in the three ACP regions.

129. In Mali sale records from cotton company has shown that more than more than 4,000 cotton farmers have reduced their purchase of highly hazardous pesticides by about 92% over an 8-year period. The conclusive results were highly correlated with IPM training based on Farmer

Field Schools (FFSs) approach. Cotton farmers in this study applied both local and commercial bio-pesticides.

130. In Benin, successful experience with growing crops without Endosulfan has been obtained by an NGO called OBEPAB using a range of non-chemicals material. In Eritrea, a TCP project has been granted to introduce IPM and biological control of woolly whitefly (Dialeurode citri) in citrus orchards. The project has also built national capacity in pest and pesticide management through strengthened legislation, development of IPM and improved management throughout the pesticide lifecycle.

131. On the other hand, the *Comité de Liaison Europe-Afrique-Caraibes-Pacifique (COLEACP)* is supporting the improvement of pesticide management through development of a field monitoring system for pest and pesticides used on key crops in Burkina Faso, Mali and Senegal, and development of programmes on integrated pest and pesticide management.

132. FAO promotes IPM as the preferred approach to crop protection and regards it as a pillar of both sustainable intensification of crop production and pesticide risk reduction. Its widespread dissemination throughout the project zone of intervention is a challenge. The results tend to be generally implemented and limited to where IPM have been introduced because IPM has not been sufficiently institutionalized and not well reflected in policies to support its widespread adoption. There is no regional strategy to do this. So finally, farmers are left with limited choice and tend mostly to use hazardous chemical pesticides, especially when pesticide costs are subsidized or low compared to potential profits. Most farmers prefer to use pesticides because of their quick effects on pests or the lack of viable alternatives wherein the development of resistance has significantly reduced the effectiveness of pesticides on crops which are sprayed heavily. The toxicity of pesticides to them does not matter much, most often they are not aware of medium and longer-term health effects nor have most been trained in the use of low health-risk IPM alternatives.

133. There is a direct relation between the (re-)accumulation of obsolete pesticides with the quantity of pesticide uses. One sustained way to reverse the trend is to ensure pesticide management through the use of best agricultural practices including IPM.

5.2 Achievements at Outcome level

134. The achievements at outcome level resulted to achieving in: identifying and eliminating existing obsolete pesticide stocks; exploring opportunities for reduction of reliance on synthetic pesticides in agriculture; and preventing the creation of obsolete pesticides.

135. These achievements outlined region-by-region in the following paragraphs:

- ***Africa***

136. In Africa, more than 400 tons of obsolete pesticides, set as indicator for all ACP countries, have been disposed or are in the final stage of elimination in Africa alone: 31 tons completed in Kenya and 1,114 tons in the final stage (Benin (350 tons), Botswana (80 tons), Mali (600 tons), Malawi (4 tons) Swaziland (80 tons) as the contracts have been awarded to selected companies.

137. As for prevention the creation of obsolete pesticides, capacity has been strengthened in each country to effectively manage and control pesticides and prevent future accumulation of obsolete pesticides in Africa.

138. Likewise there is an increased awareness in pesticides registration and post registration regulations. However, harmonization and enforcement remain still key issues. These are legal and political matters which must be addressed by the sovereign governments.

- ***Caribbean***

139. Table 8 summarises the quality of outcomes related to specific areas of the project objectives in the Caribbean. Though not achieved in the most efficient way, the outcomes realized in this project is highly satisfactory and of a high quality. As a result of the project, most Caribbean countries have developed capacity in: (i) inventorying obsolete pesticides; (ii) repackaging and safeguarding of obsolete pesticides in preparation for disposal using UN-approved operating procedures; (iii); RA and management; (iv) communication; (v) evaluation and registration of pesticides management; and (vi) pesticide policy assessment. All of which, have resulted in a better understanding of the complexities and hazards associated with managing obsolete and usable pesticides. There is a noticeable absence of exclusive training on Good Agricultural Practices, which is essential for enhanced pesticide management and sustainable pest management. The degree to which capacity has developed varies among countries and the related training activity. However, the training of several customs officers, the introduction and modification of forms and demonstration of the PSMS tool, represent significant progress in the development and utilization of systems to manage statistics on import, use and current stocks of pesticides. So also is the training of technical staff and pesticide control operators.

Table 8: Summary of the quality of outcomes related to specific areas of project objectives.

Outcomes related to specific areas of project objectives	Quality of outcome[1]
Enforcement of pesticide registration and post registration regulations;	Less than satisfactory
Utilization of systems to manage statistics on import, use and current stocks of pesticides;	Less than satisfactory
Pesticide reduction and use of alternatives to conventional chemicals;	Cannot assess[2]
Management of empty pesticide containers and small pesticide stocks.	Less than satisfactory

[1]Quality of outcome ratings, that is, less than satisfactory, satisfactory, highly satisfactory are based on the results from the semi-structured interviews.

[2] cannot assess- because quantitative data directly relating the project's impact on this outcome are not available

140. The development of communication materials on the management of empty pesticides containers and small pesticide stocks have definitely contributed to an increased awareness and change in behaviour of pesticide regulators, technical staff and other users. So much so, that technical staff who received training in pesticides management and use, have trained nationals, including farmers and householders on various aspects of the same subject area.

141. Many of these outcomes were achieved along the offshoots of other similar projects such as the National Initiative Project in Saint Lucia. Such efforts in producing relevant and sustainable outcomes are cost-effective and realistic. There is evidence that institutional capacity in terms of organization, management, human resources, auditing standards and methodology

and independence have developed as a result of the project. Such outcomes are important in understanding the obstacles that inhibit people, governments, international organizations and non-governmental organizations from realizing their developmental goals while enhancing the abilities that will allow them to achieve measurable and sustainable results. Increased institutional capacity will assist organizations to develop proposals and leverage for funds from national, regional and international institutions on issues relating to pesticides use and management.

142. In summary, the completed safeguarding of 280.5 tons of obsolete pesticides has lessened the threat to human and environmental health. The major cross-cutting outcome of the project has been an increase in the awareness of stakeholders as it relates to pesticides management and use. This has formed the basis for a change in behaviour and in making better decisions at national and regional levels. Nonetheless, these outcomes could have been achieved in a shorter time period so as to maximize the impact of the project.

- ***Pacific***

143. In the Pacific, project successfully identified and disposed of over 3,500Kg of obsolete pesticide stocks stored in Samoa, and assessed several potential contaminated sites, thereby meeting one of the immediate objectives of the project. The project also successfully completed activities related to alternatives to pesticides through IPM, assisted in generating regional momentum, linked with key strategic partners, and leveraged additional funding through the FAO TCP facility for this work, thereby contributing significantly to the reduction of reliance on synthetic pesticides in agriculture.

144. In relation to the prevention of the creation of obsolete stocks, the achievement of the immediate objective is less clear. Progress was made on work on the regional registration of pesticides, which will allow for more efficient management of pesticides import into participating countries, but the process has not yet been completed.

5.2.1 Gender Equity

145. A clear assessment of gender equity issues was not addressed in the conceptualisation of the project. Thus, none of these issues was reflected in the identification of beneficiaries and implementation of the project. An analysis among stakeholders and beneficiaries was crucial in profiling the driving-force for achieving project efficiency, effectiveness and impact. Moreover, sex disaggregated statistics is a precursor to the process of mitigating a gender gap and consequently all information systems must provide for the collection and management of sex disaggregated data sets where appropriate. The communications and awareness strategies are required to pay due attention to gender issues, particularly at the household level in relation to the management of pesticides and pest reduction. The MTE called for this necessity but apparently no actions were taken since then to identify a number of gender-disaggregated indicators and start tracking them to measure gender balance among beneficiaries or its effects on the project outcomes.

146. If an effective and visible participation of women has been a neglected element of the project, the fact remains that the project activities did not single out only men. The graduate courses offered by UCT have trained six woman pesticide registrars. Four women out of the fifteen participants attended the sub-regional workshop on the inventory techniques of obsolete pesticides held in Burkina Faso. In the Caribbean, beneficiaries of training programmes were mainly men but in some countries and areas of employment, for e.g. custom officers, a few

women were trained. In addition, there were instances, e.g. in the inventory training in Trinidad and Tobago in 2011, where the training facilitators were mainly women. Currently, one of the principle challenges related to gender of the project is that the gender ratio of AGP/PCU's senior technical staff is 3:1.

147. There is another cultural challenge related to the participation of women in sensitization activities delivered by men. Some village women are reluctant to attend demonstrations by men. Grass-roots demonstrations done by women, on the other hand, have more active participation among women.

148. Communication and awareness strategies should pay attention to gender issues, particularly at the grass-roots and household levels in relation to the management of pesticides and pest reduction. Women play a role that cannot be overlooked in the application of good agricultural practices, particularly in the adoption of IPM techniques in the household gardens where vegetables and other crops are grown for self-consumption and small income generating activities. They are also identified as vulnerable groups. The use of contaminated bottles or containers, which is common in some villages often results in death. Cases of poisoning from the inhalation of chemicals, including obsolete pesticides are also frequent in households treated by untrained ambulatory sprayers to kill pests and rodents. The fact that women, based on work division in most local communities, are responsible for family care makes them more responsive to information on pesticides risks.

149. Therefore, the production of information on gender issues is crucial if there is to be a significant change in the perception, behaviour and management of pesticides to ensure sustainable agricultural systems and a better quality of life for the rural and urban poor.

150. In the Pacific region, gender was not specifically addressed in Components 1 - 3. The issue of gender was fully integrated into the Component 4 TCP, through the inclusion of ToT and FFS participants of both genders, development of a gender-sensitive training curriculum and final evaluation of the activities. Gender issues were also considered in the development of the communication and awareness strategy.

5.3 Capacity development

151. The extent to which the project integrated capacity development measures in its design and implementation is deemed highly satisfactory. Evidence of capacity development in stakeholders was identified in several project components. There was a strong commitment from countries through the project to develop expertise in the area of pesticide management. Project-trained people streamlined and strengthened the registration process, inventory implementation and disposal of obsolete pesticides and associated wastes. Activities that contributed to capacity development included also PSMS deployment and the development of technical guidelines for various areas related to the management of obsolete and usable pesticides including specifications for disposal contracts and selection procedures of the disposal. Government staff received also training on safeguarding emergency sites and environmental assessment of potentially contaminated sites. As already indicated, local consultants and experts from the regions were contracted to undertake various project activities.

152. Capacity building in the field of hazardous waste management has emerged as a key priority in ACP countries. The project embraced this issue and dealt with it throughout the project lifespan particularly during the first years after. Activities that contributed to building capacity included:

a. Provision of technical assistance and numerous training workshops in order to develop or strengthen national capacities for improved pesticide management. Training modules on inventory, use of PSMS, pesticide management and development of a prevention framework have been delivered to complement the variety of the guidelines produced and the tool kits distributed.

b. Training of pesticide regulators and technical staff and the provision of materials on FAO standards for various areas related to the management of obsolete and usable pesticides. The impact of the training would have been greater if it was also given in French and Spanish for some African and Caribbean countries.

c. The use of experts from the region to undertake various project activities. The provision of PPE, hardware, technical assistance, office materials and tools and equipment by the project, assisted in the efficient achievement of both outputs and the subsequent outcomes.

d. The guidance provided to coordinating committees on matters related to organization, management and human resources development.

e. The interactions of local technical staff and experts with international experts and contractors.

153. All these measures have resulted in a cross-fertilisation of ideas and actions at various levels. In the future, such cross-fertilisation should allow for a more in-depth and accurate analysis of the project environment, which should result in a more efficient implementation of work plans.

5.4 Human-Rights Based Approach

154. All the countries involved in the project, have established laws and regulations to protect the rights to life, health, and livelihoods of their people. The EC project itself aims to contribute to these elementary Human–Rights by ridding the countries of their obsolete pesticides stocks which present huge risks to human health and its environment.

155. Labourers who are directly involved in the handling of obsolete pesticides are the most exposed to the products, and thus run the highest risk of being poisoned. However, all other field staff (technicians, drivers, mechanics. .) can also be exposed either accidentally or during the normal course of their work. The personal involved in these operations has been trained in best practice in handling, storage, transportation and stock control of pesticides. Furthermore, the project provided adequate personal protective equipment (PPE) to all countries. Wearing PPE is mandatory before handling any pesticides.

156. The project has undertaken risk assessments of existing warehouses to identify those that meet the requirements where obsolete pesticides can be gathered for safeguarding before transportation for disposal. Each country prepared an environmental management plan that guides the management and removal of the obsolete pesticides. The plan included an assessment of all risks associated with the current status of the pesticides and the actions that need to be taken in the removal and plan for elimination of those risks in accordance with national and international regulations.

157. In order to ensure safe transportation, obsolete pesticides have been repackaged in accordance with national and international regulations and best practice using appropriate containers. The project contributed also in providing expertise, training and equipment to countries on these issues.

158. The contracts were awarded to the companies who meet all the requirements for the destruction in safe and environmentally sound manner and in compliance with national and international law. Destruction achieved so far has been occurred in Europe (France, United Kingdom, and Germany). A standard framework for FAO's safeguarding and disposal contract has been recently established in order to ensure more coherence and efficiency in dealing with disposal contract of obsolete stocks.

159. It should be noted that no incident that could have happened during the project's operations has been reported by the countries to the evaluation mission. This does not mean that the threats to human health and the environment do not exist. Despite the disposal of obsolete pesticides achieved by the project, large stocks of these still pose serious threats. Furthermore, the increasing use of pesticides and other agrochemicals has aggravated the risks. Exposure to pesticides and other agrochemicals constitutes major occupational hazards. Casualties are huge and range from irritations and poisoning to death and, in certain cases, to cancer and reproductive impairments.

160. Due to inadequate and heterogeneous recording and notification systems, data on the incidence of accidents and diseases caused by pesticides are imprecise and notoriously underestimated particularly in the agricultural sector. Under-reporting is even more evident because most ACP countries do not have poison control centres. Permanent workers in agri-businesses are not always properly protected. The most vulnerable groups, however, are workers in family subsistence agriculture, daily labourers in plantations, seasonal and migrant workers, women workers and child labourers. They are mainly illiterate and not sensitized. Under-reporting is partially explained by the seasonal employment status of agricultural workers, the difficulties involved in the diagnosis of symptoms and diseases due to very limited anti-poisoning labs.

5.5 Partnerships and Alliances

161. Generally, the resulting partnerships and alliances contributed to a satisfactory project delivery.

162. Partnership and alliances imply coordination. Coordination refers to the extent to which development partners jointly mobilize resources or harmonize their practices to improve effectiveness, efficiency and division of work to eliminate inconsistencies, overlaps and overcrossing. In the case of the project, FAO, the countries and the stakeholders embarked into a joint venture. FAO and ACP countries are both allies. These are located in three different and remote geographical zones, having language barriers, with different political orientations and legal frameworks, each urgently threatened by urgent domestic priorities other than the management of obsolete pesticides for which the management capacities are scarce. FAO has done well to federate all the ACP countries as well as the donor community, thus, fostering the South-South, North-North and North-South cooperation.

163. FAO and the Europe-Africa-Caribbean-Pacific Liaison Committee (COLEACP) have initiated collaboration to promote sustainable strategies on plant protection of horticultural

products, pesticide management and good agricultural practices in ACP countries. The objective of this inter-professional association is to promote horticultural trade among member countries and to increase competiveness. To sustain development, it encourages ACP producers and exporters to adopt best practices in food safety, human health and environment protection through the development of field monitoring systems for pests and pesticides used in horticultural production and the development of curricula on integrated pest and pesticide management.

- ***Africa***

164. At the national level, key institutions working with the project included the Ministries of Agriculture, Environment and Health, and multi-stakeholder National Pesticide Management Committees.

165. At the regional level, the key intergovernmental institutions involved in the partnership with the project were: the CILSS Secretariat and its specialized technical Institute INSAH, UEMOA, ECOWAS and its West African Pesticides Registration Committee (WAPRC).

166. A number of national, regional and international NGOs (for instance PAN/Africa) collaborate with the project.

167. Likewise, FAO and the private sector, Crop Life (CLI), signed Framework Agreement for Voluntary Contributions to Obsolete Pesticide Stocks Projects. Under this agreement, CLI safeguarded obsolete pesticide products and contributed to their destruction in Niger and Burkina Faso.

- ***Caribbean***

168. The lack of a functioning regional hub significantly compromised the timeliness of outputs resulting from partnership activities and/or alliances. In reality, the roles, responsibilities, strengths and focus of partner institutions as it relates to roadmap to achieve outcomes were not always clearly defined, particularly at a national and regional level. This is aptly highlighted in the partner relationships between CGPC, CAHFSA, and the CARICOM Secretariat. This has resulted in various inefficiencies and has somewhat dwarfed the impact of the project. This issue must be resolved if the outcomes of the project are to be sustainable. There is also opportunity for greater partner activities with institutions such as CARDI, Caribbean Environmental Health Institute, IICA, UWI and community colleges in the countries.

- ***Pacific***

169. SPREP and SPC were key implementation partners. Both contributed to efficient delivery of outputs. SPC is very focused on IPM and Component 4 was mainstreamed into the work of SPC. The Pacific MTE noted that the overall funding allocation under the project was relatively small given the number of countries and scope of work to be completed, FAO recognised the need to supplement the contribution from other funding sources. In September 2010, the Pacific Heads of Agriculture and Forestry (HOAFs) meeting requested TCP proposals to be developed for the SPC-managed components, providing additional funds (maximum of US$500,000) per component, and therefore extending the project scope further than would be possible under the project funds alone.

170. Theoretically, this strategic alliance with the FAO TCP could have been very useful. However, of the five TCP proposals developed, only one (the proposal under Component 4) was approved for funding. Significant project resources were committed to developing TCP

proposals for the other components, but these did not come in fruition. Discussions with the FAO sub-regional office indicate that the TCPs were inconsistent with the FAO Country Programme Framework for Pacific region. FAO did successfully leverage additional funds through working in collaboration with UNEP on a GEF Pacific Alliance for Sustainability (PAS) supported project on POPs in the Pacific. The full project is providing over US$3 million to support POPs related work across the region. Due to the linkages between the project and the GEF/PAS project, the project funds were listed at co-finance to the GEF/PAS project. Under this arrangement, FAO will access another US$500,000 to focus on pesticide container management and soil contamination work based on preliminary work completed under Components 2 and 3.

6 Analysis by evaluation criteria

6.1 Relevance

171. Interviewees indicated that the project components were relevant to the needs of countries. These needs were articulated by countries at the project inception workshop, and the project components were developed in direct response to these expressed needs. Thus, there was widespread evidence throughout countries that the project was highly relevant to mobilizing and coordinating MEAs action in addressing the threat of obsolete and usable pesticides to the environment and human health. The inventories and safeguarding of obsolete pesticides have been completed in almost all participating countries; several countries have built capacity to understand the complexities and hazards associated with management of hazardous waste. It exists now a reliable database on the issue which allows planning and implementing better. Currently, countries have a much better understanding of why pesticide management is important early in life cycle in order to prevent problems. The project has assisted countries to eliminate obsolete pesticide stockpiles through external assistance, review and revise their legislation and regulation for pesticide management, and take advantage of the opportunities offered by the international Conventions of Basel, Rotterdam and Stockholm to address the pesticide mismanagement issue. The project relevance would have been even greater if countries had articulated the problem of obsolete and usable pesticides in their development strategy and if there was more funding available.

172. As a result of the project relevance, many individual governments have addressed to FAO official requests for assistance to eliminate obsolete pesticide stocks or to resolve other aspects of pesticide management.

173. The project relevance was also expressed by the trained people in participating countries. It has particularly built the capacity of pesticide regulators and technical staff for the evaluation and registration of pesticides. The project has also developed the PSMS system and produced guidance documents to assist participating countries in managing obsolete pesticides and reducing the use of pesticides. This tool was highly relevant to moving towards the elimination of obsolete pesticides and the use of best alternatives technologies and best environmental practices.

174. The satisfactory cross-fertilization at the national, sub-regional and regional levels further serves as evidence of the relevance of the project to stakeholders. Such cross-fertilization is critical to ensure greater congruency between issues related to obsolete pesticides, pesticides use and management and the expressed policies and priorities of the countries.

6.2 Efficiency

175. The efficiency of the project was mixed among the ACP regions. The project has evolved in diverse and different political, legislative, procedural and socio-economic environment. By and large, from the interviewees met during the evaluation, the project efficiency was rated satisfactory. However, satisfactory levels of efficiency were consistently achieved with the contractors and local consultants employed. The following factors contributed to varying levels of inefficiency:

- Weakness in the design of the project implementation framework
- Time delays
- Limited resources including funding
- An ineffective Caribbean project hub
- Ineffective communication
- Limited understanding of cultural norms existing in the region
- Local and regional key participants being government staff members who had many other responsibilities

6.3 Effectiveness

176. Generally, the activities and outputs achieved under the project were done effectively. The priorities that the countries themselves identified during the inception have been largely met. The project, because of its limited financial resources primarily and other external limitations and difficulties could not address all countries' needs. Such was not the project intent. However, the project in most cases was able to mobilize additional resources to leverage for disposal of obsolete pesticides, soil remediation and IPM.

177. An asset recognized unanimously is the PSMS. The project has been effective in producing this system that was deemed to be robust and of good quality by stakeholders, despite the complexity of obsolete pesticide management. However it is noted that Pacific countries are yet to benefit from the PSMS. Countries have also benefitted from the production and distribution of a range of technical guidelines aimed at raising public awareness with reference to obsolete pesticides and on sound pesticides management, IPM and reduced reliance on pesticides in agriculture. These materials were used in a limited way mainly because they are not yet to be translated from English to French and Spanish for widespread use by all stakeholders.

6.4 Sustainability

178. Since sustainability is only realised in a long term basis, it was not realistic to measure the delivery of sustainability at the end of the project four-year lifespan. Nevertheless, it is expected that some aspects of the project results will be sustained by countries and regional institutions. The inventory of obsolete pesticides was completed in most countries and the data uploaded to PSMS which has potential as a useful tool for the overall management of pesticides.

179. Based on the project achievements, the evaluation team assessed the potential sustainability of the project. Generally, there is a high probability that the benefits provided by the project may continue after its termination, taking into account that it has made a great investment in capacity building, the completion of the obsolete pesticide inventory, the development of the PSMS, and the provision of guidelines and other undertakings for the overall management of pesticides. The work on IPM and alternatives is core to FAO and the project contributed to the momentum of these activities particularly in the SPC. However, countries

commitment and ownership, continuous budget allocations, policy and regulatory reforms, maintained capacity building, and investments are the essential prevailing conditions for sustaining the project results.

180. Success as regards to sustainability of results is predicated on a harmonized pesticides legislation and registration system at regional level. Significant progress has been made in West African countries. In 2013, the project facilitated the assessment of the existing pesticide registration and post-registration under the tripartite CILSS-ECOWAS-UEMOA Agreement for the Management of Pesticides. In the Caribbean and Pacific, progress has been made for the creation of a functional harmonized pesticides legislation and registration system.

181. Another aspect showing project sustainability was its expansion and replication in other countries.

6.5 Impact

182. While all the project activities were not completed and outputs achieved, generally the project can be viewed as successfully contributed to the improved management of pesticides. As showed above, there are several areas where improvements to project management and implementation could have been made, but no negative impacts were determined.

183. The opportunity of working with FAO on the project resulted in significant positive impact on national and regional strategies aimed at the elimination of obsolete pesticides while building capacity to effectively manage pesticides and prevent future accumulation. Such development is not only vital for the protection of human and environmental health but also for socioeconomic development.

184. Since the inception of the project, some 57% of the total estimated obsolete pesticide stocks in the Caribbean have been safeguarded, thereby reducing risks. This was achieved with limited resources and within a relatively short time and under less than ideal conditions. Satisfactory progress has been made in national capacity building in the area of pesticides management by training local staff (e.g. extension officers, customs officers) and private pesticide importers and distributors in appropriate management practices for obsolete and usable pesticides.

185. The PSMS system has facilitated the processing of inventories of obsolete pesticides in the countries and has shown great potential as a tool for managing obsolete pesticides and usable pesticides. Pending in-depth training, every effort is been made by all pesticide authorities to adopt this system as an integral part of its management arsenal as they strive to protect human health and the environment. Besides as being a model for the inventory of obsolete pesticides and other chemicals, the PSMS has helped to prevent the build-up of hundreds of tons of obsolete pesticides by offering the possibility to manage their stocks in an efficient way and when possible, through triangulation, to donate excess stocks to countries that need them. Currently, the impact of the PSMS is beyond the project bounds as it is used as the standard reference in countries outside the project regions for IGOs, contracting and consulting firms skilled in obsolete pesticide disposal.

186. Satisfactory progress has been made by increasing public awareness on the obsolete pesticides issue in the context of environment and public health risks but for the impact to be sustained, these activities need to be continued and targeted all stakeholders including the farming households

187. The project results on IPM contributed also to the FAO Strategic Objective 2: "*Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner*". The project contributed also directly to MDG7 by integrating MEAs principles of sustainable development, legal frameworks and programmes into the countries' strategic documents to reduce the impact of obsolete pesticides on human health and the environment. The project also impacted on reaching MDG1 by promoting more sustainable agricultural practices to improve food quality and value for farming communities.

188. Overall, the project made significant progress in moving towards impacts, and in particular in putting in place relevant activities to ensure the integration of MEAs at regional and national levels, enhancing the leveraging of additional funds, and radically transforming the situation prevailing at the time the project was launched in 2009 when it was unthinkable that ACP countries could put into motion a strategy leading to cleaning-up obsolete pesticides.

6.6 Key Findings

189. Evidence gathered during the evaluation process reveals that the project was relevant to needs and priorities of the countries. The project concept and design are generally satisfactory although ambitious in scope and limited in available resources. Weaknesses in the design of the project implementation framework have resulted in inefficiencies, mainly due to diffused lines of responsibility and accountability, ineffective communication, and resource limitations. There were major setbacks in achieving outputs, even in circumstances where causal relationships and logical flow were clear and sound.

190. Given the broad scope of the project and relatively limited available funds, it was concluded that financial resource management was generally done to a satisfactory level by assisting countries to access additional funding mechanisms (TCP, leverage) and employing many cost-saving actions(hiring local consultants, having training venues in situ, etc). However, there is a greater need to disaggregate budget data by country and by components. This would allow for a more in-depth analysis of financial resource management of the project.

191. The evaluation showed that outputs related to components 1 (Obsolete pesticides inventory, pesticide data management system, and RA available) and 2 (Strategy for safeguarding of obsolete pesticides developed) which are more tangible and quantifiable, were ranked as the best result of the project. A coherent and comprehensive inventory of obsolete pesticides has been completed across most targeted ACP countries. The majority of these countries have validated and uploaded the data collected from the inventories. This represents a high quality and meaningful output that allows for the development and eventual execution of strategic plans for disposal of obsolete pesticides. In many countries, the safeguarded pesticides have been centralized in secured locations and ready for export. In some of them, the obsolete pesticide stockpiles have been removed for destruction. The rest of these countries have planned or are implementing disposal operations (Output 3). The scope of these disposal operations was limited because they are costly and project funds were insufficient. Satisfactory progress has been made by increasing public awareness on the issue of obsolete pesticides in the context of environment and public health risks but these activities need to be continued and targeted at all stakeholders including the farming households.

192. Sound pesticide management and pesticide use reduction are being performed in many countries where capacity was strengthened, the PSMS deployed, technical guidelines followed, and IPM practices adopted. Work is in progress in many countries on the

enforcement of pesticide registration and post-registration regulations at country level and on harmonized pesticide legislation and regulation systems at regional level.

193. Other cross-cutting outcomes of the project have been (i) the post-graduate distance-learning course on pest risk management for regulators convened at UCT; (ii) several training, workshops and events organized to enhance capacity building and foster consultation, collaboration and coordination within the three regions; and (iii) increased communication among stakeholders, consciousness to shift to alternates to chemical pesticides, and awareness to obsolete and hazardous pesticide management and use, particularly at household level. These have also maximized the impact of the project and formed the basis for a change in behaviour and in making better decisions at national and regional levels.

194. It is expected that most of the impacts and outputs achieved by the project described above, particularly the training resulting in capacity building of local, sub-regional and regional stakeholders should contribute to countries being able to sustain key components of the project framework. However, evidence suggests that the work of the project can only fully sustainable if countries continue to strengthen their human capacity, financial resources and regulatory and legislative checks.

195. A rigorous and clear assessment of gender equity and integration issues was not addressed in the conceptualisation of the project. Such an analysis among stakeholders and beneficiaries is crucial in profiling the driving-force for achieving project efficiency, effectiveness and impact. There are serious concerns regarding the inappropriate use of pesticides in the home and its association with health issues, especially respiratory and dermatological problems in children and young adults. Most of these homes are headed by females. Therefore, the generation of information on gender issues is crucial if there is to be a significant change in the perception, behaviour and management of pesticides to ensure sustainable agricultural systems and a better quality of life for the rural and urban poor.

196. The institutional arrangement from the viewpoint of FAO as the lead project implementer, providing and technical support, was generally viewed as the most efficient and effective approach to develop and deliver the programme of work on obsolete pesticides and pesticides use and management. Nonetheless, FAO was criticized for not sufficiently engaging some local stakeholders e.g. some government ministries, to facilitate a better understanding of project components, the roadmap to change, the roles of coordinating bodies, and general outcomes.

197. The opportunity of working with FAO on the project resulted in significant positive impact on the national and regional strategies aimed at the elimination of obsolete pesticides while building capacity to effectively manage pesticides and prevent future accumulation. Such development is not only vital for the protection of human and environmental health but also for socioeconomic development. Unfortunately, there were insufficient quantification of the reduced incidence of poisoning and deaths from pesticide misuse and mismanagement in targeted countries. This indicator is essential to measure project impact on human health.

7 Conclusions and Recommendations

7.1 Conclusions

1. *Project's relevance to the needs and priorities of beneficiaries' countries and to public regional global good aspects.*

198. The project was conceptualised to assist countries in eliminating obsolete pesticides and preventing the build-up of new stocks through better pesticides management. The project satisfactorily defined the key building blocks required to achieve the primary impact, which was to "improve environmental management and sustainable development focusing on management of pesticides for environmental health - quality of life, sustainable agriculture - quality of growth and protecting the global commons.

199. Evidence gathered during the evaluation process reveals that the project, with its underlying theory of change, has responded to needs and priorities of beneficiary countries. Many individual governments have addressed to FAO official requests for assistance to eliminate obsolete pesticide stocks or to resolve other aspects of pesticide management.

2. *The extent to which the project reduced the use of pesticides and improved the use of alternatives to conventional chemicals.*

200. Sound pesticide management and pesticide use reduction are being performed in many countries where capacity was strengthened, the PSMS deployed, technical guidelines followed, and IPM practices adopted. The project made significant progress in achieving its goal which was to reduce adverse impacts on human health and the environment from excessive and poorly managed pesticide use. Its performance could have been greater if the project was not confronted with serious challenges such as lack of funds, limited capacity and external constraints. Because of these difficulties, the implementation of all planned activities could not be achieved within the agreed timeframe.

3. *Utilization of systems to manage statistics on import, use and current stocks of pesticides*

201. A coherent and comprehensive inventory of obsolete pesticides and risk assessment were successfully completed for all targeted countries with the exception of Dominican Republic and Haiti in the Caribbean. The majority of these countries have validated and uploaded the data collected from the inventories.

4. *Did the project improve the management of empty pesticide containers and small pesticide stocks*

202. In many countries including Benin, Botswana, Jamaica, Kenya, Mali, Suriname, Swaziland and Trinidad, all or significant portions of obsolete pesticides have been safely packaged and ready for export. In many of them, the safeguarded pesticides have been centralized in secured locations. In some of them, the obsolete pesticide stockpiles have been removed for destruction. The rest of these countries have planned or are implementing disposal operations. The scope of these disposal operations was limited because they are costly and project funds were insufficient.

5. *To what extent the project succeeded in enforcing pesticide registration and post registration regulation*

203. Work is in progress in many countries on the enforcement of pesticide registration and post-registration regulations at country level and on harmonized pesticide legislation and regulation systems at regional level.

204. Other cross-cutting outcomes of the project have been (i) the post-graduate distance-learning course on pest risk management for regulators convened at UCT; (ii) several training, workshops and events organized to enhance capacity building and foster consultation, collaboration and coordination within the three regions; and (iii) increased communication among stakeholders, consciousness to shift to alternates to chemical pesticides, and awareness to obsolete and hazardous pesticide management and use, particularly at household level. These have also maximized the impact of the project and formed the basis for a change in behaviour and in making better decisions at national and regional levels.

205. It is expected that most of the project impacts and outputs achieved by the project described above be sustained. Developing countries have presently other priorities to feed, educate and heal populations. To these strategic priorities, the care for people welfare and the environment should be included and considered as core values. There has been a move in this direction by most governments through the project. During Phase 2 of the project, a strategy should be put in place to enable more commitment of ACP countries to the project.

206. Given the broad scope of the project and relatively limited available funds, it was concluded that financial resource management was generally done to a satisfactory level by assisting countries to access additional funding mechanisms (TCP, leverage) and employing many cost-saving actions(hiring local consultants, having training venues in situ, etc). However, there is a greater need to disaggregate budget by components. This would allow for a more in-depth analysis of financial resource management of the project.

207. A rigorous and clear assessment of gender equity and integration issues was not addressed in the conceptualization of the project. Such an analysis among stakeholders and beneficiaries is crucial in profiling the driving-force for achieving project efficiency, effectiveness and impact. There are serious concerns regarding the inappropriate use of pesticides in the home and its association with health issues, especially respiratory and dermatological problems in children and young adults. Most of these homes are headed by females. Therefore, the generation of information on gender issues is crucial if there is to be a significant change in the perception, behaviour and management of pesticides to ensure sustainable agricultural systems and a better quality of life for the rural and urban poor.

208. The institutional arrangement from the viewpoint of FAO as the lead project implementer, providing and technical support, was generally viewed as the most efficient and effective approach to develop and deliver the programme of work on obsolete pesticides and pesticides use and management. Nonetheless, FAO was criticized for not sufficiently engaging some local stakeholders e.g. some government ministries, to facilitate a better understanding of project components, the roadmap to change, the roles of coordinating bodies, and general outcomes. It is apparent that the project received satisfactory assistance from the FAO regional offices.

209. The opportunity of working with FAO on the project resulted in significant positive impact on the national and regional strategies aimed at the elimination of obsolete pesticides while building capacity to effectively manage pesticides and prevent future accumulation. Such development is not only vital for the protection of human and environmental health but also for socioeconomic development. Unfortunately, there were insufficient quantification of the

reduced incidence of poisoning and deaths from pesticide misuse and mismanagement in targeted countries. This indicator is crucial for measuring project impact on human health.

210. The evaluation team assessed the potential sustainability of the project. Generally, there is a high probability that the benefits provided by the project may continue after its termination, taking into account that it has made a great investment in capacity building, the completion of the obsolete pesticide inventory, the development of the PSMS, and the provision of guidelines and other undertakings for the overall management of pesticides. The work on IPM and alternatives is core to FAO and the project contributed to the momentum of these activities particularly in the SPC. However, countries commitment and ownership, continuous budget allocations, policy and regulatory reforms, maintained capacity building, and investments are also essential and can be promoted by FAO's increased investment in communications and awareness activities

7.2 Recommendations

Recommendation N. 1 – to FAO and Donor

Given the satisfactory results achieved during its first phase, the project deserves to be supported for its second phase in order to consolidate the achievements and to expand the results to other countries. The second phase should continue along similar aims and objectives, but should address highlighted deficiencies. This is necessary to ensure that the elimination of obsolete pesticides, pesticides management and sustainable pest management will be competently executed. In particular improved monitoring and clearer reporting line should be introduced.

Following issues should be considered in the second phase of the project:

For Africa - with reference to alternatives to conventional hazardous pesticides, Phase 2 of the project should develop an action plan providing a clear vision and the way forward for scaling up IPM alternatives in the region.

For Pacific - Work on the regional registration system and regional institutionalization of the PSMS is considered very important for the Pacific region, but is inherently slow. This work should be continued under Phase II of the project, and the progress actively managed by FAO in close consultation with SPC.

For the Caribbean - Satisfactory progress has been made by increasing public awareness on the issue of obsolete pesticides in the context of the environment and public health risks. These activities need to be continued and targeted at all stakeholders including the farming household levels where women can play important roles to alleviate the use of pesticides and their containers. Work on: (i) creation of a functional harmonized pesticides legislation and registration system using PSMS and (ii) pesticide residue monitoring and the elimination of obsolete pesticides are also deemed important to the region and should be continued in Phase 2 of the project.

Recommendation N.2 - to FAO

FAO should ensure that governments include management of obsolete pesticides in the national policies and strategies. There is an urgent need to continue updating the legislative, policy and institutional/social frameworks for sound pesticides management and pest reduction to address "counterproductive" policies such as subsidies to pesticides and centralized purchase at both the national and regional levels. All stakeholders, including the farming households, should be

involved in these efforts in a transparent, effective, participatory and consensual manner if the re-occurrence of stockpiles of obsolete pesticides is to be drastically eliminated.

Recommendation N.3 – to FAO

FAO should further explore and test adoption of IPM, good agricultural practices with less reliance on pesticides, other alternate pest management strategies and soil cleaning-up/remediation methods in ACP countries.

Recommendation N.4 - to FAO

TCPs were developed in the Pacific with the aim of financing additional key activities. These were not funded as the FAO Sub-regional Office advised that they are inconsistent with the priorities included in the FAO CPF for the Pacific region, and developed without sufficient regional consultation. It is recommended that in the future AGPM staff working on TCP Facility proposals consult closely with the FAO Sub-regional office as well as the CPF ensuring that clear references are made to country priorities. TCP Facility projects are decided on the sub-regional level, and funds are limited, so regional buy-in to plan activities is essential to them being funded.

8 Lessons learned by ACP region

- ***Africa***

The Postgraduate Diploma on Pesticide Risk Management distance-learning provided in English at UCT should be extended to candidates from French speaking countries in order to avoid disparities of knowledge. FAO should explore the possibility of convening the course in existing academic institutions in West Africa.

There is no laboratory with analytical capacities for the quality control of pesticides in West Africa. The laboratoire Central Vétérinaire (LCV) based in Bamako (Mali) has done some analysis of pesticides residues in soils and water for monitoring soil remediation under ASP/Mali but lack of equipment and technical capacity for quality control. It is suggested to strengthen and upgrade LCV as a regional laboratory under CILSS' auspices to ensure that there is the technical capacity in the region to analyse pesticides for registration and post registration management.

The infrastructure of the centre of pesticide drums decontamination of Burkina Faso, built in 1992 using Canada funds, should be rehabilitated and made operational. The possibility of upgrading it to regional centre should be investigated.

Countries covered by the tripartite Agreement (CILSS, UMEOA, CEDEAO) in West Africa should be supported in their efforts to harmonize and improve pesticides management in the region.

Improving pesticide application techniques should be included in the training plan at all users' level. This should contribute to reducing risk of accumulating obsolete stocks simply because improved methods would result in reduction of pesticide orders.

The public awareness campaigns are important and should be encouraged given the basic level of knowledge by communities and the public at large, of obsolete pesticides, their stores and their impact.

The inventory operation and the data validation should be organized immediately after the training on techniques of inventory in order to fully take advantage of the trained expertise.

- ***Caribbean.***

The rate of project execution differed across the region, resulting in countries that were at a more advanced stage of project implementation (lead countries) and those with serious delays (lag countries). There is opportunity for greater cooperation and sharing between lead and lag countries, which can result in a shorter and flatter learning curve.

- ***Pacific***

In terms of management, consultations with stakeholders (including SPC, SPREP and the FAO Sub-regional Office) indicated that communication in both directions was infrequent and sporadic with AGP. This resulted in difficulties in obtaining the appropriate responses and support on time for future projects managed from FAO headquarters it is recommended that a communications protocol be established, implemented and actively monitored to ensure stakeholders and implementation partners are kept abreast of planned and current activities.

In the case of the Pacific it was very difficult to establish what activities were completed, and what were not, as project achievements were buried in the ACP log frame. It is recommended that future regional log-frames with percentage of achievements updated annually.

In terms of general recommendations, the project includes five of the 14 PICs. According to FAO these countries were selected based on agricultural intensity and associated pesticide use. However, evidence gleaned from surveys undertaken during the communication strategy development, indicated that 80% of farmers in Vanuatu are subsistence, with low pesticide inputs. Further work should be completed at project design phase to assess agricultural intensity in Pacific countries.

The implementation of all components under this project in the PICs used project funds in an effort to leverage additional funding through the FAO's TCP Facility. Four out of five of these TCPs were left unfunded, and many planned project activities were not completed. Resources committed to the development of additional project proposals would have been better directed at planned project activities.

In addition, the project was under spent. Future activities should ensure that all funds are spent on the completion of planned project activities.