

CONCEPT NOTE: A Panel Discussion

TITLE: Mainstreaming Ecosystem Services and Biodiversity in Agricultural Production and Management to Minimize Dependency on Agrochemicals in the Pacific Islands

On the occasion of the 27th SPREP Meeting, Niue

Date: Tuesday, 20th September, 2016

Time: Lunch time

Biodiversity and Agricultural Production Systems in the Pacific islands are Inter-twined

Over thousands of years, Pacific peoples established a high dependency on the services that local ecosystems provide, such as food, freshwater and plant materials for artisanal and medicinal purposes. Land and sea have deep spiritual significance, and the diverse cultures across the region became inextricably linked to the diversity of living species that characterizes each island environment. The traditional agriculture and food systems of Pacific island societies are therefore, not only biological systems they are also social and cultural systems that provide the solid foundation for cultural identities and social cohesiveness. These traditional farming systems remain the dominant agricultural production systems in Pacific island societies.

Over the last 50 years however, the traditional low-input and diversified agro-forestry farming systems have increasingly been undermined by “modern” monoculture-based agriculture, as people and societies transition towards cash cropping, semi-commercial and commercial farming. This significant shift towards modern high-input farming systems is a part and parcel of the growth in industrialization, urbanization and populations that have led to major changes in lifestyles and consumption patterns. Traditional food and local beverages became slowly replaced and even abandoned in favour of imported foods such as rice, flour, noodles, canned foods (e.g., fish and corned beef), meat (e.g., mutton flaps, chicken, turkey-tails), soft drinks, tea and coffee. Among the many consequences is an increase in neglecting of the rich heritage of genetic varieties of food plants and a decline in traditional knowledge of local agrobiodiversity and ecosystems.

The central objective of the modernization of agriculture in the Pacific Islands, as elsewhere, has centred on raising agricultural productivity to levels which allow farmers to produce more than that required for subsistence. The drive to increase productively however, has led to an intensification of cultivation on existing farmland, the extension of cultivation onto previously unused and/or forested and marginal land, and has also led to a significant rise in the use of agro-chemicals (fertilisers and pesticides). The ecological



footprint of modern farming systems have raised concerns exponentially on the sustainability of agriculture. Nearly all Pacific island countries have identified agriculture as one of the major causes for the loss in biodiversity in their National Biodiversity Strategy and Action Plans.

It is well established that the use of pesticides, in particular highly hazardous pesticides (HHPs) in the Pacific Islands has been on the rise, with farmers mostly using pesticides that are based on old pesticide chemistry. Pesticides are poorly managed from their point of entry into the country to their end of life. The vast majority of farmers lack access to protective equipment and knowledge of the minimum risk management requirements. The costs and adverse effects, both in terms of human health and damage to agro-ecosystems and on ecosystem services, are now recognized as issues of major concern globally. Damage to the environment from pesticides is a problem everywhere, but the Pacific Islands are particularly vulnerable to these impacts, including significantly reducing their resilience to climate change.

More recently, a consensus has emerged that the fate of biodiversity and agriculture are inter-twined. Biodiversity and ecosystem services are at the heart of many solutions to sustainable increases in agricultural productivity that deliver not only better outcomes for food and nutrition security but also reduce externalities of production. Solutions can be found in ecosystem-based approaches to agricultural production and management, including pest and soil fertility management, that build on both modern science and traditional knowledge of local communities.

FAO/CBD/SPC/SPREP Collaboration on a Technical Guidance Document on mainstreaming ecosystem services and biodiversity in the Pacific islands

FAO, CBD, SPC and SPREP have been collaborating to strengthen capacity of Pacific island countries to implement synergistically, the realms of MEAs related to Chemicals and Waste (Stockholm Convention, Basel Convention, and Rotterdam Convention) and the Convention on Biological Diversity (CBD) under a European Union funded programme, “Capacity Building related to Multilateral Environmental Agreements (MEAs) in ACP Countries”.

One of the main objectives of the MEAs programme is to explore opportunities for reduction of reliance on synthetic chemical pesticides to minimise risk on human health and the environment. To achieve this objective, FAO, CBD, SPC and SPREP have collaborated on a joint publication of a Technical Guidance Document - *Mainstreaming Ecosystem Services and Biodiversity in Agricultural Production and Management to Minimize Dependency on Agrochemicals in the Pacific Islands*.

The Technical Guidance Document will provide practical guidance to assist countries identify where important synergies can be harvested in implementing MEAs related to sound chemicals management and biodiversity conservation and sustainable use. It is

intended to be used by countries in revising any of their strategies or policies related to these two realms of MEAs, but in particular is oriented toward supporting country revision, or assist implementation, of their National Biodiversity Strategies and Action Plans (NBSAPs), to strengthen the aspects of biodiversity conservation related to agricultural production and management and to help them attain a number of relevant Aichi Targets.

The Technical Guidance Document will provide practical case studies from around the Pacific islands on ecosystem-based and agro-ecological approaches that address both the negative externalities of conventional production systems and the challenges of subsistence resource-poor farmers. These approaches can be designed to build upon and harness the forces of biodiversity and ecosystem services to underpin sustainable agricultural production - so that soil fertility, natural pest control, pollination, water retention – are optimized and encouraged and help identify alternatives to the use of highly hazardous pesticides.

A Panel Discussion as a Side Event on the occasion of the 27th SPREP Meeting, Niue, 20th September 2016.

On the occasion of the 27th SPREP Meeting, SPREP and FAO in collaboration with SPC and the CBD Secretariat, with funding support by the European Union, are organizing a panel discussion to inform the preparation of the Technical Guidance Document above-mentioned on *Mainstreaming Ecosystem Services and Biodiversity in Agricultural Production and Management to Minimize Dependency on Agrochemicals in the Pacific Islands*.

The panelists represent Pacific island countries (PICs) where agricultural production and the increase use of agrochemicals have been identified as a major threat to the loss of biodiversity and ecosystem services in their National Biodiversity Strategy and Action Plan (NBSAP). At the same time, there is considerable scope in the Agriculture Sector Policy/Plan of these PICs to address the priority concerns of excessive use of agrochemicals and other poor farming methods through the promotion of ecosystem-based approaches to improvements in soil fertility and to pest and crop management – replacing chemicals with biology. For example, several Agriculture Sector Policies/Plans in the region promote organic farming and organic certification of agricultural products, which promote natural forms of soil fertility management (compost management, legume inter-cropping). In these same countries however, farmers often refer to pesticides and herbicides, such as *paraquat* as their 'friend', primarily to reduce labour time and cost and increase productivity in the short term.

The panelists will provide 5-7 minutes presentations, and will address some of the following questions:

- What is the current level of awareness, and level of concern by policy-makers and local communities on the environmental and human health risks of highly hazardous pesticides?

- While there is mounting scientific evidence across the world of the damages inflicted by highly hazardous pesticides to human health and the environment, there is only anecdotal evidence available in the Pacific islands with very limited data and research. Are there any existing or planned activities at the national level that could contribute to filling this gap?
- What are the opportunities for strengthening the synergies between the implementation of the cluster of Multilateral Environment Agreements related to sound chemicals management (Stockholm Convention, Rotterdam Convention, Basel Convention, and Waigani Convention) and the Convention on Biological Diversity, to promote alternatives to, and support minimize the dependency on, agro-chemical use?
- What are some of the policies and initiatives as case studies at the national level that address the priority concerns of excessive use of agrochemicals and other unsustainable farming practices, and support and promote the enhancing of agricultural biodiversity and ecosystem services.
- What are some of the key efforts at the national level to facilitate the involvement of the agriculture sector and farmers in the NBSAP process, and vice versa, environment/conservation sector in Agriculture Sector Plans/Policies process?
- What would be the key areas of technical support that can be provided by regional organizations and international partners to promote agricultural practices that are based on established ecological principles and processes to reduce reliance on chemical inputs in the Pacific islands?

See Draft Programme Attached