$600k OPEC-fund grant to promote use of nuclear techniques for improved food security and sustainable agriculture

Improved farming practices, healthier animals and – ultimately – increased food security will be the outcomes of projects supported by a US$ 600 000 grant by the Organization of Petroleum Exporting Countries (OPEC) Fund for International Development (OFID) under a partnership with the IAEA signed last December.

The work will promote the use of nuclear techniques towards best agricultural practices, and will benefit many people, including poor farmers, in developing countries in Asia.

The projects tie in with Sustainable Development Goal 2 "Zero Hunger", emphasized OFID Director-General Suleiman J Al-Herbish at the signature of the agreement at OFID headquarters in Vienna.

"The two projects will improve food security, and ultimately social and economic growth – two essential elements of the United Nations Agenda 2030 for Sustainable Development, which OFID has committed to wholeheartedly," Al-Herbish said. "We are pleased to be working with the IAEA in support of agriculture in Asia."

Producing more rice

US$ 400 000 will be used to help farmers grow rice that can cope with the effects of climate change in Bangladesh, Cambodia, Lao PDR and Nepal. Countries in Asia, which produce 90% of the world's rice, have seen fluctuating yields in recent years due to rising temperatures that bring plant diseases and insect pests, extreme floods and droughts as well as a rise in sea levels leading to increased soil salinity and lower soil fertility in coastal areas. By using nuclear and isotopic techniques, scientists can help farmers improve water management practices and optimize the use of fertilizer for best yields at the lowest cost.

The increased productivity from these improved practices is expected to lead to higher volumes of high-quality, affordable rice, increasing the food security of the rural population in target countries. The improved technologies will also help reduce greenhouse gas emissions from rice production.

Fighting animal diseases

The other US$ 200 000 will go towards the application of nuclear-related techniques for the diagnosis of foot-and-mouth disease and other diseases impacting cattle in Cambodia, Lao PDR, Myanmar and Vietnam. Many animal diseases are highly contagious and can spread extremely quickly within a country and across borders, hindering trade and, in some cases, affecting public health. Early and rapid detection of the pathogen is key to halting the spread of these diseases. Nuclear-related techniques are used in the development of testing kits for the diagnosis of such diseases. While conventional methods can detect the viruses, they take a long time and cannot determine their behaviour or genetic character – which is required for a rapid response.

Under the grant, the IAEA, in cooperation with the Food and Agriculture Organization of the United Nations (FAO), will train veterinarians from the four countries in the diagnosis and control of the diseases. The project will ultimately benefit livestock farmers and increase cattle production.

Since 1989, OFID has extended 12 grants totalling US$ 2.4 million to the IAEA in support of health and agricultural projects in Africa, Asia and Latin America.

— By Miklos Gaspar

Strategic management of new and expanding nuclear power programmes discussed at annual meeting

Challenges that countries face when introducing or expanding a nuclear power programme were discussed at an IAEA meeting in Vienna earlier this year. Among them are developing a regulatory and legal framework, establishing an effective owner/operator organization, involving all stakeholders to build public confidence in nuclear power, and training a well-qualified workforce.

The annual Technical Meeting on Topical Issues in the Development of Nuclear Power Infrastructure, held from 31 January to 2 February 2018, attracted some 100 representatives from both embarking and operating countries and international organizations. Senior officials from national government organizations, regulatory bodies and owner/operator organizations presented updates on their activities, shared good practices and lessons learned as they embark on, or consider introducing or expanding nuclear power.