The Technical Co-operation Programme

The IAEA promotes the transfer of nuclear and related technology for peaceful purposes to Member States through the Technical Co-operation (TC) Programme. TC projects in the fields of medicine, food and agriculture, human nutrition, industry, and environmental studies are implemented in Member States to enhance their human and institutional capacities by providing material and financial assistance. Many of these projects contribute directly or indirectly to the goals of sustainable development and protection of the environment as set out in Agenda 21 (UNCED, 1992) and the Millenium's goals. Several of these activities are conducted in conjunction with other UN and international organizations. For detailed information on the IAEA TC, operational TC Programme, Publications, Participation, Regional Co-operation Agreements, Application forms and other issues, please visit the website at: http://www-tc.iaea.org/tcweb/default.asp.

The IAEA TC strategy aims at "promoting tangible socio-economic impact by contributing in a cost-effective manner to activities addressing high development priorities of each country" Three mechanisms are adopted to achieve this goal: Thematic Planning, the Country Programme Framework and the Central Criterion.

Thematic Planning is a prescriptive planning tool that seeks the most effective and efficient technical solution to a generic development problem. The strategic value of Thematic Plans is that they provide programmatic guidance on the application of nuclear techniques in technical cooperation, drawing on IAEA's best practices and experiences. They provide a cost benefit analysis of the nuclear technology against conventional non-nuclear techniques, define a role and responsibilities of the Agency in relation to other stakeholders, identifying resource requirements and seek to outline a course of action.

Country programme frameworks (CPF) help national authorities to identify the problems to be addressed with nuclear technologies, to outline the results expected in a given time frame and to take ownership of the programme. The CPF is a programming tool that provides a concise frame of reference for IAEA technical cooperation with Member States supporting national development objectives in the medium term (4-6 years). The strategic value of a CPF results from mutual commitment to improving the quality and effectiveness of technical co-operation between a Member State and the IAEA.

Strong government commitment to project objectives, referred to as the **central criterion**, is one of the key issues assessed in the 2002 Review (GOV/INF/2002/8/Mod.1). A project meets the central criterion if it either: a) relates clearly to an area that is a prerequisite for use of nuclear technologies and that has a good chance of achieving the expected outcomes: or, b) addresses an area where there is a national programme enjoying strong government commitment with evidence of significant financial support, and where nuclear techniques can play a fundamental role for the success of a project.

Agency TC projects are approved for a two-year period (biennium) e.g. the current biennium 2005-2006. A TC programme biennium is preceded by a two-year preparatory phase. During the first year of the preparatory stage, Member States prepare proposals for projects needing Agency support. The Agency may provide expert assistance in project formulation upon request. The deadline for the submission of project proposals is December 31 of the first year of the preparatory phase. During the second year the proposals are appraised by the staff of the Agency. During the appraisal year extensive consultations are held with Member States on the requested TC assistance. Project re-formulation missions are fielded when necessary. Projects selected during the appraisal are submitted to the Board of Governors for approval in December of the second year of the preparatory phase. Projects approved by the Board are implemented during the next two years following a clearly defined plan of work. TC Projects through one or more of the following

components: equipment and supplies, fellowship training and scientific visits, training courses and workshops, expert missions and sub-contracts provide the necessary skills and equipment to establish sustainable technology in the counterpart country or region. Evaluation of projects is based on the extent to which the project has achieved or is achieving its stated objectives and is contributing to national development programmes.

The TC Programme with more than 800 on-going projects disburses more than $70 million (US dollars) worth of equipment, services, and training per year in approximately 100 countries and territories, which are grouped into five geographic regions: Africa, East Asia and the Pacific, Europe, Latin America and West Asia. TC also supports regional and interregional projects. Regional projects are those proposed by the Agency or a group of Member States in response to the expressed needs of a region, and those proposed by Member States collaborating within a Regional Co-operative Agreement (RCA). Interregional projects are established by the Agency to serve the common needs of several Member States in different geographical regions.

The SWMCN sub-programme is presently providing technical backstopping to 32 national and regional projects with a total value of US $ 2,763,228.00 million in the 2005-06 biennium covering all five geographical regions (Table 2).

Table 2. Active TC Projects in Soil and Water Management & Crop Nutrition

Soil and Water Management & Crop Nutrition

The Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture provides scientific and technical support for Technical Co-operation Projects managed by the IAEA's Department of Technical Co-operation and FAO's Technical Co-operation Department

Region	Country	Project No.	1st Year	Project Title	Technical Officer	Budget US $	Project Area
Africa	Algeria	ALG5020	2005	Combating desertification	R. Serraj	192,460 (B)	E101 E105
	Algeria	ALG5021	2005	Optimising irrigation systems and surface water management	L. Nguyen	145,350 (B)	E102
	Cameroon	CMR5013	2005	Use of nuclear techniques in soil, nutrient and water studies	R. Serraj	124,170 (B)	E102
	Ghana	GHA5032	2005	Enhancing production and use of cassava	M. Jain/ R. Serraj	162,880 (B)	E103
	Kenya	KEN5023	2005	Combating desertification using nuclear technology	R. Serraj	111,104 (B)	E102 E105
	Libya	LIB5010	2003	Establishing a drip irrigation-fertigation system using nuclear techniques	L. Heng	57,770 (A)	E101
	Mauritius	MAR5014	2003	Management Practices for Increased Efficiency of Fertilizers and Improved Productivity of Saline Soils	R. Serraj	34,100 (A)	E101
	Namibia	NAM5008	2005	Increasing crop productivity and resource use efficiency in the northern communal areas	R. Serraj	131,260 (B)	E101 E105

	Sierra Leone	SIL8002	2001	Improved Water Management Technologies in the Inland Valley Agro-Ecology	L. Heng	10,392 (A)	E101
	Sierra Leone	SIL5008	2005	Contribution of nitrogen fixing legumes to soil fertility in rice-based cropping systems	G. Hardarson	72,050 (A)	E101
	Uganda	UGA5025	2002	Integrated Nutrient Management for Increased and Sustainable Crop Production on Small-holder Farms	L. Nguyen	Zero budget	E101
	Zimbabwe	ZIM5011	2005	Combating desertification in agricultural lands	R. Serraj	207,360 (C)	E101 E105
	Ivory Coast	IVC5029/a	2005	Improvement of yield in plantain and cassava through the use of legume cover crops	R. Serraj	66,490 (A)	E101
	Kenya	KEN5026/a	2005	Isotope techniques for assessment of water and nitrogen use efficiency in cowpea/maize intercropping systems	L. Heng	86,359 (A)	E101
	Senegal	SEN5028/a	2005	Enhancement of biological nitrogen fixation and phosphorus use efficiency in cowpea under drought conditions	G. Hardarson	300,140 (C)	E101 E105
Regional Africa		RAF5048	2001	Combating Desertification in the Sahel	C. Bernard	297,960 (C)	E101

East Asia and Pacific	Bangladesh	BGD5023	2001	Development of Agroforestry-Based Livestock Production Systems	H. Makkar /R. Serraj	7,672 (A)	E201
	China	CPR5014	1999	Increasing the Productivity of Crop/Livestock Production System	H. Makkar/ G. Hardarson	111,980 (B)	E201
	China	CPR5015	2005	Assessment of soil erosion and effectiveness of soil conservation	C. Bernard	153,990 (B)	E102
	Mongolia	MON5014	2005	Application of Isotopes in soil and plant studies	G. Hardarson	259,270 (C)	E101
	Philippines	PHI5031	2005	Assessment of erosion and sedimentation processes for effective formulation of soil conservation and water quality production measures	C. Bernard	88,330 (A)	E102
	Sri Lanka	SRL5038	2005	Application of isotopes for soil erosion studies	C. Bernard	178,967 (B)	E102
Regional East Asia and the Pacific (RCA)		RAS5039 (Part2)	2001	Soil Erosion and Sedimentation and Associated Pesticide Contamination	C. Bernard	228,551 (C)	E102
		RAS5043	2005	Sustainable land use and management strategies for controlling soil erosion and improving soil and water quality	C. Bernard	154,650 (B)	E102

Europe	Turkey	TUR5024	2005	Improving crop productivity through nuclear and related techniques	L. Nguyen	118,270 (B)	E101
Latin America	Chile	CHI5048	2005	Integrated watershed management for the sustainability of agricultural lands	C. Bernard	240,640 (C)	E102
	Ecuador	ECU5022	2005	Efficient use of nitrogen fertilizers in flower production	R. Serraj	79,590 (A)	E101
	Haiti	HAI5003	2005	Enhancing crop productivity through the application of isotope nuclear techniques	R. Serraj	89,420 (A)	E101
	Jamaica	JAM5009	2005	Development of soil fertility management	R. Serraj	100,350 (B)	E101
	Uruguay	URU5024	2001	Improving Carbon Sequestration in Agricultural Systems	L. Nguyen	Zero budget	E102
West Asia	Tajikistan	TAD5002	2005	Assessment of soil erosion and sedimentation for Land Use	C. Bernard	129,620 (B)	E102
	Yemen	YEM5002	2001	Drip Irrigation and Fertigation for improved agricultural productivity	L. Heng	24,758 (A)	E101

Footnote a denote projects approved but awaiting funding from a donor country for implementation.

Budget categories A <100,000 US $; B 100,000-200,000 US $; C 200,000-300,000 US $; D >300,000 US $