

## Technical Cooperation Field Projects

Project Number	Country/Region	Title	Technical Officer(s)
BDI5005	Bangladesh	Enhancing Productivity of Staple Crops Using Nuclear-derived Technologies	I.K. Bimpong with SWMCN
BKF5024	Burkina Faso	Improving Food Crops through Mutation Breeding and Best Soil and Nutrient Management to Ensure Food Security	A. Hingane with SWMCN
BOL1012	Bolivia	Strengthening National Capacities on Irradiation Technology	C. Zorrilla with NAPC
BOT5019	Botswana	Improving Selected Legumes and Cereals against Biotic and Abiotic Stresses to Improve Food Production and Security	I.K. Bimpong
BOT5024	Botswana	Improving Selected Legumes and Cereals against Biotic and Abiotic Stresses for Enhanced Food Production and Security	I.K. Bimpong with SWMCN
BUL5016	Bulgaria	Improving the Productivity and Quality of Economically Important Crops through Mutation Breeding and Biotechnology	C. Zorrilla
CAF5013	Central African Republic	Improving Productivity of Maize and Developing Resistant Armyworm Maize Varieties Using Radio-Mutagenesis Techniques	S. Sivasankar
CAF5015	Central African Republic	Improving Productivity of Maize and Developing Resistance to Fall Armyworm Using Radiation-Induced Novel Genetic Diversity — Phase II	S. Sivasankar
CHI5052	Chile	Using Nuclear Techniques to Improve the Adaptation and Productivity of Forest Species Facing Climate Change	C. Zorrilla
CHI5054	Chile	Use of Irradiation and Isotopic Techniques to Improve Native and Agricultural Plant Genetics	C. Zorrilla
COL5026	Colombia	Enhancing Crop Productivity of Creole Potato Using Nuclear and Related Techniques	I.K. Bimpong with SWMCN
CPR5024	China, People's Republic of	Enhancing the Accelerated Application of Mutant Germplasm and High-Efficiency Breeding in Crops	N. Warthmann
CUB5023	Cuba	Strengthening National Capacities for the Development of New Varieties of Crops through Induced Mutation to Improve Food Security While Minimizing the Environmental Footprint	C. Zorrilla with SWMCN
ECU5034	Ecuador	Improving the Resilience of Bananas to their Major Diseases through Mutation Breeding Techniques	S. Sivasankar
ERI5011	Eritrea	Developing Improved Banana and Maize Varieties through Mutagenic Nuclear Techniques	I.K. Bimpong
ERI5013	Eritrea	Improving Food Crop Varieties through Mutation Breeding and Related Technologies	I.K. Bimpong
GHA5038	Ghana	Using Irradiated Pollen for the Development of Provitamin A Rich, Drought Tolerant and Cassava Mosaic Disease Resistant Cassava Mutants	C. Zorrilla
GHA5039	Ghana	Mainstreaming Nuclear Based Climate Smart Agriculture Technologies into Sustainable Production	C. Zorrilla with IPC and SWMCN
HAI0007	Haiti	Building National Capacity in Nuclear Technology Applications	I.K. Bimpong with NAPC
HON5009	Honduras	Improving Genetic Resistance of Coffee-to-Coffee Leaf Rust through Mutation Breeding	L. Jankuloski

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INS5044	Indonesia	Using Nuclear Technology to Support the National Food Security Programme	S. Sivasankar with SWMCN
IRA5015	Iran, Islamic Republic of	Enhancing Capacity of National Producers to Achieve Higher Levels of Self-Sufficiency in Key Staple Crops	L. Jankuloski with FSC and SWMCN
IRQ5023	Iraq	Utilizing Nuclear Technology to Improve Key Legume Crops for Climate Change Adaptation	I.K. Bimpong
IVC5040	Cote d'Ivoire	Improving Agricultural Production of Maize, Rice and Cassava through Cultivation of Induced Mutant Adaptable to Climatic Changes	I.K. Bimpong
JAM5013	Jamaica	Improving Crops by Using Experimental Mutagenesis and Diagnostic Technologies	S. Sivasankar
JAM5014	Jamaica	Establishing a Self-Contained Gamma Irradiation Facility for the Introduction of Sterile Insect Technique and Experimental Mutagenesis and Diagnostic Technologies	S. Sivasankar with IPC
KAM5007	Cambodia	Improving Cotton for Enhanced Resilience to Climate Change	L. Jankuloski
KEN5038	Kenya	Using Nuclear Techniques to Evaluate and Improve the Impact of Mutated Forages on the Performance of Smallholder Dairy Cows	I.K. Bimpong with APH
KUW5005	Kuwait	Implementing Mutation Induction to Improve Barley Production under Harsh Environmental Conditions – Phase III	L. Jankuloski
KUW5006	Kuwait	Improving Barley and Sorghum Production Under Harsh Environmental Conditions Using Mutation Breeding Techniques	L. Jankuloski
LAO5006	Lao PDR	Enhancing Crop Production with Climate Smart Agricultural Practices and Improved Crop Varieties	L. Jankuloski with SWMCN
LES5012	Lesotho	Improving Productivity of Potato and Sorghum through Mutation Breeding and Best Soil, Nutrient and Water Management Practices	I.K. Bimpong
LIR5003	Liberia	Enhancing Rice Productivity Using Induced Mutation and Speed Breeding for Food Self-Sufficiency and Income Generation	I.K. Bimpong
MAG5026	Madagascar	Enhancing Rice and Maize Productivity through the Use of Improved Lines and Agricultural Practices to Ensure Food Security and Increase Rural Livelihoods	L. Jankuloski with SWMCN and IHS
MAK5010	Macedonia	Improving Dry Bean Productivity and Tolerance to Diseases and Drought by Use of Nuclear Techniques	C. Zorrilla
MAL5032	Malaysia	Strengthening National Capacity in Improving the Production of Rice and Fodder Crops and Authenticity of Local Honey Using Nuclear and Related Technologies	C. Zorrilla with FSC and SWMCN
MAR5029	Mauritius	Improving Landraces of Crucifers (Cauliflower and Cabbage) and Carrot through Mutation Breeding and Biotechnology — Phase II	C. Zorrilla
MAU5009	Mauritania	Improving Rice and Sorghum through the Application of Nuclear Techniques	I.K. Bimpong
MHL5003	Marshall Islands	Enhancing Food Productivity by Promoting New Mutant Varieties and Traditional Varieties	C. Zorrilla
MLI5031	Mali	Improving Rice Productivity through Mutation Breeding and Better Soil, Nutrient and Water Management Practices	I.K. Bimpong with SWMCN
MLW5005	Malawi	Developing Drought Tolerant, High Yielding and Nutritious Crops to Combat the Adverse Effects of Climate Change	C. Zorrilla

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NAM5017	Namibia	Improving Crops for Drought Resilience and Nutritional Quality	C. Zorrilla with SWMCN
NAM5020	Namibia	Enhancing Staple Crop Yields, Quality, and Drought Tolerance through Broadening Genetic Variation and Better Soil and Water Management Technologies	C. Zorrilla with SWMCN
NEP5006	Nepal	Enhancing Productivity of Corps and Fruit Employing Nuclear and Molecular Techniques	I.K. Bimpong
NER5024	Niger	Improving Key Staple Crops towards Food Security	S. Sivasankar
NER5025	Niger	Improving Food and Biological Hazard Detection, Food Preservation and Mutation Breeding	I.K. Bimpong with FSC
NHE5001	Vanuatu	Enhancing the Productivity and Quality of Crops through the Application of Mutation Breeding Techniques	L. Jankuloski
NIC5011	Nicaragua	Broadening the Genetic Variation of Vegetative Propagated Crops Using Nuclear Techniques	C. Zorrilla
PAK5053	Pakistan	Strengthening and Enhancing National Capabilities for the Development of Climate Smart Crops, Improvement in Animal Productivity and Management of Soil, Water, and Nutrient Resources Using Nuclear and Related Techniques	L. Jankuloski with SWMCN
PAL5011	Palestine	Enhancing Food Security via Nuclear Based Approaches	L. Jankuloski with SWMCN
PAR1005	Paraguay	Establishing National Capabilities in Irradiation Technologies for the Treatment of Patients with Burns and the Introduction of Mutation Breeding for Enhanced Quality and Productivity of Crops	S. Sivasankar with NAPC
PAR5012	Paraguay	Evaluation of Varieties and Advanced Mutant Lines against Biotic and Abiotic Stress Conditions to Mitigate the Effects of Climate Change in Crops	C. Zorrilla
PER5034	Peru	Improving Yellow Potato and Coffee Crops through Mutation Breeding Techniques	L. Jankuloski
PHI5036	Philippines	Providing an Innovative Platform for Germplasm Utilization for Rainfed and Irrigated Lowland Rice Ecosystems — Phase	S. Sivasankar
QAT5008	Qatar	Developing Best Soil, Nutrient, Water and Plant Practices for Increased Production of Forages under Saline Conditions and Vegetables under Glasshouse Using Nuclear and Related Techniques	L. Jankuloski with SWMCN
RAF5083	Regional Africa	Enhancing Crop Productivity through Climate Smart Crop Varieties with Improved Resource Use Efficiency (AFRA)	S. Sivasankar/I.K. Bimpong
RAS5077	Regional Asia	Promoting the Application of Mutation Techniques and Related Biotechnologies for the Development of Green Crop Varieties (RCA)	I.K. Bimpong
RAS5088	Regional Asia	Enhancing Crop Productivity and Quality through Mutation by Speed Breeding (RCA)	S. Sivasankar/I.K. Bimpong
RAS5094	Regional Asia	Promoting Sustainable Agricultural and Food Productivity in the Association of Southeast Asian Nations Region	S. Sivasankar/ L. Jankuloski with FSC and SWMCN
RAS5098	Regional Asia	Improving the Resilience of Crops to Climate Change through Mutation Breeding — Phase II (SAPI)	C. Zorrilla
RAS5099	Regional Asia	Developing Climate Smart Crop Production including Improvement and Enhancement of Crop Productivity, Soil and Irrigation Management, and Food Safety Using Nuclear Techniques (ARASIA)	I.K. Bimpong with SWMCN

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RER5024	Regional Europe	Enhancing Productivity and Resilience to Climate Change of Major Food Crops in Europe and Central Asia	C. Zorrilla
RLA5084	Regional America Latin	Developing Human Resources and Building Capacity of Member States in the Application of Nuclear Technology to Agriculture	S. Sivasankar with SWMCN and APH
RWA5001	Rwanda	Improving Cassava Resilience to Drought and Waterlogging Stress through Mutation Breeding and Nutrient, Soil and Water Management Techniques	L. Jankuloski with SWMCN
SAF5016	South Africa	Promoting Mutation Breeding of Vegetables to Improve Rural Livelihoods — Phase I	N. Warthmann
SIL5021	Sierra Leone	Improving Productivity of Rice and Cassava to Contribute to Food Security	I.K. Bimpong with SWMCN
SRL5050	Sri Lanka	Supporting Genetic Improvement of Tea	S. Sivasankar
SUD5041	Sudan	Enhancing Productivity and Quality of High Value Crops through Improved Varieties and Best Soil, Nutrient and Water Management Practices	C. Zorrilla with SWMCN
SWA5002	Eswatini, Kingdom of	Improving Adaptability of Cowpea to Climate Change through Mutation Breeding	L. Jankuloski
SYR5026	Syrian Republic Arab	Using Accelerated Mutation Breeding of Staple Crops for Enhanced Resilience to Climate Change through Speed Breeding, Phenotyping and Genotyping	L. Jankuloski
TOG5004	Togo	Improving Crop Productivity and Agricultural Practices through Radiation Induced Mutation Techniques	I.K. Bimpong with SWMCN
TUN5031	Tunisia	Developing Cereal and Legume Mutants for Improving Food Security and Farmers' Resilience to Climate Change	A. Hingane
UGA5043	Uganda	Improving Cassava and Rice Disease Resistance through Mutation Breeding Techniques	I.K. Bimpong
URT5037	Tanzania, United Rep. of	Developing Rice Varieties with Resistance to Rice Blast and Salinity Tolerant Using Mutation Breeding and Biotechnology Techniques	L. Jankuloski
VEN5023	Venezuela	Improving Banana Productivity through Mutation Breeding Techniques for Enhanced Disease Resistance	S. Sivasankar
YEM5015	Yemen	Enhancing Sorghum and Legume Crop Productivity through Induced Mutations with Supportive Breeding and Biotechnologies	L. Jankuloski
YEM5016	Yemen	Enhancing Sorghum and Legume Crop Productivity through Induced Mutations with Supportive Breeding and Biotechnologies — Phase II	I.K. Bimpong
ZAI5029	Congo, Democratic Republic of the	Enhancing Crop Productivity of Soybean and Maize through Improved Mutant Varieties and Lines	I.K. Bimpong
COD5030	DR Congo	Improving Staple Crop Productivity and Quality through Biotechnology and Nuclear Techniques — Phase IV	I.K. Bimpong
INT5158	Interregional	Strengthening Member State Capacities to Combat Banana Fusarium Wilt (TR4) through Early Detection, New Resistant Varieties, and Integrated Management	S. Sivasankar

APH: Animal Production and Health, NAFA; FSC: Food and Environmental Protection, NAFA; IPC: Insect Pest Control, NAFA; SWMCN: Soil and Water Management and Crop Nutrition, NAFA; RPRT: Radioisotope Products and Radiation Technology, NAPC; ARBR: Applied Radiation Biology and Radiotherapy, NAHU; PHY: Physics, NAPC; PCG: Programme Coordinator, NA; IHS: Isotope Hydrology Section, NAPC