



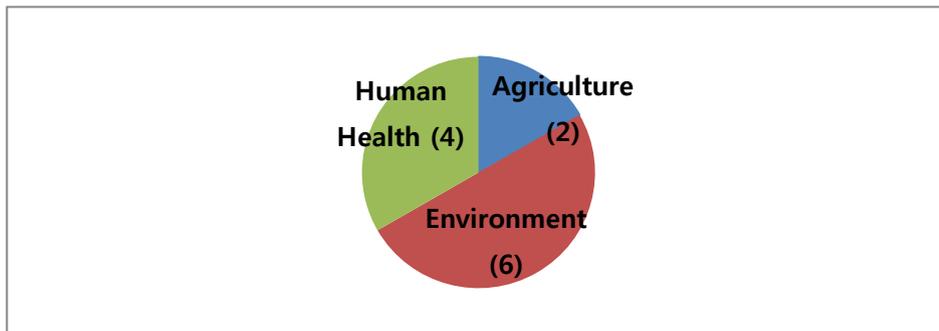
## Result of a Survey on Areas for Research Project

The survey was to understand and identify the common area of interest and appropriate research area that could address region specific needs of the RCA Government Parties through the nuclear science and technology. Based on the survey result, Government Parties will be invited to develop and submit proposals on the specific area through consultation with the relevant national research institutes.

### 1. Responded Government Parties: 13

(BGD, INS, MAL, MON, MYA, NEP, NZE, PAK, PHI, PLW, SRL, THA, VIE)

### 2. Thematic areas of interest:



\* Responses with no prioritization are excluded

#### 2-1 Common area of interest in the thematic sectors

- **Agriculture** : Rice breeding, Soil, water and land management for rice production, Electron beam applications on value added products
- **Environment**: Marine environment preservation, Water resource management, Measurement and verification of greenhouse gas emission, Radioactive waste management, Industrial waste management, Electron beam applications on value added products
- **Human Health**: Cancer treatment through nuclear medicine, radio therapy and SBRT, Patient dosimetry after repeated CT and PET/CT
- **Industry**: none

### 3. Summary of Responses from the Government Parties

GP	Thematic Area	Research Topic
BGD*	Agriculture Environment Human Health Industry Others	Development of climate resilient crop varieties using induced mutations and other advanced techniques Development of radiation grafted materials for application as biodegradable packaging Utilization of PET-CT Imaging in Adult and Pediatric Oncological Management Applied research on Digital Industrial Radiography (DIR) and Computed Tomography (CT) for material characterization to ensure integrity of industrial component including civil Engineering, Site suitability assessment and evaluation for near surface or geological disposal of radioactive wastes. Adopting Cyber Design Basis Threat (DBT) at Nuclear Facilities, Accident (LOCA) Analysis of VVER by system code RELAPS
INS	Human Health	Patient dosimetry after repeated CT and PET/CT scan in cancer patient for justification and optimization in diagnostic imaging and nuclear medicine examination
MAL*	Agriculture Environment Human Health Industry	Impact analysis of climate change on food production and environment Study of air pollution on health and environment, Radiological assessment of water supplies Impact study on DNA damage and intercellular signaling in response to ionizing radiation, Validating molecular imaging techniques through PET/CT applications for cancer management Particle tracking method development and modelling, Gamma ray densitometry for reactors
MON	Human Health	Enhancing Diagnostic Application of Nuclear Cardiology in Mongolia, Enhancing Diagnostic Application of Nuclear Neurology in Mongolia
MYA	Human Health	Trans arterial Rhenium -188 lipiodol in the treatment of inoperable hepatocellular carcinoma
NEP	Human Health	Role of radiation for rise in the number of cancer patients in Nepal and the measures for Improvement (radio therapy, nuclear medicine, stereotactic body radiation therapy)
NZE	Environment	How to measure and verify fossil fuel greenhouse gas emissions using nuclear techniques
PAK	Environment	Access to clean drinking water (Application of nuclear techniques to study Nitrate pollution in groundwater/surface water)
PHI	Agriculture & Environment	Electron beam technology utilization for development of value added products
PLW	Environment	Enhancing national capacities of Palau to monitor and assess the impacts of ocean acidification

<b>GP</b>	<b>Thematic Area</b>	<b>Research Topic</b>
SRL	Environment	Development of methodologies to convert the industrially used hazardous synthetic organic waste materials to safe mode using Radiation technology
THA	Agriculture	Rice Breeding for high yield and resistance to important diseases and insects and also biotic and abiotic stresses with good grain quality, Soil, water and nutrient management using nuclear techniques for rice production
VIE	Environment	Research on synthesis of mesoporous materials SBA-15 from water glass for liquid radioactive waste treatment

\* GPs have not prioritized the specific area