

World Bank – ICAR sponsored National Agricultural Higher Education Project
Centre for Advanced Agricultural Science and Technology (CAAST) on
Genomics-Assisted Crop Improvement and Management
ICAR-Indian Agricultural Research Institute, New Delhi

Environment Management Framework
Environment Sustainability Plan

Objectives

To

1. Develop online teaching facility and online teaching resources for enhancing the teaching and learning efficiency, and scientific communications skills
2. Develop and/or strengthen the *state-of-the art* next-generation genomics and phenomics facilities for producing quality PG and Ph.D. students
3. Develop collaborative research programmes with institutes of international repute and industries in the area of genomics and phenomics
4. Enhance the skills of faculty and PG students of IARI and NARES
5. Generate and analyse big data in genomics and phenomics of crops, microbes and pests for genomics aided crop improvement and management







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Environment Sustainability Plan

S. No	Proposed Interventions/ Activities	Compliances applicable	Possible Environmental Impacts	Mitigation Measures	Scope for the integration of environmental Sustainability concerns	Resources Required (budget, technical support etc.)
1.	Biochemical, molecular biology experiments	WHO Laboratory Safety Manual	Ethidium Bomide is a mutagen; Acrylamide is potential carcinogen;	Ethidium Bomide is disintegrated or absorbed in charcoal before disposal of EtBr solution; Charcoal is incinerated; Acrylamide is polymerized before disposal; Lab safety protocols will be followed First aid kits	Products/ varieties developed beyond project period enhance climate resilience, resource use efficiency, and reduce use of agro-chemicals. Future product development following the EPA 1986/rDNA Guidelines 1990 and GEAC approval. Good lab practices	Provision has been already made in the project
2.	Agricultural microbiology experiments	WHO Laboratory Safety Manual	No or low individual and community risk	All microbial cultures will be autoclaved and sterilized before disposal	GMT (good microbiological techniques) will be followed	Provision has been already made in the project
3.	Genomics of Plant Pathogens and artificial inoculation for screening of	WHO Laboratory Safety Manual	Environmental release is not proposed	1) Plant pathogens will be used in Lab and containment greenhouses;	Good laboratory practices	Provision has been already made in the project

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