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Mainstreaming agrobiodiversity for enhancing climate resilience, nutrition, and livelihoods

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Abstract

Continuous cultivation of a few dominant crops and varieties has eroded native crops diversity, environmental sustainability of food production, increased pest risks, etc. Declining crops and varietal diversity, narrow dietary system have led to malnutrition, and climate risks. These system shocks generally affect the marginalised fractions in society disproportionately and increase social inequality. Rural households, resource poor communities and vulnerable groups such as women and the youth bear the effects heavily as they lack resources to support rapid lifestyle adjustments. We are implementing a UN Environment-GEF funded project in India and aiming to mainstream native agrobiodiversity and improving their seed systems through community seed banks and linking those production systems to various market channels. Under the project, farmers are being empowered to exercise control over their plant genetic resources – expressed as local crop varieties, a major asset, and to use this to improve their livelihoods through better farming practices, and aligning market, societal and conservation goals in product value chains. To enhance genetic diversity on farm, 4278 native varieties of 20 crops were tested in 759 participatory variety selection (mother) trials and 5028 baby trials were tested and farmers identified 233 varieties of different crops as the most potential varieties suitable to their diverse needs. We also repatriated >3500 accession from national gene bank to farms from where they had collected but were lost overtime. Seed system strengthened with 29 community seed banks at 17 project sites, conserving >3000 native varieties. For adopting best practices at community level several farmers have been trained and designated as champion farmers working closely with >150 self help groups (SHGs), 25 farmers’ producer groups and private companies on value addition and product development for improved adaptation and livelihoods. To generate awareness and to enhance farmers’ skill on agrobiodiversity conservation and use we conducted >600 trainings, awareness workshops, field days, cross learning exposure visits. To provide linkage to agrobiodiversity 06 value chains have been developed through in-depth nutritional profiling, branding, packaging, and labelling. This has improved farmers’ livelihoods significantly.

Keywords: Climate, mainstreaming agrobiodiversity, nutrition, value chain