

Climate Smart Nutrition Sensitive Agriculture: a panacea
for small-holder farmers from rainfed tracks of Odisha, India

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Production and consumption of nutrient dense food items spanning agriculture, horticulture, livestock and fishery, a potential approach to address rampant malnutrition is equally influenced by nutrition behavior and complementary practices at household level. Climate vulnerability, weather variability in particular is on the rise and that affects crop production intrinsically thereby impact household's access to nutrition. Using primary data from tribal dominant regions, the study seeks to examine effect of climate vulnerability on nutrition outcomes. Evidences reveal weather variability results in low productivity (25% less crop production) triggering low diet diversity (less than two food groups consumed by more than 80% households) from sample under study. Limited diet diversity coupled with deficiency of vitamins and protein exposes small-holder households to nutrition insecurity. Households consume more than five food groups per day are less likely to have stunted children than those consume less than five food groups [OR=0.52; P<0.005; CI:0.40-0.67], but more likely to have low BMI level [OR=1.20;0.80-1.80]. Empirical evidences suggest that beyond household dietary diversity, positive nutrition outcomes at household level could be achieved ensuring other dimensions of nutrition, such as nutrition behaviour, enabling environment and climate smart agriculture practices. Over three and a half years of pilot modelling an action-research project funded through Bill- Melinda Gates Foundation in two tribal dominated districts of Odisha, India the on-site learning is with increasing events of weather extremes and absence of ICT in promoting agriculture-meteorological advisories to farmers, climate smartness in agriculture ecosystem is the need of hour. Project has successfully tested various low input techniques and capacity building through Farmer Field School (FFS) mode- learning by doing method to inbuild crop as well as community resilience against climate shocks. Using an RCT model farmers have been demonstrated with on comparative advantage over each other's both on-farm agricultural as well as household level nutrition practices. As a summative policy level learning and advocacy indicator, the project has started building network, forging partnership and conducting dialogues with key mainstream development agencies including the state government for mainstreaming of climate

smart nutrition sensitive agriculture planning in collaborative and convergence of government schemes hitherto implemented in silos.

Key Words: Climate Smart, Weather Variability, Diet Diversity, Nutrition Sensitive, Farmer Field School