

# **Potential of Conservation Agriculture Production Systems (caps) as Climate Smart Technology for Food Security Under Rainfed Uplands of India: a Transdisciplinary Approach**

Catherine CHAN<sup>#+</sup>

*University of Hawaii, United States*

*#Corresponding author: chanhalb@hawaii.edu +Presenter*

Using a transdisciplinary approach that engaged stakeholders from Kendujhar, Odisha, India along every step of the way in transferring conservation agricultural practices (CAPS) ensured that farmers and villagers and local and regional governments understood the costs and benefits of CAPS prior to their participation. In this case, the various CAPS treatments on maize production have clearly shown as beneficial over the traditional practices. Moreover, having farmers and local extension directly participating in the co-design and actively engaged in the conducting of field experiments, they experience firsthand the impact of CA treatments. The Analytic Hierarchy Process pre- and post- on -farm trial surveys demonstrate that stakeholders converge in their preference for the same CAPS after participating and witnessing the outcome of the field trials. The preferred treatment was reduced tillage maize intercropped with cowpea system which has scientifically been demonstrated in the experimental station trials to provide the highest profit and greater enhancement of soil quality of the several CA approaches evaluated. Other farmers in the district are now adopting the reduced tillage maize cowpea intercrop system. This is a joint project with Japan, India and the US and data collected via surveys are accessible to all project participants. Three additional students and visiting scholars were able to use the data and published a journal article. There were papers and theses published that are accessible to everyone. A website with project information was created.