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J Earth Sci Clim Change 2017, 8:10(Suppl)
DOI: 10.4172/2157-7617-C1-037

Adaptive responses for impacts of climate change in rice paddy

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Statement of the Problem: Small Island states like Zanzibar remains vulnerable to the impacts of natural hazards and climatic extremes. The common impacts of climate change and variability include sea level rise, shoreline erosion, and increased sea surface temperature, ocean current oscillation changes, violent storms, coral reef bleaching, droughts and floods.These impacts affect food availability and accessibility. As a result Agricultural sector in Zanzibar has continually experienced dismal performance such that become impossible to bring sufficient numbers of rural poor above the poverty line. Note that food poverty as high as 41% of the rural population. This situation implies that about one third of rural poor are living on less than US$ 1 a day; also indicates large disparity between urban and rural poor. Various ways have been attempted by policy makers, researchers and farmers at their farm levels to reduce the negative impacts of climate change The farmers now use a scale of priority of rice varieties that provide high economic value. Best varieties for farmers should be resistant to pests and diseases at meantime save water and improve paddy productivity. At the policy level; the Government has set tremendous national adaptation action plans to encounter weather variability in favor of agriculture. Note that agriculture is a strategic sector to support food security, employment and household income. Center of attention of the policy makers is to intensify irrigation scheme and subsiding agricultural inputs. These policy measures were underlined to reduce difficulties that farmers should face towards climatic agricultural related impacts. Take into account that rice is a main staple food for larger section of the population. Finally at technical level; improved rice varieties, innovation, awareness and dissemination were key areas laid by scientists.

Conclusion & Significance: System Rice Intensification (SRI) methodology has increased rice yield from 5.1 to 7.6 tons/ha, less water by 45%, less fertilizer, agrochemical inputs and five improved rice varieties introduced. These particular evidence based lessons have been drawn here in Zanzibar as adaptive response to the impact of climate change..

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