



# **INTERNATIONAL SEMINAR 2010** **CLIMATE CHANGE AND** **ENVIRONMENTAL** **CHALLENGES OF 21<sup>st</sup> CENTURY**



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(CFCs) at a greater level and impacting Macroclimatic changes. These gases contribute directly to global warming. The emission of green house gases has raised the Wide range of natural climatic variation and long term effects of warming on global and regional level cannot be predicted with certainty, however the mounting evidence that warming is causing changes in position, and intensity of weather system, regional wind, and temperature and precipitation pattern is clear. The green house gas emission is **highest** in developing countries and in Pakistan is 0.85% per person per year according to International Energy Agency. The increase in GHGs is majorly due to human activities. Mitigation of climatic change affects impact on reducing negative human activities. With the increase in built up area and land use change of the country, human activities are playing major role in increasing GHGs emissions. Paper will investigate major human factors or sources that are increasing the GHGs emissions in Pakistan. The sources includes energy production and use, land use change, industrial activities, municipal wastes, Pollution, increase in particular matter emission etc. The objectives of paper include tracing the mentioned sources in Pakistan as a factor of increasing GHGs emissions. Land use change affects the forest ecosystem. The vegetation or forests capture and store Carbon dioxide making a major contribution to climatic change. Deforestation, destruction and over harvesting have become major sources of Green house gas emissions. Forests and climatic change is very closely linked because of major contribution in microclimatic pattern. Mitigation and adaptation involves development and implementation of techniques and policies ranged from local community level to regional level. The potential of mitigation and adaptation for local community is very large, and ranges from technological, behavioral (altered food and recreation choices), to managerial regarding policies and implementation. Finally, paper will conclude different measures of social mitigation and adaptation by local community that ultimately will reduce anthropogenic affects on climatic change and global warming.

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**ROLE OF MUDA IRRIGATION SCHEME IN REDUCING POVERTY AMONG THE FARMERS IN MALAYSIA: RECAPITULATING PRESENT SITUATION FROM SOCIO-ANTHROPOLOGICAL PERSPECTIVE**

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The Muda Irrigation Scheme was established in Malaysia with purpose of achieving self-sufficiency in rice production for domestic consumption as well as to reducing hardship and poverty among the farmers in the project areas. Since its inception in the middle of 1970s, the project had brought a massive change in the agrarian culture of rice producing peasants in

Malaysia allowing them to integrate in the network of a cooperative relationship. For the last three decades, Muda Irrigation Scheme has been recognized by the international communities as the most successful program in agriculture which has been able to increase the increasing the rice productivity and also at the same time reducing poverty of the farmers. We have enough evidences that after the introduction of this scheme, the real income of the farmers had increased by 2.4 times as they introduced double cropping in the project areas (*e.g.* FAO and World Bank 1975). Despite several decades of such remarkable success in agriculture, a few researchers and commentators (*e.g.*, Ramli Mohamad 1988) immediate after its installation, remarked clearly that due to full dependence on technology, many farmers in the Muda areas had lost their tenancy which eventually made them victim of the economic circumstances. They argued that since Farmers' Associations (FAs) are practically controlling the total irrigation system and farming activities in the villages, these FAs have simply appeared as newly-emerged-power bastions, which are fully represented by the middle and rich farmers. These are represented by the influential persons of the locality disbursing a class-based super-ordinate values, norms and cultures of themselves. This paper focuses on the present condition of the farmers through studying a small village from socioanthropological perspective and desires to provide information about the farmers' real situation from genealogical and holistic viewpoint after three decades of glorious continuity of the Muda. More specifically, we want to reveal the poverty situation at the village level in present time, and to analyze it from their cultural context.