



Global Climate Change and its Impact on a Developing Country (Armenia)

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The aim of the given research is to find clear linkages between economical efficiency and global climate change impact for the Caucasian Republic and developing country Armenia. Armenia is located in mountainous terrain between the Black Sea and the Caspian Sea. The most important economical sector in Armenia is agriculture making 21.5 % of the whole Gross Domestic Product (GDP) in the country. 47 % of the whole land consists of agricultural land, out of which 23 % is the total sown area. The data on meteorology at 29 stations (representative for heterogeneity of the country) are received from Armenian Weather Service for the period of 1966-2010, economical data are provided by National Statistical Service for the period of 1990-2010 (after the collapse of the Soviet Union).

In order to determine the socio-economic impacts, the direct consequences of projected climate change on Armenia will need to be assessed. Results of global climate scenarios for the Caucasus region exist at a coarse resolution. Using a statistical-dynamical downscaling technique these results will be downscaled to a high resolution of approximately 5 km. Following this technique, a number of periods (e.g. heat stress, droughts) are selected for each season to represent specific weather situations. For each period dynamical downscaling is performed using the mesoscale meteorology model METRAS.

At the last stage of the study adaptation mechanisms according to the climate change scenarios must be evaluated with the cost-benefit analysis to estimate their efficiency in different economical sectors.