



Climate change adaptation strategies and mitigation policies

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The pace of climate change and the consequent warming of the Earth's surface is increasing vulnerability and decreasing adaptive capacity. Achieving a successful adaptation depends on the development of technology, institutional organization, financing availability and the exchange of information. Populations living in arid and semi-arid zones, low-lying coastal areas, land with water shortages or at risk of overflow or small islands are particularly vulnerable to climate change. Due to increasing population density in sensitive areas, some regions have become more vulnerable to events such as storms, floods and droughts, like the river basins and coastal plains. Human activities have fragmented and increased the vulnerability of ecosystems, which limit both, their natural adaptation and the effectiveness of the measures adopted.

Adaptation means to carry out the necessary modifications for society to adapt to new climatic conditions in order to reduce their vulnerability to climate change. Adaptive capacity is the ability of a system to adjust to climate change (including climate variability and extremes) and to moderate potential damages, to take advantage of opportunities or face the consequences. Adaptation reduces the adverse impacts of climate change and enhance beneficial impacts, but will not prevent substantial cost that are produced by all damages. The performances require adaptation actions. These are defined and implemented at national, regional or local levels since many of the impacts and vulnerabilities depend on the particular economic, geographic and social circumstances of each country or region. We will present some adaptation strategies at national and local level and revise some cases of its implementation in several vulnerable areas.

However, adaptation to climate change must be closely related to mitigation policies because the degree of change planned in different climatic variables is a function of the concentration levels that are achieved by greenhouse gases in the atmosphere. Mitigation and adaptation are therefore complementary actions. In the long term, climate change without mitigation measures will likely exceed the adaptive capacity of natural, managed and human systems. Early adoption of mitigation measures would break the dependence on carbon-intensive infrastructures and reduce adaptation needs to climate change. It also can save on adaptation cost. Therefore mitigation is the key objective of the global warming problem but little is being done in this field. We will present some proposals of "preventive economically efficient" policies at a global and regional level which will constitute the complement to the adaptation aspect.