



An Investigation on the Effective Parameters of Climate Change Vulnerability in Iran

Davood Moshirpanahi (1), bagher zahabiyoun (2), and tayeb Raziei (3)

(1) Iran University of Science & Technology, Civil Engineering, tehran, Iran, Islamic Republic Of (davood.moshir@gmail.com), (2) Iran University of Science & Technology, Civil Engineering, tehran, Iran, Islamic Republic Of (davood.moshir@gmail.com), (3) Soil Conservation and Watershed Management Research Institute (SCWMRI), Agricultural Research, Education and Extension Organization (AREO), Tehran, Iran

Iran, located in the Middle East, is one of the largest countries in this area. Same as people of countries which have an arid and semi-arid climate, and thus, the Iranian have faced some difficulties to provide water for their needs. In addition, due to the rapid population growth and industrial and agricultural development, accessibility to water resources with suitable quantity and quality become a big challenge and the main obstacle to sustainable development. Furthermore, climate change may decrease and change the rainfall regime which is another booster of water resources shortage in Iran. Results of all of the mentioned cases are threatening water resources sustainability and most aspects of life. So two ways exist to prevent or mitigate climate change impacts on water resources. First, make some actions after the disasters occurred, in order to control the adverse consequences (i.e. Crisis Management). The second choice which is preferable is to identify the variables that play a key role in the amplification of the impacts before the disaster occur. Adapting the later strategy increases the resilience and reduces vulnerability to climate change. Therefore, based on the second approach, the goal of this research is to investigate the main environmental, economic and sociological factors made the country vulnerable to climate change in the past decades. The vulnerability includes different features such as economic, social, political, and operational and Institution aspects. Population, Rate of increasing population, Number of educated people, Female to male ratio, the per capita income, Kind of irrigation, Land use, and their changes are some example of variables that affect vulnerability to climate change in different parts of Iran. The vulnerability is investigated by collecting and analyzing the information of different categories via formal sources throughout the country. In the next step, according to the ratio of changes and amounts of the effects, the main factors and variables responsible to climate change vulnerability are determined by ranking their importance.