

An Assessment of Risks/Opportunities and Valuation of Ecosystem Services, in the Case of Mekelle City, Ethiopia

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Information on current status of ecosystem services has vital importance in preparing local, regional and national economic plans. Results from assessment report of the condition of ecosystem services valuation help decision makers to focus on the services that are more likely to be sources of risks and opportunities for specific decisions. The main objective of this study is to assess the risks and opportunities that are related with ecosystem services within Mekelle city. Data for the study has been utilized from secondary sources and analysed using an Integrated Valuation of Ecosystem Services and Trade-offs (InVEST) model. Findings of the study show that, there are different ecosystem services that provide a variety of goods and services in Mekelle city. Food and fresh water supply, genetic resources, air quality, climate and water regulation, water purification and waste treatment, recreation and eco-tourism, nutrient cycling and water cycling are screened to be relevant ecosystem services in the city. To assess the condition and trends of the relevant ecosystem services in the city, a detailed analysis of the condition of relevant ecosystem services is done. For this purpose, indicators are selected and used to evaluate the condition and trends of the relevant ecosystem services and the drivers. The relevant ecosystem services of Mekelle city are assigned with quantitative economic values by using market values for the relevant ecosystem services that are captured in the market and indirect values for those that are not currently valued in the market place.