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Subject III

Ecosystem Services Based Approaches in Agricultural Policy Making

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The research on Ecosystem Services (ES) is only recent origin and has attracted researchers in many developed and developing countries for the past two to three decades and assumes one of the important components in policy agenda. The ecosystem services assume important for those communities whose livelihood depends mainly on natural systems including agriculture. The ecosystem provides number of beneficial services to human being. These are broadly classified into four major categories viz., (i) Provisioning services, (ii) Regulatory Services, (iii) Supporting services and (iv) Socio-cultural services. Ecosystem research is facing major challenges including less understanding about different ecosystem services, their interactions, interrelationships and their true values in the light of absence of markets. In this context, the Economics of Ecosystems and Biodiversity (TEEB), a global initiative has been started with a focus on 'making nature's values visible'. The TEEB is aimed to mainstream the values of biodiversity and ecosystem services into decision making at all levels (https://teebweb.org/). Realising the significance of ES in policy making, a separate theme has been planned to address the issues relating to Ecosystem Services and to derive policy options for sustainable management and conservation of ecosystems across the country.

Though several researchable issues have been identified and outlined in the Conference themes announcements, very few issues such as valuation of recreational benefits from wetland ecosystems and agro-ecosystem services have been addressed by few researchers. A total of five papers have been presented during the session. Of the five papers, two papers dealt with valuation of recreational benefits of wetlands (lakes) and three papers focused on farming systems. Though there are few papers presented and discussed, the discussion has brought many key issues in ecosystem services valuation, an emerging area in agricultural policy making. The key outcomes of the discussion are presented here:

MAJOR ISSUES DISCUSSED:

- Valuation of ecosystem services may be done extensively across types of ecosystems as it informs the true value of beneficial services to the different stakeholders including policy makers so that the sustainable management of ecosystems could be achieved
- The papers presented focused on specific ecosystem services such as recreation, nitrogen fixation etc. It is suggested that in order to have a holistic value, all the services including provisioning, supporting, regulating, and socio-cultural services may be assessed.

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- Recreational benefits of lakes and associated willingness to pay are critical for managing and maintaining lakes. The quantification of recreational benefits should be done for all the lakes which have potential for renovation for recreation. While assessing the recreational benefits and associated Willingness to Pay (WTP), the seasonal variations in the benefits may be included for better policy making.

- The important issue of methodologies and tools for assessing the value of different ecosystems were discussed. It also includes the data requirements for ecosystem services assessment.

- Another important issue attracted the discussion was policies for ecosystem conservation. Effective implementation of PES in countries like India often poses numerous challenges and the use of PES in environmental management in India is still in its early stages

RECOMMENDATIONS

- Valuation of ecosystem services such as agro ecosystems, agroforestry, wetlands, watersheds, forest, river, coastal ecosystem, deserts, Common Property water bodies etc may be considered for future research.

- Developing framework, improved methodologies, cutting-edge valuation methods are essential to implement effective assessment of value of different ecosystem services.

- Understanding of the linkages between ecological functions: For successful implementation of ecosystem valuation studies, a thorough understanding of the ecosystem, ecology and linkages between different components of the ecosystem is essential. The economists and ecologists should work together so that the economic and ecological models could be properly integrated.

- Stakeholders participation in ecosystem conservation and management should be ensured. This could be achieved by designing proper institutional arrangements.

- Institutions and Policies for better conservation of ecosystems such as Payment for Ecosystem Services (PES) and more empirical research may be carried out to design PES.

- The government should consider the conservation of the lakes by making the necessary efforts to charge entrance fees, desilt the lake, install more sewage plants, promote bird watching, and allocate a sufficient budget for maintenance.

- Capacity Strengthening on Ecosystem research and methods and use of research database such as The Economics of Ecosystem and Biodiversity (TEEB)

- Natural Capital Accounting – traditional GDP measure does not take into account the ES. How best this could be integrated into national income accounting may be explored. A detailed analysis is warranted

- Lack of adequate research on ecosystem services poses another challenge. The national and international donors may generously extend funding support and encourage research on ecosystem services.