

Bangladesh Academy of Sciences
BAS-USDA Endowment Program

**List of Emerging Research Areas (but not limited to) finalized in the Sub-committee
Meeting held on 31 October 2018**

A. AGRICULTURE:

a. Crop Agriculture & Food Production

1. Developing improved management practices in the drought prone areas of Bangladesh
2. Sustainable farming system emphasizing low water using practices in Teesta Basin region
3. Adopting cropping pattern(s) using surface water irrigation practices in the suitable areas of coastal region
4. Sustainable land management practices for cultivation of high value crops in the hilly region
5. Improving land drainage for enhanced agricultural productivity within polder areas of coastal region
6. Development of adaptive varieties of different crops for resilient farming in the coast
7. Increasing productivity through using integrated sericulture with vegetables
8. Development of climate-smart agriculture (both models & practices)
9. Market oriented sustainable intensification and diversification of Climate Smart Agriculture
10. Preservation / Processing of high value fruits & vegetables

b. Food quality & safety

Studies on food quality and safety standards: (SPS) accredited certification process of farm produces.

c. Soil quality

Development of input-output balance sheet of soil-water resources uses in intensive farming region

d. Livestock

1. Sustainable smallholder dairy development in Bangladesh
2. Increasing productivity of sheep and goat through improved management practices
3. Promoting good practices for market-based feeds and fodder production

e. Market Development

1. Potentials and Barriers of exporting of agricultural produces from Bangladesh.
2. Market development and Value chain improvement in remote areas of high value produces (Charland, Coastal areas and Hill Regions)

f. Miscellaneous

1. Effect of electromagnetic radiation from mobile tower on flora and fauna (Radiation increased mortality of honey bees.
2. Projects that focus on opportunities for blue growth which encompasses improved marine and freshwater fisheries systems, aquaculture, aquaponics and integrated system.

B. FISHERIES & ENVIRONMENT:

a. Biodiversity Conservation:

1. Pollution of the river systems and coastal waters and its impacts on aquatic resources
2. Climate change impacts on fish migration, breeding, growth and productivity
3. Project on Bioremediation of polluted environments by bacteria

b. Fisheries resources development:

1. Application of Hilsa genomic study and Hilsa spawning ground identification and water quality monitoring
2. Culture of Sea bass, Mullet, Grouper & Red Snapper in coastal waters
3. Improving management practices of Crab for increased income and improved livelihood of the coastal marginalized communities
4. Assess the danger of emerging diseases of shrimp, prawn and fin fishes
5. Improving floodplain resource management for enhancing fish production
6. Projects to encourage algae and seaweed culture
7. Improving productivity of floodplain fisheries