Framework Convention on
Climate Change

"Zero-Waste Lifestyle Practice in Rural Bangladesh Could Contribute to Methane Emission Reduction"

1. *Submitting organization:*
   Environment and Social Development Organization-ESDO

2. *Short description of the study:*
   This case study will examines how adopting a zero-waste lifestyle in rural Bangladesh can significantly contribute to reducing methane emissions. Methane, a potent greenhouse gas, is primarily produced through organic waste decomposition in landfills. In rural Bangladesh, traditional waste management practices often involve open dumping and burning, which not only contribute to methane emissions but also pose health and environmental hazards.

   The zero-waste lifestyle, which emphasizes the reduction, reuse, and recycling of waste, presents a sustainable alternative to traditional waste management practices. This study aims to explore the feasibility and impact of implementing zero-waste practices in rural communities in Bangladesh.

   The case study will be conducted jointly by ESDO and KCI.

   Key Objectives:

   1. Understanding Current Practices: Assess the current waste management practices in rural Bangladesh, focusing on organic waste handling, and identify the primary sources of methane emissions.

   2. Zero-Waste Implementation: Develop and implement a pilot zero-waste program in selected rural communities, promoting practices such as composting, biogas production, and recycling.

   3. Methane Emission Reduction: Measure the reduction in methane emissions resulting from the adoption of zero-waste practices, using both qualitative and quantitative methods.

   4. Social and Economic Benefits: Evaluate the additional benefits of zero-waste practices, including improved health outcomes, economic savings, and enhanced community awareness and participation in sustainable practices.

   Expected Outcomes:

   - A detailed understanding of current waste management practices in rural Bangladesh and their contribution to methane emissions.

   - Successful assessment of ongoing pilot zero-waste program, demonstrating the feasibility of such practices in rural settings.

 Quantifiable reduction in methane emissions, contributing to national and global climate goals.

 Improved health and economic outcomes for participating communities.

 Increased awareness and engagement in sustainable waste management practices.

 This case study will provide valuable insights for policymakers, environmental organizations, and rural communities in Bangladesh and beyond. By demonstrating the potential of zero-waste practices to reduce methane emissions and deliver multiple co-benefits, the study aims to support the broader adoption of sustainable waste management practices in rural areas.

3. *Geographical Region:*
   Betgari Union, Gangachara Upazila, Rangpur District of Bangladesh

4. *Area of climate policy:*
   Energy efficiency; 1. Bangladesh Climate Change Strategy and Action Plan (BCCSAP), adopted in 2009; 2. Nationally Determined Contributions (NDCs); 3. Mujib Climate Prosperity Plan (MCPP) ; 4. Global Methane Initiative (GMI); 5. Green Climate Fund (GCF); 6. National Greenhouse Gas Inventory;

5. *Short description of the policy(ies):*
   The zero-waste policy focuses on reducing waste generation through sustainable practices such as composting, biogas production, and recycling. By minimizing the amount of organic waste that ends up in landfills, the policy aims to significantly reduce methane emissions. In rural Bangladesh, this involves educating communities on waste segregation, promoting composting and biogas production from organic waste, and encouraging the recycling of non-organic materials. These practices not only reduce greenhouse gas emissions but also improve soil health, provide alternative energy sources, and enhance economic savings for households.

6. *Work programme Area to be covered by the Study:*
   Economic diversification and transformation; Just transition of the workforce and creation of decent work and quality jobs ; Assessment and analysis of the impacts of the implementation of response measures (with a view to understanding the positive and negative impacts);

7. *If the case study will cover assessment and analysis of the impacts of the implementation of response measures, the impacts to be studied:*
   Social; Economic; Environmental;

8. *If the case study will cover assessment and analysis of the impacts of the implementation of response measures, the type of assessment (Qualitative/Quantitative/Both):*
   Both

9. *If the case study will cover assessment and analysis of the impacts of the implementation of response measures, the methodology or tool used for impact assessment:*
   The study will employ a mixed-methods approach, combining qualitative and quantitative research techniques. Initial surveys and interviews with community members and local authorities will provide insights into current waste management practices and attitudes towards waste reduction. The pilot zero-waste program will be assessed in collaboration with local communities, with continuous monitoring and evaluation to measure its impact.

   Quantitative data on methane emissions will be collected using baseline and post-implementation measurements. This data will be analyzed to determine the effectiveness of zero-waste practices in reducing methane emissions. Additionally, economic and social impact assessments will be conducted to evaluate the broader benefits of the program.

10. *Status of proposed case study:*
    Case study has not been undertaken and will be developed in collaboration with the KCI

11. *If the case study is completed and published, link to the case study:*
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12. *Elaboration on how the submitter would contribute to the development of the case study:*
    - ESDO may provide human resources including expert researchers, conduct surveys, interviews, and data analysis.

    - KCI may provide the all-financial support to conduct the case study

    The case study will be conducted jointly by ESDO and KCI.