

Terms of Reference
ECONOMIC, SOCIAL AND ENVIRONMENTAL IMPACTS OF
LIVESTOCK WASTE MANAGEMENT POLICY STUDY
Environmental Policy Consultant

I. Background

In 2009, HIVOS together with the Indonesia Ministry of Energy and Mineral Resources (MEMR) and SNV initiated the Indonesia Domestic Biogas Program (IDBP) or known as BIRU program (Biogas Rumah), a program that promotes and facilitates the utilization of household biogas by the community through market mechanism. In 2012, Yayasan Rumah Energi joined the initiative as program implementor with the mandate of pushing the market mechanism for biogas at grassroot level.

The objective of BIRU is to provide access to clean cooking for communities that lack access and affordability to energy for cooking. According to a study conducted by SNV in 2008 stated that the potential for domestic biogas utilization in Indonesia could reach 1 million units with fair IRR for farmers as target users and final beneficiaries. Earlier in the BIRU implementation, the target users of domestic biogas come from cattle farmers spread throughout the provinces with highest cattle population.

As per October 2020, the number of installed BIRU digesters stood at 25,035 units spreads across BIRU's operation areas which consist of Lampung, West Java, East Java, Special Region of Yogyakarta, Banten, Central Java, Bali, West Nusa Tenggara, East Nusa Tenggara, Central Kalimantan, Central Sulawesi and South Sulawesi. Since its inception, BIRU has over 118,000 beneficiaries with 1,444 trained workforce and attracting investments sourcing from the government, private sector, donors, loans and user contribution to the amount of over IDR 200 billion.

Entering into its 10th year of implementation, the initiative has harvested lessons learned and achievements over the years such as creating new variant of biogas to reach out to urban households. As policy, technological advancement, business models, consumer behaviour and willingness and ability to pay are constantly changing so does the landscape for the BIRU program. Furthermore, BIRU partners would like to upgrade its strategies in order to scale up the initiative adjusting to new developments. One of the strategies is to address enabling policies that are essential in strengthening biogas program from upstream to downstream. As BIRU program touches multiple aspects of development which at the least policies in relation to renewable energy mix; integrated farming; waste management; emission reduction and financing; so does the Ministries/Agencies and Local Government offices that are involved.

Addressing enabling policies at the upstream level emphasizes on the management of livestock waste as the feedstock for BIRU. In many cases, the sustainability of the biodigester's functionality depends on the continuous supply of feedstock from the user's household. Without any mandatory regulation, monitoring and compliance to the regulation, the waste produced will be disposed untreated which in turn not only pollute the surroundings but also has significant impact to the methane released. Nevertheless, in order for the Central and Local Government to issue policies, an analysis on the economic, social and environmental cost of untreated livestock waste is required. This is also aligned with Indonesia's NDC on emission reduction commitment under agriculture

sector. Furthermore, it is inevitable as well that policies that incentivize for a behavior change in the community would have to be complemented with innovation in the form of incentives.

Hence the YRE is looking for a Consultant to conduct a study that measures the economic, social and environmental impacts of untreated livestock waste, provide innovative policies on livestock waste management with deployment of biogas and models of incentives for livestock breeders. The policy recommendation will be the basis for advocating BIRU program to relevant ministries/agencies and local government offices.

II. Objective

The objective of this Study is to provide in-depth analysis and recommendation on policy models on to better manage livestock waste based on an thorough assessment of environmental, social and economic impacts of livestock waste. The Study serve as a basis for further advocacy to relevant Ministries/Agencies/Local Government (i.e. Ministry of Environment and Forestry, Ministry of Agriculture, Ministry of Finance, Ministry of Bappenas/PPN, Ministry of Energy and Mineral Resources and local government offices)

III. Scope of Work

The consultant is expected to produce a Policy Paper that encompasses the following components:

1. Review of current laws and regulations on livestock waste management including policies issued by local government in YRE's priority provinces namely: East Java, Central Java, D.I. Yogyakarta, South Sulawesi, West Nusa Tenggara (if any). In the case where the provinces have not yet issued a policy(ies) on livestock waste management, the consultant is allowed to provide at least 3 (three) local government policies from other provinces.
2. Provide analysis on the economic, social and environmental impact of untreated livestock and the cost benefit analysis of having a policy on livestock waste management.
3. Provide innovative policies that addresses livestock waste management and incentive models that trigger behavior change of livestock breeders.

IV. Key Responsibilities

The Team Leader/consultant is expected to carry out the following responsibilities:

1. Liaise with key Ministries/Agencies (i.e.: Ministry of Environment and Forestry, Ministry of Agriculture, Ministry of Finance, Ministry of Bappenas/PPN, Ministry of Energy and Mineral Resources)
2. Local Governments in BIRU priority provinces (i.e.: East Java, Central Java, D.I. Yogyakarta, South Sulawesi, West Nusa Tenggara)
3. Liaise with YRE field officers, Construction Partner Organizations, micro finance partners, private sector partners, etc.

V. Deliverables

The Consultant assignment will submit the following deliverables:

- a. **Presentation of draft skeleton of the final report is expected to be submitted by 22nd of December 2020.** The comments and suggestions from this meeting will be incorporated in the Final Report.
- b. **Final Report by no longer than 22nd of January 2021.** This includes key assessments and recommendation as describe in the SoW based on:
 - Desk research and internal interviews
 - Stakeholders interviews

VI. Input from YRE

- BIRU Annual Reports
- Summary of Annual Biogas User Surveys 2014-2019

VII. Qualifications:

Both individual consultant and a consulting firm ("Consultant") are invited to lodge their bids for the project. The consultant or firm is expected to have the following qualifications:

1. A master degree in the field that is relevant to the objective of the study including but not limited to engineering, finance, environmental studies, energy, etc.
2. At least 5 (five) years of experience in conducting environmental studies and policy studies.
3. Excellent oral and report writing in English
4. Established excellent networks in Ministries/Agencies and local governments.

VIII. Contract Period

The contract period is from 16th of December 2020 to 29th of January 2021.

IX. Location of Assignment

Considering Covid-19 situation, the study will be maximizing remote and online outreach to relevant stakeholders and obtaining data/information required as effective as possible.

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XI. Request for Proposal

The consultant is invited to present a proposal for this service by email before 17th of December 2020 before 17:00 WIB to hrd@rumahenergi.org