Project Monitoring & Evaluation for Timely Responses of Organic Composting, Livestock Management, and Biogas Production

Assessment Report

LFS 302B
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Geoffroy Knaub (Technical and Scientific Specialist) 50020122
Halina Rachelson (Economic Specialist) 13813143
Maria Alejandra Cortes (Economic, Institutional and Governance Specialist) 42295113
Yasin Omar (Institutional and Governance Specialist) 50054121
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To the Board of Directors of the Institut Pertanian Bogor,

**Subject: METR Evaluation of Organic Composting, Livestock Management, and Biogas Production in the village of Ciherang.**

This proposed Monitoring and Evaluation (M&E) report is designed to critically and accurately assess the ongoing Organic Composting, Livestock Management, and Biogas Production projects in rural West Java. The focus of these projects was to provide a means to increase productivity within the village and to empower communities by utilizing a bottom-up approach to projects’ initiation and implementation. Presently, the first project failed, the second is in progress, and the third is projected to be implemented at the end of May of 2015. The proposed M&E for Timely Responses (METR) is an assessment of the successes and failures of each projects’ design and implementation.

We firmly believe that providing villagers with the economic and knowledge assets while connecting them to a market can lead to sustainable resource management and community development. These projects could have the potential to provide income earning opportunities while assisting rural communities in managing their natural resources by adding value to farm production activities. Therefore, it is essentially important to have an accurate, critical, and unbiased assessment of the project in order to meet or exceed the (METR) criteria.

The critique that we will be applying and following is the Monitoring and METR criteria. The evaluation will remain as precise and critical as possible, evaluating a social organization, the PosDaya present within the sub-district of Ciherang. Various reports and documents will be used in our M&E to ensure that we are effective in our assessment.

We are confident that our M&E will evaluate all aspects of the ‘Agrarian Community Development’ project. The M&E must critically evaluate the use of inputs and outputs and the project impacts. In addition, to improve this specific project, or to collect information to improve the next project, we believe that a strong M&E is required. We believe that we can deliver such an evaluation.

We, the Ciherang Team, appreciate your consideration of our proposed monitoring and evaluation report.

Sincerely,
Executive Summary

This M&E proposal aims to successfully deliver the METR to the Organic Compost, Kampung Chicken, and Biogas Production projects at the village of Ciherang Dramaga, Bogor, Indonesia. Currently, the Organic Compost and Kampung Chicken projects have already been implemented in sub-district, RW-08, of Ciherang. The Biogas Production project, located in RW-11, is presently in its “design phase” and is targeted to reach “implementation phase” at the end of May.

Diverse stakeholders are involved for each project, including: PT. Swen Inovasi Transfer, PGN, Dr. Katili, the Animal Genetics Department of IPB, and the villagers of Ciherang. While each stakeholder plays diverse roles, the assistance packages provided by the stakeholders have a convergent goal to provide the village with a poverty reduction mechanism while simultaneously promoting community self-reliance and resilience by adding value to existing farm ventures and knowledge assets. In this way, the village can diversify its income-earning portfolio across various activities.

The M&E will be conducted by our teams of specialists from UBC consisting of: scientific/technical expert, economics/financial analyst, and an institutional/governance specialist. The final M&E report will conform to the METR criteria and will incorporate data including surveys, interviews, and a critical analysis of the project design and/or implementation. Factors such as effectiveness and sustainability will also be considered in the M&E.

The M&E assessment will be conducted over a one-month period. Findings and recommendations provided by the M&E will hopefully contribute to improve practices of current and future projects and prevent common mistakes from being made. Above all, the recommendations will assist stakeholders in recognizing areas for improvement and in strengthening existing relationships.
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### List of Acronyms and Abbreviations

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<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>IPB</td>
<td>Institut Pertanian Bogor</td>
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<tr>
<td>Logframe</td>
<td>Logical Framework</td>
</tr>
<tr>
<td>LPPM</td>
<td>Lembaga Penelitian dan Pengabdian Kepada Masyarakat</td>
</tr>
<tr>
<td>KWT</td>
<td>Women’s Farmers’ Group</td>
</tr>
<tr>
<td>PAUD</td>
<td>Pendidikan Anak Usia Dini</td>
</tr>
<tr>
<td>PGN</td>
<td>Perusahaan Gas Negara</td>
</tr>
<tr>
<td>PosDaya</td>
<td>Pos Pemberdayaan Keluarga</td>
</tr>
<tr>
<td>RT</td>
<td>Rakun-Tetangga</td>
</tr>
<tr>
<td>RW</td>
<td>Rakun-Warga</td>
</tr>
<tr>
<td>SMD</td>
<td>Sarjana Membangun Desa</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
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</tbody>
</table>
I. Introduction and Background

The primary goal of the projects assessed under the METR criteria is to provide community members with new skill sets and knowledge assets that will allow them to improve their economic productivity, and by extension, their livelihoods. Each project involves a variety of components including:

- Waste management
- Livestock management
- Breeding
- Sustainable food production
- Commercialization of agrarian products
- Biogas production

In order to actively engage the community members, the projects were initiated by the IPB LPPM donors through community empowerment groups, the PosDaya. The PosDaya is a “Family Empowerment Post” (p.1) that strives to increase the productivities of families by enfranchising them to become a self-reliant hub through community collaboration (Muljono, 2013). While the PosDaya is not a government program, it functions as an outlet from which the villagers may collaborate with one another and reach out to interact with various sectors. These include the corporate sector, academic institutions, government offices, and non-governmental organizations. It is through the efforts of these intra- and inter-community collaborations in which context appropriate and sustainable projects are to be initiated and implemented to positively effectuate the health, environment, economics and education of the people of Indonesia.
The PosDaya was formed as part of a larger community development initiative for Indonesia (Muljono, 2013) by IPB. IPB is a leading agricultural university in Indonesia with a focus on developing agricultural sciences and marine and tropical biosciences. The institution is also at the forefront of promoting socioeconomic development in Indonesia, particularly in the neighboring Kampungs, as seen in the map (Figure 1). Amongst the numerous development projects implemented by IPB, this report will evaluate three projects that were implemented in the Ciherang village through the PosDaya initiative. The three projects assessed are:

1. Organic Composting
2. Kampung Chicken
3. Biogas Production

The projects reported on in this paper were located in Bogor, Indonesia, in the neighboring villages of IPB’s campus in Dramaga. The village follows a nested level of organization where each village are first divided into sub-districts, RWs. The RWs are then further divided into smaller community groupings, RTs. While the Organic Composting and Kampung Chicken project are both situated in sub-village RW-8, the Biogas Production project was initiated in sub-village RW-11 in Ciherang.

Presently, Indonesia has one of the fastest growing economies in Southeast Asia and therefore is experiencing increasing rates of socioeconomic inequality (The World Bank, 2015). With poverty rates of 11.66% (as of 2012), it is documented that almost half of the nation’s population live in extreme poverty, of less than two dollars a day (UNDP, 2013). Given these circumstances, Indonesia is at the focus of international development projects, which aim to assist the poor by providing them with income-earning opportunities and access to a sustainable market (The World Bank, 2014).

In this M&E proposal, we aim to critically evaluate and assess the projects so that the recommendations made can be used as a basis for understanding root causes of project failures and proposing improvements in design and implementation of future projects.

**Problem Tree (Appendix A)**

When evaluating the design of a project, our goal was to identify both the proximate and root causes of circumstances constraining the development project. Mapping out the different causes enabled us to draw solutions to the core problem. The three community development projects primarily aims to address the lack of economic activity by stimulating productivity within the community. Gathering from our observations and interviews with project sponsors and beneficiaries, we found that this lack of economic activity has resulted in various economic, environmental and social effects, primarily:

- Persistence of survival economy contributing to the poverty cycle
● Growth in informal sector
● Environmental stress
● Unemployment
● Increased dependency on households

Furthermore, the problem and its effects were due to multiple causes: proximal and root cause. Proximal causes include:

● Low skilled labour
● Insufficient jobs
● Lack of government support
● Reduction in rural production and assets

Root causes which give rise to numerous proximal causes include:

● Lack of education
● Poor job market
● Lack of institutional integrity and accountability
● Growing urbanization
● Insufficient connections to viable markets

Logical Framework (Appendix B)

The logical framework (logframe) explains the reasoning behind how the projects’ design and implementation addresses the causes and effects of the core problem presented in the problem tree (Appendix A).
## II. Project Timeline

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time in Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meeting of project implementers and key stakeholders/Team building of evaluation team</td>
<td>14 days</td>
</tr>
<tr>
<td>Travelling to project sites</td>
<td>7 days</td>
</tr>
<tr>
<td>Conducting of evaluation</td>
<td>14 days</td>
</tr>
<tr>
<td>(evaluators will have a day off every 5 days)</td>
<td></td>
</tr>
<tr>
<td>Traveling to base camp</td>
<td>7 days</td>
</tr>
<tr>
<td>Writing of M&amp;E report</td>
<td>4 days</td>
</tr>
</tbody>
</table>
Completion of final report and presentation to key stakeholders 3 days

Total: 30 days

III. Overview of Projects

Key stakeholders play a crucial role, as they have the rights and responsibilities to know how a project is unfolding and which aspects are needed to take corrective actions. Effective communication between stakeholders is necessary in the implementation process, particularly in the efforts to prioritize results and provide feedback. The three projects in Ciherang have differed in their levels of cross-stakeholder communication.

**Organic Composting**

<table>
<thead>
<tr>
<th>Purpose</th>
<th>To an income-earning opportunity for the Women’s Farmer Group (KWT) in the community by adding value to organic waste and producing marketable fertilizer</th>
</tr>
</thead>
</table>
| Beneficiaries | KWT, facilitated through the PosDaya  
Participants from Cikarawang |
| Implementers | PosDaya leader of Ciherang, Ibu Juu  
PosDaya leader of Cikarawang, Pak Nur Ali |
• CEO of P.T. Swen Innovasi Transfer, Ibu Sri Wahuni
• IPB alumnus from the Faculty of Animal Husbandry, Farmers’ Group leader, Pak Rohim

Kampung Chicken

<table>
<thead>
<tr>
<th>Purpose</th>
<th>To improve the nutrition profile of the community through increasing the villagers’ protein intake.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beneficiaries</td>
<td>Farmers in RW-08 of Ciherang, facilitated by the PosDaya Dr. Ir. Sri Darwati, M.Sci</td>
</tr>
</tbody>
</table>
| Implementers | IPB Chicken Genetics Scientist, Prof. Dr. Ir. Cece Sumantri, M. Agr. Sci.  
IPB Chicken Genetics Scientist, Dr. Ir. Sri Dawrati, M.Sci.  
PosDaya leader, Ibu Juju  
Dr.Warcitos |

Biogas Production

<table>
<thead>
<tr>
<th>Purpose</th>
<th>To provide new income-earning opportunities while introducing an inexpensive fuel source to the community.</th>
</tr>
</thead>
</table>
| Beneficiaries | Households in RW-11 who have received medicinal plants  
Investors, including: IPB, PGN, Dr.Katili, landlord |
| Implementers | Project coordinator, Pak Yayan  
Biogas technology, IPB  
State gas provider, PGN |

IV. METR Resources and Methodology

The methodology used analyzed the nature of success and failure of development projects. As evaluators, we conducted the assessment in an unbiased and strategic manner, employing tools of appreciative inquiry. In the process, we anticipated that objectives could be achieved and that challenges would be faced. We engaged project implementers in a discussion, in which we were able to highlight their perspectives on the different projects. Their answers revealed profound information on the projects and the dynamics of stakeholder relationships.

The M&E presented in this report explored three different types of assessments. Our team of five, evaluated the economic aspects, technical and scientific methods, as well as institutional and governing policies and their respective impacts. Halina Rachelson and Maria Cortes, with backgrounds in resource economics assessed the opportunity costs, financial viability, and market access issues of the projects. Geoffroy Knaub and Yeasl Yin examined the technical and scientific methods, given their expertise in animal biology and ecology respectively. Maria Cortes and Yasin Omar, contributed their knowledge of social geography and political science to
critically analyze the institutions and social dynamics involved. In order to overcome the language barrier, three economics students from IPB accompanied the team for translation of Bahasa Indonesian, Sundanese, and English in fieldwork.

The evaluation was conducted for three projects in different stages: one that failed, one in progress, and one in the design phase. Due to the constraint of time and the extent that the project covers, our team was only able to examine three projects in Ciherang without counterfactuals. To obtain information about the projects in their full scope, our interview questions had to be strategic and sensitive according to local context and culture. Example questions included: “Who is benefiting from the implementation of the project?” and “Is the project affecting the community in a detrimental manner?”. Our team conducted interviews with project designers, funders, implementers and beneficiaries whenever possible and gathered village statistics from the PosDaya leader and the local government office. These interviews and statistics were used as key information on how the project was run, whether or not there were any problems while conducting the project or even how the personnel felt while doing the projects. The operating costs of this M&E included transportation costs to and from project regions.

V. METR Findings

Organic Composting

i. Overview of Project Stakeholders

Project Implementers

The Organic Compost project was implemented at the local village level and sub-district, RW, levels and initiated by Pak Rohim, an IPB alumnus of the Faculty of Animal Husbandry. Pak Rohim, using contacts from SMD and IPB, provided the materials needed for Limbah Organik. The CEO of Pt. Swen Inovativ Transfer, Ibu Sri Wahyuni, conducted the actual workshop. The goal was to introduce a new composting method that enables farmers to earn income through
the sale of the product while simultaneously reducing waste from goat feces and feed residue. Leaders of the PosDaya, Ibu Juju and Pak Nur Ali from the Ciherang and Cikarawang villages facilitated the project and served as intermediaries between the farmers and the implementers of the project.

**Project Beneficiaries**

Support for beneficiaries came from a combination of government assistance, microfinance, and technical training. The beneficiaries of our projects were both direct and indirect. For the former, these included those participants who gained financial or knowledge assets from workshops. Direct beneficiaries included the thirty farmers from Ciherang who were part of the Farmers’ Union and two farmers from Cikarawang who gained the technical skills for Organic Compost (specific volume requirements and layering). The latter included those who benefited from added value to economic activities or reduced negative externalities, in our case, residents of RW-08. These beneficiaries may not have had to be present for the workshops but could have benefitted from increased agricultural productivity and food safety due to more fertile soil absent pathogen contamination.

**ii. Evaluation of Project Design**

In the case of Organic Compost, we attempted to understand what the issues were leading to poor relationship building, which we conclude is the nature of the failure of the organic composting workshop implementation. These causes have contributed to the actual composting period having been longer than projected and the abandonment of the Organic Compost project by villagers. Furthermore, we will decide on the theoretical and empirical underpinning of the project.

**Root Cause of Problems/ Conceptual Integrity**

The Organic Composting project attempted to provide farmers with an income earning opportunity of selling compost. This arose due to the lack of economic activity, which originated mainly from insufficient connections to viable markets, low skilled labor, insufficient jobs, lack of government support and lack of institutional integrity and accountability.

The design and implementation phases recognized the main problem: lack of income earning opportunities. The planned intervention identified the root problem but fell short in sustainable long-term planning. The project failed to consider opportunity costs of time and space, therefore neglecting to grasp the broader socio-economic and environmental interactions.
Rapid rural urbanization is, for example, driving farmers to relocate to the city. The design phase should have asked questions such as: How can the project guarantee that farmers are able to sell their compost on the market? Do they have immediate and long-term access to the market? What are the social challenges that the project might face? And how can these be overcome?

**Theoretical Underpinning/ Empirical Underpinning**

From our interviews, we verified that other villages, such as Cikarawang, surrounding the Desa Lingkar Kampus have unsuccessfully implemented Organic Compost projects. Some of these farmers were present for the workshop held at Ciherang, and similarly, the actual composting period did not match the projected composting period. Villagers of Pulwasari, a village further up in the highlands, can expect to receive the same workshop, which indicates future failures. Though we have been limited by the amount of data from Cikarawang’s failure, drawing comparisons between the project design and implementation at Cikarawang and Ciherang helped us identify the contributing factors to successes and failures of the project.

**Prevailing Conditions**

From our findings, we looked at whether the design phase of the project considered possible disabling conditions such as the following:

**Undervaluation of Renewable Resources:** Upon analysis we found that the project had the possibility of increasing the richness of the soil and the quality of the compost. However, the design phase undervalued the socioeconomic benefits of compost, as the quality of the compost depended on the degree of training, methods and relationship between implementers and beneficiaries. This directly affected the success of beneficiaries in selling the compost.

**Under Regulated Externalities:** The design phase also fell short in considering possible economic externalities, such as wasted potential fertilizer for the villagers and the potential of soil contamination and growth of pathogens. By not providing them with a secure market to sell their compost, the project had affected the degree to which the Ciherang community valued the resource of compost.

**iii. Evaluation of Project Implementation**

**Trajectory of Trust**

Analysis and observation on the outcomes of the project led us to conclude that the relationship between implementers and community beneficiaries was not established effectively. There was no indication that the implementers took into account aims,
performance indicators and assumptions prior to the implementation phase. The inability of farmers to connect to a market highlighted the lack of understanding that stakeholders had of beneficiaries’ needs and interests: a safe and secure market that would allow them to sell their organic compost. Thus, the project lacked a trajectory of trust that would allow beneficiaries to feel supported throughout the implementation and withdrawal phases of the project.

Interviewing representatives from the PosDaya and farmers involved with the project allowed us to further assess the trajectory of trust. Their individual knowledge on the project and feedback regarding their experiences in collaborating with project implementers and stakeholders demonstrated that the trajectory of trust was weak and did not enable sustainable organic composting.

Lastly, due to the weak trajectory of trust between implementers and beneficiaries, we found the project ineffective in transforming the project beneficiaries into project partners. Dialogue, constant communication and personal incentives need to prevail not only for the relationship to be effective both in the short and long-term, but also for the project to be successful.

**Key Stakeholder Analysis**

In our interviews with the project beneficiaries and the PosDaya leader, and during the final meeting, at which IPB and Ibu Juju were present, we were able to better identify which stakeholders could help improve the project for continuation at Ciherang and replication at other villages. We learned from Ibu Juju, that Ciherang is still keen on working on the compost in the future and values IPB’s opinion on how to improve composting in the future. She also admitted to poor coordination with the project donors on her part during the project’s initial phases (Appendix C, Table 1). Her hopes are that through continuous dialogue and a follow up visit to her village, IPB and farmers of RW-08 can create a new product that can enter the market and produce economic, social, and environmental gains. Rather than having the PosDaya to lead the effort and organize the entirety of the funding, by allowing an external institution like IPB to assist in providing structural support, it may allow for similar projects such as the Compost Project to see more positive results in the future.

**Implementation Governance**

In order to evaluate the degree of governance in the implementation phase of the project, we looked at the following pillars of governance:
**Transparency:** The availability of provision of materials, work plans and financial information was very limited. The stakeholders involved in the design and implementation stages were not able to provide a project description, thereby hinting at the lack of transparency of the project.

**Participation/Inclusivity:** The project was inclusive of the beneficiaries in that they were taken into account upon the design phase of the project, through deliberate provision of initial training, materials and instructions for composting. It was designed to help empower the women in the community and also be replicated at other villages. Despite the strong responsiveness of farmers and the PosDaya leader and members to training and information provided, the communication set up by the implementers was not established over the long-term. Communication was inconsistent and weak, resulting in a highly vertical relationship between implementers and beneficiaries. Eventually, beneficiaries grew dependent on the project donor to give them guidance.

**Accountability:** The project lacked accountability and a clear outline of who was responsible for each project component. The implementers of the project were not kept accountable in the long-run, thus partially influencing the limited success of the project.

**Timely Responsiveness:** The lack of an internal M&E indicated that successes and failures of the project were not being documented and therefore no lessons were being learned.

**iv. Impacts and Outcomes**

Based on information gathered from our interviews, local government statistics, and observations of the dynamics between the PosDaya and the project donors, the IPB Faculty of Animal Husbandry and PT. Swen, we found that the villagers involved in the Organic Composting project stopped producing the compost. Although the participants had gained technical knowledge in composting, the project opportunity costs of time and space constrained its progress.

**Social Impacts**

Due to the high income-earning potential of compost for Ciherang RW-11, the PosDaya leader feels eager to continue the project in the future, as long as a third party with expertise in Organic Compost can assist them in improving compost techniques and verify the quality of the end product. However, our evaluation of the project has determined that the project failure may have already impacted the relationship between the project donor and the beneficiaries in a negative way. The beneficiaries might lack trust in project donors in the future, despite their appreciation for any sort of assistance. Communication would have been essential to avoid this kind of failure and of course to restore any damage the failure might have possibly caused to
the relationship. It would have been useful for collaboration toward ingenious and more practical approaches well-suited to Ciherang.

Environmental Impact

The inability of the Ciherang farmers to continue with the production of composting allowed us to determine pressing environmental impacts. The organic composting provided a new way to manage the waste stream, thereby increasing its value both economically, socially and culturally. By making use of livestock feces and feed, farmers were able to repurpose it in order to improve agricultural productivity and reduce potential risks to human and crop health. Nonetheless, this impact was positively enacted through the successful composting of organic matter. The lack of needs assessment, follow up and establishment of a suitable and viable market to connect farmers with sellers and buyers of organic compost inevitably affected the quality and value of the compost. Thus, given the lack of communication between project implementers and beneficiaries, the farmers were not able to determine the quality of the compost. This meant that they had no way of assessing whether pathogens were created in the process, thus having a potential loss in agricultural productivity and effectiveness in waste management.

Economic Impacts

The incomprehensive project delivery had its highest negative impacts on village economics. The direct negative impact was created due to the loss in sales opportunity that the new compost technique might have provided. As IPB never returned to Ciherang to verify the quality of the compost workshop participants made, Ciherang villagers had little confidence in bringing their product to market. In addition, the opportunity cost of time represents an indirect economic loss, as the villagers could have allocated their work differently in the three months waiting and experimentation phase to reduce the actual composting period to the projected one.

v. Sustainability and Long-Term Effects

Sustainability

Over all, the Organic Compost project was not sustainable in terms of equity, environmental integrity, and economic viability due to a lack of communication between stakeholders during and after the workshop session. With a two-hour workshop and no needs assessment having been conducted prior to implementation, the project would have required additional follow up sessions to assess progress. However, PT. Swen never returned to Ciherang and the PosDaya leader was unable to contact the implementer for help when uncertain about the quality of the compost and next steps.
In terms of equity, the project’s failure meant that few targeted villagers would be reached, and thus the benefits did not extend beyond those who participated in the initial workshop. Although the compost could have had the potential to manage animal waste in order to improve agricultural productivity and bring in direct revenue from its sale, uncertainty about its quality meant this environmental benefit was ill-fated as well. The economic losses were especially high. High opportunity costs of time, space, and agricultural productivity meant that what was dedicated to waiting on the compost for six months could have been allocated to some other activity that would bring in more income.

**Capacity Building**

Project implementers established a short-term relationship with project beneficiaries. The initial training provided to Ciherang farmers did enhance their human capital, as they were able to increase their knowledge on waste management practices. The provision of an instructions manual and the materials required for composting enhanced the willingness of the farmers to adopt a new technology and respond positively to the implementation of the project.

Nonetheless, given that the communication was inconsistent and set up for the short-term, the project was limited in building the capacity of the Ciherang farmers. We found that the provision of a composting pamphlet is necessary and useful, but only insofar as the Ciherang farmers receive the appropriate long-term training, outline of responsibilities and positive interaction, as well as continuous feedback from project implementers and donors.

**Financial Sustainability**

The Project had the financial potential to provide the Ciherang farmers with another source of income, which would have reduced their poverty level by increasing their agricultural productivity. Marketing the compost contributed to the revaluing of the compost resource but did not change living economic conditions of beneficiaries. The loss in sales opportunity due to the lack of access to a suitable and viable market, indicated that the project was financially unsustainable and detrimental to the farmers’ economic liability and their willingness to undertake new future projects.

**vi. Recommendations**

Evaluation of the project’s design and implementation phases, allows us to conclude with the following recommendations:

1. **To include more practical teaching during the implementation of the workshop**
For future projects, a needs-based assessment of the villagers must be performed in order to determine which outputs might be most appropriate to ensure adoption, continuation of the project technology and replicability at other villages. A two-hour workshop including an instructions manual might not be enough, for example, for villagers to learn a composting method that includes quite specific ingredients and layering requirements. Farmers are typically hands-on learners, but familiarizing oneself with new technology takes repetition.

2. **To provide full-cycle support and monitoring**

   Future workshops should include follow up visits in case a workshop isn’t being delivered to its fullest potential. For example, Ciherang project beneficiaries could have saved themselves six months’ time and thus economic losses had IPB verified the compost quality on a regular basis.

3. **To strengthen the information exchange relationship**

   Project implementers and donors need to ensure that an information exchange relationship with project partners is implemented and maintained throughout delivery and continuation of the project. Valuing the traditional knowledge that project partners might provide the implementers with, is an essential aspect in shaping a horizontal relationship of trust, mutual respect and understanding. For example, traditional methods of composting can be taken into account in the training process, so that project partners are more familiar with the technicalities of the composting process.

4. **To promote the development and recognition of the PosDaya in their respective communities**

   Promotion of the role of the PosDaya in the communities is key in creating more effective long-term results as well as in strengthening the relationship between project implementers and partners. We recommend that institutions promote and develop the PosDaya model as it allows for the empowerment of the communities and the voicing of their needs. Doing so, would allow project implementers, donors, intermediators and partners to have a better relationship and understanding of each other’s needs.

5. **To approach the compost intervention through a cross-sectoral lens**

   In the future, the benefits of the project technology must be identified as not solely economic, but also environmental and social. There are also direct and indirect benefits. For example, compost is a method for managing the waste stream while raising crop productivity and reducing risk to human health through pathogen contamination. The technology itself is of value due to the gained knowledge assets. Lastly, compost has an opportunity cost over other income-earning activities at the rural level, so any future intervention must recognize this in choosing how to deliver it most efficiently.
Livestock Management (M.I.A.)

i. Overview of Project Stakeholders
   Project Implementers
   Project Beneficiaries

ii. Evaluation of Project Design
   Root Cause of Problems/ Conceptual Integrity
   Theoretical Underpinning/ Empirical Underpinning
   Prevailing Conditions

iii. Evaluation of Project Implementation
   Trajectory of Trust
   Key Stakeholder Analysis
   Implementation Governance

iv. Impacts and Outcomes
   Social Impacts
   Environmental Impact
   Economic Impacts

v. Sustainability and Long-Term Effects
   Sustainability
   Capacity Building
   Financial Sustainability

vi. Recommendations
Biogas Production

i. Overview of Project Stakeholders

Project Implementers

The Biogas Production project began as a collaboration between IPB and PGN in partnership with the Ciherang community (“Rector of IPB Officially Opened Jumling Program”, 2015) with a convergent goal to improve the quality of life of the Ciherang community. Initially, it was discussed to take place at sub-district RW-08 of Ciherang. However, conflicts over project management and space availabilities ultimately led to the project to be moved and initiated in sub-district RW-11. The Biogas Production project will proceed in concert with a “Medicinal Plants and Nourishing Families’ Gardens” project which will take place in proximity to the biogas production site (“Rector of IPB Officially Opened Jumling Program”, 2015). In support of the project, IPB and PGN have donated cows which will be utilized in the process to produce biogas (“Rector of IPB Officially Opened Jumling Program”, 2015). IPB has largely played the role of providing the scientific and technical details of the biogas process while PGN has taken the role of the financier. Pak Yayan is currently the coordinator overseeing the implementation of the biogas production facility. Concurrently, Pak Yayan also contributes in mediating relationships between the villagers and project investors. Aside from IPB and PGN, other investors include Klinik Dr.Katili and the landowner for the project site. While the investors were each to receive a portion of the profits earned through the cumulative projects to take place on the biogas production site, current socio-political conflicts within IPB leaves relationships between stakeholders in an uncertain position and has also led to an early termination in the evaluation for the Biogas Production project.

Project Beneficiaries

The project beneficiaries include project investors as well as households who will gain benefits either through the free supply of biofuel and medicinal plants after the implementation of the project. Presently, the Biogas Production project has planned to supply biogas to six households
which are in closest proximity to the project facility. Furthermore, we perceive that the community of RW-11 will also be affected as a portion of the profits gained from the sale of medicinal plants will be used in supporting community assistance programs.

ii. Evaluation of Project Design

Since the partial evaluation of the Biogas project took place during the setup of the facilities and prior to the project being fully implemented, there are currently no problems to identify to evaluate the successes or failures of how the project has progressed so as to address the proximate and root problems of the community. However, the limited observations and interviews gathered during the evaluation period provided means to consider and evaluate the conceptual integrity of the project in context of the village setting and by comparing current project achievements and objectives from previously implemented Biogas projects which the project coordinator was involved in.

Root Cause of Problems/ Conceptual Integrity

The Biogas project is an initiative which aims to supply biofuel, produced solely through cow manure, to neighboring households in the village. The manure residue after the production of biogas will be composted to produce liquid fertilizer to be used on plants are being cultivated at the front of the biogas facility. While an overarching project aim involves increasing the productivity of the village while providing access to cheap fuel, the limited number of households to receive the biogas raise questions of concern over the equity of the distribution of benefits. However, the project aims to partially mitigate the inequality in the distribution of benefits by allotting 30% of all profits raised through the sale of plants to social activities in the village including social organizations and emergency banks.

Theoretical Underpinning/ Empirical Underpinning

Gathering from our interviews, there seem to be conflicting views on whether previously established biogas projects in different part of Indonesia are accepted as being successful. While Pak Yayan has stated that the previous biogas projects he helped to initiate and implement continues to the viable, it is difficult to state whether continuity can be a valid
measure of success. Additionally, every biogas project thus far still continues to be funded by corporate donors. Considering that there has yet been a case where the funding has terminated to observe and evaluate whether Pak Yayan’s plan to find new investors is effective or not brings us to conclude that the current apparent success of biogas projects largely comes from the corporate funding provided by investors.

**Prevailing Conditions**

From our findings, we observed that the design phase had several major flaws within the project. Firstly, it did not consider how the procurement of cattle for the villagers to run the biogas would end up becoming their sole energy source for the participating villagers. Secondly, there is a lack of training in how the Biogas was being run in their homes, therefore leading to a reliance on PGN for maintenance.

**Unsustainable Practices:** The foundation of the model that PGN and IPB are implementing are not sustainable. Currently, plans for the final phase of the project prior to completion involve the medicinal plants and cattle to be replaced at the end of the cycle at zero cost to the villagers. Therefore, the villagers are being given these physical assets while only carry out the daily workings of for manure procurement and biogas production. While Pak Yayan is the only individual with a 5-year contract to work at the village, once the contract ends, the villagers would be left to oversee themselves without training regarding the procurement of and sale of cattle as well as lacking the training for producing biogas and its maintenance. Since the biogas is collected then resupplied in the form of fuel by PGN as their own cost, the villagers are left unawares and unexposed to the technology and knowledge regarding biogas production. These factors lead us to conclude that the current project design is unsustainable for the long-term.

**iii. Evaluation of Project Implementation**

The socio-political conflicts within IPB during the time of evaluation led to the early termination to observe and collect more data regarding the Biogas Production project. Additionally, since the project was in its project design phase and had not yet initiated its project implementation phase, it would have been impossible to evaluate the project implementation phase.

**iv. Recommendations**

Evaluation of the project’s design and implementation phases, allows us to conclude with the following recommendations:

1. **To apply a more horizontal structure of communication**
   For future projects as well as the ongoing Biogas project we recommend that there is a greater emphasis on forming a partnership rather than establishing a vertical
hierarchical structure. Shifting the focus on the positions of donor and beneficiary and establishing a partnership, would benefit the villagers in a more empowering way which would allow for projects’ statuses to be inquired on. Projects could be questioned as to their completion and enhanced communication channels could improve the manner and speed in which projects are conducted in accordance with the schedule.

2. **To provide full-cycle support and monitoring**

Future workshops should have been researched beforehand as to avoid causing further friction between villages and RW’s and improve the parties (IPB, PGN) standing in the communities.

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## VI. Conclusion

Overall, of the evaluated projects which have been fully designed and implemented, we discovered a profound lack of comprehensive evaluation regarding both the PosDaya, the project managers and the project itself. The presence of an incompressive evaluation was partly due to the lack of emphasis on collaboration between stakeholders founded on genuine partnership. Beneficiaries receiving aid at times exhibited anxiety on how their responses to the interview questions would be received by the donor and investor stakeholders. This unease indicated that the partnership between stakeholders still conformed to a vertical hierarchical structure hindering communication between actors. Furthermore, communication failures were exacerbated by the limited means by the villagers to efficiently contact the project coordinators for additional support.

Despite the evident need for improvements, we found that among the projects evaluated, there was a shared sense of enthusiasm and personal achievement, particularly among the members of the PosDaya coordinating and directly involved in the projects. However, while there is great enthusiasm within the PosDaya, there is a general lack of interest in and unawareness of the PosDaya in RW-08. While the Organic Composting project has failed, considering that it was a project instigated by the PosDaya leader as a means to provide an income earning opportunity for the Women’s Farmer Group is a testament to the fact that the PosDaya does hold the power to empower and generate self-initiative within the community. This emphases the need to enhance awareness of the PosDaya and signifies the critical role it may play in increasing self-productivity within the community. However, failure of the project also suggests that stronger structural and technical support is required for projects to develop
into its full potential. Additionally, we recognize that having both Organic Composting and Kampung Chicken projects taking place within the same sub-sub-district RT-04, of sub-district RW-08, indicates a need for greater equity in the distribution of projects. Furthermore, we add that while we recognize the Kampung Chicken has provided a possible means of increasing income, it has yet to have generated any income-earning opportunities. Although the Biogas Production project was in its design phase during the time and termination of the evaluation, we predict that the labor required for the maintenance of the biogas production facility and the medicinal plants garden provide positive possibilities of new income-generating opportunities within the community.

To follow, we conclude with the following overarching recommendations:

- To establish a process or method to evaluate and help improve the PosDaya while slowly shifting the focus of importance from project quantity to implementation quality
- To continue to increase the awareness of the purpose and role of the PosDaya
- To increase the means of encouragement or reward for participation in the PosDaya
- To enhance family-oriented structure of programs
- To mitigate the aggregation projects in a single sub-district and increase distribution equity of assistance projects
- To use assistance projects as a platform for continuing education
VII. Appendix A: Problem Tree
VIII. Appendix B: Logical Framework

Example logical framework for Organic Composting project:

<table>
<thead>
<tr>
<th>Project Delivery</th>
<th>Intervention Logic</th>
<th>OBJs</th>
<th>Assumption/ Risk Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Purpose/G</td>
<td>Increase income earning opportunities for rural poor</td>
<td>Income growth via a multi-variant income analysis (i.e.</td>
<td>Multi-stakeholder understanding of the</td>
</tr>
</tbody>
</table>
### Specific Objectives

<table>
<thead>
<tr>
<th>Objective</th>
<th>Assessment</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>To alleviate poverty</td>
<td>community context, needs, and their ability to adopt new technology</td>
<td>IPB will help villagers sell their product (e.g. connecting product to a viable market)</td>
</tr>
<tr>
<td>Provide farmers with skills set to develop self-sufficiency</td>
<td>Per capita income growth</td>
<td>Consistent and effective communication between partners</td>
</tr>
<tr>
<td></td>
<td>Fair distribution of income/Income equality via Gini Index</td>
<td>IPB teaches villagers the skills needed for production, marketing, and packaging</td>
</tr>
</tbody>
</table>

### Outputs

<table>
<thead>
<tr>
<th>Output</th>
<th>Assessment</th>
<th>Inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hands-on, complete training for workshop</td>
<td>Follow through Invoice</td>
<td>Manual</td>
</tr>
<tr>
<td></td>
<td>Number of people participating</td>
<td>Students with expertise in animal husbandry and organic waste management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sales records</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Manual exists and is relevant for use in the community</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Money circulates amongst villagers/ increased equitable sales</td>
</tr>
</tbody>
</table>

### Inputs

<table>
<thead>
<tr>
<th>Input</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students with expertise in animal husbandry and organic waste management</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### IX. Appendix C: Guiding Questions

The following are some of the guiding questions we asked for each project:

**Organic Composting**
• Was there any consultation with the local people prior to the implementation of the project?
• Are the beneficiaries adequately regarded as development partners or simply beneficiaries of well-intended charity?
• How long did the training process take?
• Where else have you conducted such workshops? Have you conducted follow-up visits or contacted these villages to record successes/failures? What worked? What didn’t? If not, why?
• Have any outside the beneficiaries, copied the interventions on their own?
• To the farmers themselves: Do you want to see this project replicated elsewhere?
• Will the successes that we see be able to outlast the end of assistance from IPB and Pt.Swen and spread beyond those who enjoy them to others in the RW area of the PosDaya and beyond?
• Are lessons being learnt to prevent repetition of failure?
• What are the expectations that the villagers have?

Kampung Chicken (Livestock Management)

• How is IPB involved in this project? Who in IPB?
• How was this involvement impacting?
• What would you still want from this involvement? What works well and what could be enhanced?
• Was there something similar in place before? Is there something similar near by?
• What is the future of this project? Is replication expected?
• Has there been feedback and checks on the project? Who and how often?
• What was the role of the PosDaya? Why did it do that? Why was it chosen to do that role?
• What was the environmental? Social? Economic purpose of this project?
• What social aspect was considered?
• What environmental aspect considered?
• What Economical aspect considered?
• What have been the best parts of this project?
• Did you work with any other agency than PosDaya? Did you consider others? Why /not?
• Are there any metrics or indicators present? Prices and such?
• Was the project chosen based on public need? How did you know it was wanted/needed?
• Any unintentional results from the project? (social, economical or environmental)
• How is it supposed to affect individuals? Community? Resources? Institution?
• How many people in community affected by the PosDaya? Has it changed over time?
• How well or not does the PosDaya work with other development programs in the village?
• What is the aim of the project? What is the progress on these goals?
• How much do all the aspects of raising these chickens cost and sell for? (feed, cages, eggs, meat, vaccines)
• How much time does taking care of this project take?

**Biogas Production**

• As similar Biogas projects worked in other parts of Indonesia?
• Have the results for those projects been positive?
• Have there been any projects where the funding had stopped? If so, what has happened afterward?
• Does it work better with different types of livestock (cows, goats, & sheep)?
• How was the land for the project site selected?
• How did IPB get involved in the project?
• How is IPB’s involvement in this Biogas project differ from the other projects?
• Who is Dr. Katili and what does Dr. Katili benefit from this project?
• Why does PGN need IPB?
• Where did the parts of the infrastructure come from?
• How were the families who are to directly benefit from the biogas (i.e. receive the fuel free-of-charge) selected to be part of the project?
• What are the evident benefits of the project for the community?
• What is your intent/purpose for the biogas project and what do you hope to achieve through implementing the biogas technology?
• If successful, how to they foresee in extending the projects to 100 households?
• How will the extension of the project be made possible?
• Who will supply the materials for construction (e.g. cows, manure)?
• How will environmental impacts such as disturbances to the community be mitigated?
• Why didn’t Pak Yayan offer his help for composting in Ibu Juju’s PosDaya when knowing that they failed in producing quality fertilizer?
• Why did the biogas project abruptly move from RW-08 to RW-11?
• Ibu Juju stated that the project site moved due to space constraints, is this true?

X. Appendix D: Tables
Table of Comments and Feedback

The following table is a summary of the comments and feedback received after concluding the presentation of the findings for this evaluation according to METR criteria. Relevant information was utilized in the writing of this report after the presentation to accurately reflect the current status of the projects. The translation was facilitated by Dr. Christopher Bennett.

Table 1. Table of Comments and Feedback

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Comments and Feedback</th>
</tr>
</thead>
</table>
| Leader of PosDaya Sauyunan: Ibu Juju       | • Appreciates the role of the IPB  
• As head of the PosDaya, she was interested in initiating an income-earning opportunity for the KWT within the community  
• However, because the program did not have the involvement of institutional or corporate stakeholders such as IPB, it was difficult to contact the necessary resources in times of need and thus she was not able to adequately coordinate to develop the project  
• Hopes that in the future, there will be more effective cooperation with IPB to help successfully develop similar projects – especially as a similar project is to take place in the village of Pulwasari  
• There is now still tremendous amount of enthusiasm to make compost and requests for further training in producing high quality compost  
• Ibu Juju requests that that LPPM return to Ciherang for more training for both organic composting and Kampung chickens  
• The Kampung Chicken project was initiated in Ciherang to produce healthy chickens for consumption yet was not properly evaluated  
• It is important to clearly communicate what the purpose of the chicken project, or any other project, is so that IPB and the villagers
have a mutual understanding of what is to occur and what is to be expected
- Furthermore, if any IPB scientists are to work in the villages in the future, they must be clear on what they will do and deliver so as to avoid disappointment
- Additionally, Ibu Juju faced much disdain from other villagers who saw her being responsible for the failure of the composting project
- Requests for more comprehensive support from the LPPM in the future

| Pak Warcitos | • The Ayam Sehat Kampung project began in Ciherang to produce healthy chickens for consumption
• However, during the implementation of the project, there was a change in the program on the part of the researcher thus it was decided that the genetically superior chickens would then be bought from Ciherang
• He accepts that while the program was to provide eggs and hatch chicks from them, there were changes made during the implementation phase which were poorly communicated
• He aims to implement a system so as to avoid the rotting eggs problem
• Fundamental challenge to ensure better communication between the IPB researcher and villagers |

| PosDaya Stakeholder (?) | • There is a need for external evaluation in the PosDaya movement
• Requests that such M&E not only take place at IPB but in other universities as well
• There are other student volunteer programs (e.g. KKK) which provides continuous support for the communities by placing students |
directly into the project site

- Agrees that there should be a shift in emphasizing quality of the project rather than the increasing the quantity and over-expanding

- The PosDaya movement is now focusing on a limited number of PosDayas to make them more effective, but simultaneously, they would also like to expand the PosDaya to all villages in Indonesia

- They are also trying to develop and implement an M&E system which is effective and community based (i.e. a form of community based monitoring)
XI. Appendix E: Figures

Figure 1. Villages surrounding IPB’s Desa Lingkar Kampus involved in community development projects initiated and implemented through the PosDaya. The projects of interest for this assessment took place in Desa Ciherang.
XII. Literature Cited


