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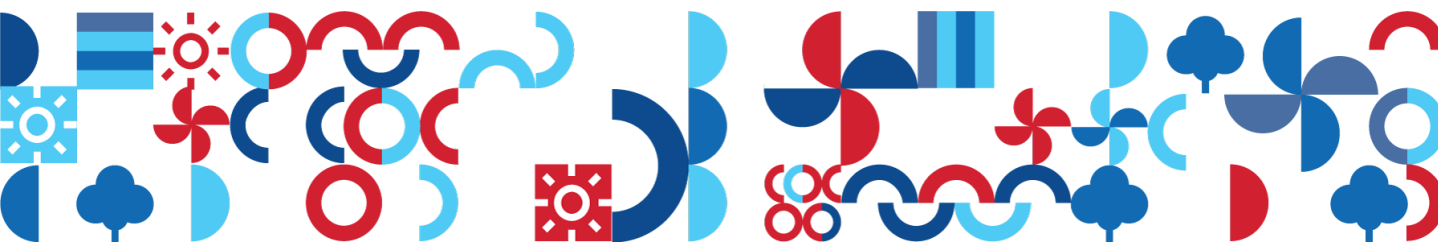


Empowering women, youth and marginalized groups to co-design and take part in energy use and skill development in a Photovoltaic (PV) small-scale off-grid renewable in Mata Redi, Central Sumba, Indonesia

ACEF 2022

Session 3.2 Green Jobs, Gender, and Development

June



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About MENTARI

MENTARI is a four-year programme (2020-2023) to develop low-carbon energy in Indonesia between the Ministry of Energy and Mineral Resources (KESDM) of the Republic of Indonesia and the British Embassy Jakarta.

A **Low Carbon Energy Transition** can help Indonesia achieve its inclusive economic growth, poverty reduction, electrification, and climate change goals.

<https://mentari.info/>

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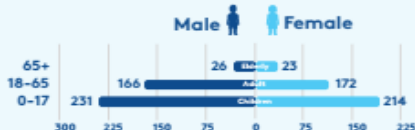


Social-Economic Situation and Energy Demand of Mata Redi and Mata Woga Village

Total number of households (HH) = 205

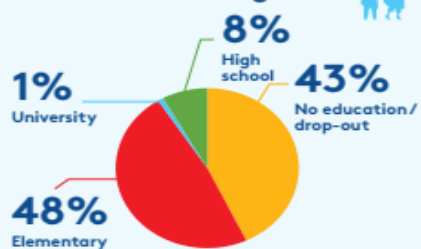
Village Profile

Demographic (children, adult, elderly)

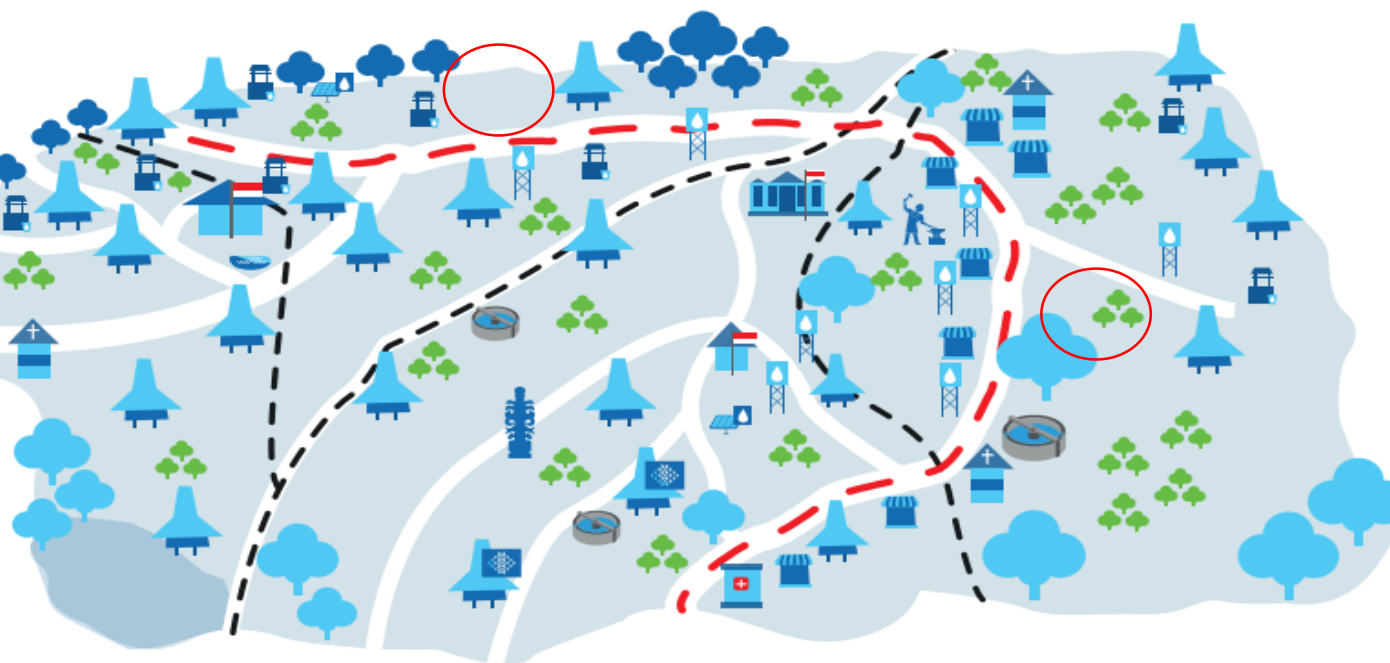
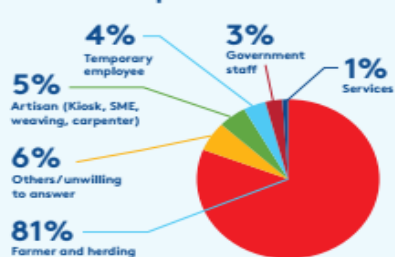


174 Number of physical house
11 Number of facilities
50 Number of entrepreneur

Educational Background



Main Occupation



Schematic of the villages

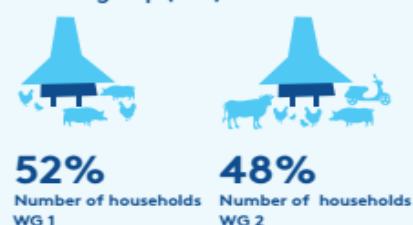
- Village boundary
- - - Hamlet boundary
- Village road
- Hamlet road
- Candle nut tree (potential for productive use of energy)
- Warung / Kiosk

Gender and Inclusion

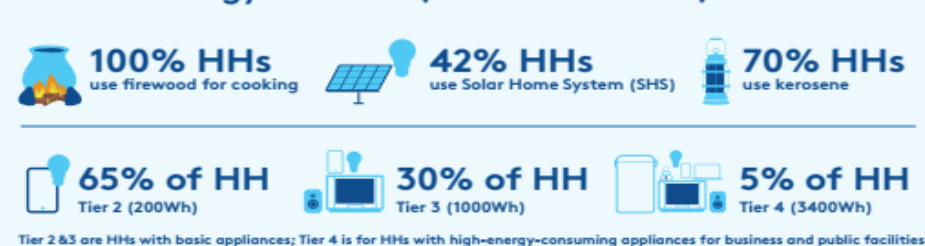
18% of HH are women-headed
83% of working women are artisans and farmers
14% are women-led businesses
17% Acknowledged prevalence of domestic violence
21% of households have disable family members

for all 3 charts, better to use a consistent color code, i.e. red for the highest number, orange for the second top, etc. it'll help readers to read/understand it faster

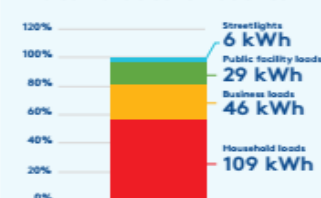
Economic Condition Wealth group (WG)



Current Energy Demand (% of households)

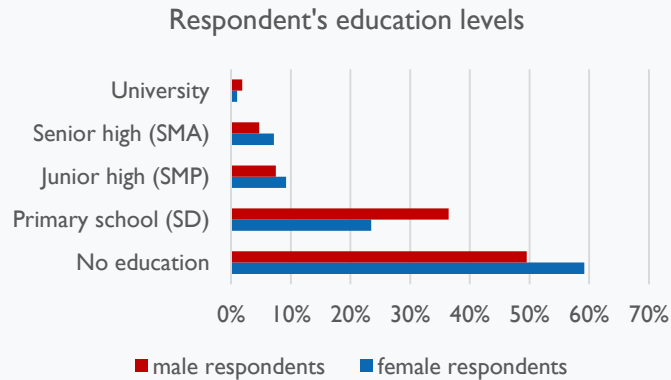


Demand Assessment Total clusters results



Women are less **educated** and more **illiterate** than men.
Education levels are low across gender: 84% of respondents has not finished any education or only finished primary school.

The majority of respondents are not educated.



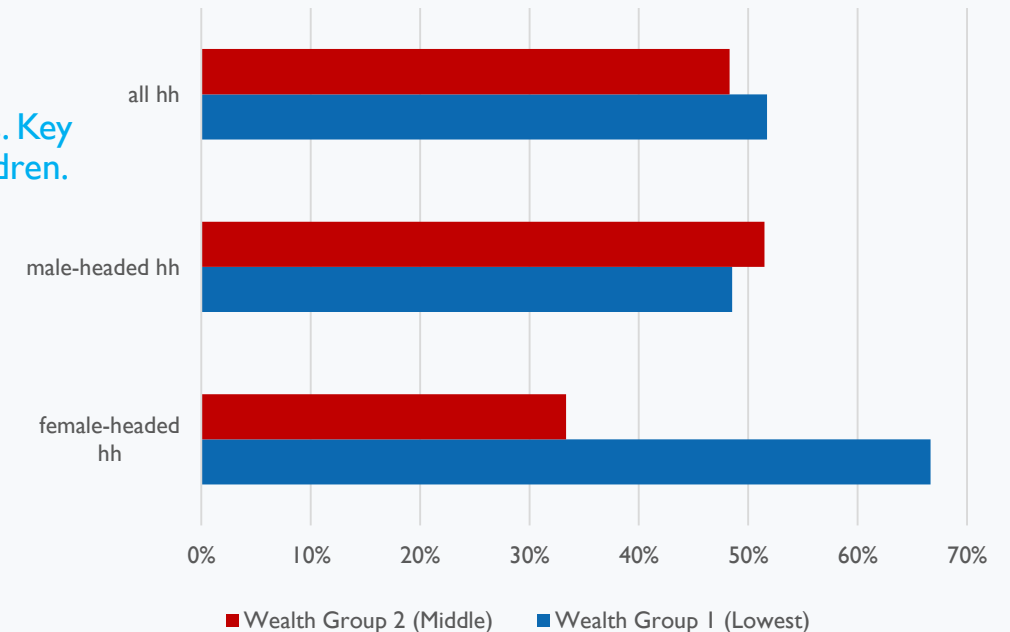
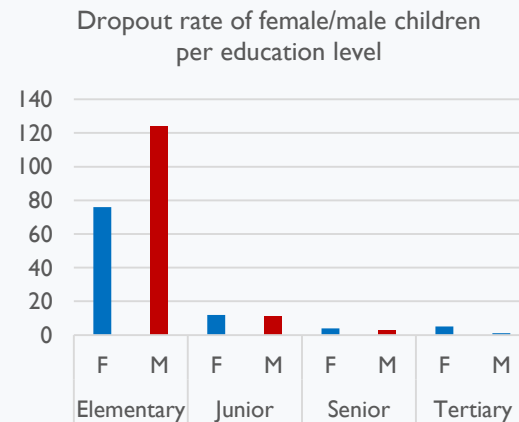
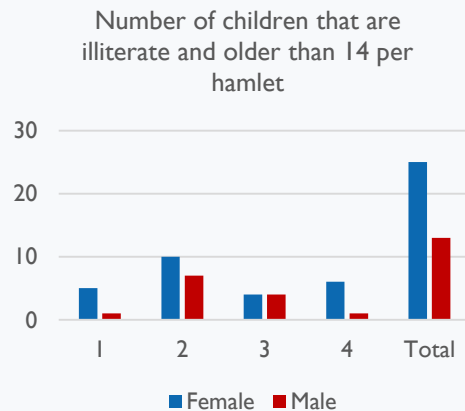
Covid-19 and home schooling has meant children are falling behind, as many parents are often not educated themselves and cannot provide adequate support.

Respondent distribution: 107

male; 98 female

Village population: just over 1000

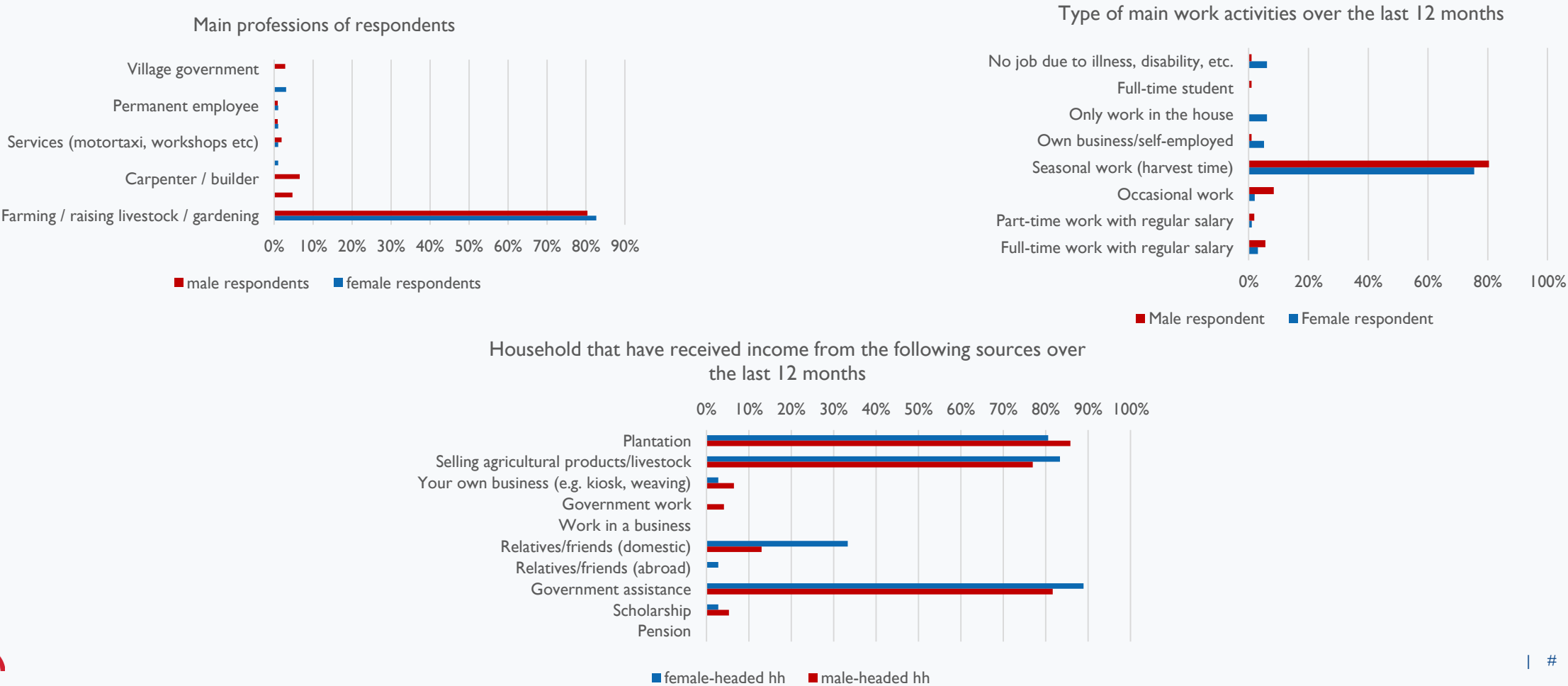
There are more girls illiterate than boys. Yet boys drop out of school more often than girls. Key reasons for dropping out are inability to afford school fees or no motivation from the children.



For 81% agriculture is the **main job and income source**. There are more female respondents without a job.

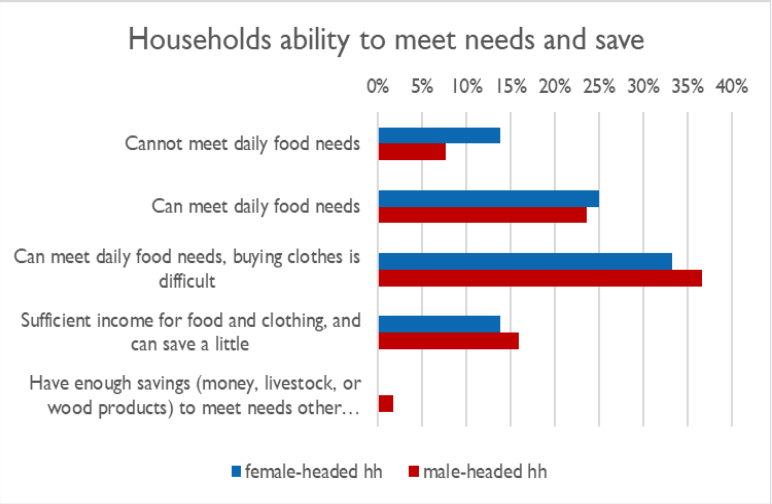
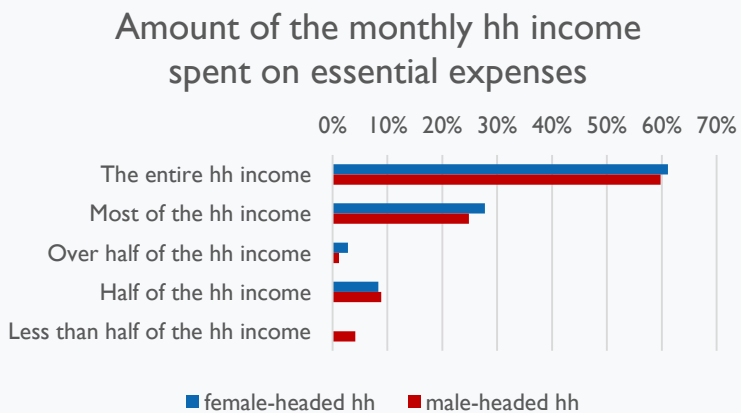
Men and women have differentiated jobs in rice farming: Men are often responsible for processing of the land for rice planting, which is either done manually with a buffalo or by renting a tractor. Women are mostly responsible for planting the rice, although men also help with this.

Most production is used for their own/family consumption, with small quantities sold in the market



The majority of the households spend **their entire monthly households income (60%)** or the majority of it (25%) on essential household expenses such as food, education and transport.

A larger proportion of woman-headed households struggles to meet **daily food needs (14%)** compared to 8% of man-headed households.



166 families (80%) out of 250 received social assistance, cash or in-kind support

| Type of Support* | Total | Remarks |
|---|--------------|--|
| Cash Assistance | | |
| Program Keluarga Harapan (PKH) | 120 Families | The amount of cash depends on the number of family member. The amount range between Rp150.000-Rp1.250.000/month |
| Kartu Indonesia Pintar (KIP) | 43 Families | Cash support/subsidy for student |
| Bantuan Langsung Tunai/Bantuan Sosial | 45 Families | BLT is given quarterly for Rp600.000 |
| In-Kind Assistance | | |
| Kartu Indonesia Sehat (KIS) | 121 Families | National health insurance |
| Rumah Layak Huni/Rumah Mandiri | 42 Families | There are two kind of support. First is in-kind material to renovate the house, and the other one is district program to build a new house |
| Raskin/Rastra | 76 Families | 15-45 kg rice every month |
| Program Keluarga Harapan (PKH) – Non Cash | 20 Families | Similar with raskin but with additional groceries item such as egg, cooking oil, mung bean, and dried fish |

The hungry season falls between October and December, when rice supplies run out.



Types of engagement

Pre-planning

- Gender and inclusion study
- Gender safety assessment
- Local capacity assessment (local vocational schools, local advocacy support)

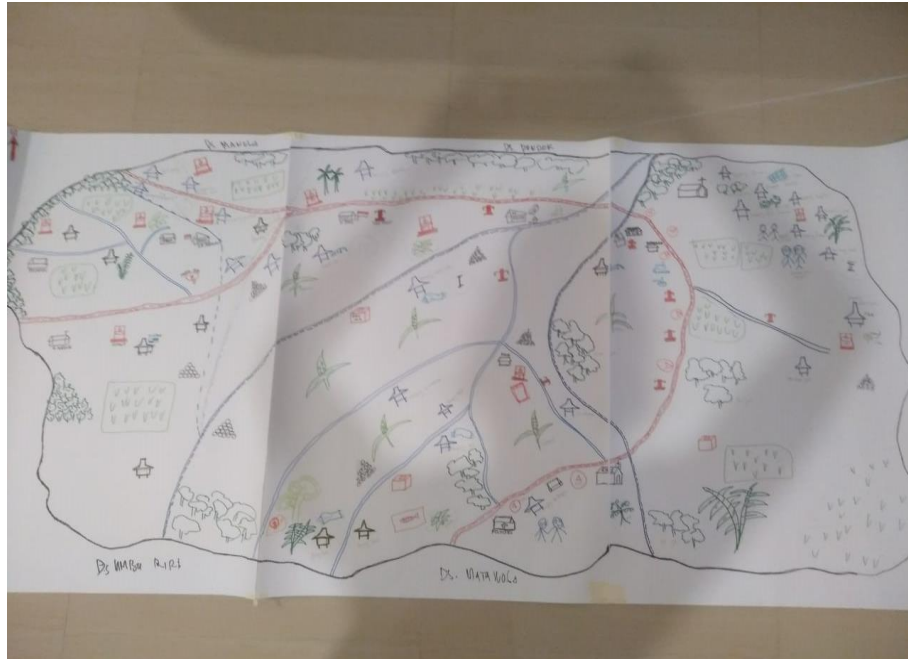
- Gender and inclusion (G&I) plan
- Budget
- Gender Action Learning for Sustainability tools

G&I Implementation

- Adding productive use of energy into the CAPEX and modifying streetlights for better layout/ placement to support women's needs
- Three phases of gender training
- Solar PV training for youth
- Productive use of energy training
- Gender sensitive recruitment for management and PV operators
- Entrepreneurship training (agriculture) through engagement with off-takers
- Mini-grid knowledge engagement through gamification and audiovisual
- Gender mainstreaming training to all partners including vocational schools and financial institutions and government

Pull Information Strategy to Build G&I Plan and co-design the intervention

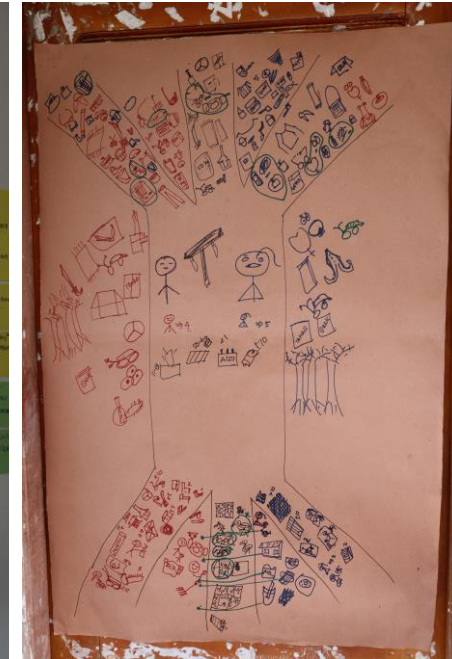
- Design tools to help women, youth and overall community to share their livelihood and gender and social situations
- Street lights and productive use of energy are among design aspects that resulted from these engagements



Gender safety tool



Livelihood calender mapping



GALS Happy Tree

Electrical and Productive Use of Energy trainings

- Girls can take part and excel in the electrical-related training when given the opportunity



Gender Action Learning

- It allows women, youth and marginalized groups to plan their future livelihood improvement/ businesses including adoption of appliances when electricity arrive
- All community members have an equal footing and where one group is not privileged over the other, and it give community member the freedom to plan and participate through drawing – break the literacy barrier
- Community members to understand the gender roles and learn entrepreneurship skills (supply chain, access to market and finance)
- Strengthening women's group and increase their advocacy effort at village level
- We work closely with the village level enterprise, create linkage to other market actors through B2B arrangements



Inclusive recruitment

- Recruitment of local PV Operator and village owned enterprise



Mini-grid knowledge through gamification

- To ensure community understand their future energy demand and mini-grid components as well as the business model



Key Learnings

- Early engagement with women and youth during the design process increases their participation in the following activities and to better understand their energy demand/ needs, and capacity needs
- These resulted in increased participation of women in the project planning and implementation, 50% of women in the village enterprise's management and youth participation in PV and productive use of energy training.
- Strengthening local women network/ organizations to support advocacy effort
- Trainings in advance of installation allows community to take part in any job opportunity arise from the project
- Ensure all partners adopting G&I framework; e.g. ensure EPC continues the training efforts and to hire the trained youth, village enterprise to employ those who been trained, vocational school adopts G&I scorecard etc.

| | |
|---------------------------------------|-----|
| Feasibility Study | 48% |
| Institutional set-up | 38% |
| Trainings | 45% |
| Community Consultation and Engagement | 28% |
| Government meetings | 27% |
| Operator and Village enterprise | 50% |

A breakdown of women participant per activity



Key Learnings (cont.)

- When adopting government regulations e.g. in recruitment, be aware of G&I barriers; we need to advocate these, in close coordination with the government to suit the local conditions
- Leverage other programs/ government fund to support the results such as provision of information, technology and computer training, etc
- Institutionalizing knowledge, whether it is entrepreneurship, technical PV mini grid, linkage and access to market are important for the community to create thriving green businesses



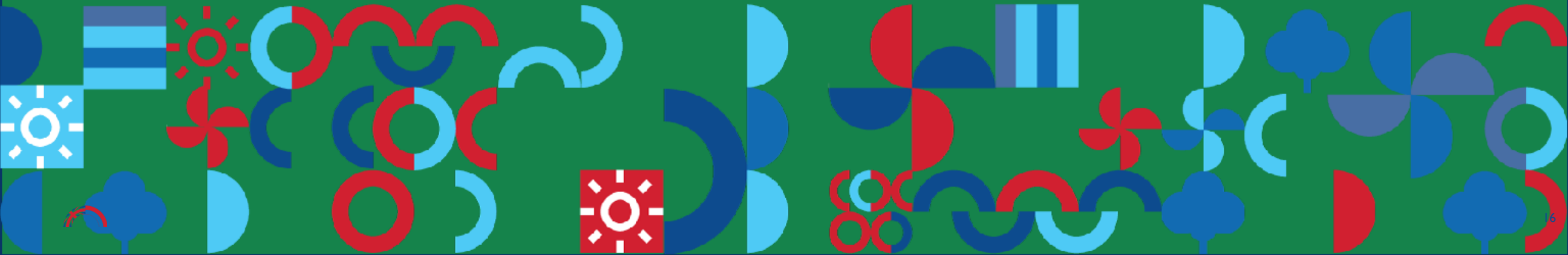
Knowledge References

- <https://mentari.info/knowledge/books-and-modules/>
- <https://www.youtube.com/channel/UCzj58av3drKgnZVcI txs3Kg>
- https://hsi.foundation/assets/2020/11/Hivos_Book_GALS_2019_07spread.pdf
- https://www.biru.or.id/wp-content/uploads/2021/07/01-Booth-produk-Gender_-_Social-Inclusion-in-RE-Module-2019.pdf



Thank you

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| Criteria | Wealth Group 1 | Wealth Group 2 | Wealth Group 3 |
|----------------------------|---|--|--|
| HH members | 5 | 5 | 5-10 (family & bonded servants) |
| Land ownership | 0.25 to 0.5 Ha | Up to 5 Ha | Up to 5 Ha |
| Crops | 0.25 to 0.5 Ha | 0.5 to 1 Ha | 1+ Ha |
| Food Crops | Rice, maize, sweet potatoes, beans and cassava | Rainfed rice (some have irrigated rice), maize, sweet potato, beans and cassava | Rainfed rice and/ irrigated rice, maize, sweet potatoes, beans and cassava |
| Cash Crops | Limited production due to land size | Cashew, candlenut, coffee, cloves and coconut | Cashew, candlenut, coffee, cloves and coconut |
| Food Security | Producing 2-6 months of stable food supply | Producing 6-8 months of stable food supply (coastal communities) Producing 8-10 months of stable food supply (in-land and highland communities) | Producing up to 12 months of stable food supply, work with suppliers and sell the margin |
| Livestock size | No larger livestock 2-4 pigs 2-4 dogs | 1-5 cattle/ buffalo, horses 2-6 pigs 2-6 goats 2-4 dogs | 5--20 cattle/ buffalo, horses 2-6 pigs 2-6 goats 2-4 dogs |
| The primary source of cash | Agriculture labour, construction labour, ojek driving Livestock sales Collection and sale of wild products such as salt and fishing | Cash crop sales Livestock sales | Food and cash crop sales Livestock sales Shops and businesses |
| Education | Rarely beyond primary | Graduate from lower/ upper secondary | Graduate from secondary and some tertiary |
| Energy demand | Tier 1-2 (up to 500W) | Tier 1-2 (up to 500W) | Tier 2-3 (up to 2000W) |
| Power duration | 1800-0600 | 1800-0600 | 24 hours |

