

The Voice of the Off-Grid Solar Energy Industry

## Swedfund



### Module 6: Take back and collection



This module will introduce off-grid solar waste take-back and collection, including the three main channels:

- Company-owned/reverse logistics,
- Third-party collection
- Informal sector engagement

It will also explore questions around consumer awareness raising, designing incentives and developing partnerships.



Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Charlotte Heffer, Operations and Business Development Manager

Daniel Hinchcliffe, Advisor Circular Economy and Sustainable Waste Management

## Looking back: E-waste festival



Channel:	Company-owned	Third-party collection	Informal sector collaboration
Challenges	-Out of warranty product take-back -Lack of consumer awareness -Losing track of products (several possibilities for disposal) -Costs for companies.	-Partnerships require investment and mgmtCommercially sensitive processes/informationIncentives more difficult to implementHealth and safety -Security (if waste has positive value)	-Quality assurance of repaired products and brand riskEnvironment, health and safety -Decentralized nature poses coordination challenges.
Opportunities	-Collective company actionUsing customer journey to create awareness -Alternative financing mechanisms (incl. resultsbased finance)	-Working with schools (& other community facilities) for both awareness and collectionEstablishing partnerships with mobile operators or MNOs.	<ul> <li>-Facilitating connections</li> <li>within the collection/repair</li> <li>networks.</li> <li>-Greater standardization</li> <li>of components to ease</li> <li>repair.</li> <li>-Capacity building (repair)</li> </ul>





Charlotte Heffer, Operations and Business Development Manager



# d.light E-Waste Pilot Project



### **Objectives**

- Increase take-back
- Understand how best to reach the target population
- Understand costs of increased take-back (time and money)
- Better understanding of competitive landscape through data

## **Major Considerations**

What message should be delivered to target population?
 And how should the message be delivered?

 How to reach people that have purchased cash products? In terms of message and logistics

 How to incentivise target populations to return nonfunctioning solar products that they have invested in

# Content and Delivery of Message

### **Considerations**

- What would motivate people to return goods?
- Use of the term *e-waste*
- Mention of environment/health
- Focus on our reason or their reason?
- Verbal, written, pictorial

# Reaching Our Target Population

## **Challenges**

- Data collection methods from sales within d.light
- Where are the target households
- How to reach them
- How to get the EOL products back

## **Effective Incentivisation**

### **Considerations**

- Cost of customer to return a product (time + fare)
- Perceived value of EOL product
- Need for a new product/alternative to EOL product

### **Decision**

Appropriate discount on new product







Daniel Hinchliffe, Advisor Circular Economy and Sustainable Waste Management





### Why work on informal-formal partnerships?

- 20% of the e-waste is recycled through appropriate recycling routes (Global E-waste Monitor 2017)
- highest share is managed by the informal sector under inappropriate working and environmental conditions
- Not considering informal activities, e.g. in EPR-based legislation, may lead to competition for the e-waste and result in disadvantages for all stakeholders
- Number of initiatives to build up partnerships between formal and informal stakeholders with mixed success – it needs identification and dissemination/ learning on success factors

### StEP focus group developing new paper on partnerhships



- Target: Recommendations on how partnerships between the formal and informal sector can be successfully developed/scaled up shall be compiled in a Step Paper and be introduced and discussed in selected stakeholder processes
- Analysis of literature and practical examples of partnerships from StEP and non-StEP members (e.g. RLG Peru, Karo Sambhav India, Hinckley Recycling Nigeria, Desco South Africa, GIZ Ghana)
- Feeding in recommendations regarding partnerships into selected national processes and international initiatives of manufacturers, PROs, national governments and international organisations, "test" approaches

# Who is the informal sector – which possibilities for partnerships?

Basic characteristics: workers or businesses not officially registered, without legally concluded contracts, outside of tax control and social/ labour market protection provisions Various forms and activities:

- Collection, sorting, dismantling or recycling, maybe also refurbishment
- Individual or family subsistence activities, vs. "unofficial businesses", unorganized vs. organized groups of workers
- For some stakeholders, only minimal forms of organization are possible
- For others, formalization and upgrading or shifting of activities is only viable option

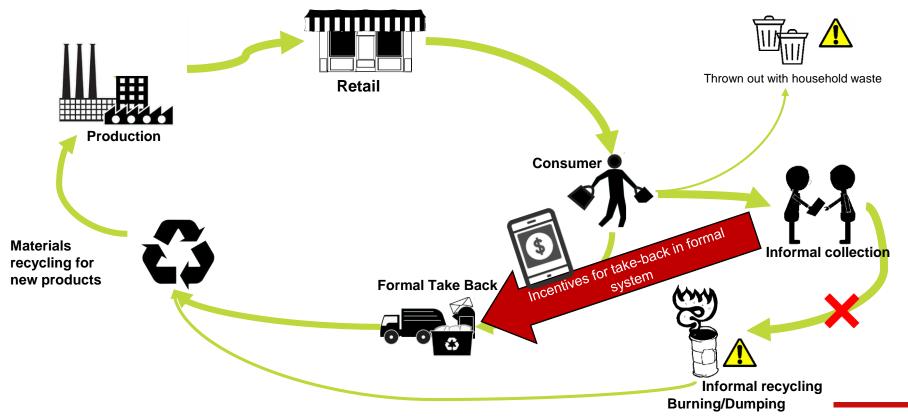




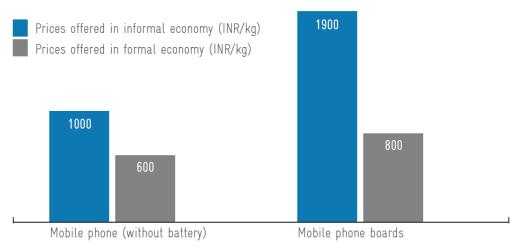




## **Inclusive Partnerships in E-Waste Management**



### Overcoming the price gap



Example of price gap between formal and informal sector in India (GIZ 2018)

- Channeling waste out of the informal sector often means overcoming price gap between informal and formal sector.
- May need to offer some kind of advantages to cooperation can be financial incentives or nonfinancial incentives
- Where legislation is in place for extended producer responsibilty, finance may be available for this. Otherwise may look to cooperate via recyclers or voluntary initiatives.

### Which incentives can sustain partnerships?

#### Financial incentives:

- Financial subsidies
- Market price payments or minimum price guarantees
- Fixed salaries (might be lower but more reliable than volatile market price payments)

#### Non-financial incentives:

- Trainings
- Support for creation of organizations and advocacy of workers' rights
- ID-Cards/ certificate for submission to authorities, households and bulk consumers
- Tax issues are taken care of by formalized entity, making operations legal.
- Protective gear
- Educational services

Mix of binding and non-binding agreements possible

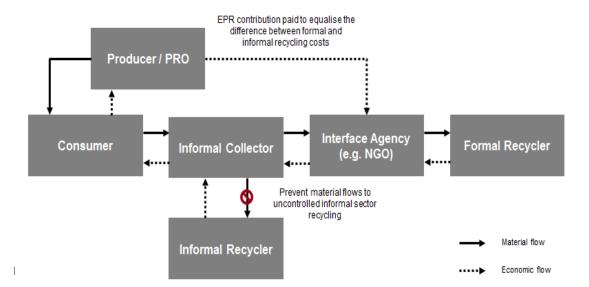
### Which challenges need to be overcome?

- Lack of local acquaintance to approach to the informal sector
- Lack of information on informal subsistence activities and lack of regularity/ reliability of supply by informal stakeholders
- Lack of long-term engagement for paying sufficient prices to informal sector by manufacturers/ PROs/ recyclers
- Difficulties of informal collectors to get access to large quantities of e-waste
- Provisions in legal texts making informal-formal partnerships impossible or risky

### Which models and partnering arrangements exist?

Partnerships between e.g.

- Informal collectors and interface agencies (aggregators, cooperatives, PROs maintaining direct relationships with informal collectors)
- Informal collectors NGOs producers (NGO acting like an interface agency but also providing long-term support/ guidance)
- Informal collectors/ dismantlers and formal recyclers



# Recommendations on partnerships (based on examples from India)

- Map out different local informal sector actors to understand how operates in local context
- Civil society organisations can provide *interface* to connect with informal actors
- Interface agencies should take the role of mediators which communicate the needs of informal collectors and align them with the expectations of producers or PROs
- Identify and include respected & trustworthy local individuals to build trust
- Working out the right agreements, protocols and mix of incentives is key to success
- Agreements need to provide some degree of flexibility
- Non-financial incentives can only partially bridge the price gap: e.g. fixed salaries, technical trainings, protective gear, provision of ID cards
- The performance of partnerships needs to be closely monitored, regularly evaluated and developed on a long-term basis

### **Current example from India – PRO Karo Sambhav**

- Following India's 2016 E-Waste Rules, producers must meet collection targets for ewaste. The E-Waste Rules do not mention engagement with the informal sector and few producers have attempted this
- Karo Sambhav, a producer responsibility organization (PRO) in India, has targeted collection in cooperation with informal e-waste aggregators, waste pickers and repair shops on behalf of several producers in several cities across India
- To efficiently collect large amounts of material, Karo Sambhav targeted nodes in the informal collection networks, such as lower level aggregators specialized in only a few ewaste categories
- Karo Sambhav was able to win partners through trustworthy financial transactions:
   Following a few initial small trades, they convinced some workers to transition to digital
   payments and helped workers to establish bank accounts and register their GST tax
   information first steps towards formalization.
- Aggregators have to sign a code of conduct, which requires them to meet standards
- Electronic documentation of transactions and flows ensures that material channelled out of the informal sector is not sold back to informal recyclers.
- Within the first two years of operation, Karo Sambhav has engaged over 5.000 aggregators and collectors, and collected over 3.000 tons of e-waste.

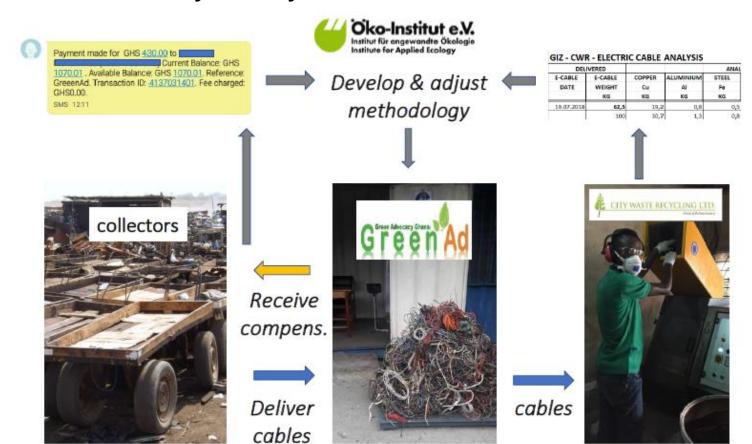
## New opportunities – digital payments



Digital payments can support channeling out of informal sector

- Direct payment more reliable than cash transaction with middlemen, track massflows
- Avoid dangers of cash, reduce corruption/bribes, enable tax compliance
- Transaction fees, but may get better pricing due to removal of information asymmetries

### **GIZ Ghana – Pilot Payment System for Cable collection**



# Recommendations and steps towards good partnerships (draft StEP paper on informal formal-partnerships)



#### **Producers/ PROs:**

- Understand informal market mechanisms, involve local leaders/ NGOs
- Establish inclusive Extended producer responsibility plans
- Offer simple mechanisms for registration, reporting etc.
- Provide long-term support to informal workers, incl. training, transparent, fair prices etc.
- Look to partner with recyclers pursuing inclusive approaches with informal sector

### **Authorities:**

- Leave room/ transitional phases to allow for set-up of organizational structures and to make set-up of business relations between formal and "not-yet-formal" stakeholders possible
- Support informal stakeholders to establish partnerships with formal stakeholders or formalize
- Establish clear procedures/ guidance for monitoring reports on quantities

# Recommendations and steps towards good partnerships (draft StEP paper on informal formal-partnerships)



#### Informal sector:

- Be prepared to enter minimal forms of organization
- Comply with minimal forms of reporting and transparency required by informal-formal partnerships or associate with partners who can support
- restrict activities to non-problematic practices or engage in formalization and technical upgrading, diversify activities beyond mere collection, e.g. to refurbishment

### **Recyclers:**

- Set up simple but reliable reporting measures on inputs (also for materials received from informal stakeholders) and outputs
- Contract informal collectors as far as possible, provide ID cards or franchising systems
- Promote the idea of formal-informal business partnerships to producers/ PROs and authorities

### **Purchasers of secondary materials:**

 Support recyclers and their suppliers with trainings and/ or with higher prices for sustainable materials

### **Further Reading on partnerships**

- Forthcoming StEP Paper: Case Studies and approaches to building partnerships between the informal and the formal sector for sustainable e-waste management (worldwide, early 2020)
- Clean and Inclusive Recycling E-Waste in China and India (IIED, 2016)
- GIZ: Building the Link: Leveraging formal-informal partnerships in the Indian E-waste sector (GIZ, 2017)
- GIZ: Creating Successful Formal-informal partnerships in the indian e-waste sector (GIZ, 2018)
- Informal integration through standards: ISO Guidance Principles for the Sustainable Management of Secondary Metals (SRI, 2017)
- Example for implementation in legislation: Technical Guidelines on Environmentally Sound E-Waste Management for Collectors, Collection Centers, Transporters, Treatment Facilities and Final Disposal in Ghana (Ghana EPA and SRI, 2018)

### Thanks for your attention!

### Contact

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"GOGLA recommends that cash incentives are not practiced (by off-grid solar companies, collectors or other actors). This is likely to set a precedent in the mindset that is difficult to shift".

-Module 3, the Financials of E-waste.



# Should off-grid solar companies use cash incentives to increase take-back rates?

-Only for certain components (positive value or hazardous) - 29%

-It's too early to say/I don't know – 71%





## **Inaugural Solar E-Waste Challenge Winners**

















### Learning themes

- Take-back and collection
- Repair and refurbishment
  - Recycling
  - Second life Li-batt.
- Market insights & advocacy













## Global LEAP Awards Solar E-Waste Challenge Second Round

Sustainable Product Design & Battery Technologies

Application Deadline: December 15, 2019









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Thank you.

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