Empowering farmers and women's self-help groups through the provision of solar-powered cold storage units.

The city of Rourkela is developing cold rooms in five markets across the city to increase the shelf life of vegetables from farmers and reduce distress selling. Trained women’s self-help groups will be operating the cold rooms.
Small-scale farmers in Rourkela face many difficult situations.

- Low access to large markets: Being small-scale, these farmers do not have direct access to bulk buyers and are reliant on middlemen.
- Distress selling: Farmers are forced to sell their produce at a very low rate by the end of the market day.
- 20-40% of the vegetables like Cabbage, Tomato are being sold below market price. Most farm produce have a shelf life of 4 days.
- Price fluctuations: The vegetable market is prone to price volatility.
- No storage space to conserve the harvest.
- Conventional cold rooms have a high operating cost.

The pilot survey indicates that 83% of farmers/vendors stated the lack of storage options as the main driving factor for distress selling.
THE SOLUTIONS

**Action ONE:**
Introducing and building smart waste collection stations in the newly upgraded neighborhoods to improve waste segregation by households and solid waste management.

**Action TWO:**
- Establishing five solar powered cold rooms across the city, to store vegetables reducing wastage and distress selling thereby achieving SDG 2.
- Training and hand-holding the women Self Help Group members with technical and management skills for cold room operations thereby achieving SDG 5.

**Action THREE:**
- Reducing the operating expenses of the cold room by using solar power, electric tuk-tuk, and financial support.
- Each cold room directly employs 5-6 women.

**Action FOUR:**
- Linking cold rooms with bulk institutions thus providing a wider market access to farmers.
- Surveyed 120 institutions such as hotels, canteens, colleges.

Each cold room is expected to be used by 120 to 160 farmers.

Proposed price for a day’s storage is 3 INR (0.036 $)/25kg. Half the price of existing ones.

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Target 2.3
By 2030, double the agricultural productivity and incomes of small-scale food producers, particularly women, indigenous peoples, family farmers, pastoralists and fishers.

Target 5.7
Equal rights to economic resources, property ownership and financial services.

Local Action:
By 2025, we will increase the income of small-scale farmers by 60% through increasing market linkages and reducing wastage.

By 2025, we will train and employ about 25 women to operate the cold room.
**Partners below will provide specific skills and expertise, which together will contribute to effective project implementation:**

<table>
<thead>
<tr>
<th>PARTNER</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rourkela Municipal Corporation</td>
<td>Project owner and responsible for administrative approvals.</td>
</tr>
<tr>
<td>District Horticulture Department</td>
<td>Responsible for data on vegetable production and planning. Linkage with farming clusters</td>
</tr>
<tr>
<td>Farmer Producer Organizations</td>
<td>Responsible for project awareness among farmers.</td>
</tr>
</tbody>
</table>
INFRASTRUCTURE

Picture of cold room

Electric Rickshaw with women SHG
CAPACITY BUILDING

Awareness session among farmers

Training
CHALLENGES AHEAD

1. Lack of skill set and knowledge on cold room operation and marketing among women self-help group members

   **Mitigation Strategy:**
   Implementing a training program covering operation, maintenance, record keeping, customer/vendor engagement, and digitization of data.

   Hands on training on how to operate cold room systems correctly

2. Erratic power supply and lack of power capacity in some locations

   **Mitigation Strategy:**
   Implementation of off-grid solar-powered cold rooms in project sites. Cold rooms will have thermal ice storage as back-up to meet non-solar time.
WHAT’s NEXT

Operating Pilot Cold Room

▪ Construction of the 1st cold room is completed.
▪ Women SHGs have started operations of the Cold rooms.
▪ Providing guidance to SHGs to operate cold rooms.
▪ Monitoring operations to identify areas that require improvement.

Construction of next 4 cold rooms

▪ Feasibility study is completed and 4 sites are allocated.
▪ Procurement of solar-powered cold rooms to start soon.
▪ Operations of the new cold rooms are expected to start January 2024.
THANK YOU!

Bewin Tom, Project Supervisor,
Rourkela Global Mayors Challenge project

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