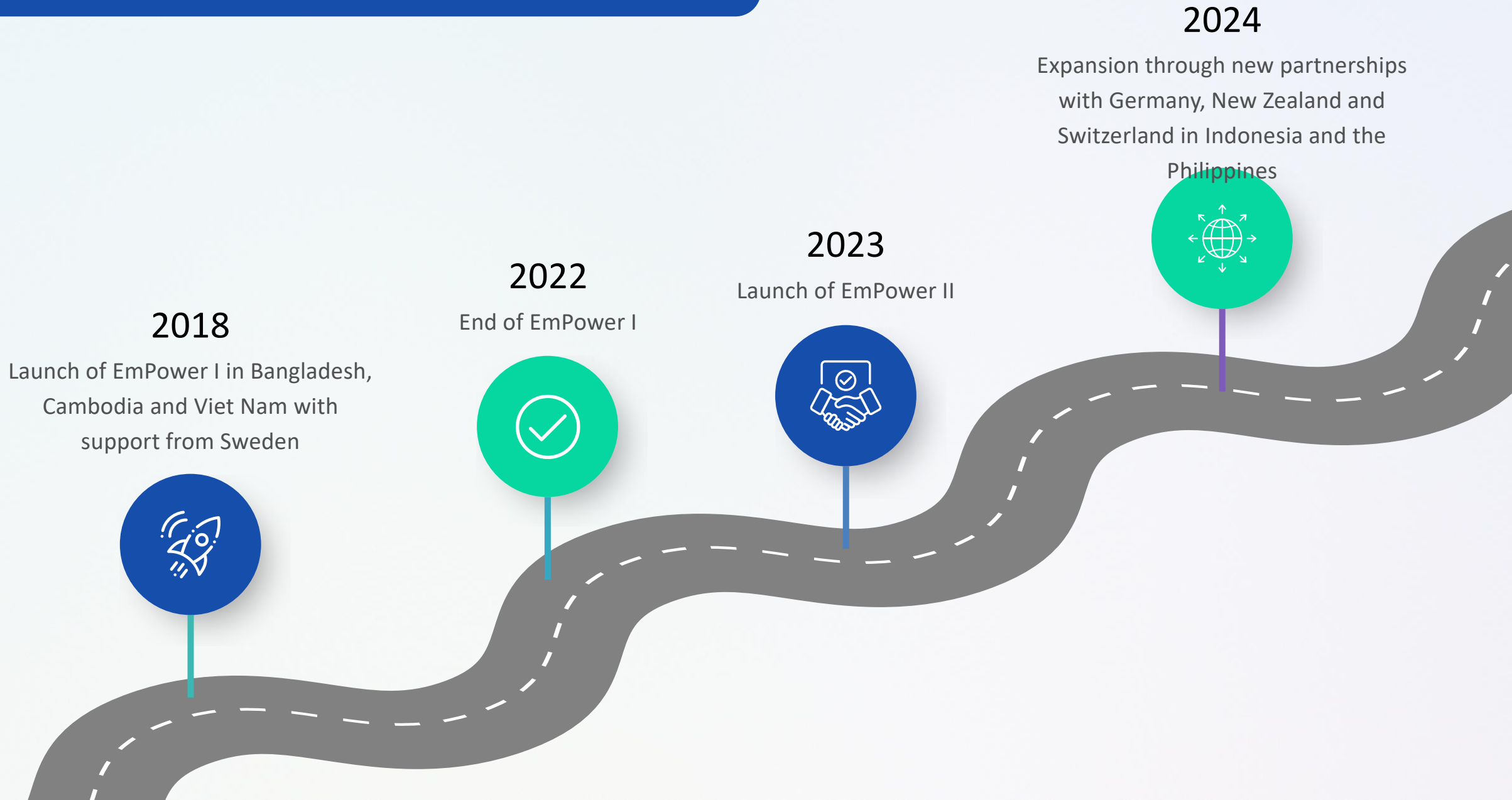


Renewable Energy, access to finance women entrepreneurship and Climate Resilience

Experiences from EmPower-I and II

EMPOWER: THE JOURNEY SO FAR



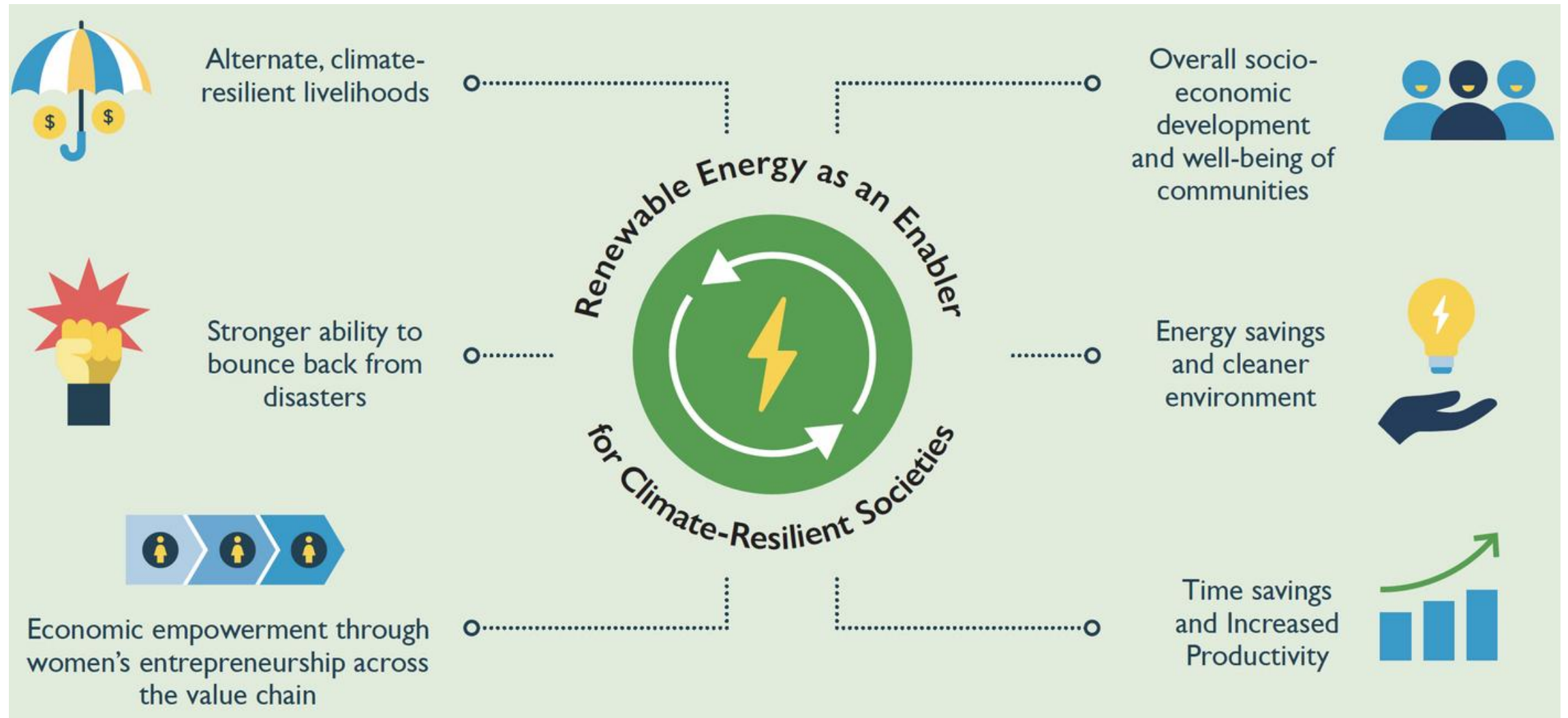
In 2018, UN Women and UNEP initiated the

EmPower: Women for Climate-Resilient Societies Programme

to accelerate gender-responsive and human rights-based climate actions in the Asia-Pacific region.



Renewable Energy as an enabler



Adopting an integrated approach for women's energy entrepreneurship programme to respond to climate change and pandemic recovery



Create entrepreneurship opportunities



Sustain businesses for women in clean energy



Upscaling women's energy enterprises

Ensuring women's economic empowerment is also resilient even post COVID-19



Where We Work- EmPower-I



IDCOL

Govt-owned financing institution, pioneer in renewable energy product financing

NCDDS

Sub-National govt working with community on climate change

Nexus for Development

Expertise on livelihood assessment, business model development



Viet Nam



Green ID

NGO-Working on RE at the community scale

CHIASE:
NGO-Working with women ethnic group

Vietnam Women's Union

Regional component on Knowledge sharing and capacity building

Cambodia

Engage stakeholders across the spectrum at different levels for renewable energy entrepreneurship



Energy needs of women, climate vulnerable and marginalized groups need to be reflected in subnational energy planning

Investing in different types of business models will be critical

1

**WOMEN'S
INFORMAL/
SELF-HELP GROUPS**

2

**COMMUNITY
CO-OPERATIVES**

3

**MICRO-
ENTERPRISES**

4

**EXISTING
AND NEW
ENTERPRISES**

5

**SMALL AND
MEDIUM
ENTERPRISES**

6

**HIGH POTENTIAL
ENERGY
ENTERPRISES**



EmPower's approach to support women entrepreneurs on renewable energy and enhancing climate-resilient livelihood generation



POLICIES AND PLANS

Action plans to support Women Entrepreneurship development and enhancing climate resilient livelihood generation activities through Renewable Energy (RE). Ensure gender inclusive national RE policies and plans.



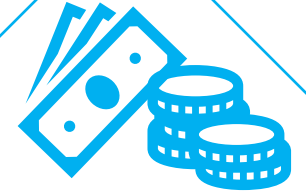
CAPACITY DEVELOPMENT

Training & mentorship on business skills, financial literacy, operation & maintenance of renewables-based enterprises. Incubation of enterprises, synergies with long-standing capacity building programmes. Fostering regional knowledge and South-South learning



PIPELINES & BUSINESS MODELS

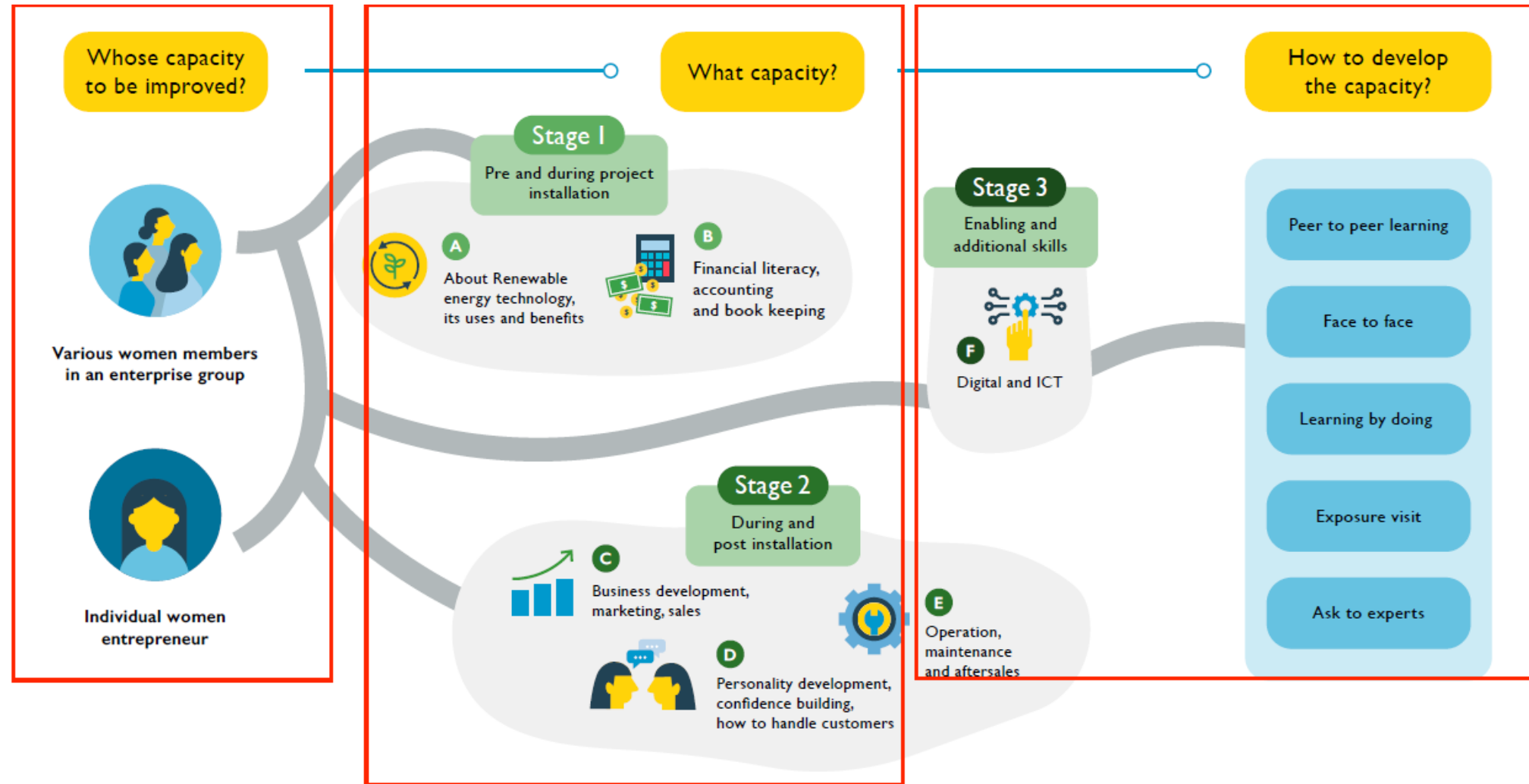
Support Women Enterprise projects
Develop pipeline of projects
Actual implementation
Demonstration of business model
Detailed feasibility studies and due-diligence of women's enterprises to support the market linkages



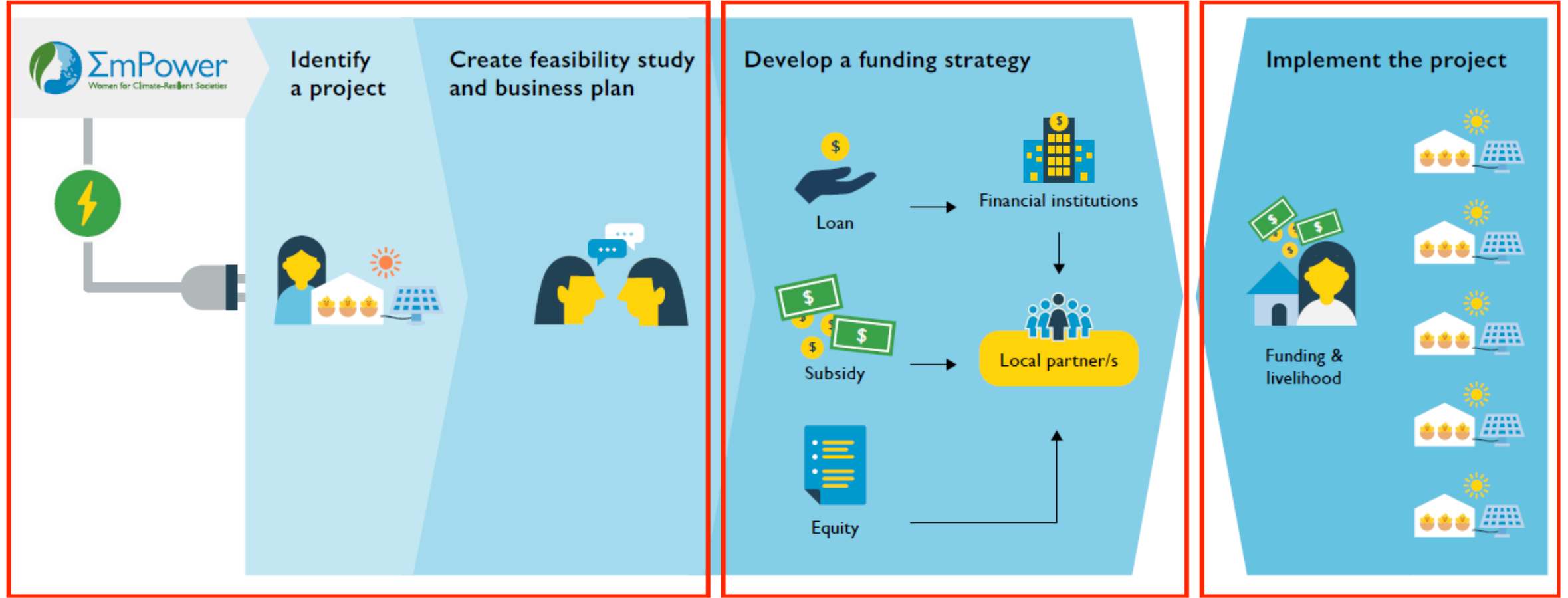
ACCESS TO FINANCE

Support to access existing public and private funds and loans. Leveraging partnerships with government institutions to finance enterprises. Channeling co-funding based on requirement, targeting current and future women entrepreneurs.

Capacity Development



Project implementation with different business models



Pilot Implementation - EmPower-I

Piloting gender-responsive climate action

Drying Banana and Other Fruits

RE technology used: Solar Dryer

Technology provider: Thanh Phat, Vinh Tien, Long Vu company

Partner Organization	Vietnam Women's Union
Location: Province	Tan Phu; Ben Tre Province
Name of Women Entrepreneur	Cơ sở Trường Ân
Enterprise	existing
Size of the project ; Year of Installation	Dec 2021
Total Project cost	USD 25,000
EmPower contribution	USD 8,000
Other contribution (Co-funding)	USD 17000 (own contribution by enterprise)
Women Benefitted	Direct beneficiary: 10 Indirect beneficiary:



Shrimp Drying

RE technology used: Solar Dryer

Technology provider: Viet Nam Sustainable Solar Technology Company Ltd

Roof system and equipment frame, humidifier fan, cart and drying rack to install the solar energy drying house; convection fans, heat assisters with cold drying technology at night/rain, and equipment controllers for solar energy drying house systems

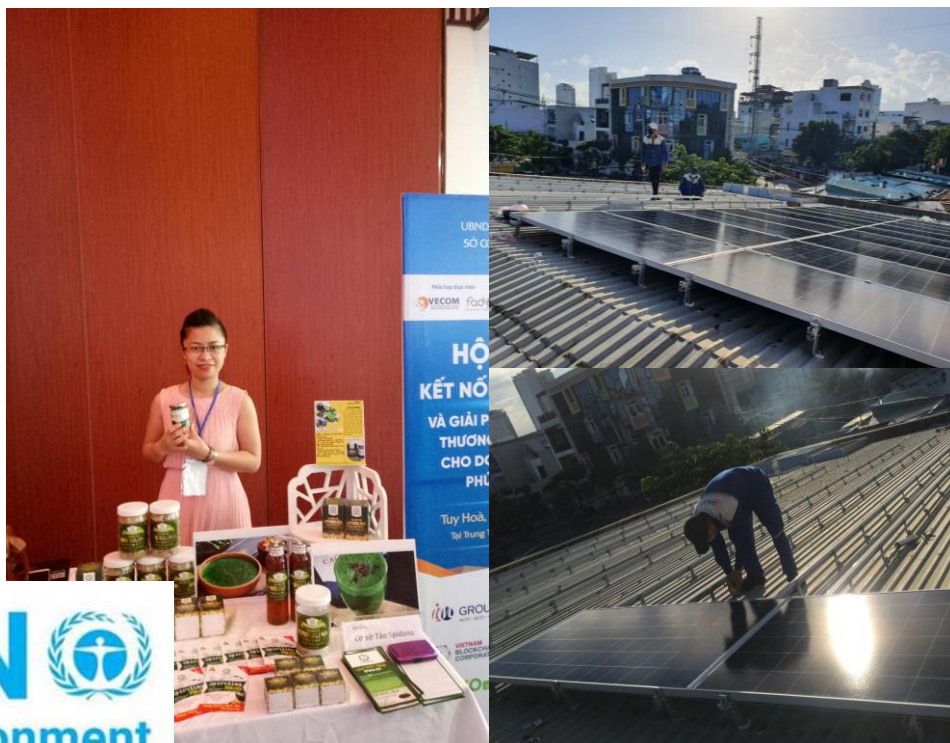


Partner Organization	Vietnam Women's Union
Location: Province	Vien An Dong , Ca Mau Province
Name of Women Entrepreneur	Tổ hợp tác Anh Thư
Name of enterprise	
Size of the project ; Year of Installation	150 kg capacity , December 2021
Total Project cost	USD 20, 000
EmPower contribution	USD 8, 000
Other contribution (Co-funding)	USD 12,000 (own contribution by enterprise)
Women Benefitted	Direct beneficiary: 5 Indirect beneficiary:
Other Benefits	saves 20-40% of energy costs compared to other normal dryer model; increase food safety and hygiene; improve product quality because the dryer helps to keep the color of the product, helps the product have a more beautiful color, helps to sell it in markets with strict requirements for the product (such as supermarkets, export). In addition, the drying house helps to improve productivity and reduce labor force for the project.
Sustainability and other strategies	

Spirulina Production

RE technology used: Solar PV-based Refrigeration Drying System

Technology provider: Bao Gia Khang Environmental Energy Engineering Co. Ltd.



Partner Organization	Vietnam Women's Union
Location: Province	
Name of Women Entrepreneur	Ms. Đinh Nguyễn Hoàng Thư
Name of enterprise	Mặt trời Việt High Tech Cooperative (existing)
Size of the project ; Year of Installation	December 2021
Total Project cost	USD 40, 000
EmPower contribution	USD 8, 000
Other contribution (Co-funding)	USD 32,000 (own contribution by enterprise)
Women Benefitted	Direct beneficiary: 8 Indirect beneficiary:
Other Benefits	20% electricity saving, reliable supply of electricity



Sawdust Pellets from Straw

RE technology used: Biomass
Technology provider: My Nguyen, Nhat Vinh company (supplies control cabinets, inverters, crushers, choppers, vibrating sieve)



Partner Organization	Vietnam Women's Union
Location: Province	Thai Nguyen province
Name of Women Entrepreneur	Ms. Nguyễn Thị Thanh Phương
Enterprise	Existing
Size of the project ; Year of Installation	December 2021
Total Project cost	USD 40, 000
EmPower contribution	USD 8, 000
Other contribution (Co-funding)	USD 32,000 (own contribution by enterprise)
Women Benefitted	Direct beneficiary: 7 Indirect beneficiary:
Other Benefits	Labor and cost savings, increase income from 5-7M VND/per month compared to previous
Sustainability and other strategies	

Mushroom and Cinnamon Drying

RE technology used: Solar Dryer

Technology provider: Vietnam Agriculture Join Stock company



Partner Organization	CHIASE
Location: Province	Na Nghiu,Bac Kan Province
Name of enterprise	Hop Giang cooperative (existing)
Size of the project ; Year of Installation	60 m2, December 2021
Total Project cost (RE equip+ production equip+construction)	USD 54,609
EmPower contribution	USD 5565 (As subsidy) USD 5565 (as loan) ~ 20%
Other contribution (Co-funding)	USD 44591 (own contribution by enterprise +loan)
Women Benefitted	Direct beneficiary: 114 Indirect beneficiary:

Rice Noodle Production

RE technology used: Solar Water Heater for Boiling
Technology provider: Ba Hue Shop



Partner Organization	CHIASE
Location/province	Coc Lung ,Bac Kan Province
Name of enterprise	Nam Cuong dried noodle group (existing)
Size of the project ; Year of Installation	240 liter/day, Total area for the RE equipment: 2.5 m2; Jan 2022
Total proj cost (RE equip+ prod equip+construction)	USD 1413
EmPower contribution	USD 652(As subsidy)
Other contribution (co-funding)	USD 761 (own contribution by enterprise)
Women Benefitted	Direct beneficiary: 3 Indirect beneficiary:

Rice Noodle Production

RE technology used: Solar Dryer

Technology provider: An Binh Company



Partner Organization	CHIASE
Location: Province	Na Nghiu, Bac Kan Province
Name of enterprise	Hong Luan cooperative (existing)
Size of the project ; Year of Installation	10 m2, January 2022
Total Project cost (RE equip+ production equip+construction)	USD 19,500
EmPower contribution	USD 3261 (As subsidy) USD 3261 (as loan) ~ 30%
Other contribution (Co-funding)	USD 13696 (own contribution by enterprise +loan)
Women Benefitted	Direct beneficiary: 20 Indirect beneficiary:

Fish Storage

RE technology used: Solar-powered Cold Storage

Partner Organization:
Green ID

Location and size of
the project : An Giang
Province , 15kW solar
PV

Name of enterprise:
Kim Loan business

Name of
Entrepreneur:

Total Project cost:
USD 13040

EmPower
contribution: USD
6520

Enterprise
contribution :

• - Co-funding: USD 6520
(loan from VWU)

Year of installation
Dec 2021

Benefit:

- No of women direct beneficiaries- 8
- No of women indirect beneficiaries:



Food and Fish Storage

RE technology used: Solar-powered Cold Storage



Partner Organization	GREEN ID
Location: Province	An Giang
Name of enterprise	Kim Trang business households
Size of the project ; Year of Installation	15kWp Solar PV with battery system
Total Project cost (RE equip+ production equip+construction)	USD 13040
EmPower contribution	USD 6520(As subsidy)
Other contribution (Co-funding)	USD 6520 (own contribution by enterprise +loan)
Women Benefitted	Direct beneficiary: 8 Indirect beneficiary:

Vegetable Cultivation

Pump system 100% powered by solar PV system

RE technology used: Solar Pump with Drip Irrigation

Partner Organization	GREEN ID
Location: Province	Dak Lak
Name of enterprise	Nui Xanh Company
Size of the project ; Year of Installation	7.2 kWp Solar PV with battery system+ drip irrigation
Total Project cost (RE equip)	USD 4230
EmPower contribution	USD 2115(As Grant)
Other contribution (Co-funding)	USD 2115 (own contribution by enterprise +loan)
Women Benefitted	Direct beneficiary: 33 Indirect beneficiary: 70

- Before intervention of solar irrigation system, monthly electricity consumption **was 8-10 million dong for 300 m2 land** or if electricity not available run it through diesel pump set
- After installation monthly saving of **3-4 million dong**



"Since the installation of the rooftop solar power system to supply electricity for the irrigation pumping system, I didn't have to worry about turning on/off the system because now it automatically turned on when it was sunny. Also, I save money on the monthly electricity bills. I currently have a cold storage system, so I'm considering to expand my investment".

The application of green solutions in production not only helps business households save costs but also increases green certificates for female enterprises to enhance their reputation in the market. The female workers on the farm are more relaxed when the operation of the system is simpler.

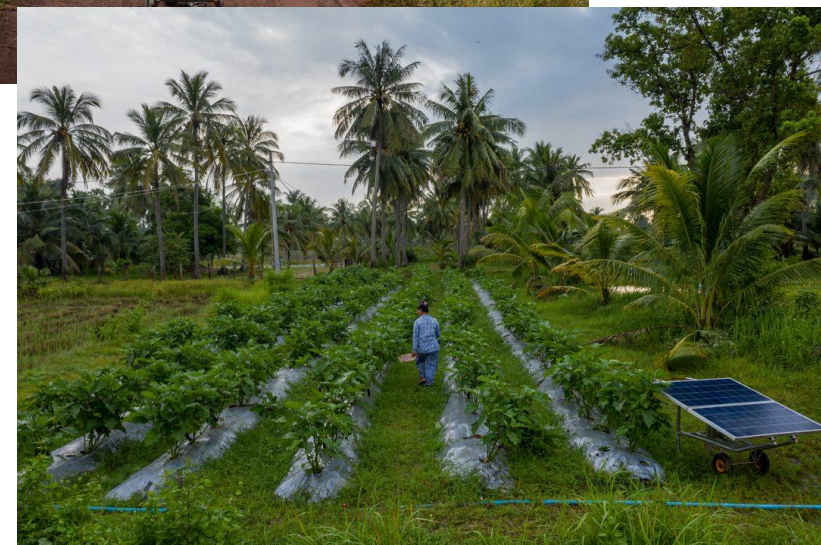
Vegetable cultivation,
horticulture

1:Vegetable cultivation

RE technology used: Portable, mobile solar pump

Technology Provider: Eco Sun

Partner's organization	NCDDS
Location: Province	Trapeang Chak, Tram Kak, Takeo
Name of Women Entrepreneur	Mang Aun
Name of enterprise	Micro-entrepreneur
Size of the project ; Year of Installation	230W Solar system; Irrigating 1600 m2/0.5 acre land; Installed in Nov 2021
Total Project cost	USD 630
EmPower contribution	USD 378 (60%)
Other contribution (Co-funding)	USD 252 (40%)-own source
Women Benefitted	Direct beneficiary: 1 Indirect beneficiary: 3



2-6:Vegetable cultivation

RE technology used: Portable, mobile solar pump

Technology Provider: Eco Sun

Partner's organization	NCDDS		
Location: Province	Tram Kak, Takeo		
Name of Women Entrepreneur	Kim Sokun	Tep Yeuan	Douk Da
Name of enterprise	Micro-entrepreneurs		
Size of the project ; Year of Installation	320W Solar system Installation in Jan 2022	320W Solar pump Installation in Jan 2022	670W solar pump Installation in Jan 2022
Total Project cost	USD 854	USD 854	USD 1549
EmPower contribution	USD 683 (80%)	USD 683 (80%)	USD 1239 (80%)
Other contribution (Co-funding)	USD 171 (20%)- own source	USD 171 (20%)- own source	USD 310 (20%)- own source
Women Benefitted	Direct beneficiary:1 Indirect beneficiary: 2	Direct beneficiary:1 Indirect beneficiary: 3	Direct beneficiary:1 Indirect beneficiary: 1



Drinking water

Clean Drinking Water

RE technology used: 2250W solar hybrid power system
Technology Provider: SOGE (lead by a woman)

Partner's organization	NCDDS
Location: Province	Pou Pi, Kandieng, Pursat
Name of Women Entrepreneur	Morl Phally
Name of enterprise	Existing enterprise
Size of the project ; Year of Installation	2250W Solar hybrid system; Installed in Oct 2021
Total Project cost	USD 6848
EmPower contribution	USD 3424 (50%)
Other contribution (Co-funding)	USD 685(10%)-own source; USD 2740 (40%) loan (ARDB)
Women Benefitted	Direct beneficiary: 8 Indirect beneficiary: Women using cleaner water
Other Benefits	
Sustainability and other strategies	



Poultry raising & Hydroponics

8-9:Poultry raising & Hydroponics

RE technology used: W solar hybrid power system
Technology Provider: SOGE (lead by a woman)

Partner's organization	NCDDS
Location: Province	Kal Kom, Tram Kak, Takeo
Name of Women Entrepreneur	Kim Oun (& her daughter joined training)
Name of enterprise	Existing enterprise
Size of the project ; Year of Installation	1800 W Solar chicken incubation system Hydroponic combined ; Installed in Nov 2021
Total Project cost	USD 5592
EmPower contribution	USD 4473 (80%)
Other contribution (Co-funding)	USD 1118 (20%) ;own resources
Women Benefitted	Direct beneficiary: 4 Indirect beneficiary: 1
Other Benefits	
Sustainability and other strategies	



Section 2

Solar Irrigation with Goat Farming

Site Details

Goat Farming

RE technology used: Solar PV

Technology provider/Sponsor: WAVE Foundation

New or Existing SIP : Existing

Partner Organization (for UNEP in B'desh)	IDCOL
Location: District and Province	Kulpala, Chuadanga
Name of Women Entrepreneur	1. Reti Khatun 2. Sajeda Khatun 3. Shafali Khatun 4. Hawa Begum 5. Gita Rani
Name of enterprise	Only Goat Farming
Size of the project	43.68 kWp PV Panel
Women Benefitted	Direct beneficiary: 5 Indirect beneficiary: 20 (so far)



Goat Farming

RE technology used: Solar PV

Technology provider/Sponsor: WAVE Foundation

New or Existing SIP : Existing

Partner Organization (for UNEP in B'desh)	IDCOL
Location: District and Province	Kadipur, Chuadanga
Name of Women Entrepreneur	1. Haji Rani 2. Jotton Khatun 3. Ayesha 4. Tahmina Akter 5. Beauty
Name of enterprise	Only Goat Farming
Size of the project	43.52 kWp PV Panel
Women Benefitted	Direct beneficiary: 5 Indirect beneficiary: 20 (so far)



Fish Culture

RE technology used: Solar PV

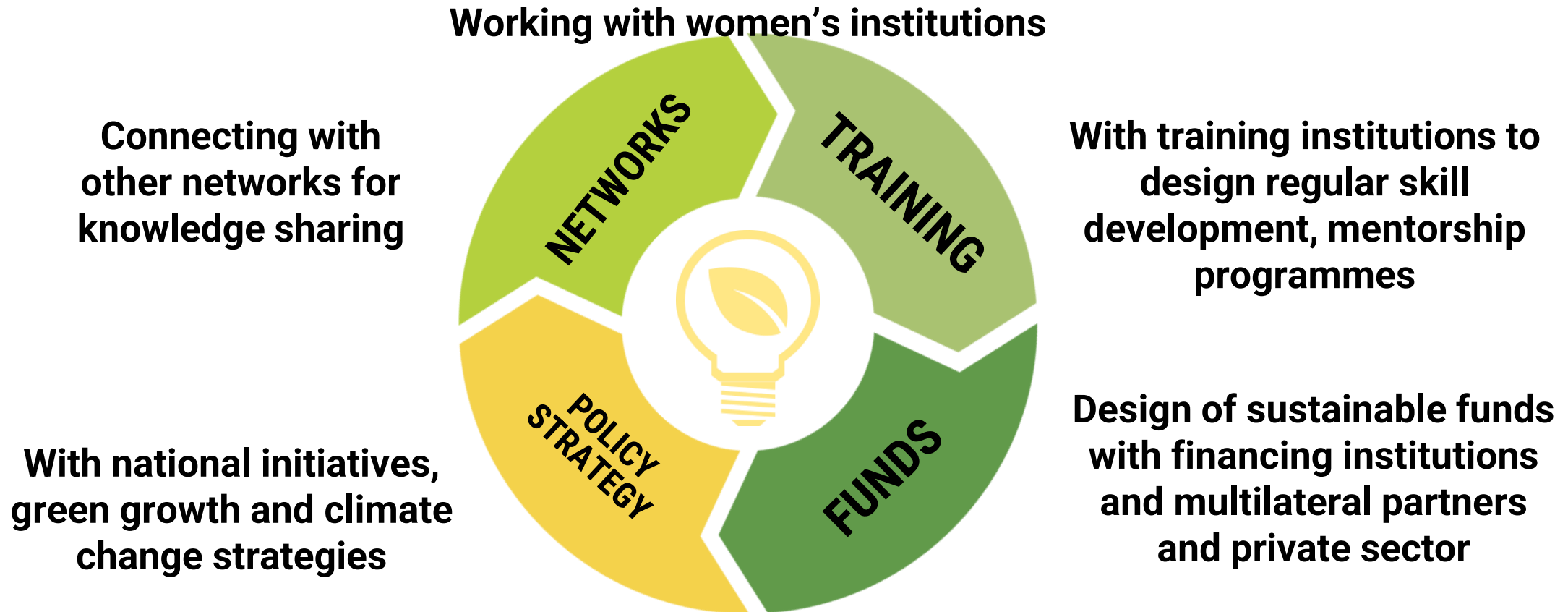
Technology provider/Sponsor: Sun Home Energy Limited

New or Existing SIP : Existing

Partner Organization (for UNEP in B'desh)	IDCOL
Location: District and Province	Monir Basbari-2, Thakurgaon
Name of Women Entrepreneur	1. Lipi Rani Rai 2. Ronjona Rani 3. Sufola Rani 4. Mina Rani 5. Rumi
Name of enterprise	Only Fish Culture
Size of the project	43.20 kWp PV Panel
Women Benefitted	Direct beneficiary: 5 Indirect beneficiary: 20 (so far)



Women's energy entrepreneurship is gaining traction but significant scaling up is needed



KEY MESSAGES

- Critical to **reflect the learnings and best practices from on the ground interventions in the policy formulation** in order to make it more inclusive, sustainable and relevant
- **Formulating provincial action plans through close coordination with local and link/converge it to the existing institutional and budget structure** to avoid parallel operational system.
- **Link RE women entrepreneurship with sectors identified in the NDCs or other SDGs targets** and support country to advance implementation of their commitments under Paris Agreement as well as achieving their SDG targets.
- **Access to finance**: Explore how the invested funds become **revolving and catalytic** and attract additional private sector capital to develop “women for climate-resilient societies” financing alternatives
- Climate resilient gender lens investment opportunities provides **a way to achieve better social and environmental outcomes**”, while “accelerating a more inclusive, dynamic and sustainable development for all
- **Access to skill sets and Bringing digital technologies to improve the access to market and skillsets of women entrepreneurs**

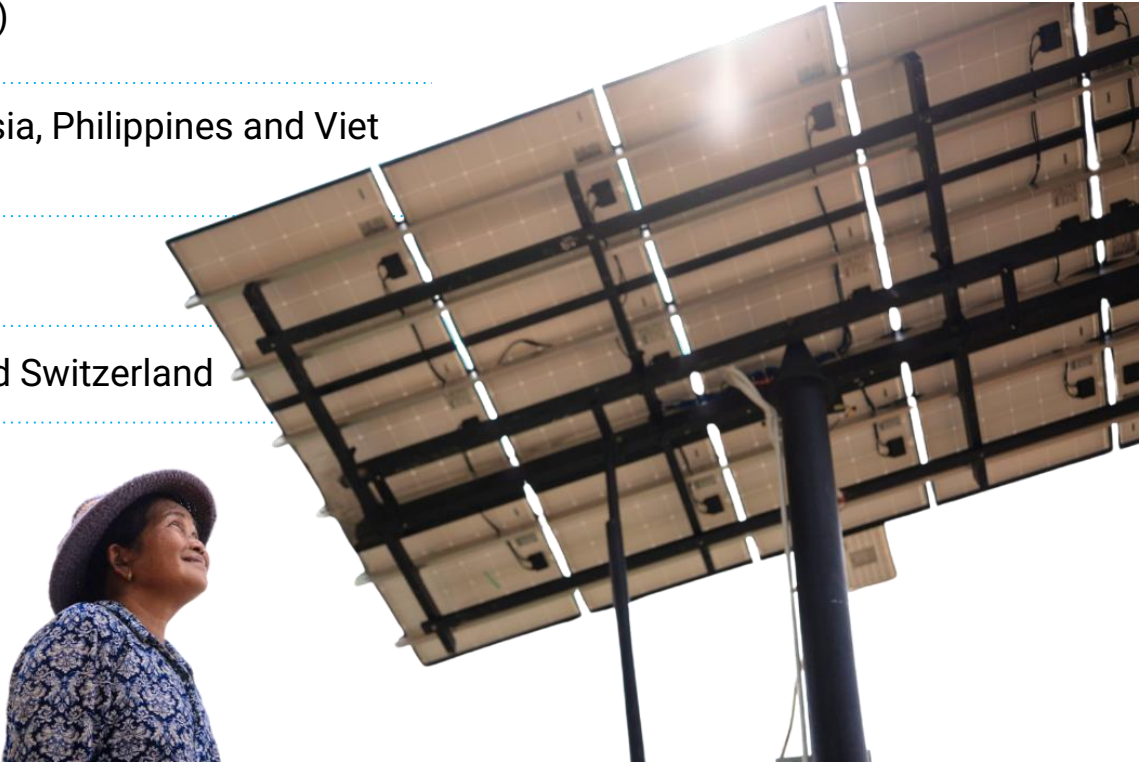
EmPower-II

Accelerating gender-responsive climate action

Programme overview

Programme title	EmPower: Women for Climate-Resilient Societies (Phase II)
Responsible agencies	UN Women and UN Environment Programme (UNEP)
Geographical scope	Asia-Pacific region Bangladesh, Cambodia, Indonesia, Philippines and Viet Nam
Duration	5 Years January 2023 – December 2027
Donors	Governments of Germany, New Zealand, Sweden and Switzerland

SDGs



Programme overview- EmPower-II

OBJECTIVES

- 1**
Increase gender-responsive climate action
- 2**
Women's leadership
- 3**
Climate-resilient livelihoods

KEY ENABLERS

- Policy** development and implementation
- Mobilize **investments** in low-carbon technology
- Raise **awareness** and strengthen **capacities**
- Foster regional and national **partnerships**

PRINCIPLES

- Human rights-based approach
- Gender equality and women's empowerment
- Leave No One Behind
- Climate resilience



Finance component overview - EmPower-II

Accelerating gender-responsive climate action

Clean technologies

- B Biomass
- B/F Biomass / Fuel switching
- Spv Solar PV
- ST Solar Thermal
- W Wind / Micro hydro
- E Energy efficiency / Storage
- LC Low-carbon feedstock
- WR Waste recovery
- C Cooling



Access to finance

\$56.9M committed

Regional

Nexus for Development | **\$6.9M** *Southeast Asia + Bangladesh*
Massive Earth Foundation | **\$6M** *South Asia*
SAFFAL

Bangladesh

BASE – BRAC Bank | **\$3M**
Bangladesh Bank | **Risk guarantee**

Indonesia

IIX | **\$5M**
CIMB Niaga | **\$10M**
PNM | **\$2.5M**
UOB | **\$1M**

Viet Nam

BIDV | **\$10M**
IIX | **\$5M**

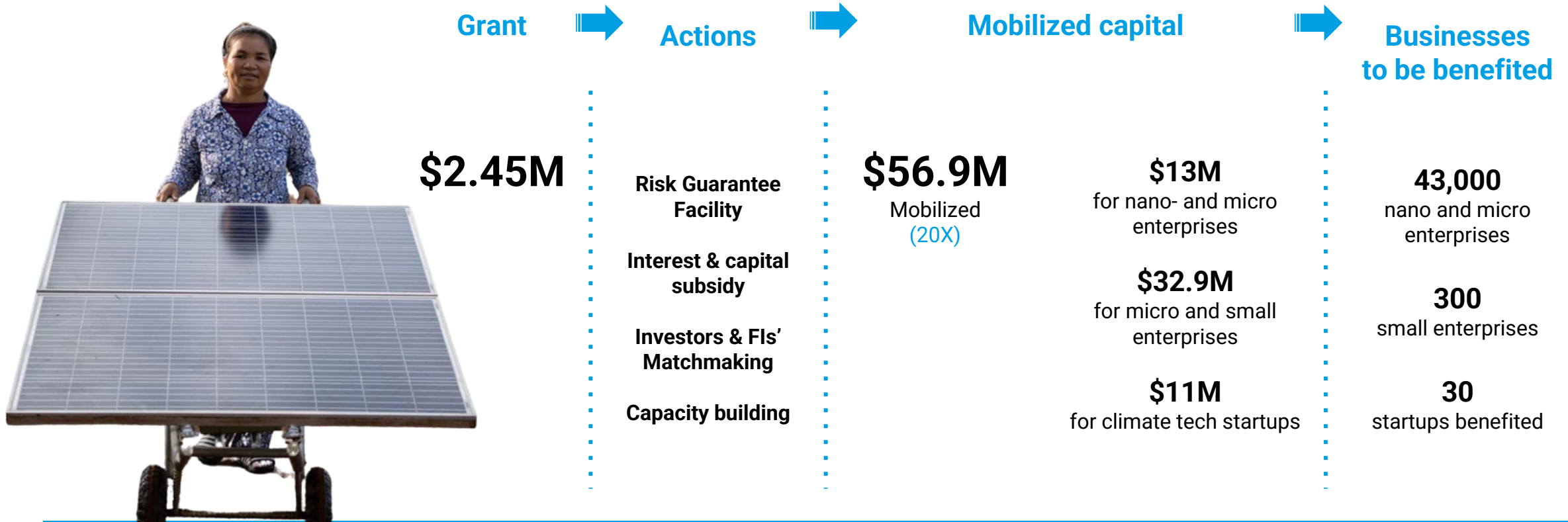
Cambodia

People in Need | **\$4.5M**

Philippines

MCPI – ASHI | **\$750K**
MCPI – NWTF **\$750K**
MCPI – Banko Kabayan **\$750K**
MCPI – RAFI | **\$750K**
MCPI – Villgro | **Risk guarantee**

Leveraging finance



Capacity Building to FIs on ESG

Developed guidance note on **Environmental Social and Governance Assessment of Micro, Small and Medium-Sized Enterprises**.

- ESG Assessment Process
- Exclusion List
- ESG Assessment Questionnaire

Provides trainings to finance institutions on how to apply into their D&D process.



Private sector engagement

4 Accelerator programmes | February 2025

1,418

Applications received

35

Countries



158

Startups
benefited

76

Women-led

Agrifood
Renewable energy
E-mobility
Cooling
Digital innovation
Clean air
Waste management
Green building
Energy efficiency
Sustainable materials



46

Investors
interacted

6

Successful
matchmaking

20

NDAAs in Asia



Private sector engagement

SAFFAL | Climate tech for women

CALL FOR APPLICATIONS | OCTOBER 2025

South Asia Finance Facility For Acceleration and Leverage-SAFFAL supports women-led SMEs working in climate tech across South Asia. By providing financial and strategic support.

TARGETS

- A selection **50 women-led SMEs**.
- A capital raise of **USD 6M for 20 women MSMEs**

TOPICS: Agrifood | Renewable energy | E-mobility | Cooling | Digital innovation | Clean air | Waste management | Green building | Energy efficiency | Sustainable materials



Resources



[Access the resources](#)

THANK YOU

