

Asia Solar Energy Forum 2017

Solar Home System (SHS): Bangladesh Success Case

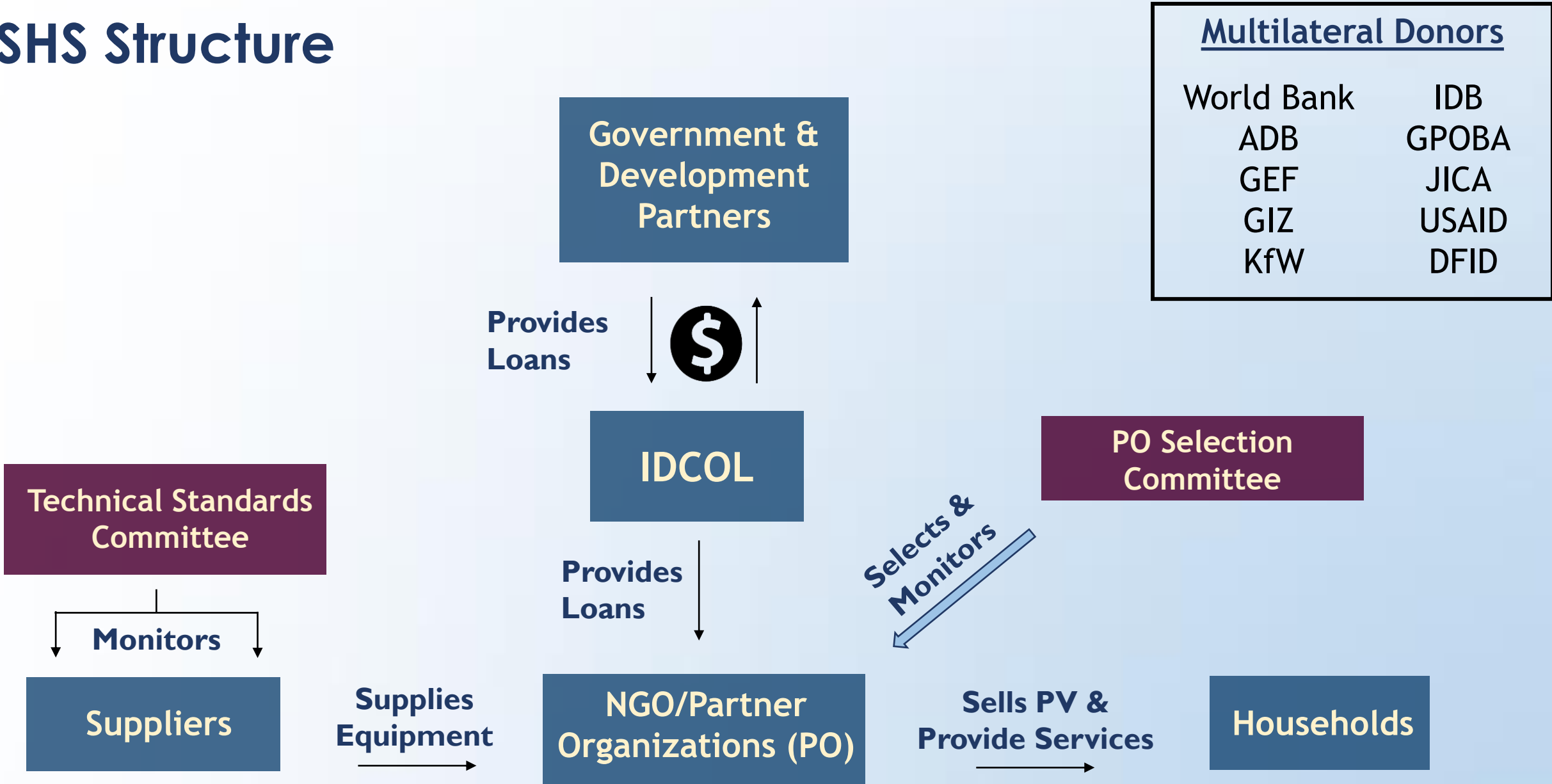
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SHS Structure



Key Features & Success Factors



Quality

Multi-Layered Monitoring & Quality Control:

- *Training & Inspections* by IDCOL
- Technical Standards Committee (TSC) *monitors suppliers'* components.

Competition leading to better quality at lower costs:

56 Partner Organizations (PO) provide services across the country providing consumers *freedom of choice*.

Key Features & Success Factors



Finance

Phased-out Subsidy:

Subsidies gradually *phased down* to almost *zero* making the system *financially viable* for all *investors*.



Micro-Credit Scheme:

- Leveraging micro-credit lending to increase *affordability* for *poorest segments*.
- **88%** customers pay off *on time*.

Key Features & Success Factors



Strategic



Focus on Poorer Off-Grid areas:

- **60% customers** buy the **smallest panel** (covers 3 LED lights and 1 mobile phone charger).
- **Targeting** the segment **lacking access** to any electricity.
- As grid electricity is already subsidized, this **prevents dual subsidization**.

Key Features & Success Factors



Strategic



Support for Domestic Industries:

- *Semi-concessional credit facilities* by IDCOL to *local workshops* encourages new *domestic manufacturers*.
- Promotion of *domestically sourced* SHS equipment.
- *All batteries locally made*.
- **25%** Panels made *locally*. Rest **75%** sourced from *China*.



Marketing & Convenience

Service at a Personal Level:

- *Communication at a root level* with customers on the *financial benefits* of SHS has helped *convince* them.
- Typically, *6 loan officers* operate in a *six-km radius*.

Convenient Modelling:

- *Panels are detachable* and can be *brought indoors* during *natural disasters* in cyclone-prone areas.
- *Disaster Management Fund* acts as *insurance* for customers affected by cyclones.

Financing Structure

2003

50% Down Payment
Rest Paid in 6 months



- Economies of Scale
- Falling Subsidies of grid electricity
- Falling Prices of Solar

2016

15% Down Payment
Rest Paid in 5-7 years

Interest Rates (Concessionary)



6-9%



12%



8%

Challenges

①

Entrance of unregulated **poor quality SHS providers** at low prices.

②

Market Maturity as Bangladesh Government is aggressively expanding on-grid connections.

③

100% penetration difficult to achieve as the ultra-poor unable to afford even the cheapest options.

④

Lack of a roadmap & coordination resulting in **lack of timeline** of grid connections, creating **uncertainty** for SHS providers.

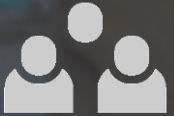
Way Forward



Market Scope: Target of **6mn SHS by 2021**, generating **220 MW**.



Expanding services to grid connected areas to tackle **load-shedding in peak seasons**.



Expand International Collaboration to share success:

- IDCOL conducts **capacity building & experience** sharing in **11** countries in **Asia & Africa**.



Investment and **Capacity Building** Support for **local manufacturing & assembling** facilities for Solar PV, bringing down costs.



Increased focus on **solar** and **wind** to support power generation roadmap **cost-effectively**.

- BD will have **90%** dependence on **imported energy** by **2030** at **high costs**.

Takeaways



Bangladesh's growth in Renewable Energy will be **driven by the solar power**, forming more than **50%** of the total composite.



Decentralized Renewable Energy (DRE) are **quicker** and **cost-effective** means to provide power in remote parts.



SHS has **lifted thousands of families out of poverty** by **targeting** only the **rural population** lacking grid connectivity.



Micro-credit financing and **Mobile Money** adoption has been at the **heart of SHS success**.



SHS can serve as a **profitable role model** for **Asian** and **African economies** that have significant population lacking access to electricity.

THANK YOU

