



**ennos**  
INNOVATIVE SWISS TECHNOLOGY

# Marketing Strategy for the

**SUNLIGHT**  
**PUMP**  
TURNS SUNRAYS INTO SAVINGS

# Supply Chain: 3-tiers



ennos HQ

Importer/  
wholesaler

Retailer/  
technician

Farmer

## Challenges:

- Find importer / wholesaler with experience and network
- Find retailers / technicians with experience and clients
- Target farmers in clusters / groups
- Find finance partners, because nobody pays upfront and cash
- Profitability & affordability

# Challenges of ennos



- R&D to continually adapt, improve and extend product portfolio
- SOPAS as an association to support the market introduction: development, field tests, validations, HCD which are very time- and resource-intensive
- Find an attractive product (package)
- Reliable manufacturer:
  - a) quality
  - b) price
  - c) volumes (through own marketing)
- Marketing in selected ennos countries (good partnerships are crucial)
- Export / Import procedures, freight, taxes papers
- Pricing: the product needs to be affordable and at the same time the distribution needs to be profitable for each player (reflected in the margins)

# Challenges of importer/wholesaler



- Experience in importing (changing regulations)
- Knowhow of market and institutions
- Knowhow of rural marketing
- Network in rural areas; not enough to put product on shelf and wait for customers
- Institutional markets: projects, tenders, technical know-how for making offers
- Necessary capital to keep stock

# Challenges of retailer/technician



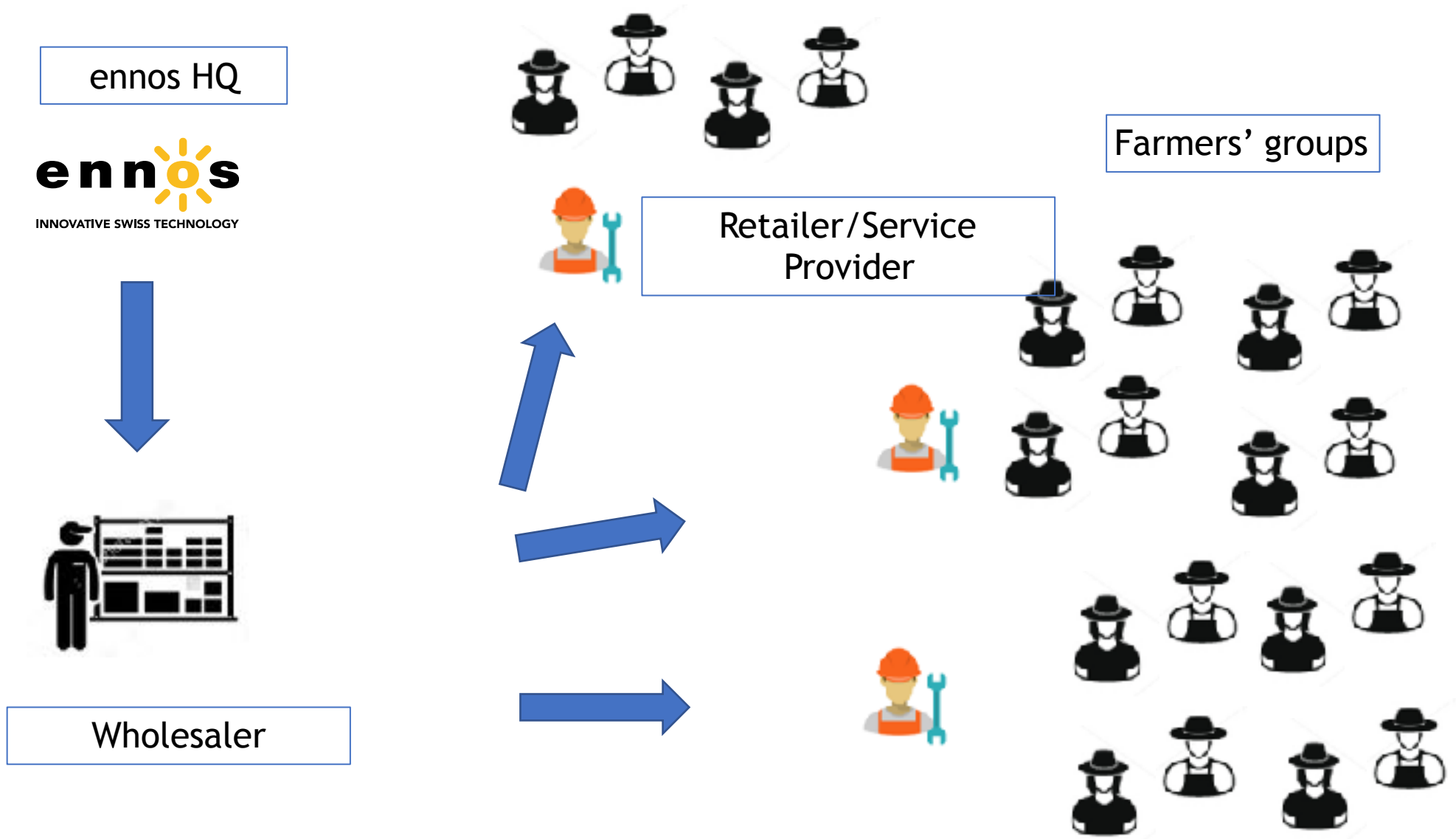
- Retailers with experience and network
- Retailers with some capital and administrative skills, but also technical skills
- Demonstration plots
- Transport/logistics: does he have a motorbike? → customers live in remote areas. How to guarantee last mile delivery of product and services?
- Pricing strategy → product needs to be affordable, even at initially low sales numbers

# Challenges of marketing to farmers



- Usually, farmers need solid demos – they will “only believe it when they see it”
- Farmers will be convinced when they see farmer using it and when they are fully comfortable → technical problems need to be addressed immediately, otherwise reputation is damaged
- Transaction costs are high with spread-out farmers
- Can we have clusters of farmers?
- Cooperatives?
- Specific crops such as cocoa, coffee and sell through supply chain rather than individual farmers

# How to make the distribution sustainable?



# How to strengthen retailers?



Some retailers are weak, no capital, little entrepreneurial spirit and experience



But we try to work with partners and projects that already have a structure, for example are themselves lead farmers and can be trained for installation and maintenance



Many institutional links are important, for example with micro-finance institutions who can give pumps at credit to farmers



Leasing, renting and instalment buying



# Collecting money

- We seek – for farmers – a link with micro-finance programs but it does not work with normal micro-finance products (agricultural loans paid back after harvest, not weekly)
- Kiosks for drinking water: we believe strongly in potential of drinking water kiosks, but first priority is irrigation
- Model of a kiosk that sells water and energy services

# Promotion programs

- For a government, it makes much more sense to subsidize solar pumps than diesel pumps (eternal subsidies vs. one-time investment)
- Huge savings in CO<sub>2</sub> possible
- Big problem is the irrigation practices, e.g. wheat in Bihar: irrigation is only required 3 times per year, the rest of the year, the pump is under-used
- Economic viability only if the pump is used as much as possible because initial investment is high but running costs are close to zero. Better economics for drinking water supply where the pump is used daily
- See concept of Tushaar Shah on farmers as energy sellers (energy as additional “crop”)

Professor Ranjit Gupta Memorial Lecture  
Hyderabad, September 19<sup>th</sup>, 2016

# Rethinking Our Solar Mission:

Farmers as Energy Sellers to the Nation

Tushaar Shah

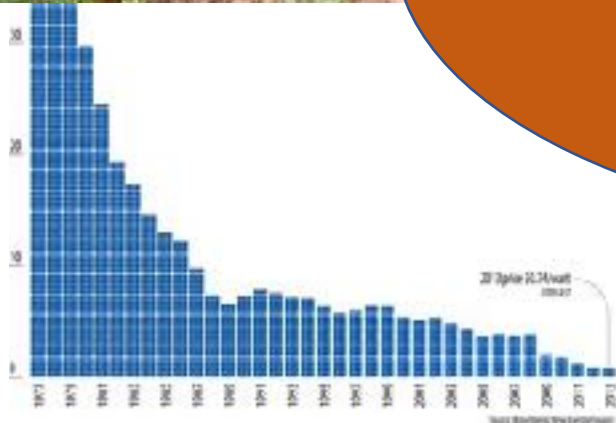


Power subsidies have put inexorable stress on western aquifers..  
Solar pumps mindlessly promoted today will accelerate depletion  
like never before..



- PV cell costs falling faster than predicted: US \$ 1500/kWp in 2012; US \$ 800/kWp in 2016; US \$ 350-400/kWp by 2022?

Democratization of energy...  
grid-independence presents  
a formidable groundwater  
governance challenge.



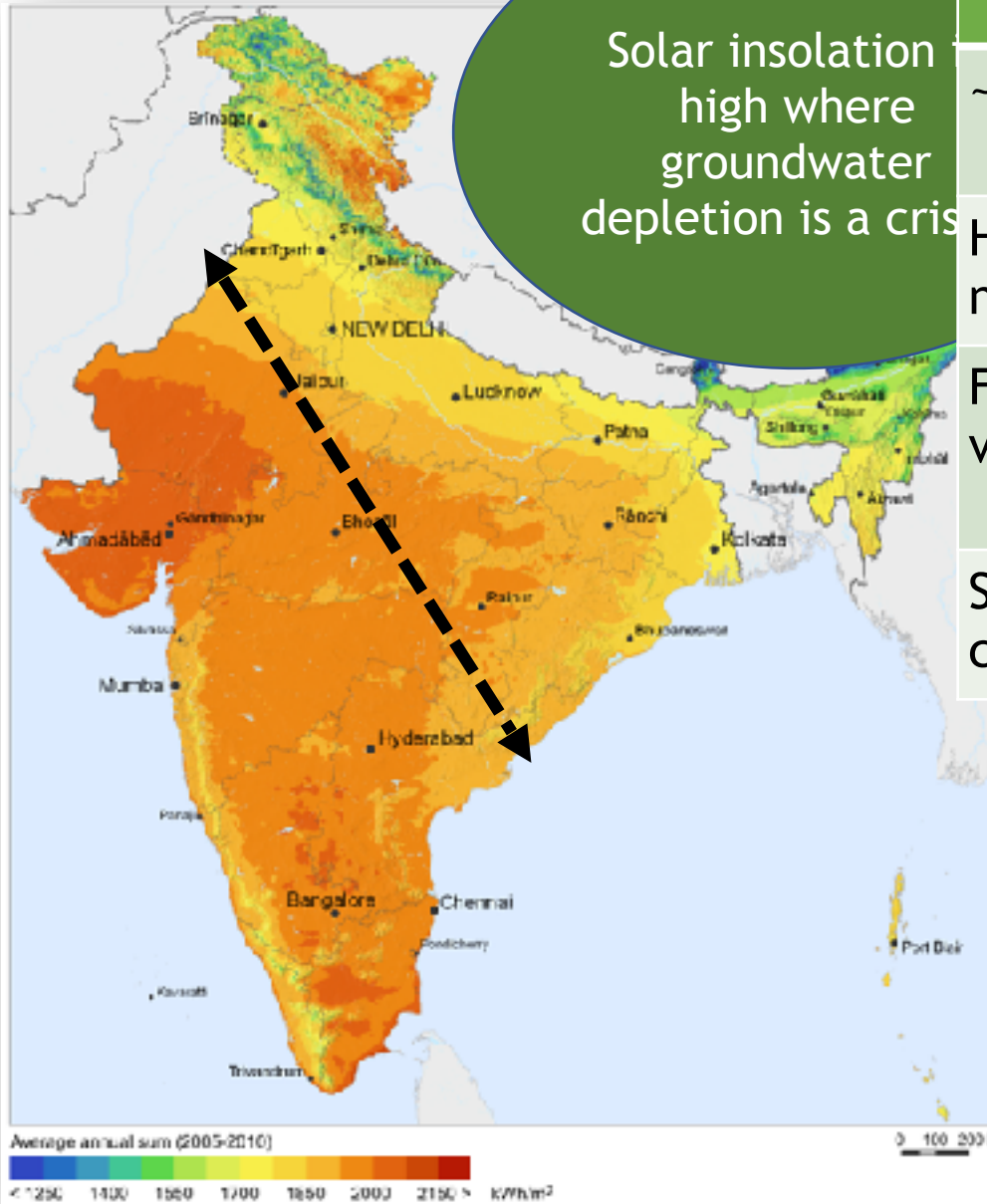
...members in India growing  
...during 1985-2012;  
...million during

...faster than  
...2012; 5kWp  
...use in Bihar;  
...subsidizes 7 kWp solar.

- Non-subsidy solar pump market already a reality
- Zero land footprint..

# Potential for disruption by solar pump juggernaut

Solar insolation  
high where  
groundwater  
depletion is a crisis



## Grid power

~1200 kWh/kW/year

Half or more during nights

Frequent interruptions, voltage fluctuations

Subsidized marginal cost

## Solar power

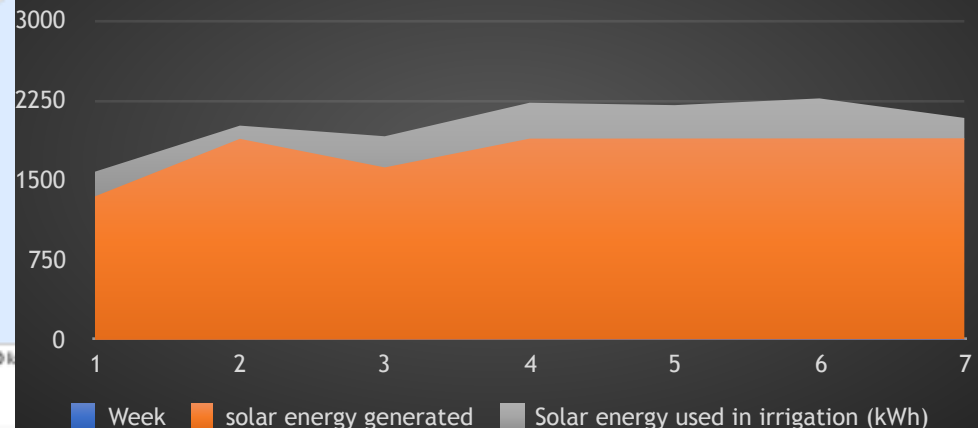
~1500-1800 kWh/kW/year

All day time

uninterrupted; predictably variable voltage

Zero marginal cost

## Dhundhi Solar COOP (54 kW): solar energy generated and used for irrigation (kWh)



Solar energy can be one of the largest and most profitable cash crop for India's farmers.

crop	of	Net Value Added (Rs/ha)	CO2 balance (tCO <sub>2</sub> )
Rice		100	61 million
Milk		10	66 million
100 GW capacity			~0

A solar farmers coop/FPO can operate exactly like an Amul dairy coop, offering reliable market for surplus energy produce at the farmer's door step.

'Growing' solar panels, fertilizers, pesticides and very little water and risk of risk from floods and droughts.

# Churn in India's irrigation economy ..

- Despite public investment, wells are the mainstay of irrigation.
- 21 m wells use up 28% of India's grid power and contribute 6% of India's GHG emissions.
- Farm power subsidy bill: Rs 85,000 crore/year; political grid-lock prevents rationalization of this perverse subsidy
- Western India's aquifers under serious stress
- DISCOM finances are in ruin thanks to perverse subsidies
- National Solar Mission can fix all these by putting farmer in charge of solar power generation.
- social entrepreneurial push needed to demonstrate SPaRC coops/FPOs
- SPaRC has basic elements of the design of robust cooperatives/FPOs



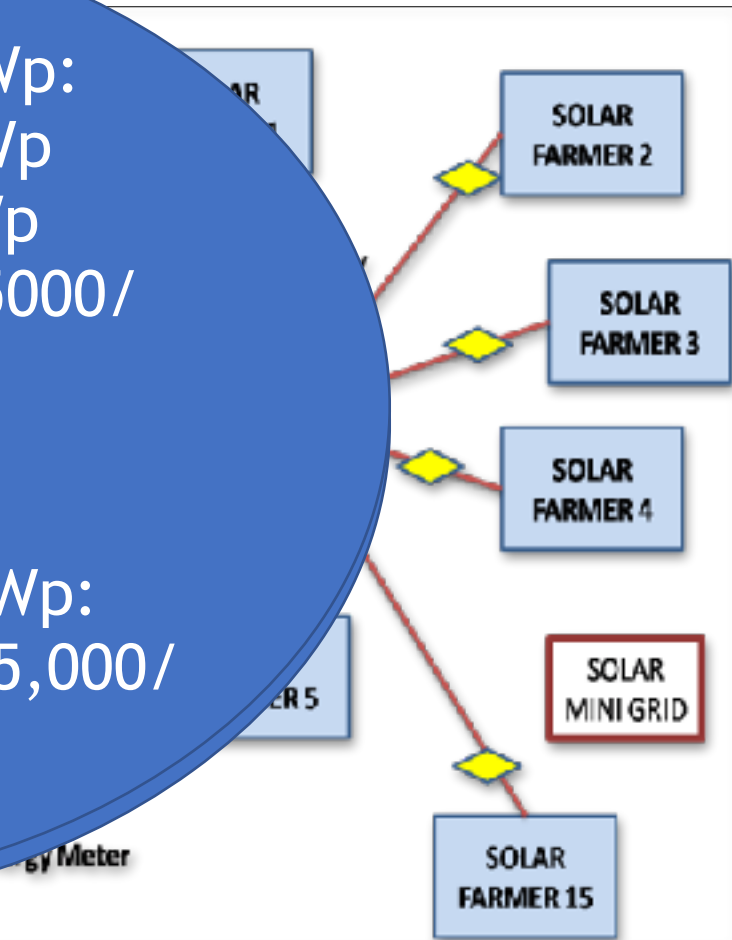
# IWMI's Pilot Project on Dhundhi Village Solar Power Producers' Cooperative

## Services offered:

1. Absorb  
costs  
surp
2. Ass  
farm  
power
3. Add so  
over time

6 farmers with 54.6 kWp:  
4 farmers with 7.5 kWp  
2 farmers with 10 kWp  
Farmer contribution Rs 5000/  
kWp

4 new farmers for 28 kWp:  
Farmer contribution: Rs 25,000/  
kWp





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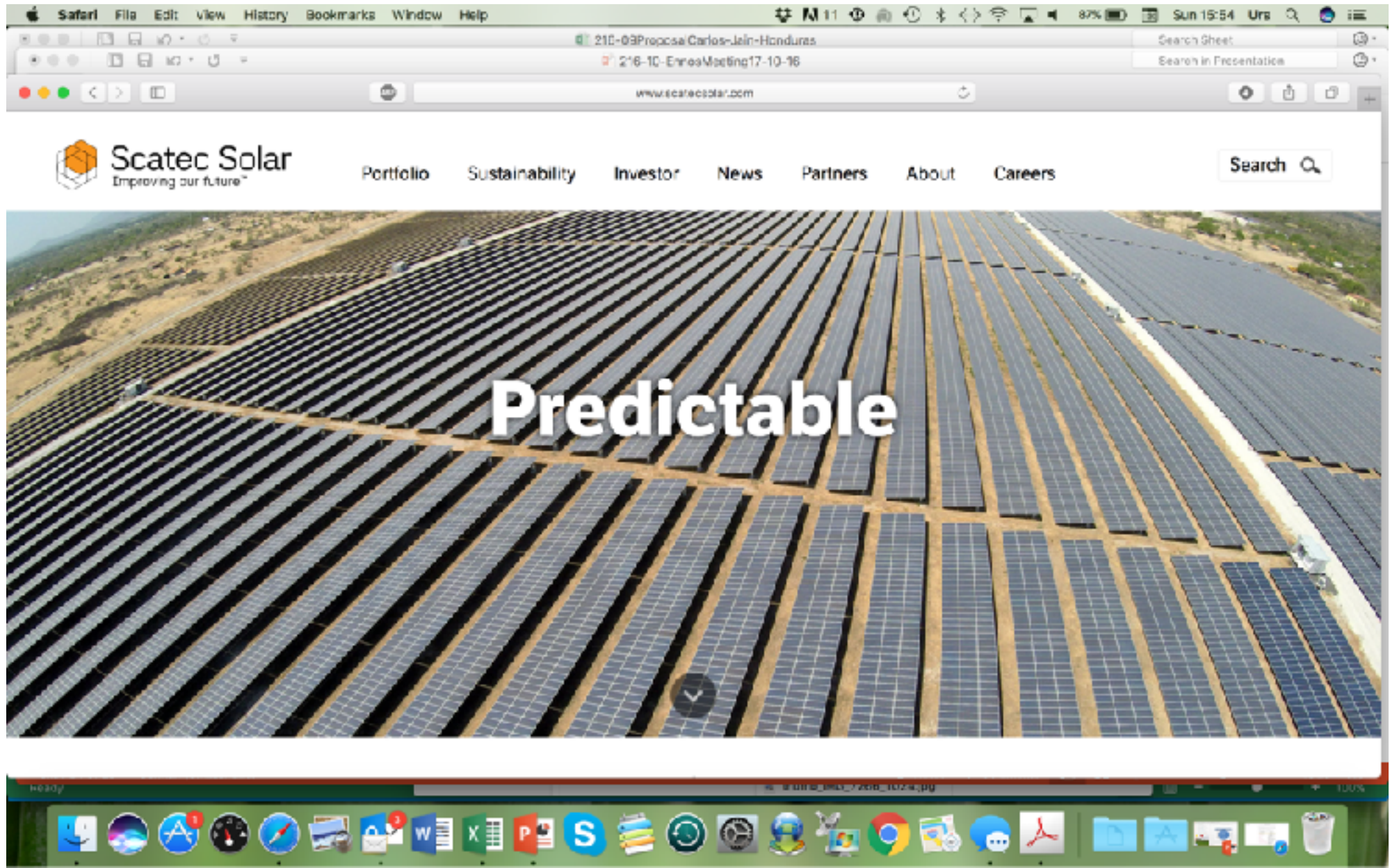
Five  
Problems,  
One  
Solution..

Thank You...

IWMI-Tata Water Policy Program



# Relevant in Honduras



The image is a screenshot of a web browser displaying the Scatec Solar website. The browser's address bar shows the URL [www.scatecsolar.com](http://www.scatecsolar.com). The website's header includes the Scatec Solar logo with the tagline "Improving our future™" and a navigation menu with links for Portfolio, Sustainability, Investor, News, Partners, About, and Careers. A search bar is located on the right side of the header. The main content area features a large, high-angle photograph of a vast solar farm with rows of photovoltaic panels stretching across a dry, hilly landscape. The word "Predictable" is superimposed in large, white, sans-serif font over the center of the solar panels. The browser's status bar at the bottom shows the system time as 11:11 and the battery level at 87%.

Scatec Solar  
Improving our future™

Portfolio Sustainability Investor News Partners About Careers

Search

Predictable



# Greenfield plant in Honduras





















# CEPIRS

Centro Productivo para la  
Innovación Rural Sostenible

Rancherías, Namasigüe  
2016



FOTOVOLTAICA  
LOS PRADOS



Scatec Solar  
Empowering the future

Norfund

IDE  
Cultivando Potencial























