Accessing Finance for Green Growth and LEDS: An Asia LEDS Partnership Workshop

Alternative financing options for SMEs in climate business

Exploring options and opportunities from Crowdfunding

March 12-14, 2014, Sheraton Hanoi Hotel, Viet Nam

Xiaochen Zhang, World Bank

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What is the fastest way to innovate?

It is no longer about storing knowledge...

...but about knowledge

Something that works!
LIPI Thinking for Climate Change Innovation

• What are the challenges we try to address?
• What are the existing successful experiences/ solutions?

Landscape

• How can the solution be financed?
• How to address the “access to finance” challenge for the poor in the solution?

Investment

• What impact does this innovation seek?
• How can such impact be sustained and measured?

People

• Who do you collaborate with?
• Who do you serve?

Impact
A learning journey: crowdfunding for climate actions

Learning about the new context (challenges, opportunities, etc)
• What are the challenges we try to address?
• What are the existing successful experiences/solutions?
• Who do you collaborate with?
• Who do you serve?
• How can the solution be financed?

Co-design solutions based on existing experiences
• Who have been successful in achieving the same goal?
• What are the key experiences/solutions?
• Can they be adopted to climate change business?
• What incentives can we think of to encourage sharing and collaboration?

Pilot and improve the solution before scale up
• Partnership;
• Pilot countries
• Assessment
• Business models;
• Framework and implementation plan;
• Stakeholder engagement
• …

Can CF be an option for CC in Asia?
-a learning journey with me!

• Concerned individuals lack of access to support climate action with safe and decent return;
• Limited access to finance by SMEs for climate business
• Public agencies lack of business models to scale-up micro-level impact with public resources;

• Crowdfunding is spreading to emerging market with a market potential of up to US$96 billion a year by 2025 in crowdfunding investments in developing countries;
• Successful business models are emerging in the industry which address some key challenges mentioned above
Husniya’s new business: my first CF experience

Husniya is a very hardworking and determined woman.

From her earliest years, she worked in the fields. After high school, she enrolled in the College of Medicine. Growing up, she got married. Currently, she has three children. Her husband grows crops.

Husniya also wanted to start her own business and find a source of income. Six months ago, she started her business raising livestock.

Husniya is requesting a loan of 1,000 somoni to buy livestock to expand the working capital of her new business.

http://www.kiva.org/lend/647884
Rang De’s social lending: Debt-Based Crowdfunding

Launched in 2008

**Why:** to lower the cost of capital for our borrowers

**Impact:** raised more than Rs.200 million from 5700+ individuals and corporate social investors and have extended credit to nearly 28,000 borrowers in 16 states of India.

**Business model**
Rang De expects to cover its operational costs through its share of interest paid by the borrowers.

Rate of interest paid by the borrower: 8.5% flat (i.e. 15.33% APR)

Retail Loans, Micro-enterprise Loans and Community Enterprise Loans

WWW. RANGDE.ORG
How does Debt-Based Crowdfunding work: Spark’s experience

Spark offers two innovative capital lease options, lowering the cost of capital for projects while providing investors a solid return:

**spark**
QuickPay Lease

Offers the shortest lease duration and highest lifetime savings.
- Own your equipment faster
- Benefit from significant lifetime savings
- Upfront schedule of fixed repayments
- 5-10% shared savings buffer helps ensure project is cash flow positive from day one.

**Lease Duration:** 1-8 years  
**Interest Rate:** 5-9%  
**Investor Yield:** 4-8%

**spark**
Cashflow Lease

Allows for significant current year cashflow.
- Keep up to 40% of the savings from your project each year (shared savings).
- Spark makes money by participating in savings over the lifetime of the lease.
- Upfront schedule of fixed repayments
- Lower lifetime savings, but more cash in your pocket along the way.

**Lease Duration:** 3-10 years  
**Shared Savings:** 20-40%  
**Investor Yield:** 5-10%

[www.sparkfund.co](http://www.sparkfund.co)
A step by step “how to”: how does Spark work?

**Spark**

**Spark Crowd**
Invests $100k

**EXAMPLE:**
Charter School LED Lighting Upgrade
(QuickPay Lease):
Cost: $100,000
Origination Fee: $3,500
Savings: $33,333/year
Interest Rate: 7.5%

Spark keeps:
$11,000 over 4 years
(Carry rate, origination fee, platform fee)

School keeps:
$17,623 over 4 years
(13% Shared savings)

**Spark**

**Spark purchases LEDs**
($100K Project Cost)

**Step 1:**
**Investors** select projects to finance on the Spark platform and purchase efficiency notes.

**Step 2:**
**Customers** pay an upfront origination fee of between 2% and 5%, then make fixed monthly lease payments based on expected savings.

**Step 3:**
**Investors** then receive monthly distributions from Spark, earning back their investment plus interest.

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*THE WORLD BANK*  
World Bank Institute

**Climate Change**
But what if you are a solution provider who look for equity investments?

QUETSOL PAYG KITS

All Pay As You Go Kits include: Perpetual warranty | Mobile payments | Costless upgrades
Winning Units:

10 watt panel

- 2-3 LED lights: 3.5W each
- 5 hours of electricity per night
- Lighting, Cell-phone and USB charging
- Monthly Cost: $13 (compared to $16 in candles)

75 watt panel

- 5-8 LED lights: 6W each
- 5 hours of electricity per night
- Three plugs for AC appliances: Computer, Internet, TV, accessories
- Monthly Cost: $45 (compared to $75 diesel generator)

http://www.quetsol.com/
Equity crowdfunding for climate actions

Current Commitments

$720,350 of $1,000,000

Convertible Note type

73% of goal

Quetsol is currently raising at least $1,000,000 with a minimum investment amount of $25,000. This raise round opened on January 14, 2014 and will close on March 31, 2014.

I'm Interested...

Previous Funding

<table>
<thead>
<tr>
<th>Date</th>
<th>Amount</th>
<th>Raise Type</th>
<th>Raise Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2011</td>
<td>$700,000.00</td>
<td>Equity</td>
<td>Investor</td>
</tr>
</tbody>
</table>

https://www.crowdfunder.com/quetsol/deal/
Can Crowdfunding working for adaptation project: a example of a “Perks-Based” Crowdfunding project

The World Bank will match funds raised up to $50,000!
“This is an exciting opportunity to explore alternative mechanisms of financing projects, as well as to test the viability of mobile sensor technologies to address development challenges,” said Chris Vein, Chief Innovation Officer for Global ICT Development at the World Bank.

Is Crowdfunding an one-fits-all solution?

http://www.indiegogo.com/projects/momo-keep-the-water-running
Where Crowdfunding Fits on the Funding Lifecycle?

Crowdfunding Investing > US$1M
Once ideas have met minimum viable tests by the crowd or community an equity or debt-based crowdfunding campaign is appropriate. It will provide increased capital for growth and vested interest of supporters. Angels can also play an important role here.

Mainstream Financing > US$1M
At this stage, once ideas are proven, models tested and customer interest engaged, the risk for follow on, larger, more traditional capital from Angels, Venture Capital or Private Equity may be engaged.

Crowdfunding < US$50K
Donation or perks based crowdfunding is a good fit for idea/inception and proof of concept/prototyping. It allows the community to decide which ideas are worth funding early on.

Institutional Capital
Companies that have proved sufficient market growth and traction that are increasingly capital intensive may be able to seek funding from investment banks at this stage.

http://www.infodev.org/infodev-files/infodev_crowdfunding_study_0.pdf
Where Crowdfunding Fits to Help Scale up Local Climate Action

The side is from Konrad Ritter
Example: Telecom Energy Synergy for Off-Grid Electrification - An A-B-C Model

The proposed “A-B-C” business model: From Anchor to Business to Community

A+B+C+ Policy and Financial Support
- Creates an enabling environment to replicate and scale-up off-grid electrification

A+B+C
Anchor + Business + Community
- The new micro-grid provides affordable energy to households

A+B
Anchor + Business
- Local Businesses use power to increase operating hours

A
Anchor, Mobile Network Operator
- Large, reliable, credit-worthy customer needing power for mobile tower

Evolution of power distribution under the A-B-C Model
Process: Collaborative Learning

Global Virtual Roundtable
5 Cities; 32 countries; 190 participants
100+ questions, comments and discussions

Feasibility study in Tanzania

Investor conference in London

Telecom Energy CoP
9 months; 490 members; 5 e-discussions; 160 postings
4 webinars and conferences

WBI-USADF Business Model Challenge
2 f2f workshops; 24 proposals; 5+5 winning proposals, collaborative advisory support

Innovative financing solutions
Scaling crowdfunding for sustainable solutions serving the Base of the Pyramid (one of the 12 finalist of the IFC SPACE Competition)

https://collaboration.worldbank.org/groups/incubating-innovation-for-rural-electrification-the-telecom-energy-initiative
Scaling crowdfunding for sustainable solutions serving the Base of the Pyramid: Process
Can Crowdfunding Help to implement Policy Instruments for CC: CF for the introduction of EE Technology Standard (early idea)

- TA on Standard
- Pilot (grants + CF for SMEs)
- Scale (grants + CF + banks)
Potential steps in introducing CF for climate change
(Eary idea)

**Process**

1. Self assessment
2. CF country studies
3. Stakeholder engagement, partnership and business models
4. National program addressing CF ecosystem
5. Pilot in supporting a selected number of NAMAs or other CC interventions

**Resources**

- Crowdfund Investing Country Readiness Survey
  https://docs.google.com/forms/d/1nRnaOpgOnwC-x0ApDylsYMuH1hmvl6E-Cra7ZtLeC4Q/viewform

- Crowdfunding's Potential for the Developing World

- Climate Innovation Centers
  build private sector innovation capacity through a holistic service
  **From Asia?**

- Crowdfunding Industrial Leader Roundtable (Side-event) in Carbon Expo
  (Cologne, Germany, May 28-May 30, 2014, )
### A. Technology – Technology and education are necessary components.

<table>
<thead>
<tr>
<th>1. What is the level of Internet and/or mobile smartphone penetration in your country? (1 = low, 10 = high)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low 2 4 6 8 10</td>
</tr>
<tr>
<td>High 1 3 5 7 9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. What is the most readily available speed of mobile connectivity in urban areas in your country? (1 = no connectivity, 10 = 4G connectivity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No connectivity 1 3 5 7 9</td>
</tr>
<tr>
<td>4G connectivity 2 4 6 8 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. How engaged is the population via social media including LinkedIn, Facebook, Twitter, other local social networks? (1 = very low utilization, 10 = very high utilization)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very low utilization 1 3 5 7 9</td>
</tr>
<tr>
<td>Very high utilization 2 4 6 8 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. What is the average education level reached in the country? (1 = less than 4 years, 10 = over 12 years of education)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 4 years 1 3 5 7 9</td>
</tr>
<tr>
<td>Over 12 years 2 4 6 8 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. Business skills (accounting, marketing, and so on) are learned? (1 = on the job, 10 = in education or formal training)</th>
</tr>
</thead>
<tbody>
<tr>
<td>On the job 1 3 5 7 9</td>
</tr>
<tr>
<td>In education or formal training 2 4 6 8 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. The banking system uses and supports electronic funds transfers, or are other Internet or mobile-money transaction enabled services available? (1 = not available, 10 = very common)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available 1 3 5 7 9</td>
</tr>
<tr>
<td>Very common 2 4 6 8 10</td>
</tr>
</tbody>
</table>

### B. Culture – Does a culture of entrepreneurship exist and is entrepreneurship considered a reputable career path?

<table>
<thead>
<tr>
<th>7. As a career path, how favorably do people view entrepreneurship in your country? (1 = not very favorably, 10 = very favorably)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not very favorably 1 3 5 7 9</td>
</tr>
<tr>
<td>Very favorably 2 4 6 8 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. In making investment, how risk-averse are people in your country? (1 = people don't take risks with their investments, 10 = people take risks and include a small proportion of high risk investments as part of their investment options)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No risk 1 3 5 7 9</td>
</tr>
<tr>
<td>High risk 2 4 6 8 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. How risk-averse are people in your country to changing jobs? (1 = people don't take risks with their careers, 10 = people take risks and include changing jobs as part of their career advancement strategy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No risk 1 3 5 7 9</td>
</tr>
<tr>
<td>High risk 2 4 6 8 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10. In general, are actions more driven by individualistic goals or group goals? (1 = people act individually, 10 = people make decisions based on group dynamics)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual goals 1 3 5 7 9</td>
</tr>
<tr>
<td>Group goals 2 4 6 8 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11. How would you describe the general level of trust between individuals within the society/institution? (1 = building building relationship between individuals takes a great deal of time and experience, 10 = building relationships form quickly)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takes time to develop 1 3 5 7 9</td>
</tr>
<tr>
<td>Happens quickly 2 4 6 8 10</td>
</tr>
</tbody>
</table>

### C. Regulation – Regulation can both enable and deter entrepreneurship and crowdfunding depending on its structure and scope.

<table>
<thead>
<tr>
<th>12. What is the level of regulation/process complexity involved in starting a business today? (1 = very burdensome, 10 = very easy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very burdensome 1 3 5 7 9</td>
</tr>
<tr>
<td>Very easy 2 4 6 8 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13. What is the level of regulation/process expense around hiring and firing employees? (1 = very burdensome, 10 = very easy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very burdensome 1 3 5 7 9</td>
</tr>
<tr>
<td>Very easy 2 4 6 8 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14. What is the level of regulation around going out of business/closing a business? (1 = very burdensome, 10 = very easy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very burdensome 1 3 5 7 9</td>
</tr>
<tr>
<td>Very easy 2 4 6 8 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15. In evaluating financial regulation, to what degree does investor protection take precedence over the ability of businesses to raise money to start or grow? (1 = government is focused primarily on investor protection, 10 = government is focused primarily on access to capital for businesses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investor protection most 1 3 5 7 9</td>
</tr>
<tr>
<td>Access to capital most important 2 4 6 8 10</td>
</tr>
</tbody>
</table>

### D. Capital – The availability of capital is usually one of the most prominent missing elements when attempting to build a successful entrepreneurial ecosystem.

<table>
<thead>
<tr>
<th>16. Are new small and medium businesses able to access funding from capital markets? (1 = yes, 10 = no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 1 3 5 7 9</td>
</tr>
<tr>
<td>No 2 4 6 8 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17. Are there active angel investors in my country? (1 = yes, 10 = no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 1 3 5 7 9</td>
</tr>
<tr>
<td>No 2 4 6 8 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>18. Are there active venture capital funds in my country? (1 = yes, 10 = no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 1 3 5 7 9</td>
</tr>
<tr>
<td>No 2 4 6 8 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>19. Are there active investment funds in start-ups and small businesses in my country? (1 = yes, 10 = no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 1 3 5 7 9</td>
</tr>
<tr>
<td>No 2 4 6 8 10</td>
</tr>
</tbody>
</table>
Annex 2: Relevant studies


http://www.eurocapacity.org/downloads/CF4CC.pdf
Annex 3: Climate Innovation Centers - build private sector innovation capacity through a holistic service

*Climate Innovation Centers*

- **Venture Financing**
  - Proof-of-concept grants up to USD 50k
  - Seed Capital Investments from USD 50k-1m
  - Investment facilitation and syndication

- **Business Advisory/Training**
  - Business training, mentoring, access to professional services
  - Technical training and skills development
  - Education, seminars and events

- **Government Advisory**
  - Research on sector policy trends and best practice
  - Engagement with government on SME policy issues
  - Policy dialogues, roundtables and events

- **Market Intelligence**
  - Access to databases on technologies, standards and suppliers
  - Information on markets, competitors and potential partners
  - Research, reports and analytics on sector trends

- **Technical & Office Facilities**
  - Office space and services for entrepreneurs and start-ups
  - Access to technical facilities to test and demonstrate products
CICs being established ...

The Ghana CIC will support local SMEs to participate in CTF Ourzazate and other solar ambitions

The Morocco CIC will support local SMEs to participate in CTF Ourzazate and other solar ambitions

The Ethiopia CIC will support local SMEs to participate in CTF Ourzazate and other solar ambitions

The Ethiopia CIC will focus on agriculture and include a women-led innovation program

The Vietnam CIC will focus on green buildings and support the government’s Green Growth Strategy

The India CIC will support a networked approach, covering multiple locations and will address skills constraints and lack of financing for the next generation of Indian cleantech entrepreneurs

The Kenya CIC, is featured on GoK’s Climate Change Action Plan and is already working with more than 70 Kenyan firms

The South Africa CIC, featured in the government’s Green Economy Accord, will promote inclusive innovation

The Caribbean CIC is regional and focus on tourism, agriculture, distributed renewables and adaptation tech
Annex 4: one of many business models

Climate change projects to be included in the pool (National)

Investment transferred to projects

Projects information/ Fee(PI/F)

International Crowdfunding CC projects Pool

Donor risk sharing arrangements, capacity support and guarantee

Debt-based crowdfunding

Investor 1

Investor 2

Investor 3...

Investor a

Investor b

Investor c...

Crowdfunding sites

Donation-based crowdfunding

ERs

Transfer

Loans

Repayment

PI/C

Investment

PI/F
Q&A
Thank you
XZHANG8@WORLDBANK.ORG