Promoting Green Jobs: Experience in India on policy and project support

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Green Jobs: Meeting challenges of 21st century

• Achieving economic and social development and environmental sustainability
  – Environmental: climate-related disasters (262 mill), water shortages (1.8 mill), environmental refugees (50 mill), displacement by flooding (330 mill), food shortages (180 mill now + 600 mill 2080), loss of biodiversity
  – Social/decent work: working poor (1.3 bill), unemployed (190 mill), young job seekers (500 mill), no access to social security (5.3 bill), food, shelter (1 bill), energy (1.6 bill)
BUT WHY SHOULD THEY COMPLAIN ??!
THIS TRULY IS A GREEN JOB!
Is this a green job?
Is this a green job?
Green Jobs are Decent Jobs

- E.S, but not Decent
- Neither ES nor decent
- Decent but not E.S
- GREEN JOBS
GJ example: green & decent recycling
GJ is not just GHG reduction

✓ Avoid greenhouse gas emissions (decarbonize economies)
✓ Reduce consumption of energy and raw materials (dematerialize economies)
✓ Minimize waste and pollution
✓ Protect and restore ecosystems and environmental services
✓ Adapt to climate change
But, how will the climate change affect me in Nepal?
Jobs - missing element in CC discourse

How do these impact on labour market (i.e., my job)?
Ex.) How many jobs will be affected if new policies change the course of urban air pollution?
Good example in Nepal

• Bio-mass stove distributed more than 30,000 (National Agriculture and Environment Forum’s estimate as of Mar. 2009)
  – Cleaner air at home compared to wood burning stove → reduce death by asthma and bronchitis
  – Improve thermal conversion efficiency
  – Mitigate the loss of trees (otherwise 10 million t/y)

• This is green & decent!
  – Potential for further job creation w/ business model enhancement and policy intervention
How GJ mainstreamed in India?

1. Policy dialogue
2. Capacity building
3. Studies
4. Demonstration projects

Mutual feedback critical for coherent policy development & implementation.
1. Policy dialogue – before GJ

- Exec sponsorship from the Prime Minister
  - “Low carbon path to inclusive growth” as political mantra
  - Preparation of State Level Action Plan on CC (SAPCC) (presently being prepared)
Green Jobs introduced

• GJ policy mission (Dec. 2008)
• Formation of GJ task force led by MOLE (Jan.-Mar. 2009)
• Tripartite consultation w/ global GJ team (Mar. 2010)
• GJ national conference (Jun. 2010)
• Workshop on Preparation of State Level Action Plan on Climate Change (SAPCC) (Aug. 2010)
• 2nd meet of GJ task force (Jan. 2011)
# 8 Missions of National Action Plan on CC

<table>
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<tr>
<th>Mission</th>
<th>Objective</th>
<th>Responsible Entity</th>
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<tr>
<td><strong>National Solar Mission</strong></td>
<td>• 20,000 MW of solar power by 2020</td>
<td>Ministry of New &amp; Renewable Energy</td>
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<tr>
<td><strong>National Mission for Enhanced Energy Efficiency</strong></td>
<td>• 10,000 MW of EE savings by 2020</td>
<td>Ministry of Power</td>
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<td><strong>National Mission for Sustainable Habitat</strong></td>
<td>• EE in residential and commercial buildings, public transport, Solid waste management</td>
<td>Ministry of Urban Development</td>
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<td><strong>National Water Mission</strong></td>
<td>• Water conservation, river basin management</td>
<td>Ministry of Water Resources</td>
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<tr>
<td><strong>National Mission for Sustaining the Himalayan Ecosystem</strong></td>
<td>• Conservation and adaptation practices, glacial monitoring</td>
<td>Ministry of Science &amp; Technology</td>
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<td><strong>National Mission for a Green India</strong></td>
<td>• 6 mn hectares of afforestation over degraded forest lands by the end of 12th Plan</td>
<td>Ministry of Environment &amp; Forests</td>
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<td><strong>National Mission for Sustainable Agriculture</strong></td>
<td>• Drought proofing, risk management, agricultural research</td>
<td>Ministry of Agriculture</td>
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<tr>
<td><strong>National Mission on Strategic Knowledge for Climate Change</strong></td>
<td>• Vulnerability assessment, Research &amp; observation, data management</td>
<td>Ministry of Science &amp; Technology</td>
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State level actions

• In 2008, the state of Himachal Pradesh introduced a voluntary 'green tax' on vehicle-users to create a fund for combating climate change.

• The Chief Minister of the state of Gujarat announced in February 2009 the establishment of a special department to prepare a comprehensive policy on issues related to climate change and global warming.

• On August 20 2009, the government of Maharashtra approved the state's climate change action plan.

• Prime Minister Dr Manmohan Singh asked all state environment ministers to prepare state-level action plans on climate change (Aug. 2009) → Many plans are presently being formulated.
GJ contribution

• Importance of JOBS aspect in CC agenda understood and being discussed by key national and state level policymakers

• Ex.) Collaboration bet. MNRE & MOLE started to coordinate skills inputs to the National Solar Mission

• GJ becoming one of the issue areas to be included in the SAPCC
2. Capacity building

• Sharing GJ experiences through missions of specialists
• Turin and regional training of constituents
• In-country training & technical support to workshops organized by constituents
• GJ community of practice launched
• Support attendance at regional CC meetings
3. Studies

- Case study: A "Green" Value Chain Development Exercise in Jabalpur, India - [pdf 477 KB]
- NREGA - A review of decent work and green jobs in Kaimur district in Bihar - [pdf 3354 KB]
- Skills for green jobs in India - background country study - [pdf 8880 KB]

Further studies

- Sector-wise GJ mapping exercise in selected states (to assist SAPCC)
- Project level assessment of GJ creation
- Update of the Green Value-Chain case to consolidate methodology
- Study on steel sector GJ as part of global study

- Further respond to the research needs of the central and state governments
  - Contribute to “Knowledge” mission through research
4. Demonstration projects

- Green value-chain pilot (1st case study done)
- FIP/SCORE with cleaner production (phase II project starting)
- Making MG-NREGA contribute to greener & more decent work (new)
Green VCD: From non-green and un-decent
To greener and decent work
The dairy industry in India

• Largest dairy sector of the world.
• Livestock is contributing about 22% to the agricultural GDP and about 5.5% to the national GDP (CSO, 2001).
• The livestock sector provides regular employment to 18.4 million people in principal/subsidiary status, constituting about 5% of the total workforce (GOI, 2002).
• Yield (kgs/animal/year) is still one of the lowest in the world - 1000 as against global average of 2100.
  – Room for improvement!
Biogas in India

- Population growth, reduced trees, fuel shortage in rural areas
- India’s 300 million cattle produces billion tons of cow manure /y, ¾ of which is burned for heat and cooking purposes, leading to eye disease, lots of flies, loss of fertilizer resources.
- Cow dung emit methane, 20-25 times more global warming than CO2.
Benefits of biogas system

1. Production of energy (heat, light, electricity).
2. Transformation of organic wastes into high quality fertilizer.
3. Improvement of hygienic conditions through reduction of pathogens, worm eggs and flies.
4. Reduction of workload, mainly for women, in firewood collection and cooking.
5. Environmental advantages through protection of forests, soil, water and air.

Each biogas plant can mitigate about five ton's of carbon dioxide equivalent per year (Winrock Nepal study)
Initiatives under G-VCD

• Facilitate dissemination of biogas technology at large scale firms
  – Mitigate potential loss of income for cow dung women through a) alternative livelihood & b) enhanced access to social protection measures

• Facilitate dissemination of biogas technology to small & medium dairy farms for the better utilization of cow dung
  – Facilitate investment decision through investment simulation
  – Build supplementary income sources (e.g., green fodder, re-use of slurry for compost, calf rearing)

• Facilitate dissemination of biogas based cook stove system to households for the better utilization of cow dung
  – Problem solution kit to increase the success rate of installed biogas systems
Most of the stakeholders identified and mobilized through VCD

Value Chain Steering Group

- SMEs & unions
- Large enterprises
- Banks
- lead firms & foreign buyers
- Industry bodies & Associations
- BDS providers & Consultants
- NGOs & Donor Agencies
- Government departments, institutes & initiatives
- Accreditation Agencies
- Supply industries
- Government departments, institutes & initiatives
Policy feedback expected

• Feedback to subsidy policies to renewables re.: how to enhance the performance of ongoing schemes; what market will take care and what government should intervene.

• Feedback to convergence of several policies, e.g., link between renewable schemes and NREGA, health policies, skills programmes, agriculture extension programmes, livelihood support programmes, access to finance policies and carbon finance opportunities.
Key questions when designing pilot projects

• Who gain and who lose? (Just Transition)
• How far the market will take care?
• Is the incentive set right?
• What about the social side?
• What capacity could be built locally?
• Prospect to serve policy dialogue later on?
Green Jobs in the Local Economy – a scenario

Access to energy for the poor

- Grid extension
- Area-wide collective options
- HH level solutions
- repair & maintenance jobs
- some manufacturing jobs

Greener development of sectors with vast informality
(incl. green & conventional jobs)

- Agriculture
- MSMEs
- Waste mgt & Recycling
- Building & Construction

Induced impact
What we can do (1)

Access to (clean) energy for the poor

- Grid extension

Area-wide collective options

- HH level solutions
  - repair & maintenance jobs
  - some manufacturing jobs

- We support:
  - gauging the labour market impact of selected energy projects and resulting skills gap
  - Value-chain and business model dev

- Partnership required
  - e.g., regulators, technology providers, training providers, financiers, market facilitators
Informal economy & green jobs

Key actors:
- Government
- Workers
- Employers
- Civil society
- Int’l orgs

Policy & regulatory environment

Market dynamics

Formal economy

Informal economy

Green Jobs

ILO’s work

formalization
Introduction of green technologies

- Cost saving in terms of energy & waste reduction
  - Firms become more competitive
  - Firms grow, creating more GJ
  - Demand for maintenance services grow, creating more GJ

- Technology supplier firms grow, creating more GJ
  - Parts supplier firms grow, creating more GJ
  - Parts supplier firms decline, reducing brown jobs

- Brown technology supplier firms decline, reducing brown jobs
  - Alternative use of the waste may eliminate jobs previously dealt with

Gain

Loss
Jobs created or lost? How about quality?

Introduction of green technologies

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- Alternative use of the waste may eliminate jobs previously dealt with
  - Absorption of the labour within the expanding segment of VC

Decent Work Challenge
- Integrated approach to green, decent and profitable businesses

Keeping jobs
- Conversion of brown jobs into GJ in the same firm/VC
  - Alternative livelihood thru entrepreneurship & ALMP

Compensating the loss
- Alternative livelihood thru entrepreneurship & ALMP
Materialize the impact of access to energy into local economic development ...

Access to (clean) energy for the poor

Greener development of sectors with vast informality

is NOT AUTOMATIC

• Calls for an integrated approach
• Need to work with various stakeholders incl. convergence with government programs/schemes
What we can do (2)

• ILO programmes & tools available:
  – Local competitiveness & value chain tools
  – Entrepreneurship, skills and MFI training
  – Workplace enhancement & productivity prog.
  – Support to expand social protection coverage
  – Tools to address needs of vulnerable groups

Greener development of sectors with vast informality

- Agriculture
- MSMEs
- Waste mgt & Recycling
- Building & Construction
"Sustaining Competitive & Responsible Enterprises (SCoRE)"

SCoRE supports enterprises to strengthen collaboration and communication between managers and workers to:

- Boost quality and productivity
- Improve working conditions (HR, OSH etc)
- **Reduce environmental footprint** and ...
- ...make enterprises more competitive in national and global markets, thereby creating or protecting jobs in the economic crisis.
SCoRE - Safer working environments

before

after
SCoRE - Higher productivity

before

after
SCoRE makes enterprises more competitive in national & global markets

Organize your workplace → Quality → Workplace Cooperation → Productivity and Cleaner Production

- Two day classroom training for managers and workers
- Local experts for organization and intensive follow-up
- Worker / Manager approach to continuous improvement
SCoRE’s Cleaner production module in collaboration with UNIDO
Recommendations for policymakers

• Win – win not by default, but by design

• Policies that work:
  1. Map employment/income opportunities and risks
  2. Start with low-hanging fruit
  3. Target: youth, women, the poor, SMEs
  4. Engage stakeholders in social dialogue
Useful websites

- **Green Jobs India site:**

- **Asia-Pacific Green Jobs site:**

- **ITC-Turin’s Green Jobs training site:**
  http://greenjobs.itcilo.org/

- **LED knowledge website:**
  http://www.ledknowledge.org/

- **SCoRE programme site:**