COUNTRY CASE STUDY on the Climate Change Education for Sustainable Development (CCESD)

Dr. B. K. Ranjit
The main objectives of the programme

1. to develop Monitoring and Evaluation Plan and Tools

2. to undertake the field study

3. to develop Monitoring Report on the implementation of CCESD

4. to develop Country Case Study on the national CCESD programme
Scope and Methodology

- Desk review: project document, monitoring report, progress report, National Survey, mapping report, etc.

- Field work: in the 3 of the project district, viz. Morang, Dhanusha, and Kathmandu to collect primary data/information to assess overall achievement, draw lesson, and collect perceptions and suggestions of the stakeholders for further development of climate change education in the Nepalese schools.

Continued……
Activities at the field

- Questionnaire: students, teachers, head teachers, Resource Persons, and Government Officials
- Group Discussion: mainly concentrated on these themes – Activities/strategies/actions on CCESD; Impacts/outcome/ effectiveness of CCESD; Lessons (positive and negative) – what works and what does not work; constraints/ shortcoming/ difficulties; and Future/further suggestion – improvement in ongoing endeavors and new areas/aspects to be covered.
- Case, Story
- Observation: Researcher(s) also observed school and community surrounding to validate as well as assess the changes due to climate change content and teaching in the curriculum and curricular materials.
Major Findings

A. Respondents who were participated in orientation, two days training and awareness campaign being organized by partner organizations in collaboration with UNESCO, Kathmandu were well aware of integration of CCEd. components into national curriculum.
B. Perceptions regarding Climate Change Education in the National Curriculum

- **Students** – expressed the incorporation of CC education in Science and environment, Social studies and population in case of lower secondary level whereas in science, social studies and health population and environment in case of secondary level.

- **Teachers** – Participating teachers further specified the contents related to CC that have been incorporated in curriculum based on the subject matter. The major CC issues incorporated were global warming, natural disasters and pollution.

- **Government Officials** – Government officials also opined that the contents related to CC have been well incorporated in the national curriculum in different subjects.
C. Teacher Preparation on Climate Change Education

- The training was a milestone in raising the awareness among the teachers about the process and impacts of CC
- Opinions expressed by teachers:
“We were aware about the climate change and its associated impacts prior to participating in the training but had never considered it important. But after the training we were convinced and realized potential impacts of climate change. Training provided us with necessary knowledge, skills and tools to work on climate change and motivated us to work from school to households and community level to contribute mitigating its impacts in the lives of people. We got the opportunity to transform the knowledge learnt from the training in our daily lives. We learnt the importance of plantation and have practiced the concept of kitchen garden in school and also at home. The people in my community have been influenced by the greenery at my home and they are also making their respective homes green.”

Sujita Khanal
Secondary Teacher
Jeevan Bikash Public School, Morang
“Once I was aware about the CCEd after participating in the training, I have been involved in educating and raising awareness among other people especially in the Women’ group formed in my community. I was able to develop professionalism about CC and have been actively participating in educating the households and community on mitigation measures. I have practiced kitchen garden at my home and also transfer the knowledge to other women of my group about the importance of plantation at home to maintain greenery on one hand and on the other to produce fresh fruits and vegetables without using chemical fertilizers and pesticides in the land.”

Bandana Thapa (Uprety)
Shree Kankali Secondary School, Kathmandu
"The training was found fruitful in raising the awareness regarding the management of solid waste produced at schools and houses. We learnt the 3R concept in waste management and have been effectively practicing at schools and home. I have now minimized the use of chemicals in my kitchen garden as I have learnt the ways to prepare compost from the daily kitchen wastes. In addition, I am also involved in disseminating the knowledge among students and other people in the community after I developed professionalism in the issues related to CC."

Ram Dular Jha
Lower Secondary Teacher
Rajarshree Janak Lower Secondary School, Janakpur
Teacher Preparation was associated with Process, Activities & Reflection

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Morang</th>
<th>Kathmandu</th>
<th>Dhanusha</th>
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<tbody>
<tr>
<td>i. Process</td>
<td>• Text books</td>
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<td></td>
<td>• Teachers’ guides</td>
<td>• Teachers’ guides</td>
<td>• Training</td>
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<td>• Supplementary materials</td>
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<td>• Self-learning modules</td>
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<td>• Training packages</td>
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<td>i. Activities</td>
<td>- Project work</td>
<td>- Project work</td>
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<tr>
<td></td>
<td>- Role play</td>
<td>- Role play</td>
<td>- Group work</td>
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<td>- Brain storming</td>
<td>- Brain storming</td>
<td>- Debate, essay and poem competition</td>
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<td></td>
<td>- Case studies</td>
<td>- Case studies</td>
<td>- essay and poem competition</td>
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<tr>
<td></td>
<td>- Group work</td>
<td>- Group work</td>
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<tr>
<td></td>
<td>- Field visit</td>
<td>- Field visit</td>
<td></td>
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<tr>
<td></td>
<td>- Debate, essay and poem competition</td>
<td>- Debate, essay and poem competition</td>
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<td></td>
<td>- Kitchen Garden</td>
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## Teacher Preparation was associated with Process, Activities & Reflection

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<tr>
<td>i. Reflections</td>
<td>Teachers have felt easier to deliver the knowledge on CC issues and students have well participated and grasped the matter taught to them through these different processes and activities</td>
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<td>Teachers have been able to illustrate some of the phenomenon and process of CC among the students but students are seeking for more detailed process and activities</td>
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D. Development of Teaching-learning Supportive Materials

- Developed materials by some schools themselves.
- Assisted schools by NGOs for developing additional materials.
- Provided teaching-learning materials by Municipalities to schools.
- Applied instructional materials by few schools.
E. Student's Learning

- Importance of plantation, kitchen garden, solid waste management and awareness campaign was found to be appreciable among students.
<table>
<thead>
<tr>
<th>Content/Activities</th>
<th>Teachers/RP (N=44)</th>
<th>%</th>
<th>Students (N=56)</th>
<th>%</th>
<th>Government Officials (N=4)</th>
<th>%</th>
<th>SMC/PTA (N=3)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Plantation</td>
<td>44</td>
<td>100</td>
<td>56</td>
<td>100</td>
<td>4</td>
<td>100</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>2. Kitchen garden</td>
<td>33</td>
<td>75</td>
<td>40</td>
<td>71</td>
<td>3</td>
<td>75</td>
<td>1</td>
<td>33</td>
</tr>
<tr>
<td>3. Waste management</td>
<td>27</td>
<td>61</td>
<td>52</td>
<td>93</td>
<td>4</td>
<td>100</td>
<td>2</td>
<td>67</td>
</tr>
<tr>
<td>4. Awareness campaign</td>
<td>44</td>
<td>100</td>
<td>56</td>
<td>100</td>
<td>4</td>
<td>100</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>5. ECA</td>
<td>44</td>
<td>100</td>
<td>56</td>
<td>100</td>
<td>3</td>
<td>75</td>
<td>2</td>
<td>67</td>
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F. Community Education and Empowerment

- Knowledge & skills transformation into the communities through training

Some cases on impact of CCEd. :

"Having been provided with the insights on importance of plantation to mitigate the likely impacts of CC by the training, the school has designed a part of its land for kitchen garden. The students and teachers are divided into different groups to look after their gardens. The students have grown different vegetables and fruits like chilly, mango, papaya in their kitchen garden at school and the product are sold among teachers and their parents and have been making money out of it."

- Students have transferred this knowledge to their households and empowered their parents and the communities regarding the same.

- It reflects the inclination of students towards Income Generating Activities.

A case of students at Jeevan Bikash Public School, Morang
"The trainings on CCEd have directly assisted both the teachers and students of the school especially in raising the awareness regarding the impacts of CC. They have been empowered with the skills and knowledge about keeping the surrounding clean by conducting cleaning program periodically. In addition, the school actively participates in plantation during appropriate seasons in open/barren areas in and near the school premise.

The knowledge is being transferred to the community through the active participation of the students."

A case of Kankali Secondary School, Kathmandu
Lessons Learnt

- Making content and skills visible in the curriculum
- Touching people’s life helps in effective and powerful down streaming
- Significance & popularity of Green Clubs getting high
- High priority & emphasis in Local Collaboration
"As a curious student I was really moved by knowing what might be coming to our life due to change in climate during the training/orientation session. It was also explained we can mitigate it in some extent even from our efforts however smaller it might be. I started from my home with compost fertilizer pit, kitchen garden and plantation around my house. My parents also encouraged me. In a month or so, environment around my household started to change – green saplings, colorful flowers, and neat and clean surrounding. Some of the teachers and students also visited my home. It was really an encouragement to me and more than that some of my friends have also started to do it at their homes."
Constraints

- Lack of Self-help skills
- Difficulties faced by stakeholders
- Class room practices found to be traditional pattern – teacher oriented, content focused, question-answer modality
- Inadequate use of project & community based learning (lack of Project work & associating learning with community)
## Difficulties pointed out by the stakeholders

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Difficulties</th>
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</thead>
<tbody>
<tr>
<td><strong>1. Plantation</strong></td>
<td>i. Lack of adequate water&lt;br&gt;ii. Lack of fences to protect the plants from animals</td>
</tr>
<tr>
<td><strong>2. Kitchen garden</strong></td>
<td>i. Inadequacy of organic manure&lt;br&gt;ii. Lack of water&lt;br&gt;iii. Inadequate technical knowledge to grow the vegetables and fruits</td>
</tr>
<tr>
<td><strong>3. Waste management</strong></td>
<td>i. Problems with waste segregation&lt;br&gt;ii. Dustbins used are not enough to segregate the waste into degradable and non-degradable&lt;br&gt;iii. Problems associated with final disposal of waste</td>
</tr>
<tr>
<td><strong>4. Awareness campaign</strong></td>
<td>i. Coordination with the concerned stakeholders is difficult&lt;br&gt;ii. Public were not much interested</td>
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</tbody>
</table>
Opportunities

- Sensitized stakeholders
- Motivated teachers and students
- Recent national hazard
- Organizational collaborative efforts

Global priority - important forums such as MUSCOT July 2014, Inchion, Republic of Korea, 19-22 May 2015, Aichi-Nagoya in 2014.
## Advantages for activities to combat climate change

<table>
<thead>
<tr>
<th>Activities</th>
<th>Advantages</th>
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<tbody>
<tr>
<td>1. Plantation</td>
<td>i. Maintenance of greenery around the school compound</td>
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<td></td>
<td>ii. Temperature regulation during summer season</td>
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<tr>
<td>2. Kitchen garden</td>
<td>i. Knowledge sharing at households to grow vegetables and fruits</td>
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<td></td>
<td>ii. Income generation by selling the products</td>
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<td></td>
<td>iii. Advantages of crop rotation</td>
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<tr>
<td>3. Waste management</td>
<td>i. Minimization of the use of chemical fertilizers by using compost</td>
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<td></td>
<td>ii. Waste can be used as resources to earn money</td>
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<tr>
<td></td>
<td>iii. Cleanliness can be maintained at schools and communities</td>
</tr>
<tr>
<td>4. Awareness campaign</td>
<td>i. People in the community can be provided with the knowledge about the impacts of climate change.</td>
</tr>
</tbody>
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Implications

- First call for students
- Advocacy and the Articulation of Demand
- Focusing on Critical Points
- Advocacy and Communications
  
  I. Articulation of Demand
  II. Social Mobilization
  III. Programme support communications
Conclusions & Recommendations

A. School Curricula and Resource Materials

- Revision and updating of curriculum and resource materials need to be made in compliance with recent development and problem encountered/contemporary growing concerns
- Development of varieties of teaching learning supportive materials needs to be made in massive scale
B. **Extra Curricular Activities** need to be emphasized.

- Essay/poem/debate competition
- Cultural programme/street drama
- Fair, symposium, colloquium
- Plantation, kitchen gardening, sanitation and solid waste management at household level.
C. Competency Development Aspects

- Orientation and advocacy on policy lobbying programme for concerned stakeholders (school supervisors, resource persons, head teachers, SMCs and PTA members, local leaders and social workers) need to be undertaken.

- Capacity building programme for subject teachers needs to be focused on delivery aspect.
D. Monitoring, Evaluation and Follow-up Programme

- Development of guidelines and indicators for monitoring, evaluation and follow-up activities needs to be made & disseminated at grassroots level
- Regular field visit and rapid assessment for monitoring, evaluation and follow-up need to be strengthened
cont.

E. **Intensive teachers training** needs to be provisioned to develop their knowledge and skills for teaching methods, developing instructional materials/teaching aids and evaluation techniques.

F. **CCESD Programme at Community** needs to be accelerated to realizing the need for keeping community clean on their own initiatives.
cont.

G. CCESD Programme in School calls for an emerging need to bring about:

i. Change in the school environment

ii. Change in teachers’ perception on CCEd

iii. Change in rational knowledge, positive attitude and behavior of students.
THANKS FOR YOUR ATTENTION AND PATIENCE BUT BE IMPATIENT FOR DISSEMINATION OF CCESD TO OUR SCHOOL EDUCATION SYSTEM