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Integrating education with consumer behaviour relevant to energy efficiency and climate change at the Universities of Russia, Sri Lanka and Bangladesh (BECK)

Partner report on current state of higher education and its relationship with consumers'behaviouron energy efficiency and climate change

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1 INTRODUCTION

The purpose of thisseries of country reports is to obtain general philosophical, pedagogical and practical understanding on the status of higher education and its impact on consumer behaviour relevant to energy efficiency and climate change in BECK partner and European partner countries. It will also provide a basis for understanding and evaluating the capabilities of partner institutionson integrated educationforenergy efficiency and climate change. The results of these reports willinform a capacity building framework, which will form the basis for development of modules on energy efficiency and climate change during the BECK project.

The reporting approach isbased on the Capacity Needs Assessment Methodology (CAPNAM) proposed by the United Nations (2013).

The report includes chapters on the following:

- Methodology. This section describes the methodological approach used to collect and analyse the data that informs the findings presented in this report.
- Context. Provides an overview of the regulatory, socio-political, and cultural factors that shape policy on the consumer behaviour relevant to energy efficiency and climate change in the country in general, and education in particular.
- Scope and coverage of education policies onconsumer behaviour relevant to energy efficiency and climate change by the Higher Education Institution (HEI). Examines the illustrative policy and planning issues relevant to integrated education on consumer behaviour relevant to energy efficiency and climate change.
- Description of capacity types. Evaluates the existing state of capacities of HEI in the field of integrated education on consumer behaviour relevant to energy efficiency and climate change. As defined by the CAPNAM analytical framework, the four types of categories are institutional, organisational, individual, and the knowledge base.

The content of this report is related to the BECK Project and reflects only the author's view. The National Agency and the Commission are not responsible for any use that may be made of the information it contains.



2 Methodology

Please describe the methodological approach used to collect and analyse the data that informs the findings presented in this report. For example, this may include focus groups, interviews, document reviews and literature reviews.

This report has been prepared on the research results conducted by the Department of Geology and Mining, University of Barisal. The main focus of this survey method is to find out the existing capacities against target capacities of the institute.

Different methodological approaches have been adopted to collect and analyze data for this report. Primary data were obtained from structured interviews and focus group discussion with varied individuals such as academics, field experts and university management team and University Grant Commission (UGC), Bangladesh.

Annual Report of the year 2018 of University of Barisal has been used to get over all summary of students, staffs and study programmes.

In addition, secondary data have been used from documentary and literature reviews of university records, statistics, funding criterion and websites related to UGC and Ministry of Education, Bangladesh (MoE).

Finally all the collected informations were used to develop the report to fulfill the partial objectives of the BECK project.



3 CONTEXT

This section provides an overview of the regulatory, socio-political, and cultural factors thatshape policy on the consumer behaviour relevant to energy efficiency and climate change in the country in general, and the education in particular. Please answer following questions.

3.1 Socio-political and cultural context

What are the socio-political and cultural contexts providing the framework foreducational policy planning in the field of consumer behaviour relevant to energy efficiency and climate changein the country? Are there any regulations, plans, etc.?

It is recognized that Bangladesh is highly vulnerable to climate related disasters such as floods, droughts, tropical cyclones and storm surges, which are worsened due to global climate change. Moreover, Bangladesh is highly populated. Still, consumer behaviour relevant to energy efficiency and climate change related education, training, public awareness issues have not been received the attention in the socio-political and cultural context at the national level of Bangladesh.

There are some Climate Change Action Plan of 10 years (2009-2018) in Bangladesh (Bangladesh Climate Change Strategy and Action Plan 2009), which is built on six pillars such as i) Food security, social protection and health; ii) Comprehensive disaster management; iii) Infrastructure; iv) Research and knowledge management; v) Mitigation and low carbon development; vi) Capacity building and institutional. However, in the consumer behaviour relevant to energy efficiency and climate have not been implemented in the educational policy making.

3.2 Status of education

What is the current state in education on consumer behaviour relevant to energy efficiency and climate change? Is it important at your country? Please specify.

Bangladesh is one of the most climate vulnerable countries in the world and will become even more so as a result of climate change. Flood, tropical cyclones, storm surges and droughts are likely to become more frequent and severe in the coming years. However, the concept of consumer behaviuor relevant to energy efficiency and climate have not been introduced in the education sector of Bangladesh to face the upcoming climate change related disasters.

Now, the concept of consumer behaviour relevant to energy efficiency and climate change in the education sector is an urgent need for the Bangladesh. As, Bangladesh has an extremely high population density with one of the worst rates of poverty in the world. Therefore, to meet the challenges of climate change related issues, it is important to introduce the concept of consumer behaviour relevant to energy efficiency and climate change to the education of Bangladesh. In addition, capacity building, training, improvement of teacher's qualification on modern study method is vital to achieve high quality education related to climate change.



3.3 Funding

Is funding sufficient for integrated education on consumer behaviour relevant to energy efficiency and climate change at your country? Please specify.

In Bangladesh, very few modern multi-disciplinary courses are linked to climate change and consumer behaviour related to energy efficiency for integrated education. The Government of Bangladesh has recently established a National Climate Change Fund, with an initial capitalization of 45 million dollar later raised to 100 million dollar, which will focus mainly on adaptation. Government funding mainly covers only teaching. Very limited funds are available for research but very insignificant. No special funds are allocated for curricula developement in relation to consumer behaviour relevant to energy efficiency. Overall, funding is not sufficient for integrated modern multidisciplinary education on consumer behaviour relevant to energy efficiency and climate change.

3.4 Educational needs

What are the needs in integrated education on consumer behaviour relevant to energy efficiency and climate change (please list up to 5 major needs at country level):

i) Upgraded curricula of the integrated education relevant to energy efficiency and climate change

ii) Practice of modern learning, teaching tools and methodologies which are now being used in Europe.

- iii) Quality training, awareness and development of teacher's capacity and strength.
- iv) Scientific network among universities to enhance the strength of integrated education.
- v) Capacity building of the institutes and staffs.

3.5 Educational gaps

What are the gapsin integrated education on consumer behaviour relevant to energy efficiency and climate change (please list up to 5 major gaps at country level):

Education sector is very vital for the socio-economic development of the country and to face challenges. Awareness among the people's is an urgent issues to face the future coming disasters related to global climate change. However, there are some gaps in the integrated education in Bangladesh on consumer behaviour relevant to energy efficiency and climate change. These gaps are-

- i) Lack of capacity on participatory, experimental, and inclusive teaching and learning methodologies.
- ii) Lack of quality training facilities.
- iii) Education, training and public awareness issues relating to climate change.
- iv) Modern quality education requirements and stack holder needs.
- v) Dissemination of information at national level.





4 POLICIES RELEVENT TO HIGHER EDUCATION, AND THEIR RELATIONSHIP WITH CONSUMER BEHAVIOUR ON ENERGY EFFICIENCY AND CLIMATE CHANGE

This section examines the illustrative policy and planning issues relevant to integrated educationon consumer behaviour relevant to energy efficiency and climate change. Please answer following questions.

4.1 Policy and planning

Please describe policy and planning issues currently being addressed by the HEI in the field of integrated education on consumer behaviour relevant to energy efficiency and climate change.

Currently HEI dealt with the issues of climate change but the integration with energy efficiency and climate change is poorly addressed. The main policy and planning to focus on the impacts of climate change related issues, mitigation and adaptation. In the curricula few courses are present on climate change related issues. Moreover, Ministry of Education (MOE) and University Grant Commission (UGC) does not focus on the integrated education on consumer behaviour relevant to energy efficiency and climate change.

4.2 Gaps in policy and planning

Please describe other, if any, policy issues that are not currently being handled by theHEI but should be considered.

At present in HEI, education should be considered keeping the views of climate change related issues along with energy efficiency. Besides, curricula should be integrated with energy efficiency and climate change. Modern learning, teaching tools and methodologies should be considered at HEI to develop the socio economic condition.

N.B. The responses to these questions do NOT require describing each policy and planning issue butonly the identification of the type of issues being addressed and those not being addressed. Thequestions are only meant to understand the scope of coverage of important issues by the HEI.



5 CAPACITY TYPES

This section aims at assessment of the existing state of capacities in the HEI forintegrated educationon consumer behaviour relevant to energy efficiency and climate change. As defined by theCAPNAM analytical framework, the four types of categories areinstitutional, organizational, individual, and the knowledge base.

5.1 Institutional capacities

This part describes the institutional capacities at HEI level. Please answer following questions.

1. Please provide brief presentation of the HEI.

The University of Barisal (BU) is the biggest university in Southern part of Bangladesh. The University of Barisal (BU) is a place without limits where teaching, research, service, and innovation merge to improve lives in Barisal and beyond. We are not afraid to ask bigger questions, to get better answers. Established in 2011, the University of Barisal, the state's super land-grant (50 acres) university with six faculties, produces graduates who are real-world ready through their intense academic and co-curricular engagement. University of Barisal offers education and research in multidimensional fields like (arts, law, social sciences, bioscience, biotechnology, engineering and earth sciences. It is the flagship educational institution in the country, a place where more than 200 teachers and 8000 students develop and share knowledge and their skills. It is very fast growing university with the commitment of high quality research support to produce world class graduates.

The University of Barisal (BU) is working on climate change related issues with its high class researchers who are nationally and internationally recognized for expertise in climate research, adaptation, and building practical, science-based solutions for managing risk. The academic programmes are adopted with commitment to make its students competitive in global career by the updated curriculum. BU helps develop and link research-based knowledge with decision-making at multiple scales. The primary objectives of BU family is building network of climate related research with national and international community to understand the mechanism and effects of climate change and adaptation technique and solution based decision for policy making. We are involved in numerous international research collaborations and integrate practical experiences in our curriculum, so that students work on real-life projects in partnership with business, government and community sectors. We aim to bring together the best minds in individual fields, and encourage researchers from different disciplines and institutions to work together to find lasting solutions to society's pressing problems. Keeping this views to exchange tertiary level education and research, the university has signed MoU with the University of Sheffield, UK and various organizations.

Barisal University is an educational and research based institution which awards academic graduate and postgraduate degree in arts, humanities, social science, law, business, science, engineering, and bio science. The aim is prepare the graduates to meet global challenges.

 Please describe general model of studies according to different levels (bachelor, master, PhD). Bachelor : 4 years integrated Honors (Credit varies depending upon subjects and faculty) Masters : 1.5 years (Research and/or Coursework)



- 3. Please provide key facts and figures about the HEI:
- 3.1. Number of students: 7593
- 3.2. Number of academic staff: 200
- 3.3. Student/Academic staff ratio: 38 : 1
- 3.4. Number of Faculties (please specify): 6
- 3.5. Number of graduates: 4000
- 3.6. Number of study programmes: 2
- 3.7. Number of international academic partners: 2
- 3.8. International rankings of the HEI (if any): N/A

4. Please describe main education and research areas of the HEI.

University of Barisal (UoB) serves as an interdisciplinary faculty for education, research, evaluation, policy studies training in undergraduate and post graduate level. UoB provides higher education and research covers broad spectrum of science (chemistry, mathematics, soil science, disaster, coastal, earth science, climate change, ecology, plant, agriculture, water etc), engineering (information technology, eater hydraulics, geotechnical engineering, biotechnology etc), management, marketing, finance, accounting, social science, law, political science, history etc. UoB involves in multidimensional research fields like arts, humanities, social science, bioscience, science and engineering, biochemistry and biotechnology.

5. Is there any strategic priorities given to integrated education on consumer behaviour relevant to energy efficiency and climate change at HEI level? Please specify.

HEI mainly focuses on the education of climate change and its impacts but lack of strategic priorities to integrated education on consumer behaviour relevant to energy efficiency and climate change.

6. What are the needs at HEI in integrated education on consumer behaviour relevant to energy efficiency and climate change (please list up to five major needs):

i) Upgraded curricula of the integrated education relevant to energy efficiency and climate change

ii) Practice of modern learning, teaching tools and methodologies which are now being used in Europe.

iii) Quality training, awareness and development of teacher's capacity and strength.

iv) Scientific network among universities to enhance the strength of integrated education.

v) Sufficient research funds and capacity building of the institutes and staffs (training and funds).

7. What are the gaps at HEI in integrated education on consumer behaviour relevant to energy efficiency and climate change (please list up to five major gaps):



- i) Lack of capacity on participatory, experimental, and inclusive teaching and learning methodologies.
- ii) Lack of quality training facilities.
- iii) Education, training and public awareness issues relating to climate change.
- iv) Modern quality education requirements and stack holder needs.
- v) Dissemination of information at national level.



5.2 Organisational capacities

This part describes the organisational capacities pertinent to integrated education on consumer behaviour relevant to energy efficiency and climate change at HEI. Please answer following questions.

1. Is integrated education on consumer behaviour relevant to energy efficiency and climate change sufficiently included in the curricula of HEI? Please specify according to different levels (bachelor, master, PhD):

Integrated education on consumer behaviour relevant to energy efficiency and climate change is not sufficiently included in the curricula of HEI. There are few courses related to climate change and the mechanism of past climate change. However, the main focus is only on the climate change.

1.1. Study programme level (Please list relevant study programmes): Bachelor and Master

1.2. Study subject level (Please list relevant study subjects/modules): Environmental Chemistry, Environmental Geology, Coastal management and oceanography.

1.3. Study topic level (Please list relevant study topics): Climate change, disaster, coastal management etc

2. Is funding sufficient for integrated education on consumer behaviour relevant to energy efficiency and climate change at HEI? Please specify.

In HEI, very few modern multi-disciplinary courses linked to climate change and consumer behaviour related to energy efficiency for integrated education. However, funding is not sufficient for integrated modern multidisciplinary education on consumer behaviour relevant to energy efficiency and climate change.

3. What are the needs at HEI in integrated education on consumer behaviour relevant to energy efficiency and climate change related to organisation of study process (please list up to five major needs):

i) Upgraded curricula of the integrated education relevant to energy efficiency and climate change

ii) Practice of modern learning, teaching tools and methodologies which are now being used in Europe.

iii) Quality training, awareness and development of teacher's capacity and strength.

iv) Scientific network among universities to enhance the strength of integrated education.

v) Sufficient research funds and capacity building of the institutes and staffs (training and funds).



6. Please list up to five major gaps in integrated education on consumer behaviour relevant to energy efficiency and climate change related to organisation of study process:

- i) Lack of capacity on participatory, experimental, and inclusive teaching and learning methodologies.
- ii) Lack of quality training facilities.
- iii) Education, training and public awareness issues relating to climate change.
- iv) Modern quality education requirements and stack holder needs.
- v) Dissemination of information at national level.



5.3 Individual capacities: Staff skills

This part describes the individual staff capacities pertinent to integrated education onconsumer behaviour relevant to energy efficiency and climate change at HEI. Please answer following questions.

1. How many academic staff works at your unit? (which implements the project): 5 persons in parallel with academic responsibilities.

2. Is there sufficient number of teachers who specialise in integrated education on consumer behaviour relevant to energy efficiency and climate change? How many?

2.1. At university level: 8

2.2. At your unit/department: 5

3. Is there sufficient number of researchers who specialise in consumer behaviour relevant to energy efficiency and climate change? How many?

3.1. At university level:

3.2. At your unit/department:

4.Please describe the current state of the staff training in HEI. Is it sufficient?

There is no training of the staff in HEI.

5. Please describe the current state of the staff training on consumer behaviour relevant to energy efficiency and climate change. Is it sufficient?

There is no training on consumer behaviour relevant to energy efficiency and climate change of the staff in HEI.

6. Does the academic staff have flexibility in designing its own skill development plans or does it have to follow a centrally determined package?

Yes, academic staff have flexibility in designing its own skill development plan.

7. Is there staff stability, or does it suffer from high turnover among suchprofessionals?

Yes, there is staff stability and no high turnover among professionals.

8. What staff skills are required for integrated education on consumer behaviour relevant to energy efficiency and climate change(please list up to five major needs):

i) Training and workshop.

ii) Communication skills development.

iii) Presentation skills.

iv) Data management.

v) Group work.



9. Please list up to five major gaps in integrated education on consumer behaviour relevant to energy efficiency and climate change related to staff skills:

- i) Develops and employs decision-support resources
- ii) Focuses, where appropriate, on place-based analyses to support decision making in specific
- iii) Presentation skills.



5.4 Access to Information, Knowledge and Technology

Access to information, knowledge and technology is becoming increasingly critical for sustaining long-term growth and development of education. It relates to the capacity to enable academic staff and students to mobilize, access and use information and knowledge, including access to and effective use of internet. Please answer following questions.

1. Do students and teachers have access to the novel educational resources on consumer behaviour relevant to energy efficiency and climate change? Please specify:

Not directly. However, some journals are available.

1.1. Printed learning materials in national language: NO

1.2. Printed learning materials in English or other languages: English

1.3. Online learning materials (open-source videos, simulators (calculators and software), case studies, text material) in national language: NO

1.4. Online learning materials (open-source videos, simulators (calculators and software), case studies, text material) in English or other language: English

2. Does HEI use MOODLE for educational purposes?

Not using MOODLE.

3. Does HEI use computer-based intelligent systems, MOOCs, computer learning systems, big data mining for educational purposes? Please specify:

To some extent, HEI uses computer based system for educational purposes.

4. Does HEI use software forintegrated educationon consumer behaviour relevant to energy efficiency and climate change? Please specify:

NO

5. What Information/Knowledge/Technology is required for integrated education on consumer behaviour relevant to energy efficiency and climate change(please list up to five major needs):

- i) Online open sources MOODLE
- ii) Sufficient support and access
- iii) Free access to the resources

6. Please list up to five major gaps in access to information, knowledge and technology pertinent to integrated education on consumer behaviour relevant to energy efficiency and climate change:

i) Lack of knowledge on integrated education on consumer behaviour relevant to energy efficiency and climate change.

ii) Lack of training and workshop.



iii) Transfer of technology and methodologies.