



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

Module Specification

Originating Institution, Department	Module Co-ordinator
Social Policy Analysis and Research Centre (SPARC), University of Colombo	Dr. Nishara Fernando

TITLE OF THE MODULE

Title of the module	Module code¹
Certificate Course in Urbanization, Climate Change, Displacement and relocation (as a professional development course)	Ref.No.304043600004 (UCCDR)

PROGRAMME(S) IN WHICH TO BE OFFERED:

Bachelor of Arts

LEVEL OF STUDIES²

First cycle (BA) <input checked="" type="checkbox"/>	Second cycle (MSc/MA) <input type="checkbox"/>	Third cycle (PhD) <input type="checkbox"/>
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CREDITS AND LEARNING HOURS

Credit Value ³	ECTS Value ⁴	Indicative academic learning hours ⁵	Length (in Semesters) ⁶	Year in which to be offered
3	3	90	1	

¹ To be indicated by the Institution

² According to the Framework of Qualifications for the European Higher Education Area, Annex 8: http://www.aic.lv/ace/ace_disk/Bologna/Bergen_conf/Reports/EQFreport.pdf

³ Permissible credit values as set out in Institution's Academic Regulations

⁴ European Credit Transfer System, 1 ECTS = 25-30 academic learning hours. Please refer to ECTS Users' Guide: https://ec.europa.eu/education/ects/users-guide/docs/ects-users-guide_en.pdf

⁵ 1 academic learning hour is equal to 45 minutes

⁶ Indicate 0.5, 1, 1.5 or 2





ANNOTATION OF THE MODULE⁷

In this course module we put forward how increasing urbanization is an important phenomenon in the modern world using statistics from the global, regional and Sri Lankan contexts. We explore how natural hazards, urban development and climate change lead to significant changes on urban lives and livelihoods. In this course module we examine the consequences of these changes using concepts such as disaster-induced displacement, development-induced displacement and resettlement and climate change mobility. Moreover, this course module undertakes an in-depth look at urban livelihoods and sustainable livelihoods as well as local vulnerability and resilience. While relocation is presented as a disaster risk reduction strategy through case studies of development projects, it also examines the resistance of people.

Therefore, the course offers theoretical knowledge and practical application to those in relevant fields. Though displacement is mainly caused by natural hazards and urban development in the world today, its irregularities are made complex by climate change.

Relocation is used as a disaster risk reduction strategy for victims of natural hazards and development projects and recent relocation models have incorporated climate change adaptation as a major component to adapt to current crises. Best practices and also shortcomings which occur due to insufficient attention been paid to vulnerabilities and unique needs of victims can be identified when studying various cases of relocation.

The course covers all these important areas of study, citing from a number of real-world relocation projects that have been executed in Sri Lanka and across the globe- eventually offering theoretical knowledge along with practical application of such knowledge to those in relevant fields.

AIM OF THE MODULE⁸

- Developing the capability of students to use relocation-related concepts and theories to understand relocation as a process in relation to various contexts
- Developing the capability of students to think about the past-contemporary, and the future of urban development and relocation
- Developing the ability of students to think about the past-contemporary, and the future of natural hazards and relocation
- Developing the capability of students to identify various relocation models and their applicability in relation to different urban contexts
- Developing the ability of students to identify various issues and problems with regard to urban relocation and relocation failures in South Asia in general and Sri Lanka in particular.

⁷ Please provide brief summary of the module, up to 200 words

⁸ Aim of the module must correspond to the BECK Capacity Building Framework





MOOC LEARNING AND TEACHING STRATEGIES

The MOOC course has to contribute to an opening up of education for the benefit of both learners and society at large while reflecting upon values such as equity, quality and diversity. Common features of the course are:

- Openness to learners: open entry (no formal pre-requisites), freedom to study at the time, place and pace of your choice, flexible pathways, fit for a wide variety of lifelong learners;
- Digital openness: courses available online;
- Learner-centred approach: courses aid students to construct their own learning from a rich environment, and to share and communicate it with others;
- Independent learning: a MOOC provides high quality materials to enable the progress of an independent learner through self-study;
- Media-supported interaction: course materials make best use of online affordances (interactivity, communication, collaboration) as well as rich media (video and audio) to engage students with their learning.
- Recognition options: successful course completion will be recognised as indicating worthwhile educational achievement.
- Quality focus: focus on quality in the production and presentation of a MOOC.
- Spectrum of diversity: the course is inclusive and accessible to very diverse citizens.

The delivery of the new certificated and recognized adaptive BECK MOOCs is enabled by the use of the innovative Simulated Big Data Interuniversity Networked Affective Educational Centre. Affective computing technologies and neuro decision matrices, big data and text analytics, and an adapted Yerkes–Dodson law form the foundation of the BECK system. Affective computing is the study and development of systems and devices that can recognize, interpret, process and simulate human affects. The BECK system will interpret the emotional state of a student and adapt the learning process to that particular student by providing an appropriate response to relevant emotions and requirements.

Six major components have been identified for the development of the Simulated Big Data Interuniversity Networked Affective Educational Centre (the BECK Centre):

- 1) Adaptive MOOCs;
- 2) Computer learning systems;
- 3) Big Data Mining;
- 4) Affective Tutoring System;
- 5) Access to e-sources;
- 6) Moodle Virtual Learning Environment.

The computer learning system is understood as an object (with its components) for managing and investigating data, information, expressed and unexpressed knowledge. It is a modelling system that accumulates data and information from various resources and then processes that data and information by means of various mathematical, logical and informative models.

Data mining will enable integrated analysis of the following data and information from multiple locations: weather, climate, dwelling envelope, utilities, occupancy, market data (government data, trade association data, financial data from major players, customer surveys), climate change, best practices, human influences, the behaviour of users, etc.

The Affective Tutoring System integrates student self-assessment procedures with biometric (facial expression analysis) and intelligent techniques and technologies.

The centre will offer open-source videos, simulators (calculators and software) and case studies from the best universities around the world to enhance the module.





The following main features have been identified for the development of the Moodle Virtual Learning Environment: adaptable design, modern and easy to use interface, personalized dashboard, collaborative tools and activities (Assignments, Chat, Choice, Database, Feedback, Forum, Glossary, Lesson, Quiz, Survey, Wiki, Workshop), all-in-one calendar, convenient file management, simple and intuitive text editor, notifications, progress tracker, secure authentication and mass enrolment, multilingual capability, high interoperability, user role and permission management, etc.

MOOC is accessible to various target groups. Its activities aid participants to construct their own learning and communicate it to others. The activities, tasks and routes are designed in such a way that they can be performed at specific levels of difficulty or complexity, to accommodate the broad spectrum of participants' knowledge and skills that is expected. The course contains sufficient interactivity (learner to content, learner to learner and learner to teacher) to encourage active engagement. The feedback of the academic tutor is limited and scalable. The course provides learners with regular feedback through self-assessment activities, tests or peer feedback. The MOOC has possibilities to follow the score and progression.

The pedagogical model of the course is such that the efforts of all services do not increase significantly as the number of participants increase. All aspects of the course are delivered online. Learning outcomes are assessed using the balance of formative and summative assessment appropriate to the level of certification.

INTENDED LEARNING OUTCOMES AND ASSESSMENT

According to Bloom's Taxonomy (Sources: Bloom et al. (1956); Dave (1970); Anderson et al. (2001), intended learning outcomes of the module can be ranked. As mentioned below, the first second and third levels; i.e. Define, Explain and Apply will be used in this module.

- Level one - Recall facts and basic concepts (define, duplicate, list, memorize, repeat, state)
- Level two - Explain ideas or concepts (classify, describe, discuss, explain, identify, locate, recognize, report, select)
- Level three - Use information in new situations (execute, implement, solve, use, demonstrate, interpret, operate, schedule, sketch)

Source: bloom's Taxonomy (Sources: Bloom et al. (1956); Dave (1970); Anderson et al. (2001).





<i>Learning Outcomes of the module⁹</i>	<i>Methods of studies</i>	<i>Assessment methods of student achievements¹⁰</i>	<i>Assessment criteria of student achievements by assessment levels</i>
O1. Define Urbanization and urban development, relocation, vulnerability and resilience	Blended learning, access to e-sources (open-source videos, self-study in the Moodle Virtual Environment (LMS) (learning materials including audio visual materials, text materials)	<input checked="" type="checkbox"/> Problematic questions <input checked="" type="checkbox"/> Other: assessment of a written essay	Level one Recall facts and basic concepts (define, duplicate, list, memorize, repeat, state)

⁹ Learning outcomes are specified in three categories – as **knowledge, skills and competence**. This signals that qualifications – in different combinations – capture a broad scope of learning outcomes, including theoretical knowledge, practical and technical skills, and social competences where the ability to work with others will be crucial. Please refer to Cedefop (2017). Defining, writing and applying learning outcomes: a European handbook. Luxembourg: Publications Office of the European Union. https://www.cedefop.europa.eu/files/4156_en.pdf. Learning outcomes of the module must correspond to the BECK Capacity Building Framework.

¹⁰ Please select from the list. Additional assessment methods may be added.





			<p>1.1 The student is able to list out examples for the following terms: Urbanization, Urban development, relocation, vulnerability and resilience (Excellent)</p> <p>1.2 The student is able to state what the terms Urbanization, Urban development, relocation, vulnerability and resilience means (Good)</p> <p>1.1 The student is able to memorize the definitions of Urbanization, Urban development, relocation, vulnerability and resilience (Satisfactory)</p>
O2. Define natural hazards, Disasters, Displacement and relocation	Blended learning, access to e-sources (open-source videos, self-study in the Moodle Virtual Environment (LMS) (learning materials including audio visual materials, text materials)	<input checked="" type="checkbox"/> Problematic questions <input checked="" type="checkbox"/> Other: assessment of a written essay	<p>Level one</p> <p>Recall facts and basic concepts(define, duplicate, list, memorize, repeat, state)</p> <p>2.1 The student is able to list out examples for the terms natural hazards, climate displacement and relocation (Excellent)</p> <p>2.2 The student is able to state what the terms natural hazards, climate displacement and relocation means (Good)</p> <p>2.3 The student is able to memorize the definitions of natural hazards, climate</p>





			displacement and relocation (Satisfactory)
O3. Explain various models of relocation	Blended learning, access to e-sources (open-source videos, self-study in the Moodle Virtual Environment (LMS) (learning materials including audio visual materials, text materials)	<input checked="" type="checkbox"/> Problematic questions <input checked="" type="checkbox"/> Other: assessment of a written essay	Level two
			Explain ideas or concepts (classify, describe, discuss, explain, identity, locate, recognize, report, select, transtate)
			3.1 The student is able to write a report on models of relocation (Excellent) 3.2 The student is able to recognize advantages and disadvantages of different models of relocation. (Good) 3.3 The student is able to describe the models of relocation (Satisfactory)
04. Describe sustainable relocation from an international perspective	Blended learning, access to e-sources (open-source videos, self-study in the Moodle Virtual Environment (LMS) (learning materials including audio visual materials, text materials)	<input checked="" type="checkbox"/> Problematic questions <input checked="" type="checkbox"/> Other: assessment of a written essay	<i>Level two</i> Explain ideas or concepts (classify, describe, discuss, explain, identity, locate, recognize, report, select) 4.1 The student is able to write a report on sustainable relocation from an international perspective (Excellent) 4.2 The student is able to recognize latest global trends on sustainable relocation (Good) 4.3 The student is able to describe sustainable relocation from an international perspective (Satisfactory)





<p>05. Explain relocation in the developing world</p>	<p>Blended learning, access to e-sources (open-source videos, self-study in the Moodle Virtual Environment (LMS) (learning materials including audio visual materials, text materials)</p>	<p><input checked="" type="checkbox"/> Problematic questions</p> <p><input checked="" type="checkbox"/> Other: assessment of a written essay</p>	<p><i>Level two</i> Explain ideas or concepts (classify,describe,discuss, explain,identity,locate,recognize,report,select)</p> <p>5.1 The student is able to write a report on relocation in the developing world (Excellent)</p> <p>5.2 The student is able to explain types of relocation models in Asia (Good)</p> <p>5.3 The student is able to describe relocation in the developing world (Satisfactory)</p>
<p>6. Explain the relationship between Urban development and Urban relocation in relation to relocation failures in Sri Lanka</p>	<p>Blended learning, access to e-sources (open-source videos, self-study in the Moodle Virtual Environment (LMS) (learning materials including audio visual materials, text materials)</p>	<p><input checked="" type="checkbox"/> Problematic questions</p> <p><input checked="" type="checkbox"/> Other: assessment of a written essay</p>	<p><i>Level two</i> Explain ideas or concepts (classify,describe,discuss, explain,identity,locate,recognize,report,select)</p> <p>6.1 The student is able to write a report on the relationship between urban development, urban relocation and relocation failures in Sri Lanka (Excellent)</p> <p>6.2 The student is able to recognize the reasons for relocation failures in Sri Lanka(Good)</p> <p>6.3 The student is able to describe the relationship between urban development, urban relocation and relocation failures in Sri Lanka (Satisfactory)</p>





<p>07. Recognize the role of governance in Disaster, climate, development induced displacement and relocation in relation to Sri Lanka</p>	<p>Blended learning, access to e-sources (open-source videos, self-study in the Moodle Virtual Environment (LMS) (learning materials including audio visual materials, text materials)</p>	<p><input checked="" type="checkbox"/> Problematic questions</p> <p><input checked="" type="checkbox"/> Other: assessment of a written essay</p>	<p><i>Level two</i> Explain ideas or concepts (classify,describe,discuss, explain,identity,locate,recognize,report,select) 7.1 The student is able to role of governance in Disaster, climate, development induced displacement and relocation in relation to Sri Lanka (Excellent)</p> <p>7.2 The student is able to recognize reasons as to how the role of governance in Disaster, climate, development induced displacement and relocation in relation to Sri Lanka (good)</p> <p>7.3 The student is able to discuss how the role of governance in Disaster, climate, development induced displacement and relocation in relation to Sri Lanka (satisfactory)</p>
<p>08. Recognize relevant theories on relocation and vulnerability</p>	<p>Blended learning, access to e-sources (open-source videos, self-study in the Moodle Virtual Environment (LMS) (learning materials including audio visual materials, text materials)</p>	<p><input checked="" type="checkbox"/> Problematic questions</p> <p><input checked="" type="checkbox"/> Other: assessment of a written essay</p>	<p><i>Level two</i> Explain ideas or concepts (classify,describe,discuss, explain,identity,locate,recognize,report,select)</p> <p>8.1 The student is able to Recognize relevant theories on relocation and vulnerability (Excellent)</p> <p>8.2 The student is able to demonstrate the skill of practical application of theoretical knowledge in the local context (Good)</p>





			8.3 The student is able to write an assignment using relevant theories on relocation and vulnerability (Satisfactory)
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SYLLABUS OUTLINE

No.	Topic¹¹	Number of hours¹²
1.	New trends in urbanization and Climate Change	10
2.	Urbanization induced displacement and climate induced displacement	5
3.	Various forms of relocation	5
4.	Models of relocation	10
5.	Urban development-induced displacement and relocation	10
6.	Disaster-induced displacement and relocation	5
7.	Urban development, vulnerable groups and sustainable livelihoods	10
8.	Relocation and resistance	10
9.	Voluntary, involuntary and forced relocation in the developing world	5
10.	Urban relocation policies and relocation projects in Sri Lanka	10
11.	Successes and failures of urban relocation projects in Sri Lanka	5
12.	Urban relocation, secure communities and resilient cities	5
Total:		90

¹¹ Please add as many topics as needed

¹² Includes self-learning, on-line conferences and consultations





MAPPING THE INTENDING LEARNING OUTCOMES AND THE SYLLABUS OUTLINE

No.	Topic¹³	ILO
1.	New trends in urbanization and Climate Change	1,2,4
2.	Urbanization induced displacement and climate induced displacement	1,7
3.	Various forms of relocation	1,2,3,8
4.	Models of relocation	1,2,3,8
5.	Urban development-induced displacement and relocation	1,7
6.	Disaster-induced displacement and relocation	2,7
7.	Urban development, vulnerable groups and sustainable livelihoods	1,8
8.	Relocation and resistance	1,8
9.	Voluntary, involuntary and forced relocation in the developing world	3,4,5
10.	Urban relocation policies and relocation projects in Sri Lanka	3,7
11.	Successes and failures of urban relocation projects in Sri Lanka	3,6
12.	Urban relocation, secure communities and resilient cities	1,4

¹³ Please add as many topics as needed





MODULE MARK CALCULATION:

Assessment components (in chronological order of submission/examination date)				
Type of assessment ¹⁴	Weighting, %	Duration (if exam)	Word count (if essay or similar):	Component pass required ¹⁵
Quizzes	40%	-	500	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Written Report	60%	03 months	5000	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Total:	100%			

Lesson Quizzes	Weighting, %	Duration (if exam)	Word count (if essay or similar):	Component pass required ¹⁶
Quiz 1	10%	2 nd week	500	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Quiz 2	10%	5 th week	500	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Quiz 3	10%	8 th week	500	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Quiz 4	10%	11 th week	500	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Total:	40%			

	Weighting, %	Duration	Word count (if essay or similar):	Component pass required ¹⁷
Written Report	60%	03 months	5000	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Total:	60%			

¹⁴ Please indicate in chronological order of submission date each assessment component by type, e.g. examination, homework, coursework, project

¹⁵ Indicate Yes to specify the assessment component(s) to be passed in order to pass the module

¹⁶ Indicate Yes to specify the assessment component(s) to be passed in order to pass the module

¹⁷ Indicate Yes to specify the assessment component(s) to be passed in order to pass the module





Study Plan

Week	Video Recorder 1	Session 02	Total
01	Lecture on Lesson 01	Lecture on New Trends in Climate Change	10
02	PowerPoint Presentation and Discussion (Lesson 02)	Lecture on The role of built environment in Disaster and relocation	05
	Quiz 1		
03	PowerPoint Presentation and Discussion (Lesson 03)	Lecture on Kegalle case study and comparison between the owner driven and donor driven houses	05
04	PowerPoint Presentation and Discussion (Lesson 04)	Lecture on World Bank Policy and CRIP 2 project	10
05	PowerPoint Presentation and Discussion (Lesson 05)	Lecture on a Case Study based on Urban development induced displacement and relocation	10
	Quiz 2		
06	PowerPoint Presentation and Discussion (Lesson 06)	Lecture on Disaster Risk Reduction and Climate Change Adaptation	05
07	PowerPoint Presentation and Discussion (Lesson 07)	Lecture on Vulnerable groups; impact of involuntary relocation on children	10





08	PowerPoint Presentation and Discussion (Lesson 08)	Lecture on An overview of Multi Hazard Early Warning (MHEW) Systems in Sri Lanka	10
	Quiz		
09	PowerPoint Presentation and Discussion (Lesson 09)	Lecture on Voluntary, involuntary and forced relocation in the developing world; based on Meeriyabedda Case Study	05
10	PowerPoint Presentation and Discussion (Lesson 10)	Lecture on A practical session based on Urban relocation policies and projects in Sri Lanka	10
11	PowerPoint Presentation and Discussion (Lesson 11)	Lecture on Multi-dimensional Approach to disasters; The role of conflict in displacement and relocation	05
	Quiz		
12	PowerPoint Presentation and Discussion (Lesson 12)	Lecture on Environmental Sociology aspect of climate change	05
	Submission of the Written Report		





LEARNING MATERIALS¹⁸

Core materials (up to 5 references):

1. Oliver- Smith, A. (2010). Defying displacement – grass root resistance and the critique of development. Austin: University of Texas Press.
2. Perera, C.R. & Hewege, C.R. (2018). Religiosity and Environmentally Concerned Consumer Behaviour: ‘becoming one with God (nature)’ through Surrendering Environmental Identities, *International Journal of Consumer Studies*, 42, 6, 627-638
3. Powell, K. M. (2015). Identity and power in narratives of displacement. Routledge
4. Renu, M. (2009). Beyond Relocation – the imperative of sustainable resettlement. New Delhi: Sage.
5. Short, J. (2006). Urban theory-critical assessment. New York: Palgrave Macmillan.

Supplementary materials (up to 10 references):

1. Calthrope, P. (2011). Urbanism in the age of climate change. Island press, London.
2. De Wet, C. (2006). Development induced displacement – problems, policies and people. London: Berghahn books.
3. Geiger, S.M., Fischer, D. & Schrader, U. (2017). Measuring What Matters in Sustainable Consumption: An Integrative Framework for the Selection of Relevant Behaviors, *Sustainable Development*, 26, 1, 18-33
4. Gunarathna, K. (2006). Spatial concerns in Development – a Sri Lankan Perspective. New Delhi: Atlantic publishers.
5. Gunarathna, K. (2006). Spatial concerns in Development – a Sri Lankan Perspective. New Delhi: Atlantic publishers.
6. Inam, A. (2014). Designing urban transformation. London: outledge.
7. McAdam, J. (2010). (ed.) Climate change displacement – multi-disciplinary perspective. Hart publishing, Oxford.
8. Metha, L. (2009). Displaced by development – confronting marginalization and gender injustice. New Delhi, sage.
9. Nadarajah, M. & Yamamoto, A.T. (2007). Urban crisis: Culture and the sustainability of cities. No. Sirsi) i9789280811254. Institute of Advanced Studies. Ishikawa International Cooperation Research Centre
10. Oliver- Smith, A. (2009). Development and dispossession- the crisis of forced displacement and relocation. Mexico: School for advanced research press.

On-line resources¹⁹:

1. <https://onlinelibrary.wiley.com/doi/abs/10.1111/ijcs.12469>
2. <https://www.amazon.com/Identity-Narratives-Displacement-Routledge-Communication/dp/1138846945>
3. <http://sk.sagepub.com/books/beyond-relocation>
4. <https://www.amazon.com/Urban-Theory-John-Rennie-Short/dp/1403906599>

Other materials:

¹⁸ Courses should provide high quality materials to enable an independent learner to progress through self-study. Materials should make best use of online affordances (interactivity, communication, collaboration) as well as rich media (video and audio) to engage students with their learning.

¹⁹ Please provide links





Lecture materials available at the BECK Simulated Big Data Interuniversity Networked Affective Educational Centre.

REQUIRED IT RESOURCES²⁰

No.	Software, manufacturer
1.	MS Word
2.	MS Power Point
3.	Adobe Acrobat reader
4.	MS Excel
5.	SPSS

Date of completion of this version of Module Specification:

Date of approval by the Faculty: 10/08/2020

²⁰ Please add as many software as needed for the course

