

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(s)
Global Disaster Resilience Centre, School of Applied Sciences, University of Huddersfield, Huddersfield, UK	Prof. Dilanthi Amaratunga Prof. Richard Haigh

TITLE OF THE PROGRAMME

Title of the module	Module code ¹
Disaster risk management, climate change and development	

PROGRAMME(S) IN WHICH TO BE OFFERED:

PhD

LEVEL OF STUDIES²

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

The proposed modules are not credit bearing and there is no formal certification. They will be incorporated within the formal research degree timeline.

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

ANNOTATION OF THE MODULE⁷

Climate change-related risks, including weather induced natural disasters, are the result of a complex interdependency among natural hazards, like storm and flood conditions, and exposure of assets and their vulnerability, susceptibility to damage. While climate change increases the frequency and intensity of natural hazards, the exposure and vulnerability are determined by socio-economic development and human decision-making.

Disaster risk management needs a holistic view across the disciplines that consider various drivers of risk, and mitigation options ranging from structural measures to emergency management and risk transfer. Further, it requires a variety of approaches for the assessment of risk and evaluation of options, incorporating the methods from natural sciences, engineering, economics, ecology, and social sciences. An

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

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





important basis of successful risk management lies in the application of an assessment of risk, and the analysis of risk management options within different stakeholders to identify economically optimal strategies.

The PhD programme on “Disaster risk management, climate change and development” will discuss a holistic view to the climate change associated risks in rapid unmanaged urban development.

AIM OF THE MODULE⁸

To explore the approaches and applications about climate change and the risk associated with unmanaged urban development.

MOOC LEARNING AND TEACHING STRATEGIES

Learning Materials/ Activities & Assessment

Learning materials that equate to the face-to face lecture can be included the in the recording or as in a reference material, e.g., PowerPoints/documents, pre-recorded lectures/videos/podcasts/screencasts. In addition, related learning activities for students can be introduced for further reference, e.g., online discussion fora, quizzes, group work, online tutorials, and seminars. All learning materials can be made available in MOOC platform aligning to the module schedule, this will support and enable students to self-direct their own learning.

Doctoral Research Training Programme 2021

All the lectures that are developed under the BECK project will be integrated to the Global Disaster Resilience Centre, Doctoral Research Training Programme which is revised on annual basis. The research programme will cover a range of relevant issues, from research methodology to preparing for assessment milestones.

Variety of activities will be held to coincide with major international events, such as the International Day for Disaster Risk Reduction and World Tsunami Day.

Research projects will be shared that are currently being undertaken by members of the Centre, as well as that from visiting academics.

The Centre’s research training programme is designed to work alongside and complement the University’s Researcher Development Programme, which is run by the Graduate School.

Pre-recording learning materials

There are several options to create learning materials in recorded forms. These learning materials can act as reusable pieces and alternative means of delivery of face-to-face content. The following applications can be used to produce the recorded lectures considering the familiarity and convenience.

1. ZOOM
2. MS Teams

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





Panopto (Facilitate by the University of Huddersfield – Preferred)

INTENDED LEARNING OUTCOMES AND ASSESSMENT

<i>Learning Outcomes of the course⁹</i>	<i>Methods of studies</i>	<i>Assessment methods of student achievements¹⁰</i>	<i>Assessment criteria of student achievements by assessment levels</i>
Demonstrate knowledge and understanding in the field of climate change, weak governance, urbanization, growing population, eco system decline, poverty, displacement and etc.	<ul style="list-style-type: none"> • Background study • Literature review • Refer to primary & secondary data sources 	<ul style="list-style-type: none"> • Supervision monitoring • Proposal submission 	<ul style="list-style-type: none"> • Supervisor review. Recommend submit / submitting after revisions • Recommend training & skill development programmes
Demonstrate the ability to identify and formulate researchable issues with environmental and social science aspects which influence disaster risk reduction and urbanization (including geographical, political, economical, anthropological understandings).	<ul style="list-style-type: none"> • Literature synthesis • Problem framing • Formulating aims & objectives 	<ul style="list-style-type: none"> • Supervision monitoring • Progress monitoring – 1 (Report & Viva) 	<ul style="list-style-type: none"> • Supervisor review. Recommend submit / submitting after revisions • Examiners review. Approve for the next stage Resub. of report Resub. of report & viva Transfer to M.Phil. Fail
Demonstrate competence in scholarly analysis, case studies and synthesis while assessing related phenomena, issues and situations.	Identification of. <ul style="list-style-type: none"> • Research approach • Research strategies • Research choice 	<ul style="list-style-type: none"> • Supervision monitoring 	<ul style="list-style-type: none"> • Supervisor review. Recommend submit / submitting after revisions • Recommend training & skill development programmes
Evaluate the findings to generate new knowledge on common approaches to disaster risk reduction, including the problems and critiques associated with disaster prevention, mitigation, preparedness, response and recovery in	Research techniques for. <ul style="list-style-type: none"> • Data collection • Data analysis 	<ul style="list-style-type: none"> • Supervision monitoring • Progress monitoring – 2 (Report & Viva) 	<ul style="list-style-type: none"> • Supervisor review. Recommend submit / submitting after revisions • Examiners review. Approve for the next stage Resub. of report Resub. of report & viva Transfer to M.Phil. Fail

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.





both industrialized and developing countries.			
Provide solutions to complex problems / contribute original knowledge including academic and professional/transferable skills of disaster risk reduction and urbanization, along with implications and limitations of research findings on this subject.	Methods of. <ul style="list-style-type: none"> • Data collection • Data analysis 	<ul style="list-style-type: none"> • Supervision monitoring • Final report submission and viva 	<ul style="list-style-type: none"> • Supervisor review. Recommend submit / submitting after revisions • Examiners review: Accepted (Ph.D. offered / editorial changes / resub. minor changes up to 3 months / resub. major changes up to 6-12 months) Transfer to M.Phil. Fail

- Apart from the mentioned assessment criteria a minimum recommended number of conference proceedings and journal publications must be processed in due course of programme undertaken.

MODULE MARK CALCULATION¹¹:

- The proposed modules are not credit bearing and there is no formal certification. They will be incorporated within the formal research degree timeline.
- Within 3 months FT / 6 PT of commencing a research degree, all students must complete a research support plan and skills audit:
 - Final research proposal
 - Initial ethical review
 - Review key competencies
 - Identify research skills and training needs
 - This includes broad and specialist subject knowledge that are addressed by these MOOCs

Assessment components (in chronological order of submission/examination date)				
Type of assessment¹²	Weighting, %	Due submission (No of months/ Full time)	Word count (if essay or similar):	Component pass required¹³
Proposal submission	100%	3	3,000	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Progression monitoring - 1	100%	9 - 12	6,000	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Progression monitoring - 2	100%	21 - 24	6,000 & Literature Synthesis Chapter	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Final report submission and viva	100%	36 - 48	80,000	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Total:	N/A			

¹¹ Please list all components, sum must be equal to 100%. Note that successful course completion should be recognised as indicating worthwhile educational achievement.

¹² Please indicate in chronological order of submission date each assessment component by type, e.g. examination, homework, coursework, project

¹³ Indicate Yes to specify the assessment component(s) to be passed to pass the module



SYLLABUS OUTLINE

No.	Topic ¹⁴	Number of hours ¹⁵
1.	Trends in disaster risk	N/A
2.	Drivers of disaster risk	
3.	Disaster management and risk governance	
4.	Disaster risk reduction policy agenda	
5.	Convergence of disaster risk, climate change and development agendas	
6.	Case studies	
Total:		

LEARNING MATERIALS¹⁶

Core materials (up to 5 references):

1. OECD, Responding to Rising Seas: OECD Country Approaches to Tackling Coastal Risks. 2019: OECD, ISBN: 978-92-64-31247-0 978-92-64-48979-0 978-92-64-31248-7 978-92-64-57098-6, Available from: https://www.oecd-ilibrary.org/environment/responding-to-rising-seas_9789264312487-en.
2. UNISDR, Progress and Challenges in Disaster Risk Reduction: A contribution towards the development of policy indicators for the Post- 2015 Framework on Disaster Risk Reduction. 2014, Geneva, Switzerland: The United Nations Office for Disaster Risk Reduction (UNISDR), Available from: https://www.unisdr.org/files/40967_40967progressandchallengesindisaste.pdf.
3. UNDP, Strengthening Disaster Risk Governance. 2015, New York: UNDP Support during the HFA Implementation Period 2005-2015, Available from: <https://www.undp.org/content/dam/undp/library/crisis%20prevention/disaster/Strengthening%20Disaster%20Risk%20Governance-Full-Report.pdf>.
4. UNISDR, Making Development Sustainable: The Future of Disaster Risk Management. Global Assessment Report on Disaster Risk Reduction. 2015, Geneva, Switzerland: United Nations Office for Disaster Risk Reduction (UNISDR), ISBN: 978-92-1-132042-8, Available from: https://www.preventionweb.net/english/hyogo/gar/2015/en/gar-pdf/GAR2015_EN.pdf.
5. UNDRR, Accountability in the Context of Disaster Risk Governance. 2019, ISBN: 978-1-86218-170-0, Available from: <https://reliefweb.int/sites/reliefweb.int/files/resources/Accountability%20in%20the%20context%20of%20disaster%20risk%20governance.pdf>.

Supplementary materials (up to 10 references):

1. T., N., Literature review on aligning climate change adaptation (CCA) and disaster risk reduction (DRR). 2019, Geneva: IFRC, UCC, Available from: https://ifrcgo.org/africa/img/disaster-law/resources/20191208_CCA_DRR_Review_.pdf.
2. Adapting to Climate Change, Lessons from Natural Hazards Planning. 2014, New York & London: Springer, ISBN: 978-94-017-8631-7.
3. IPCC, Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation, Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change, ed. C.B. Field, V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.). 2012, Cambridge, UK, and New York, NY, USA: Cambridge University Press, ISBN: 978-1-107-02506-6, Available from: https://www.ipcc.ch/site/assets/uploads/2018/03/SREX_Full_Report-1.pdf.
4. IPCC, Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. 2014, Geneva, Switzerland: World Meteorological Organization, ISBN: 9789263100498, Available from: https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf.
5. IPCC, Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change ed. O. Edenhofer, R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.). 2014, NY, USA: Cambridge University Press, Cambridge, United Kingdom and New York, ISBN: 978-1-107-05821-7, Available from: https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_full.pdf.
6. UNISDR, Enabling knowledge for disaster risk reduction and its integration into climate change adaptation, in Prepared for the Global Assessment Report on Disaster Risk Reduction 2015 2014, UNISDR.
7. UNDRR, Global Assessment Report on Disaster Risk Reduction. 2019, Geneva, Switzerland: United Nations Office for Disaster Risk Reduction (UNDRR), ISBN: 978-92-1-004180-5, Available from: https://gar.undrr.org/sites/default/files/reports/2019-05/full_gar_report.pdf.

¹⁴ Please add as many topics as needed

¹⁵ Includes self-learning, on-line conferences, and consultations

¹⁶ 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.





8. Ireland, P., Climate change adaptation and disaster risk reduction: Contested spaces and emerging opportunities in development theory and practice. *Climate and Development*, 2011. 2(4): p. 332-345, DOI: <https://doi.org/10.3763/cdev.2010.0053>.
9. Dias, N., D. Amaratunga, and R. Haigh, Challenges associated with integrating CCA and DRR in the UK- A review on the existing legal and policy background. *Procedia Engineering*, 2018. 212: p. 978-985, DOI: <https://doi.org/10.1016/j.proeng.2018.01.126>.
10. Dias, N., et al., A Resilient Environment through The Integration of CCA and DRR: An Overview of Existing Challenges. 2019. Vol. 9. 2019, ISBN: 2088-5334, Available from: http://ijaseit.insightsociety.org/index.php?option=com_content&view=article&id=9&Itemid=1&article_id=8072.

On-line resources¹⁷:

1. Shao-Hong, W., P. Tao, and H. Shan-Feng, Climate Change Risk Research: A Case Study on Flood Disaster Risk in China. *Advances in Climate Change Research*, 2012. 3(2): p. 92-98, DOI: <https://doi.org/10.3724/SP.J.1248.2012.00092>.
2. Tom Mitchell, M.v.A.a.P.S.V., Assessing Progress on Integrating Disaster Risk Reduction and Climate Change Adaptation in Development Processes, in *Strengthening Climate Resilience Discussion Paper 2*. 2010, Institute of Development Studies United Kingdom.
3. Lauta, K.C., et al., ESPRESSO Enhancing Risk Management Capabilities Guidelines. 2018, ISBN: 978-88-943902-0-9, Available from: www.espressoproject.eu.
4. Djalante, R., C. Holley, and F. Thomalla, Adaptive governance and managing resilience to natural hazards. *International Journal of Disaster Risk Science*, 2012. 2(4): p. 1-14, DOI: <https://doi.org/10.1007/s13753-011-0015-6>.
5. Birkmann, J., et al., Adaptive urban governance: new challenges for the second generation of urban adaptation strategies to climate change. *Sustainability Science*, 2010. 5(2): p. 185-206, DOI: <https://doi.org/10.1007/s11625-010-0111-3>.
6. Christoplos, I., et al., WHO IS ACCOUNTABLE TO WHOM IN DRR AND CCA GOVERNANCE? Towards 'good enough' climate and disaster risk governance. 2014: Danish Institute for International Studies. 19-42, Available from: www.jstor.org/stable/resrep15636.6.
7. Leitner, M., Buschmann, D., Capela Lourenço, T., Coninx, I. and Schmidt A., Bonding CCA and DRR: recommendations for strengthening institutional collaboration and capacities. 2020, Lisbon: PLACARD project, FC.ID, Available from: <https://www.placard-network.eu/wp-content/PDFs/PLACARD-Insitutional-strengthening-May2020.pdf>.
8. Leitner, M., Schmidt, A., Capela Lourenço, T., Prutsch, A., Liehr, C., Pulquerio, M., Steenbergen, M. & Schipper, L., Draft guidelines to strengthen CCA and DRR institutional coordination and capacities, in PLACARD Work Package 4 – institutional strengthening, PLACARD project. 2018, European Union FC.ID, Lisbon.
9. Rahayu, H.P., et al., A micro scale study of climate change adaptation and disaster risk reduction in coastal urban strategic planning for the Jakarta. *International Journal of Disaster Resilience in the Built Environment*, 2019. 11(1): p. 119-133, DOI: <http://dx.doi.org/10.1108/IJDRBE-10-2019-0073>.
10. Young, A.F., Adaptation actions for integrated climate risk management into urban planning: a new framework from urban typologies to build resilience capacity in Santos (SP). *City, Territory and Architecture*, 2016. 3(1), DOI: <https://doi.org/10.1186/s40410-016-0042-0>.
11. de Leon, E.G. and J. Pittock, Integrating climate change adaptation and climate-related disaster risk-reduction policy in developing countries: A case study in the Philippines. *Climate and Development*, 2016. 9(5): p. 471-478, DOI: <http://dx.doi.org/10.1080/17565529.2016.1174659>.
12. Phuong, L.T.H., G.R. Biesbroek, and A.E.J. Wals, Barriers and enablers to climate change adaptation in hierarchical governance systems: the case of Vietnam. *Journal of Environmental Policy & Planning*, 2018. 20(4): p. 518-532, DOI: <https://doi.org/10.1080/1523908X.2018.1447366>.
13. Clegg, G., Dias, N., Amaratunga, D., Haigh, R., & Panda, A., Integration of CCA and DRR for flood resilience: A review of good practices in the United Kingdom, in *Global Assessment Report on Disaster Risk Reduction (GAR 2019) 2019*, UNITED NATIONS OFFICE FOR DISASTER RISK REDUCTION (UNDRR), Available from: <https://www.unisdr.org/we/inform/publications/66296>.

Other materials:

REQUIRED IT RESOURCES¹⁸

No.	Software, manufacturer
1.	MS Word
2.	MS Excel
3.	MS Power Point
4.	Statistical analysis software (NVivo, SPSS etc)
5.	Online Learning Management Systems

¹⁷ Please provide links

¹⁸ Please add as many software as needed for the course





Date of completion of this version of Module Specification

Date of approval by the Faculty:

