Urban Climate Change Research Network

Climate Change Adaptation in Small Coastal Towns & Cities

Dr. David Major & Dr. Martin Lehmann*

Background:
To support appropriate city-level action, UCCRN was established in May 2007 during the C40-Large Cities Climate Summit held in New York City. UCCRN, an initial group of 100 researchers in 60 cities, was created to provide knowledge to the C40 cities and other urban decision makers to enhance climate science based policy-making. Today, over 600 individual scholars dedicated to the analysis of climate change mitigation and adaptation are members of the Network.

In 2012, Aalborg University joined the Network and has since made significant contributions not least in respect to the flagship Assessment Report on Climate Change & Cities (ARC3) series. Every year, two to five master’s students enrolled in the Erasmus+ Joint Degree programme in Cities & Sustainability (CiSu) join the Secretariat in New York or one of the Regional Hubs to participate in their day-to-day activities and work on select research projects.

Aalborg University is furthermore home to the UCCRN Nordic Node and now launch the project “Climate Change Adaptation in Small Coastal Towns & Cities” together with colleagues from Earth Institute at Columbia University, and Helsinki and Aalto Universities.

Motivation:
Climate Change has already had significant influence on human and natural systems and it is a generally accepted fact that even with substantial mitigation efforts and actions, adaptation will be necessary. For example, current studies from NASA on vital signs show global sea level rises of almost 90 mm since the mid-nineties, and average global temperatures have risen almost 1°C over the past 100 years. Further effects include changes in precipitation patterns, and more droughts and heat waves.

While steps for climate change adaptation are being taken in many countries at the national level, such strategies for adaptation do not necessarily or often translate into action in small coastal towns and cities. Furthermore, for the most part, small coastal towns and cities, in both developed and developing countries, do not for have the advantages of the well-managed, prosperous cities with own large planning, engineering and scientific department that have taken the lead in urban adaptation to climate change.
Particular barriers include a lack of information about the detailed nature of climate change impacts locally and a lack of financial resources to develop appropriate adaptation measures. Further, there are institutional barriers between agencies that delay responses, especially a lack of clarity over the allocation of responsibilities for identifying impacts, developing and implementing adaptations, and covering the financial costs and mitigating the social and economic burdens on localities (Adger et al. 2005; Biesbroek et al. 2013).

As starting point, the adaptation frameworks of first mover cities such as Copenhagen (Copenhagen Climate Adaptation Plan) and New York City (New York City Panel on Climate Change) could be adjusted in different ways for smaller cities and towns, and lessons from the European Climate Adaptation Platform (Climate-ADAPT) studied, translated and exchanged.

Despite these and other valuable starting points, many challenges remain to enable small coastal towns and cities to profoundly address their adaptation conditions, needs, and opportunities.

**Research Focus:**
The two-year project will initiate a move forward to address the adaptation needs of small coastal communities by providing focused input to the four overall aspects identified in Major & Juhola (2016):
First, estimates of the number of small coastal towns and cities worldwide likely to be impacted by climate change, and their types and characteristics. Second, initial estimates of costs for adaptation for these settlements. Third, focused, practical adaptation guidance for small coastal settlements. Fourth, guidance for national and external funding agencies (including NGOs).

The main geographical focus of the research will be on Nordic communities and conditions with a particular emphasis of the Northern Denmark region; however, the team will collaborate with other UCCRN scholars from around the world and along the way attract further Nordic and EU funding.

**EU and other funding opportunities:**
Marie Curie: ITN, RISE, COFUND (deadlines annually in January, April and September, respectively)
Horizon2020:
Erasmus+: Strategic Partnerships and Knowledge Alliances (deadlines annually in February, March)
Nordforsk: Potentially linked to Nordic University Hubs call (deadline 3 May 2017)
Joint Programmes: JPI, Belmont and similar (deadlines continually).

**Team:**
At Aalborg University, the project will be led by Associate Professor Martin Lehmann, and consist of a further two researchers:
Adjunct Professor David Major, Earth Institute, Columbia University; Aalborg University (2 years, 2017-2019)
Postdoc NN (2 years, 2017-2019)

**Time plan:**
28 March 2017: Outline Proposal Submitted with named Adjunct Professor
1 April 2017: Potential Postdoc identified
21 April 2017: Application deadline.
5 May 2017: Applicants receive a decision.
September 2017: Official project launch
**Budget:**
Salaries for two years, September 2017 – August 2019 for David Major (20% Adjunct Professor), and postdoc.
A total of DKK 300,000 to cover travel, fees, etc. for the team (Martin Lehmann, David Major, and postdoc), of which JEMES CiSu will cover DKK 100,000.

**Contacts:**
Please contact Dr. Martin Lehmann, martinl@plan.aau.dk, +45 9940 8422 for further details or for expression of interest to participate in this call. The only document to be submitted is an up-to-date CV, including list of publications.
Project description

The project description must cover the element appearing below. How you organize the content is up to the applicant. Use at least 20 mm margins at all four sides (top, bottom, left, right), an 11 pt font, and maximum 5 pages excluding references (a maximum of 2 pages for references).

Notice: out of respect to other applicants, supplementary material received after the deadline is not considered unless that material is requested by the assessment committee.

Title
Name of postdoc.
The postdoc’s current affiliation. Name of senior host.
Name of department.

8-10 lines executive summary
A short description that nails it.

The project – research part
Introduction.
The core idea, hypotheses/challenges.
State of the art.
Advancement of the state-of-the-art.

The project – teaching part
Courses/projects/educations where the postdoc intends to contribute. Consider also whether a PhD course may be offered.

Local impact
How will longer-term, lasting impact be achieved?
Plans to apply for external funding (when, where, etc.).
Expected/intended impact on the AAU research group.

Work and time plan
A rough plan including both teaching efforts and research contributions.

Budget
Provide an itemized budget that covers salary and running costs (up to DKK 150,000).

Success criteria
Dissemination plans (scientific and popular).
Indicate 3-5 success criteria to enable evaluation of whether the project has been a success.

Appendix:
An up-to-date CV for the postdoc for which partial funding is requested. In addition, also a list of all peer reviewed publications (preferably with Google Scholar links).