

Annex 1

UCCRN Regional Hubs

Building on a series of scoping sessions with stakeholders and members, the Urban Climate Change Research Network (UCCRN) is transitioning from a report-focused organization to one that leads an ongoing, sustained, global, city-focused climate change knowledge assessment and solutions program. The program is targeted to early-, mid-, and late-adopter cities through the expansion of the UCCRN to include proactive Regional Hubs, with field directors, program coordinators, and researchers who strengthen ongoing collaborations and knowledge exchange both for and with cities.

The Regional Hubs operate at continental-scale and serve to promote enhanced opportunities for new urban climate change adaptation and mitigation knowledge and information transfer, both within and across cities, by engaging in a real-time monitoring and review process with cities through ongoing dialogue between scholars, experts, urban decision-makers, and stakeholders. These activities are achieved through a combination of cities-based activities and workshops held at international city gatherings and accomplished through regular interactions that include monthly coordination calls, e-newsletters summarizing Hub activities, regional meetings hosted by each Hub every year, and an annual UCCRN meeting rotating through the Regional Hub locations.

In addition to hosting and organizing region-specific, climate change, and cities activities and knowledge sharing, Regional Hubs are also responsible for recruitment and outreach to local urban climate experts to expand the UCCRN network and access an increased diversity of knowledge; stakeholder engagement to connect climate change expertise with city leaders; production of locally focused research and downscaled projections for the regions; fundraising to support research projects, coordination activities, staffing, and operational expenses; hosting regional and topical workshops for local scholars and stakeholders to facilitate the exchange of ideas around climate change and cities; promotion of the Urban Climate Change Research Network Assessment Report on Climate Change and Cities (ARC3) series of reports to targeted stakeholders and translation of reports and publications into regional languages; and liaising between the UCCRN Secretariat in New York and the region.

The first UCCRN Regional Hub was launched in Paris, in July 2015, as the European Hub, followed shortly by the launch of the UCCRN Latin American Hub in Rio de Janeiro in October 2015. The UCCRN also announced at COP21 in December 2015 an Australian-Oceania Hub, co-located in Sydney, Melbourne, and Canberra. The UCCRN African Hub in Durban, South Africa, was launched in May 2016, and the UCCRN East Asian Hub was inaugurated in August 2016 in Shanghai. In November 2016, the

UCCRN launched a Hub in Philadelphia to strengthen a North American network of scholars and stakeholders dedicated to climate change and cities.

In addition to the formal Hubs, a Nordic Node has also been established at Aalborg University to help coordinate Northern European urban climate change efforts, and São Paulo State is the home of the UCCRN Center for Multi-Level Governance, whose overall objective is to discuss implementation of climate policies at the subnational level and their jurisdictional circumstances. The UCCRN is in discussion to launch a Southeast Asian Hub at the Ateneo de Manila University and the Manila Observatory, and it is exploring other potential Asian Hubs in Bangkok and Dhaka.

The *UCCRN European Hub*, hosted in Paris at IEES-Paris (Paris Institute of Ecology and Environmental Sciences), in partnership with the Centre National de la Recherche Scientifique (CNRS), University Pierre et Marie Curie (UPMC), and l'Atelier International du Grand Paris, was launched during the pre-COP21 conference "Our Common Future under Climate Change," in July 2015. The UCCRN European Hub is co-directed by Dr. Chantal Pacteau at CNRS, and Prof. Luc Abbadie at UPMC.

The UCCRN European Hub aims to promote integrated climate change responses based on knowledge-sharing and collaboration between European scholars, institutions, local governments, and industry while acknowledging the richness and diversity of Europe's scientists and practitioners. Local and specific solutions are recognized as foundations for lasting solutions. The European Hub will organize workshops to set a research and coordination agenda of the highest priority climate change issues that European cities face. Additionally, the Hub is looking to translate and publish the ARC3.2 Summary for Leaders in French and in Italian.

The European Hub has been able to solidify a core group of partners that include Paris City Hall, Institute of Ecology and Environmental Sciences of Paris (IEES), Paris Climate Agency (APC), Regional Agency for Nature and Biodiversity (Naturparif), and the Institute for Climate Economics (I4CE).

The *UCCRN Latin America Hub* is hosted by the Oswaldo Cruz Institute/FIOCRUZ and the Center for Integrated Studies on Environment and Climate Change at Universidade Federal do Rio de Janeiro (COPPE-UFRJ), under the coordination of Dr. Martha Barata at FIOCRUZ, and Prof. Emilio La Rovere at COPPE-UFRJ. It aims to promote enhanced opportunities for new urban climate change adaptation and mitigation knowledge

and information transfer through ongoing dialogue between scholars, experts, urban decision-makers, and stakeholders at the regional level.

In October 2015, the UCCRN Latin American Hub, in partnership with UCCRN and the Columbia Global Center in Latin America, hosted a seminar on “Building Resilient Cities: Climate Change Risk Management for Urban Health.” Members of the UCCRN presented results of the *Second Assessment Report on Climate Change in the Cities* (ARC3.2) with a focus on Latin American cities. The initiative had positive outcomes within the national and regional media: it connected scientists, experts, and interested authorities on the subject and facilitated their engagement with the new Hub.

Currently, the UCCRN Latin American Hub is engaged in promoting new research on climate change vulnerabilities, impacts, mitigation, and adaptation of Latin American cities; incorporating new members from different parts of the Latin American region; and hosting, promoting, and participating in workshops and scientific networks in order to build capacity for knowledge partnerships with cities’ scientists and stakeholders.

The core partners of the Latin American Hub are the Brazilian Environment Ministry, Brazilian Health Ministry, the Rio Resiliente Program, the Environmental Secretary of the City of Rio de Janeiro, and the Environmental Secretary of the State of Bahia.

Additionally, the Latin American Hub is looking to translate the ARC3.2 in Portuguese and Spanish and adapt it to publish an “Education Kit for Municipal Schools and Museums,” in order to provide a toolkit to assist in creating more resilient cities.

The *UCCRN Australian-Oceania Hub* is being shaped as a platform to promote a coordinated climate change response based on knowledge sharing and collaboration between Australian and Oceanian scholars, institutions, city and local governments, and industry. It aims to enable local initiatives in the region to inform local initiatives in other countries, as well as to enable those of other countries to inform initiatives in Australian and Oceanian cities. It is co-directed by Dr. Ken Doust at Southern Cross University in Lismore, Prof. Kate Auty at University of Melbourne and the Office of the Commissioner for Sustainability and the Environment, and Prof. Barbara Norman at the University of Canberra.

The Australian-Oceania Hub the richness and diversity of the region’s many researchers and practitioners and seeks to channel the potency of this resource into a systematic response to climate change. Local and specific solutions are recognized as foundational for lasting solutions that respect and enhance the individuality and personality of the landscapes, cities, and people that comprise the Australian continent and the Oceania region.

A number of participants in the Australian-Oceania Hub were in attendance at the UNESCO “Our Common Future” Conference and

COP21 in Paris. In December 2015, the Hub launched its website <http://www.sustainabilitystep2.org/uccrn/> in time for the COP21 events involving UCCRN. The Australian-Oceania Hub is currently discussing the best way to operationalize the collaborative efforts between the universities and how to best engage with city and regional level governments as the first focus. The Hub is building dialogues with mayors and their agencies to explore where they are with the climate change agenda and to understand the initiatives they are leading or embracing and how collaboration with the Hub participants can help in moving down the path of transformational change.

The UCCRN Australian-Oceania Hub’s academic partners include Macquarie University, Monash University, Southern Cross University, the University of Canberra, the University of Melbourne, the University of New Castle, the University of New South Wales, the University of Technology Sydney, and the University of Wollongong.

The *UCCRN African Hub* was launched in May 2016, in Durban, South Africa, in partnership with the Durban Research Action Partnership (D’RAP), the University of KwaZulu-Natal (UKZN), and eThekweni Municipality. It is directed by Dr. Sean O’Donoghue at eThekweni Municipality and Prof. Mathieu Rouget at UKZN.

As an African coastal city with a developing economy, Durban’s development trajectory is at risk from climate change impacts. Durban leads regional efforts to coordinate climate change responses and in co-producing knowledge products to guide implementation of adaptation activities. Durban’s key knowledge partner is the University of KwaZulu-Natal through the Durban Research Action Partnership (DRAP). Although the partnership has been functional since 2011, the Hub’s formal launch was in May 2016.

The UCCRN African Hub will seek to coordinate research activities to guide adaptation implementation within its regional partnership of local and district municipalities, called the Central KwaZulu-Natal Climate Change Compact.

The *UCCRN East Asian Hub* was launched in August 2016 during the first Shanghai Forum on Climate Change and Cities. The Hub is co-led by East China Normal University (ECNU) and the Shanghai Meteorological Service (SMS), and co-directed by Prof. Miu Liu at ECNU and Dr. Xiaotu Lei, Director of the Shanghai Typhoon Institute at the Chinese Meteorological Administration.

East Asia experiences several weather- and climate-related disasters every year, including flooding, high temperatures, infrequent rainfall, and typhoons. The UCCRN East Asian Hub will serve to explore further areas for risk assessment and knowledge generation in the region, especially in terms of evaluating the success of implementing adaptation and mitigation plans in East Asian cities. It will provide science to local stakeholders and facilitate the translation of UCCRN publications into

regional languages, including Mandarin, Cantonese, Japanese, and Korean.

The UCCRN is also working with the East Asian Hub to establish a Shanghai Panel on Climate Change based on the framework of the New York City Panel on Climate Change. China released its Action Plan on urban climate change adaptation in February 2016, selecting 30 cities to initiate adaptation pilot projects, beginning in Fall 2016. The UCCRN East Asian Hub is planning to collaborate with a few of these city pilot projects to provide them with relevant climate science knowledge to incorporate into their plans.

The *UCCRN North American Hub* was established in November 2016, at Drexel University, in Philadelphia, under the leadership of Dr. Franco Montalto. Three core goals have been established to guide its activities. The first goal is to promote two-way dialogue between urban decision-makers across North America and UCCRN researchers. Hub researchers will provide knowledge regarding climate change impacts and the effectiveness of various adaptation and mitigation strategies to urban decision-makers, while urban decision-makers will help ensure that the Hub researchers are asking policy-relevant research questions with the potential to produce actionable results. The second goal is to consolidate and mainstream relevant domain knowledge, for example regarding information gaps, known opportunities and constraints to different adaptation and/or mitigation strategies and lessons learned from pilot projects and programs. The third and final goal involves networking and mobilizing activities, specifically by enhancing interactions among researchers, cities, students, and other existing networks.

Organizationally, the UCCRN North American Hub, in partnership with the UCCRN Secretariat in New York, will achieve these goals by developing a Research Project Database, an Interaction Zone, and an Urban Climate Resource Exchange. The Research Project Database will be in the form of a searchable listing of applied research projects identified by the Hub Director and other Hub affiliates during interactions with urban decision-makers throughout North America. Students and researchers from North American Hub institutions will use the Database to identify projects that can be incorporated into master's of science (MS) and doctoral theses, project-based learning opportunities in the classroom, independent study projects, or even sabbatical projects. The online portal would also include an upload option to facilitate the addition of new projects to the database remotely.

The Interaction Zone would also be an online portal including a searchable inventory of various climate action plans from North American cities. This would be publicly accessible and is also expected to build capacity for Hub stakeholders interested in rapidly surveying the state of the art in climate preparedness plans in North America. The Urban Climate Resource Exchange would include links to key international guidance documents, as well as links to other related networks.

Hosted by the São Paulo State Environment Secretariat and closely connected to both the UCCRN Latin American Hub in Rio de Janeiro and the University of São Paulo (USP), the *UCCRN Center for Multi-Level Governance* was launched at the Brazilian Embassy in Paris during COP21, in December 2015. Its overall objective is to discuss implementation of climate policies at the subnational level and their specific jurisdictional circumstances. It is co-directed by Dr. Patricia Iglecias, former São Paulo State Secretary and Lecturer at USP, and Dr. Oswaldo Lucon, Climate Change Advisor to the São Paulo State Environment Secretariat and Lecturer at USP. The Center was created after the experience of writing the ARC3.2 report, and its activities will aim to cross-cut and integrate the UCCRN Regional Hubs on these matters.

The *UCCRN Nordic Node* began its formation during the ARC3.2 International Kickoff Workshop in New York, in September 2013. Through the KlimaLab at Aalborg University, Denmark, it has been working with and supporting the UCCRN Secretariat through the completion of the ARC3.2 volume and beyond.

The UCCRN Nordic Node, led by Dr. Martin Lehmann at Aalborg University, is a close affiliate with the UCCRN European Hub located in Paris. It is intended to bring added value to the UCCRN, in particular by tapping into what is sometimes called "The Nordic Way." This approach embodies a close collaboration in partnerships between cities and regions, academic institutions, industry, and business, and civil society.

The Nordic countries have, individually and collectively, some of the most ambitious climate and energy policy agendas in the world. One of the Nordic Node's aims is to ensure that experiences, results, failures, and successes from these agendas are being collected, scrutinized, analyzed, and shared within the wider UCCRN network and beyond. By doing so, the Node aims also to inspire similar actions in other countries and regions of the world and thereby help to underpin the UCCRN response agenda supported by knowledge and rigorous research.

UCCRN Regional Hubs



Annex 1 Figure 1 Urban Climate Change Research Network (UCCRN) Regional Hubs.