

Urban Health & Wellbeing

a systems approach



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Since 2006 our research at the Institute of Urban Environment has been investigating the impacts of urbanization on ecosystems and society. A special focus of our work has been the relationship between urban environmental quality and human health by understanding the impacts of water, soil, air, and solid waste pollution.



With the Programme on Urban Health and Wellbeing: a Systems Approach, our institute and the Chinese Academy of Sciences as the host of the International Programme Office, recognizes the importance of taking an interdisciplinary and systems perspective for advancing knowledge on urban health and informing urban decision makers.

Yong-Guan Zhu, Director General, Institute of Urban Environment

Hosting a programme on Urban Health and Wellbeing which takes an interdisciplinary and systems approach, demonstrates the sincere interest and need for better understanding the complex dynamics behind urbanization processes which have an impact on people's health and lives in cities worldwide. I feel honored to serve the



programme as its executive director and privileged for having the opportunity to contribute in shaping it's framework and agenda for the coming 10 years. The programme has come at a critical junction in human development where for the first time in history the urban environment has become human's dominant habitat. Although living and health standards worldwide have improved with urbanization, so have the challenges to health and wellbeing. Both can be reinforcing: increasing inequality hits hardest on society's poorest who are most vulnerable and susceptible to physical, mental and social health threats. This interdisciplinary and global science programme aims at shedding light on the interrelationships of the social, ecological and technological dimensions of urban systems and aims at identifying healthy constellations of factors impacting the quality of life in cities. We will encourage and facilitate the production of knowledge in that field. The programme comes at a time when not only cities are rapidly changing but also science itself. Today scientists increasingly recognize the value of multiple knowledge domains for understanding the city as a complex adaptive system. Together we will advance that knowledge and I sincerely invite all interested in contributing to this scientific adventure by connecting with the programme.

Franz Gatzweiler, Executive Programme Director

Contact

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Recently at IUE



From left to right: Franz Gatzweiler (IUE), Qiaoying Liu (University of Nottingham), Miriam von Beek (Maastricht University), Charlotte Mohn (Bartlett School of Planning, University College London), Juan Miguel Ortega Quesada (Xiamen University), Ana Rada Tarifa (Mayor de san Andres University, La Paz, Bolivia), Dr. Keith Dear (Duke Kunshan University), Ohidul Alam (Tongji University), Arch. Nataly Arevalo (Tongji University), Joshua Elaru (Tongji University), Eulalie Ruan (Xiaoxia) (IUE)

The International Programme Office co-organizes the annual summer school at IUE

July 15-18, 2015

The summer school at IUE is an annual event to which Chinese and international students are invited for introducing IUE's work to a broader junior academic audience. This year the summer school was co-organized by the Urban Health and Wellbeing Programm which allowed us to invite international lecturers and non-Chinese students who are potentially interested to do research in the thematic focus of the programme:

Prof. Frank Wania from University of Toronto, gave a lecture on "Simulating differences in exposure to PCBs between generations, sub-populations and individuals."

Prof. Keith Dear from Duke Kunshan University, presented on "Climate Change and Urban Health"

Dr. Ana Rada Tarifa from Mayor de san Andres University, La Paz, Bolivia, and a member of the ICSU Regional Office for Latin America and the Caribbean presented on "Rural-urban migration and chronic diseases".

Dr. Feng Kuishuang from University of Leeds, lectured on "Teleconnecting Consumption to Environmental Impacts at Multiple Spatial Scales"

Prof. Yu Xin from IUE, gave a lecture on "You can say NO!"

Prof. Shao Guofan from Purdue University, gave a lecture on "Optical Sensing Technology and Application"

Prof. Zheng Yuming from IUE, talked about "New nano-functional materials".

Prof. Yu Changping from IUE, gave a lecture on "Emerging Pollutants".

Prof. Franz Gatzweiler from IUE, presented the research agenda of the Programme: "Urban health and wellbeing: a Systems Approach".

Director Zhu Yongguan from IUE, gave a lecture on "Where has the Nitrogen gone?"

Sponsors' message

Heide Hackmann



International Council for Science (ICSU)

On behalf of the International Council for Science (ICSU) - the “start-up organization” of the Programme “Health and Wellbeing in the Changing Urban Environment: a Systems Analysis Approach” – I congratulate the Scientific Committee and International Programme Office for the tremendous work done towards the implementation of this initiative. The programme represents an important activity in ICSU’s profile of international research collaborative actions. It furthers solutions-oriented research approaches and the transdisciplinary dialogue between social, natural, health and engineering scientists, local policy-makers and practitioners. The partnership between ICSU, the InterAcademy Medical Panel, the United Nations University (UNU), and the host organization – the Institute of Urban Environment of the Chinese Academy of Sciences – provides a strong enabling environment for the Programme to co-develop a research agenda and co-produce knowledge aimed at addressing the determinants and manifestations of health and wellbeing in urban populations. In this context, ICSU foresees an important role for the Programme in the attainment of the Sustainable Development Goal 11 “Make cities and human settlements inclusive, safe, resilient and sustainable”, and the overall post-2015 development agenda.

Jo Ivey Boufford



InterAcademy Medical Panel (IAMP)

The Inter Academy Medical Panel (IAMP), a global network of 73 academies of medicine and medical branches of science academies, is committed to improving health world-wide. Working through its member academies, the secretariat in Trieste, Italy, undertakes a series of activities directed by an executive committee made up of representatives from its member academies. Key areas of interest include social determinants of health, One Health, and non-communicable diseases. All these areas are fundamentally affected by the growth in the number and size of cities and, in turn, are critical factors in the study of urban health. The complex nature of cities and urban societies requires new analytic frameworks such as systems science and ‘big data’ to allow us to understand and intervene better than ever before. IAMP is organizing a working group of Academies interested in urban health to enrich its engagement in this important work. By bringing the network of IAMP’s member academies into the ICSU-IAMP-UNU Urban Health programme, we can learn from experts in cities around the world, mobilize expertise from member academies to participate in this initiative as well as quickly disseminate findings to countries and cities where this work will be of great benefit.

Anthony Capon



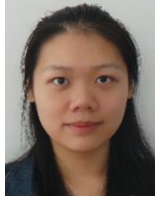
United Nations University-International Institute for Global Health

The global urban transition is arguably the most profound change to human ecology in the history of human life on Earth. During the last 200 years, the proportion of the world’s population living in cities and large towns has grown from 5% to more than half of the current 7.3 billion people. In the next few decades, a further 2-3 billion people need to be housed in urban areas – more than 1 million people every week. Most of this population growth will occur in small and medium-sized cities in low and middle-income countries. There is a pressing need to improve urban decision-making and thereby protect and promote health and, more generally, improve the lives of urban dwellers in sustainable ways. With its transdisciplinary intent, and focus on systems approaches, this new science for health and wellbeing programme is well placed to build knowledge and capacity for informed policy, from global through local contexts. UN University is delighted to co-sponsor the programme and looks forward to active involvement.

From the IPO

Betty Liu (Qiaoying LIU)

I'm a penultimate year under graduate student of Environmental Sciences in the School of Geography at the University of



Nottingham. My research is on reconstructing temperature changes in the late Ming dynasty (1560 – 1644 AD) and possible correlations on resource scarcity, especially harvest failures and subsequent social conflicts. This research uses the GCM (Global Climate Model) to reconstruct the precise temperature variation in the late Ming dynasty. In this 'Little Ice Age' period, there was societal unrest in China which may have been caused by climate change. My research aims at quantifying the temperature and exploring possible linkages between reconstructed temperature and social proxies, for example famine, war, migration, population decline. Data sources are from Chinese historical documents and existing research. The research results would help to understand the relationship between temperature variation and societal change, and also assist future research on resilience in society.

Miriam van Beek

I am Miriam. I am a German and Dutch national and I am currently finishing my MSc in Global Health at the Maastricht University,



Faculty of Health Medicine and Life Sciences in Maastricht, Netherlands. My MSc thesis research is on "Syndromic Surveillance for infectious diseases in China". I look at strengths and challenges of disease surveillance systems and the use of messaging services, the internet and social media as a surveillance tool. Syndromic Surveillance is used for the early detection of diseases to mitigate the impact of disease outbreaks on public and global health. It collects, analyzes and interprets health-related data in (near) real-time, which makes a rapid detection of potential health threats possible. Syndromic Surveillance uses non-specific health indicators, such as drug sales and absenteeism, to find irregularities and links these irregularities to possible disease outbreaks. I am focusing on the possible use of social media, the internet and messaging services as a tool to detect disease-outbreaks at a very early stage. At IUE I am doing qualitative interviews with experts in the field and analyzing the current systems.



Charlotte Mohn

After graduating from the University of Edinburgh (UK) with an undergraduate degree in Politics and Sociology, and before commencing graduate studies in International Urban Planning at the University College London (UK), I came to Xiamen to study Chinese. The IUE then gave me the opportunity to do an internship, allowing me to look into the interplay between urban planning and urban health. Urban health, in this regard, is defined not only as the health of the urban dwellers, but also as the health of the city as a social system. With a special focus on the special concentration of poverty in Chinese cities, particularly the concentration of rural-to-urban migrant workers in areas marked by lower levels of infrastructure and accessibility of basic services such as health care, education and so forth, my research analyses the role urban planning and state-led policies have played in bringing about the spatial concentration of urban poverty, and in how far they can play a role in alleviating some of the problems associated. The research stands against the backdrop of - yet does not leave unquestioned - the work of numerous scholars who have argued that the spatial concentration of the urban poor is likely to lead to social conflict and limited upward social development.

From the IPO



Yi Zhang

I am the science officer of the Programme on Urban Health and Wellbeing: a Systems Approach. I was trained in agricultural economics and achieved my doctorate degree from the University of Bonn in Germany. Since 2007, I have been dedicated to research topics on rural-urban migration in China. Fast urbanization in China due to the rural-urban migration is the most prominent change in China's economy, society and natural environment. The research topics I am involved in include: the impact of rural-urban migration on China's economic growth, the demographic changes of population, human capital investment, and agricultural productivity. My recent research interests focus on urbanization and health risks. I am developing an index of urban health resilience. The construction of metrics with an index of indicators is of substantial importance to evaluate the capability of a urban health system to respond to health risks. An index of urban health resilience can not only identify the existing status and problems in health systems, but also reveal potential improvements in the future. In 2011, the proportion of China's population classified as urban reached 51%. The urbanization ratio will be increasing in the coming decades. Thereby the imminent research question for us is whether China's urban health system has the capability to address the challenges from the changing environmental and social conditions in urban environments.



Eulalie Ruan (Xiao-xia)

I am assistant to the executive director of the programme and in charge of the administration and logistics which relate to the programme on Urban Health and Wellbeing: a System Approach at IUE, CAS. If you need help or further information about the programme feel free to ask, I will do my best to support you.

Events

Interdisciplinary Seminar on Urban Health and Wellbeing

Course on "Causality and Health Statistics" at IUE

Systems approaches in science are now becoming more popular as scientists recognize the increasing interconnectedness of factors influencing the behaviour of complex systems, such as cities. Urban health and wellbeing in particular requires a better understanding of the strengths and weaknesses of statistics with regards to underlying causal connections. In this course you will get an in-depth understanding in the applied health statistics. The programme on Urban Health and Wellbeing: a Systems Approach offers this course at IUE, in August 2015, lectured by Guido Lüchters, expert in health statistics at the University of Bonn, Germany.

Events

“Governing the Anthropocene: Cyber-systemic Possibilities” Workshop funded by the VW Foundation in Hannover

July 30-31, 2015

The prevailing paradigm in the governance of the relationships between humans and the urban environment is characterised by commitments to scientism and linear, monocausal and dualistic thinking. Enacting cyber-systemic processes that maintain the quality of relationships between humans and their environment and the institutions which shape these relationships, are failing on many fronts. The Anthropocene has emerged as a conceptual framing for this issue. The Workshop fostered a resurgence in cyber-systemic thought and action with the aim to generate a potentially fundable research agenda. The two day event at Herrenhausen Palace in Hannover, Germany was organized by Prof. Ray Ison and Prof. Konrad Hagedorn from Monash University and Humboldt University of Berlin, respectively. It was framed as an invitation to contributors from different cyber-systemic organisations and communities to participate in a systemic inquiry into how cyber-systemic thinking and practice can contribute to transformations that better enable us to govern the anthropocene.

Outlook

Big Data in an Urban Context

Nov 30 – Dec 4, 2015 – Xiamen, China

The World Social Science Fellow Programme of the International Social Science Council (ISSC) in partnership with CODATA (an ICSU programme which works to improve the quality, reliability, management and accessibility of data) and the Programme on Urban Health and Wellbeing: a Systems Approach, organize a seminar at IUE, CAS, Xiamen, China on ‘*Big Data in an Urban Context*’. ‘Big Data’ gives us the power to gather and analyse data relating to the urban environment and to human interactions and offers the prospect of improving urban health and wellbeing, through the gathering of rich real time data on human interactions. Exploring these data and applying the new techniques of ‘data science’ is essential if we are to address major, fundamentally interdisciplinary, scientific and social grand challenges emerging from the changing urban environment. A call for applications from outstanding early career social scientists around the world to become World Social Science Fellows has been issued.

Deadline for applications is Aug 24, 2015.

To apply go to: <http://www.worldsocialscience.org/activities/world-social-science-fellows-programme/call-for-applications/>

Outlook

Ideal City: between myth and reality

Aug 27-29, 2015 - Urbino, Italy

The conference is organized by the Research Committee on Urban and Regional Development (RC 21) of the International Sociological Association. It will be hosted by the School of Social and Political Sciences – Department of Economics, Society, and Politics at the University of Urbino Carlo Bo, Italy. The Programme on Urban Health and Wellbeing: a Systems Approach in collaboration with UNU-International Institute for Global Health (UNU-IIGH) are convening a seminar at the conference on “Understanding Health and Wellbeing Linkages in Urban Systems”.

Go to the conference webpage: <http://www.rc21.org/en/conferences/urbino2015/>

Urban Thinkers Campus

Jan 25-27, 2016 – Georgetown, Penang, Malaysia

The Programme on Urban Health and Wellbeing: a Systems Approach has committed to be a partner of the Urban Thinkers Campuses (UTCs). The UTCs are an initiative of UN-Habitat. They provide open space for critical exchange between urban actors who will come together and work towards positive urban transformations. A 3-day event including local authorities, civil society organizations, parliamentarians, professionals, trade unions, researchers and academics, foundations, businesses and industries, slum dwellers, women’s groups, children and youth and indigenous people. The topic of the UTC in Georgetown will be “Urban Health and Wellbeing”. It will discuss issues through the lenses of green and healthy urban environments, inclusion and urban health equity, culture, heritage and urban wellbeing. In addition there will be two cross cutting themes on systems thinking and co-production of knowledge and urban governance for health.

For more information: <http://unhabitat.org/urbanthinkers/>

Reimagining health in cities

Sep 10-11, 2015 - Philadelphia, Pennsylvania, USA

Hosted by the Drexel University School of Public Health, the symposium will bring together researchers, practitioners, and policy makers focused on health in cities to energize work on urban places and health, generate novel ideas for research, and stimulate debate on policy implications. Participants will reflect critically on the links between urban environments and health, identify new opportunities for research (including novel data and methodological approaches), and consider implications for community action and policy.

<http://publichealth.drexel.edu/research/events/UrbanHealthSymposium/>

Urban art

A competition for a programme logo was announced beginning August 2015 at IUE, Xiamen University and on a public webpage for the city of Xiamen.

The logo was selected by a committee at IUE and will be the future logo of the programme – in a slightly modified version.

