



## **Systems Approaches to Health and Wellbeing in the Changing Urban Environment**

**Call for expressions of interest to establish  
International Centres of Excellence (UHWB ICE)**

### **TERMS OF REFERENCE**

Co-sponsored by the International Science Council (ISC), the United Nations University (UNU), and the InterAcademy Partnership (IAP), the **Urban Health and Wellbeing (UHWB) programme** was launched as a ten-year programme to address the major challenges to health and wellbeing in the urban environment. Starting in 2014 its International Programme Office at the Institute of Urban Environment, Chinese Academy of Sciences (IUE, CAS) took up its operation.

The UHWB programme addresses the emerging health challenges in urban environments which are under the influence of and accelerated by broader climate, epidemiological, demographic and ecological changes. The programme recognizes the increasing complexity and interconnectedness of cities as socio-ecological-technological systems and the associated risks to the health and wellbeing of people living in cities. Ageing, safety, inequality, malnutrition, migration, transport, pollution and a range of communicable and non-communicable diseases are among some of the problem areas for which better knowledge and data need to be created, integrated and communicated for improving urban decision-making. However, despite the increasing amount and availability of data the decision-making process requires more systems intelligence to better cope with complexity and progress towards the global goals and targets of the UN landmark agreements of the New Urban Agenda, the Sendai Framework for Disaster Risk Reduction, the Paris Agreement and the Sustainable Development Goals (SDG).

The UHWB programme therefore **aims** at promoting and encouraging the application of various types of systems approaches in different fields of urban health and wellbeing by developing methodology, identifying and integrating data, strengthening capacity, communication, outreach and decision support to support the implementation of the UN landmark agreements. **The programme aims at facilitating the creation of systems intelligence for improving health and wellbeing in changing urban environments.**

The UHWB Programme is directed by the **Science Committee** and the **International Programme Office (IPO)** which decided to establish a limited number of **International**

**Centres of Excellence (ICE).** An ICE can be based on and located at existing organisations, such as Public Health Agencies, focusing on public, global, urban health research and service delivery, research and development, education and awareness raising with a focus on cities. The ICE should operate in networks of other hubs engaging and collaborating with other organisations in the region, country or city.

### **Relevance**

Historically, socio-economic progress, in science and society, has been made by specialisation and creating value across scales. As populations grow and become increasingly complex, coping with complexity becomes increasingly challenging and costly. Unintended consequences of development and externalities, such as pollution, congestion, inequality and conflict, are the results of the failure to manage this complexity of social, ecological and technological systems in cities. A common mistake is to seek solutions which create benefits in one field but creates adverse impacts in fields to which the solution is connected. These can have serious effects on human health and wellbeing and potentially translate into excess morbidity and premature deaths. These costs on human health and wellbeing are to a large extent the result of incomplete systems intelligence<sup>1</sup>. What is needed are solutions which create co-benefits based on an understanding of the multiple interconnections.

While complex problems could be solved in the past by analytically addressing each and reducing complexity, today's increasing interconnectedness requires interdisciplinary and integrated systems approaches to solve them. The process of recognizing the need for systems approaches to collective decision-making and action is a process of systems intelligence. Systems intelligence can be institutionalized in an organisation when decision-making processes repeatedly make use of various systems methods. Organisationally this can be achieved by a systems intelligence unit with a mandate from a higher decision-making authority.

### **Objectives of UHWB ICE**

Each ICE will be developed to improve the working of its host organisation but also to contribute to the UHWB programme's main principles, objectives and study domains. Every ICE contributes to the UHWB Science Plan<sup>2</sup>. The UHWB ICE are required to support the Scientific Committee and the IPO but also to develop a partnership to build a global network for UHWB knowledge centres with shared expertise and researcher.

Specifically, UHWB ICE will demonstrate how an integrated systems approach can be applied to solve concrete challenges of urban health and wellbeing. This can be done, for example, by capacity building and training in systems approaches to UHWB; by case studies and demonstration projects; assessment, data management and monitoring. The ICE should be a mechanism that enables interested organisations to improve their cross-sectoral and multi-disciplinary procedures for improving urban health and wellbeing and thereby add value for their own organisational performance measures.

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<sup>1</sup> "Intelligent behaviour in the context of complex systems involving interaction and feedback." Saarinen, E. and Hämäläinen, R.P. 2010. The Originality of Systems Intelligence, In Essays on Systems Intelligence, eds. Raimo P. Hämäläinen and Esa Saarinen: pp. 9-26 Espoo: Aalto University, School of Science and Technology, Systems Analysis Laboratory

<sup>2</sup> ICSU (2011). Report of the ICSU Planning Group on Health and Wellbeing in the Changing Urban Environment: a Systems Analysis Approach. International Council for Science, Paris.

Further, the ICE can serve the purpose of strengthening international networks for delivering on the Sustainable Development Goals (SDGs) and other UN landmark agreements, by taking a systems approach to urban health and wellbeing. ICE will be developing and strengthening strong partnerships with UN Agencies and organizations at international, regional, national and local levels working on urban health.

The ICE will, in particular, enable regional scientific activities through geographically-focused contributions based on more localized inputs and by being visible centres of research, motivate participation in the UHWB.

ICE will extend their core function as facilitators of UHWB and will be international centres for providing support for decision-making, promulgating achievements of Urban Health research, as well as fostering researchers and practitioners. The aim is to ensure the shift of focus towards a holistic and inclusive systems approach to urban health and wellbeing in research, policy-making and society.

### **Main Roles and Activities of UHWB ICE**

Suggested activities of the ICE could include:

- Conduct inter-sectorial, integrated systems research on health and wellbeing in cities
- Provide specifically-designed technical cooperation on urban health and wellbeing for policy and decision-making;
- Provide technical support for formulating urban health and wellbeing programs, case studies, pilot and demonstration projects based on integrated systems approaches;
- Promote UHWB outreach, capacity building by conducting trainings, workshops or other activities for urban health agencies, planners, managers, decision- makers, or junior researchers.
- Facilitate and participate in UHWB events;
- Contribute to an urban health researcher network

### **Criteria for designation of UHWB ICE**

The ICE will be designated on the basis of the following criteria:

- A good track record in, or commitment to, transdisciplinary research on urban health and wellbeing, combining social science, natural science, planning, education as well as policy advice.
- Provision of unhindered access for researchers from participating countries and international visitors;
- Proven multi-national and interdisciplinary experience in science and policy excellence;
- Internal capabilities to manage multi-national research teams;
- Commitments to provide support for UHWB activities;
- Provision of office space and supporting services;

### **Selection Process of UHWB ICE**

The UHWB ICE selection round would be conducted through the following competitive process.

### **Expressions of interest**

The **expressions of interest** will be reviewed by the UHWB programme. They should incorporate the following parts:

- A description of the organization requesting UHWB ICE, including its basic organizational structure, key personnel, funding sources, scientific research capacity, linkage with international urban health research network
- An overview of the professional activities for the past years, including past and ongoing programmes with regards to urban health research, practice and policy advice
- A plan of incorporating UHWB objectives into its own missions and its implementation, if not already part of them.
- A vision to develop the UHWB ICE and the envisioned working of a systems intelligence unit
- Identification of its funding and proposed in-kind support

### **Review and Evaluation of Application**

UHWB will review and assess applications in accordance to the selection criteria. Recommendations will be made to the UHWB Science Committee. The UHWB Science Committee will have the final decision.

### **Organization of UHWB ICE**

The ICE will vary in their structure and include the possible establishment of a Centre to act as a host institution and coordinating mechanism shared between several institutions in different countries, within one country or one city. The Host Institution will be agreed between the participating organizations and the UHWB Science Committee.

Each ICE will have both local and international components.

- The local component should consist of a strong cadre of health and wellbeing academics, researchers from universities, academies of science, institutes and centres within the host country (or countries).
- The international component would welcome where possible short- and longer-term (6-12 months) visiting scientists from developed and developing countries and support to host workshops, colloquia and scientific meetings that bring together scientists on, for example, case studies and where possible engages in multilateral collaborations for longer-term cooperative studies.

As a contribution to international science and the UHWB Programme, the ICE is expected to provide for, where possible, open data, information and outputs. The ICE is expected to be sustained for at least 3 years.

The UHWB ICE will function independently and work closely with, where available, UHWB Regional and National Committees and the IPO, under the overall guidance of the UHWB Scientific Committee. They should provide brief bi-annual reports to the IPO prior to the Scientific Committee meetings and submit a work plan and annual report to the IPO for the Scientific Committee on an annual basis.

### **Funding for UHWB ICE**

The funding for each ICE will be provided by the Host Agencies/Organizations for the duration of the Centre's lifespan. The Host Institution will be expected to provide and

mobilize funding for all day-to-day operations as well as supporting, where possible, projects and visiting scientists. Fundraising would be undertaken jointly with the UHWB IPO and supported by Scientific Committee members as needed.

**Submissions**

Interested organizations, agencies, foundations, institutions, academies, universities, and other capable entities can submit an Expression of Interest to the UHWB IPO directly to its executive director via e-mail: [franz@iue.ac.cn](mailto:franz@iue.ac.cn), or: [gatzweiler02@gmail.com](mailto:gatzweiler02@gmail.com)