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Note from the field

# Bridging the gap between science and practice: an ICLEI perspective

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ABSTRACT

Local governments must continuously innovate to respond to dynamic pressures from changing social, environmental and economic conditions in their localities. Local governments therefore need to have access to the latest technology and techniques developed through research, and in turn, researchers need to respond to the requirements of local governments. In the last decades, many tools and instruments with a focus on urban sustainability have been produced. Nevertheless, the potential of this wealth of knowledge is not fully used, as many tools are hardly known by policy-makers at the local level and thus not employed. This paper acknowledges that scientific research approaches and findings on urban sustainability are not independent from political and institutional contexts. By exploring three different cases through which knowledge is exchanged and shared between researchers and policy-makers, this paper analyses the mechanisms to improve such "connectivity" and outlines the related benefits.



## 1. Introduction

Local sustainability practice within the context of sustainable urban development takes place through a variety of actors, approaches, and instruments. In this paper, a practitioner and their practice is defined as a performative process of taking action. Action can for example be a) informing, designing and making policies to create enabling conditions for implementation; b) rallying and mobilizing political community support to drive positive change; and/or c) implementing actions on the ground for tangible outcomes. In the process, practitioners respond to and create indigenous knowledge and experience. Practitioners may harvest knowledge from a variety of networks and sources in order to act, and in turn they can inform knowledge through their actions, constituting a rich source for others to research. In an ideal case an interactive loop emerges whereby practitioners act upon a science-based knowledge source and science-based knowledge builds upon the available indigenous knowledge. Practitioners may create, modify, or be influenced by and apply scientific tools to take action. For example the identification of vulnerabilities requires elaborate methodological approaches to assess the negative effects of climate change on human and natural environments. Scientific research on the other side may research and assess practitioner actions to enhance the accuracy and quality of their own research, as well as to fill knowledge gaps. They may also do so to directly inform practitioner actions, such as by formulating research implications for policy-making.

In reality however both research and practice communities, more often than not, operate in isolation or in disconnect. Observations can include that science takes longer to permeate practitioner networks, is too backward (i.e. asking what has happened without considering the research implications for current or future practice), not communicated in an accessible way (i.e. highly theoretical, conceptual, methodological, or discussion intensive), does not answer the questions practitioners have (i.e. focused on questions of abstract, principle or methodological nature), does not consider the realities of the group (i.e. idealized scenarios or too narrow disciplinary focus) or the needed research discipline does not exist within or is not desired to be created in the cultural, regional context it requires. It has to be acknowledged however that much academic work is valid in its own right. Such work is important for improving scientific approaches, which can be the basis upon which research for practice can grow.

On the other side, practitioners may not draw upon existing or evolving scientifically derived knowledge, expertise, methods or

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tools when identifying and solving certain challenges. They may be unaware of rich sources of knowledge, unable to benefit from lessons learned, and may attempt to "re-invent the wheel". They can also be heavily informed by pressing political or cultural trends. As a further complication, when practical projects are forced to compete for resources (both financial and human) and balance the priorities of various stakeholders, the additional interest and input of the research community may not provide practical or realistic outcomes. The required networks and institutions for integrating practice and research may also simply not be there.

To advance and accelerate sustainable urban transformation, these tensions and synergies need to be further explored to identify mutually beneficial opportunities. While there does already exist some overlap between the research community and practitioners, their continued interaction and exchange is important and should be further investigated. This is important because improved interaction between research and practice can lead to better results in both sustainable urban practice and research. As an organization, ICLEI – Local Governments for Sustainability,[1] has in its work explored how to overcome this gap. ICLEI is an international association of local governments committed to sustainable development. It provides technical consulting, training, and information services to build capacity, share knowledge and support local government in the implementation of sustainable development at the local level (ICLEI, 2012).

ICLEI was founded in 1990 as the "International Council for Local Environmental Initiatives". The Council was established when more than 200 local governments from 43 countries convened at ICLEI's inaugural conference, the World Congress of Local Governments for a Sustainable Future, at the United Nations in New York (ICLEI, 2012). At the time a need and opportunity was identified for an organization that could support the exchange of information and experiences. Cities which were already doing environmental analysis and applying methodologies could share these with cities in need of them. In the process of bringing together a relevant group of cities worldwide with coordinated action in the same direction, it was identified that the global environment and cities and communities could benefit.

In 2003, members of ICLEI voted to revise the organization's mission, charter and name to better reflect the current challenges local governments are facing. The "International Council for Local Environmental Initiatives" became "ICLEI – Local Governments for Sustainability" with a broader mandate to address sustainability issues. ICLEI's basic premise is that locally designed initiatives can provide the most effective way to achieve local, national, and global sustainability objectives (ICLEI, 2012). ICLEI's mission is to build and serve a worldwide movement of local governments to achieve tangible improvements in global sustainability with special focus on environmental conditions through cumulative local actions. Towards this aim ICLEI has identified eight principle goals to work towards: integrated sustainability policy, resource-efficient cities, BiodiverCities securing ecosystem services, low carbon and climate neutral cities, resilient communities, green infrastructure, green urban economy and jobs, and healthy and happy communities (ICLEI, 2010).

This article will draw upon selected experiences from ICLEI to illustrate challenges and opportunities from three projects and programs. First, the Informed Cities Initiative in Europe is discussed, which sought to explore, through a series of interactive meetings, the application of two sustainability tools. Second, an Urban Climate Project conducted in India is presented, which has resulted in an informative study on pervious concrete through the collaborative interaction between research and practice. Third, challenges and opportunities are explored with regards to knowledge documentation. The article argues that research and sustainable urban practice can be mutually supportive, although some fundamental challenges exist to bridging the cultural and practical gap between these two "cultures".

## 2. Linking research and practice

### 2.1. Informed Cities Initiative in Europe: driving interaction

#### 2.1.1. Background

The Informed Cities Initiative, which is funded by the Seventh Framework Program of the European Union (EU) under the name PRIMUS – Policies and Research for an Integrated Management of Urban Sustainability, is specifically designed to bridge the gap between research on the European level and policy-making at, and for, the local level. The initiative looks at the ways in which different policy areas of urban development are integrated with sustainable urban management (Informed Cities, 2010). It forms part of a broader initiative from the European Commission (EC) of improving brokerage processes between policy-makers and researchers across Europe (and across all fields of policy-making European Commission, 2008, 2009). This initiative has been developing specifically in relation to sustainable development since 2007, starting with a workshop held by the EC on "Research for Sustainable Development: How to enhance connectivity" (EC, 2007).

The main aim of the workshop was to explore the issue of connectivity in research for sustainable development in general and more specifically in relation to the EU Seventh Framework Programme. Underpinning this is the perceived need to change the "non-integrated approach to policy-making", as identified in the renewed Sustainable Development Strategy from 2006, and to address the associated questions of complexity, integration, and inter-and trans-disciplinarity, both at the policy level and research level (Council of the European Union, 2006; European Environment Agency, 2000). The weak connectivity between research and policy-making endangers the achievement of EU sustainability objectives, and as such it is an important challenge to be addressed. Towards resolving this challenge the workshop involved representatives from research agencies in Member States and Associated Countries responsible for financing or managing research for sustainable development.

The Informed Cities Initiative, concluded in April 2012, was built around a series of events aimed at improving the links and the connection between researchers and policy-makers:

- 2 Informed Cities Forums were held in April 2010 and October 2011. They brought together more than 120 and 150 European local government representatives and researchers active in the field of local sustainability.
- 3 Informed Cities European Roundtables were carried out in April 2010, January 2011 and February 2012, gathering approximately 15–20 representatives of national institutions responsible for dealing with sustainability policies directed at the local level.
- 10 Informed Cities Implementation Workshops were organized in 10 European countries from September 2010 to April 2011 to showcase user-tailored support for authorities in applying pre-selected research tools (i.e. Local Evaluation 21 and Urban Ecosystem Europe), and to demonstrate in practice how research and policy-making can be connected.

[1] See: www.iclei.org.