

resilience to climate change and avoid loss and damage and address loss and damage that is not avoided through enhanced comprehensive risk management is one way to align the implementation of these three agendas. □

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#### Additional information

Supplementary information is available in the online version of the paper.

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## COMMENTARY:

# International standards for climate-friendly cities

Victoria Hurth and Patricia McCarney

More effort should be put into standardization as a route to achieving international consensus and action on climate change. Cities are a good example of what is being achieved through this arguably unfashionable mechanism.

Standardization is the process of taking disparate approaches and creating a common set of rules about ways of perceiving, describing and behaving. Standards structure the world, provide social order<sup>1</sup>, and focus action and could be crucial for efforts to tackle climate change.

Following 6 international meetings, 5 drafts, 300 comments and the involvement of 20 countries and 12 partner institutions, the world's first international standard for tracking cities' performance was finally approved in May 2014. ISO37120 establishes a standardized set of definitions and methodologies for 100 city indicators providing a baseline of data for cities to track their own progress and draw comparative lessons from other cities globally. It moves the world towards better climate policy performance management.

Policymakers often look to large-scale system levers to tackle problems such as climate change. However, in the urgency of the task, we can overlook the slow deliberate shifts in thinking and operating at a global level that can produce dramatic changes by focusing energy through alignment of thought and action. One of the areas where this type of change is most apparent is in international standardization.

Standards are being produced that relate to all areas of human activity, from local to

national and international levels. At each level, the work becomes more complex and slow, but the resulting standards are potentially more effective.

The national level tends to be the focal point of efforts to standardize and regulate systems, but there are very few bodies that can do this work at the global level<sup>2–4</sup>. However, it is at the global level that work on climate change is critical, yet most challenging. Although climate change is unlikely to be addressed without international coordination of actions, learning and culture, a number of observers are sceptical about the role of traditional multilateral international negotiations in addressing climate change<sup>5,6</sup>. This type of international political cooperation relies on overarching commitments, which, it is hoped, will translate into initiatives that will durably affect systems and cultures before the next government comes along and sweeps those initiatives away.

Standardization, however, is developed through a bottom-up approach. It is open to influence by a wide variety of parties, relatively transparent and not generally subject to national control. Therefore standards can have a democratic foundation and durability that transcends political cycles.

There are around 14 distinct ISO standards that address climate change. A recent addition to this list, and which has historically received limited standards attention, regards cities.

#### Standards for cities

Cities are estimated to be responsible for between 60%<sup>7</sup> and 75%<sup>8</sup> of global greenhouse gas emissions. Around 54% of the world's population lives in cities today (up from 30% in 1950) and this is projected to increase to 70% by 2050<sup>9</sup>. This means that the full remit of infrastructural and service decisions that city managers make today will be critical in setting the global emission trajectories for the future.

Not all emissions will be directly under the control of city administration. A recent estimation by the Federation Of Canadian Municipalities suggests 44% of its provincial greenhouse gas emissions are under the control of local governments<sup>10</sup>.

In 2014, two landmark efforts to standardize city approaches to climate change were launched. First, in December, the World Resources Institute, C40 Cities Climate Leadership Group and ICLEI-Local Governments for Sustainability along with input from many other stakeholders including International Organization for Standardization (ISO)

and the UN, partnered to create a standard for cities known as the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC). This provides detailed guidance for cities to measure and report their climate emissions and sources. The GPC Protocol is working to give cities the standards and tools they need to measure their emissions, build more effective emissions reduction strategies, set measurable and more ambitious emission reduction goals, and to track their progress more accurately and comprehensively.

Second, in May, the Global City Indicators Facility at the University of Toronto, working with 255 cities across 81 countries since 2008, and with ISO and the connected network of national mirror committees since 2012, successfully published ISO37120. This is the first ISO standard focused on improving performance management in city service delivery and quality of life to build more sustainable cities for all citizens, while mitigating and adapting to climate change and other unsustainability pressures.

ISO37120 details 100 indicators (46 core and 54 supporting), including the GPC measures as well as providing a range of other indicators of services that may be affected by climate change, may indirectly impact on climate change, or in other ways indicate that a city may be effectively enhancing quality of life for its citizens in the long term<sup>11</sup>. Plans are now in place for further related standards for cities.

City indicators on climate change can enhance understanding of the risks associated with climate change, influence opinion and behaviour, shape policy and determine priorities, thereby affecting a city's relative contribution to global climate change.

The first wave of cities, including Dubai and Shanghai, have recently been certified against ISO37120. The World Council on City Data (WCCD) has been established to help cities adopt ISO37120 by reporting the core and supporting indicators and certifying the data with third-party verification. There are 20 cities already certified by the WCCD, with another 100 cities in the pipeline.

### Enhanced accountability

Standards help bring about city data that is transparent. This transparency helps bridge the gap between government and civil society and facilitates a culture of learning between cities. In the past, cities have been reluctant to share that data with each other. But this seems to be changing, as cities see real value in data that is comparable and provides a level playing field.

When indicators are well developed and soundly articulated, they can also influence how issues are constructed in the public realm. Hezri and Dovers argue, for example, that "as a source of policy change, learning is dependent on the presence of appropriate information with the capacity to change society's behavior"<sup>12</sup>. Although there is no obligation for cities to adopt the standards, there will be increasing pressure for them to do so as these become the gold standard used to judge overall progress and a tool for grant makers, investors and institutional lenders. The standards will help citizens and all stakeholders judge their cities more effectively, providing critical outside pressure for change and creating wider behavioural support. This is an important lesson because behavioural change can result from publicly accessible information by becoming embedded in the thought and practices and institutions of users.

Care must be taken to standardize that which is useful and leave the rest open. This also helps make standards efficient, which is important for groups like cities. Additionally, flexibility is needed, in terms of how standards are used, because every context is different. For this reason, in helping all cities to adopt ISO37120, WCCD has created an open data portal ([www.dataforcities.org](http://www.dataforcities.org)), giving all cities access to the standardized data.

Flexibility is also maintained by the standard remaining uncommitted as to which direction an indicator should be travelling. This is because cities can vary dramatically in their contexts, with standards needing to be equally applicable to Bristol as to Bogota. For example, for some cities, increased electrical use per

capita could indicate a positive move away from coal to renewables, but for others it could signal base poverty reduction, or an upwards trajectory could be a measure of unsustainable levels of energy demand.

### Standards as solutions

Although often under the radar, standards are critical for focusing energy and momentum towards appropriate climate solutions for cities, and in a way that is in balance with all the other demands on city managers to deliver long-term quality of life within sustainable limits. There are, however, very limited resources for creating standards that are globally relevant and technically accurate.

The climate community would do well to focus effort on building and disseminating standards at least as much as supporting global political-level negotiations. As a way of motivating international consensus and action on climate change, it could be argued that standards are, on balance, likely to be more successful. □

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