



ELSEVIER

Contents lists available at [ScienceDirect](#)

Urban Climate

journal homepage: www.elsevier.com/locate/uclim

Comprehensive local climate policy: The role of urban governance

Taedong Lee ^{a,*}, Martin Painter ^b

^a Department of Political Science and International Relations, Yonsei University, 309-2 Yonhee Bldg., 50 Yonsei-ro, Seodaemun Gu, Seoul, Republic of Korea

^b Department of Public Policy, City University of Hong Kong, Tat Chee Ave., Kowloon, Hong Kong Special Administrative Region

ARTICLE INFO

Article history:

Received 18 May 2015

Revised 18 August 2015

Accepted 9 September 2015

Available online xxxx

Keywords:

Comprehensive climate change policies

Urban climate change governance

Expert knowledge

NGO participation

ABSTRACT

Given that climate change is a complicated collective action problem, local governments need a comprehensive approach to tackle climate change issues. Comprehensive climate policies concern an integrated approach in planning and implementing of climate change mitigation and adaptation policies. Yet, not all local governments are actively engaged in global climate issues in a comprehensive manner. Why does local government's commitment on comprehensive climate change policy vary? This study analyzes the influences of urban climate change governance arrangements on the level of comprehensiveness in city-level climate change policies, using case studies of four cities. Urban climate change governance arrangement that includes researchers, NGO (Nongovernmental Organization) s along with public officials is a necessary factor for a city government to develop comprehensive climate policy. The case studies illustrate that cities with well-developed climate change governing organizations (Seattle and Seoul) present comprehensive climate change policy. Urban climate governance arrangements set the climate action agenda and promote implementation schemes. However, Anaheim and Busan have neither well developed urban governance arrangements nor comprehensive climate policies.

© 2015 Elsevier B.V. All rights reserved.

1. Introduction

The politics and the science surrounding climate change mitigation and adaptation are complex and highly contested. The policy issues arising from the potential impacts are multi-sectoral, including environmental degradation (air pollution, waste, sea level rise, temperature change and extreme events) and disruption to economic activities (production, consumption and energy use). There is no single policy solution or single sector that can be the *one* best way to deal with climate change. To succeed, we may need a variety of integrated mitigation and adaptation policies and a comprehensive approach.

Cities vary in planning and implementing mitigation procedure, integration of relevant sector policies into mitigation, and adaptation policies. Why does commitment to comprehensive climate change policy vary from one city government to another? How do structures of urban governance influence city-level policy? In order to address these questions, we analyze the influences of differing city governance arrangements on climate change policy, using the case studies of Seattle, Anaheim, Seoul, and Busan. The central argument is that local governments are most likely to develop comprehensive climate policies when cities have in place of climate governance arrangements which consist of high level city government officers, relevant city departments, research institutes and environmental NGOs.

* Corresponding author.

E-mail address: tdlee@yonsei.ac.kr (T. Lee).

The article starts with an overview of comprehensive climate change policy at the city level as a dependent variable. We classify local climate change policies based on the level of comprehensiveness. Comprehensive climate policies are those that adopt an integrated approach in planning and implementing of climate change strategies and mechanisms. The second section presents a theoretical discussion of the drivers of comprehensive climate change policy, reviewing the role of local governance. In the third section, we discuss our case study methodology and present the cases of Seattle, Anaheim, Seoul, and Busan to compare local climate change policies and governance arrangements. Finally we conclude and identify the larger implications of this study.

2. Theory

2.1. Analytic framework: comprehensive climate change policy at the city level

Climate change policy can be broadly categorized into (1) adaptation and (2) mitigation. While the aim of mitigation is to reduce the current and future GHG emissions, the aim of adaptation seeks to adjust social and built environment such as buildings, houses and harbors to minimize unavoidable climate change outcomes. The study of urban climate change policies have looked at adaptation (Corfee-Morlot et al., 2011; Hallegatte, 2009; McGranahan et al., 2007) and mitigation policies (Gustavsson et al., 2009; Jonas et al., 2011) separately. Yet the complexity of the climate change issue requires concrete and integrated policies across related policy arenas, such as energy, transport, building, and urban planning/development, considering trade-off and synergy (Swart and Raes, 2007). A piece-meal approach, such as redressing existing air pollution policies in a new climate policy context, is not enough to tackle the multifaceted climate change problem. While the term 'climate policy integration' seeks to "the incorporation of climate objectives into all stage of policy making in no-climate policy sector (Adelle and Russel, 2013) [p. 4]," which components consist of climate policy integration is not clear. In a similar vein, climate 'mainstreaming' studies mainly focus on putting the priority of climate change policies, particularly adaptation and resilience policies, on development agendas (Friend et al., 2014). Another body of literature emphasizes the 'co-benefits' of integration between climate adaptation, mitigation and existing environmental policies (Lee and van de Meene, 2013). Despite scholarly efforts to consider both urban mitigation and adaptation policy (Adelle and Russel, 2013; Hamin and Gurrán, 2009), studies on the conceptualization and analytic framework of comprehensive urban climate policies has been scant.

The complexity of climate change response in principle requires comprehensive policy integration which aims to synthesize environmental and other relevant policies with 'win-win' solutions through active participation of all social entities and institutional arrangements. We define a comprehensive urban climate change policy as a city planning and implementing (1) procedural mitigation steps, (2) sectoral comprehensiveness in mitigation and (3) preparedness for adaptation. First, procedural comprehensiveness for mitigation refers to whether a city government has (1) a GHG (Greenhouse gas) inventory system, (2) a master plan and GHG reduction target, (3) integrated action plans, (4) implementation of policy plans, and (5) the ability to monitor and disclose performance. Sectoral comprehensiveness includes a variety of climate policy related sectors such as transportation, energy supply and demand, public health, building, waste and water (Krause, 2012). Preparedness for adaptation is concerned with whether a city government has climate adaptation plans and the means to implement them (Hallegatte, 2009).

Among procedural climate change mitigation policies, drawing up a GHG emission inventory is a first step. Without a GHG inventory, it is impossible for local governments to set the reduction target, to consider possible scenarios, and to create an implementation scheme (Carney and Schakley, 2009). The existence of a city master plan for climate actions indicates whether the local entity approaches climate change issues in a systematic way or not. It is a sign that information, strategies and actions need to be integrated. A system of monitoring and disclosure of performance in meeting goals and targets is an integral part of such a plan and associated policies. These mechanisms are critical to measure progress; to prevent adoption by implementation agencies and actors of 'green wash' measures; to share learning with communities; and to update existing plans and policies.

Adaptation measures at the local level can be broadly categorized under three interrelated headings: disaster management (water, coast, fire); public health; and urban planning (Baker et al., 2012). Under the first heading, densely developed settlements in coastal and river area are especially vulnerable to climate change risks. Two-thirds of urban areas around the world with more than 5 million population fall into the category of 'low lying coastal zone' (McGranahan et al., 2007). Incorporating existing disaster management strategies into climate change adaptation measures is critical to reduce the risks of frequent and severe flooding and sea-level rising. Under the second heading, public health effects would arise, for example, from hotter and longer summers due to climate change, in particular for vulnerable communities such as the old, the young and the poor. Public health measures must anticipate and prepare for such conditions as heat stress, vector-borne diseases and food poisoning. Under the final heading – urban planning – comprehensive adaptation policy entails such elements as population growth projection in climate-vulnerable areas, management of private and public buildings, energy and water management (Füssel, 2007). This categorization resonates to the mainstream approach of municipal climate adaptation. Uittenbroek et al. (2014) explain that municipal governments take the mainstreaming approach when institutional entrepreneurs utilize indirect political commitment, by integrating existing policy domains, actors, and resources with climate adaptation ones.

Download English Version:

<https://daneshyari.com/en/article/10260265>

Download Persian Version:

<https://daneshyari.com/article/10260265>

[Daneshyari.com](https://daneshyari.com)