
THE ROLE OF TRANSNATIONAL ACTORS IN BUILDING CLIMATE-RESILIENT CITIES: CASE STUDIES ON DAGUPAN CITY AND SORSOGON CITY

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INTRODUCTION

As a disaster-prone country, the Philippines has been ranked 3rd by the *2012 World Risk Report* and 10th by the *2012 Global Climate Risk Index* report in terms of risk and vulnerability. These rankings do not come as a surprise because for the last three decades, 268 disaster events, natural and man-made, had been recorded. Hence, between 1990 and 2008, it has been reported that an average of PhP28 billion or US\$666 million damages were inflicted by these disasters to the country's agriculture, infrastructure, and the private sector which was about 0.7% of the gross domestic product (GDP). From these disasters, an average of 1,000 lives was lost every year (World Bank 2011).

Saddled with huge financial problems, including external debts, the government accepts legitimate humanitarian, financial, and technical assistance from various sources, e.g., relief agencies like Red Cross, bilateral institutions like USAID, multilateral institutions like UN Habitat, and from international non-governmental organizations (NGOs) like Oxfam. The increasing number of international organizations assisting the Philippines cope with climate change-related disasters had been noted by one report (Rincón and Virtucio Jr. 2008). In general, their activities range from financing climate change mitigation and adaptation projects to implementation. In particular, many projects, specifically those related to climate change adaptation or vulnerability assessments, are focused on urban areas/cities because of their susceptibility to hazards and the impacts that they could create at various levels, i.e., economic, social, environmental, and even political (Rincón and Virtucio Jr. 2008: 32-33).

As has been stated above, the "intervention" of international organizations varies and some affect public policies and government institutions – in short, governance. However, there had been no attempt yet to study their contributions to the latter, and their impacts to their intended beneficiaries. This is a similar research problem shared by many academics on climate governance. Scholarly literature on "transnational" climate governance have pointed out the dearth of studies on the increasing number of transnational cooperation on climate change between and among sub-national governments, regions, NGOs, corporation, and government agencies (Andonova 2009: 52-53).

As a modest contribution to the literature on transnational climate governance, this paper seeks to answer the following research questions: Up to what extent do international organizations (a.k.a. transnational actors in academic literature) affect urban climate governance? How well are they able to work with local actors? Where is the space of transnational actors in multi-level governance in these areas? Are their interventions appropriate, effective, and sustainable? For the last question, this paper only provides a rapid assessment without going through the rigors of evaluation research.

To respond to the questions above theoretically, this paper reviews the terrain of knowledge from relevant literature on the nature of transnational actors, their roles and functions in climate governance in general, and in climate governance in urban areas/cities in particular. In addition, two empirical case studies of cooperation between transnational actors and city governments in the Philippines are discussed. The two cities were selected for two reasons: (1) they are disaster-prone due to the changing climate, and (2) they had been assisted technically and financially by transnational actors to develop their climate change adaptation/disaster risk reduction plans and operations.

The Nature of Transnational Actors

Studies in international relations have traditionally delved into relations among states only, so much so that an accurate account of the manner by which political outcomes are arrived at by way of interactions occurring across national boundaries, has not been easily achieved. Primarily, such studies have been criticized because they have failed to recognize that actors, other than states, in cross-border contacts are vital agents of change in the international politics. State-centered studies have likewise been contested because they have failed to take into consideration that the concept of state itself consists of various entities, other than governmental machineries, that take part in international relations. Finally, such studies have been scrutinized for failing to take note that some entities involved in international interactions wield greater political and economic power than some states. (Willets 2001)

Consequently, the concept “transnational actors” emerged so as to emphatically assert that international relations are not confined to state-actors (Willets 2001). In turn, with the recognition of the concept of transnational actors, international relations are transformed into transnational ones. Transnational relations then consist of the “regular interactions across national boundaries when at least one actor is a non-state agent, or does not operate on behalf of a national government” (Busse 2008 citing Risse-Kappen 1995).

For purposes of this paper, transnational relations must be viewed in the context of global governance. “Governance occurs on a global scale through both the coordination of states and activities of a vast array of rule systems that exercise authority in the pursuit of goals and that function outside normal national jurisdictions. Some of the systems are formalized, many consist of essentially informal structures, and some are still largely inchoate, but taken together they cumulate to governance on a global scale” (Rosenau 2000). According to Andonova (2007), when transnational relations operate for the purpose of steering constituent members or population to act, transnational governance is said to be obtaining.

In the realm of transnational governance, transnational actors, therefore, may be defined as the public and private entities interacting across national borders and political jurisdictions while engaged in governance functions (Andonova et al. 2007). Transnational actors may also be defined as the state and non-state actors that act in self-governing networks, or in collaboration with each other, within a system other than the hierarchical forms of authority associated with the processes and institutions of government (Bulkeley et al. as cited in Andonova et al. 2007). Lastly, transnational actors may be defined as state and non-state actors above and below the state level, sharing policy-making and implementation functions with each other (Vivekanandan 2009). Accordingly, transnational actors include multinational corporations, international non-governmental organizations, social movements, epistemic communities, as well as, national and local governments (Busse 2008).

Climate change governance has emerged as an area of transnational governance where the influence of transnational actors are increasingly being felt, for the following reasons: (1) the number of advocacy and business organizations with climate change related interests has been increasing, (2) the participation of various transnational actors possessing various interests and roles has become a necessity in view of the degree of complexity involved in addressing climate change, (3) the nature of the inter-governmental regime for climate change itself has created mechanisms and opportunities for transnational actors, and (4) the political landscape of global climate change governance has provided a venue for building networks in the context of transnational governance (Andonova et al. 2007). In addition, Nasiritousi (n.d.) argues that the influence of transnational actors has become salient in climate change governance in view of their power structures, and the myriad roles and functions they perform in global politics.

According to Telesetky (2011), an impasse has already been reached among states that the engagement with the private sector rises as a viable alternative negotiating ground of states in their pursuit of mitigating climate change. In view of this, Telesetky (2011) proposes a co-regulation “model of regulatory interaction between public and private actors, which involves a sequential combination of specific goal setting by the government for a sector coupled by a case-by-case implementation strategy for individual corporate actors within a sector.” States remain as the central actors in the decision-making, but competencies are now shared and contested by other actors functioning at various territorial levels (Vivekanandan 2009).

Where exactly are transnational actors located in global climate governance? Using the “Global Environmental Governance” diagram of Ohta (2001) (see Figure 1), they could be found at the Level 1, i.e., international politics. They could either be global civil society, epistemic communities or international organizations interacting with states. In a neo-liberalist point of view, these transnational actors are seen as conducting diplomacy at the international level. These transnational actors may interact with actors (i.e., government agencies, business, political parties/politicians, and NGOs) at the Level 2, i.e., domestic politics.

The Roles and Functions of Transnational Actors in Climate Change Governance

Andonova et al. (2007) propose a typology of transnational networks to facilitate a systematic understanding of transnational governance in the context of climate change mitigation. The proposed typology is significant because central to it are the types and functions of transnational actors which are relevant to this paper.

In the proposed typology, the first criterion in categorizing transnational networks consists of the types of transnational actors which include: (1) public transnational governance networks, (2) private transnational governance networks, and (3) transnational hybrid networks. Public transnational networks are governance mechanisms established solely by state actors. Private transnational networks, on the other hand, are governance mechanisms established by non-state actors only. Finally, transnational hybrid networks are mechanisms formed by public and private transnational actors by way of collaborations (Andonova et al. 2007).

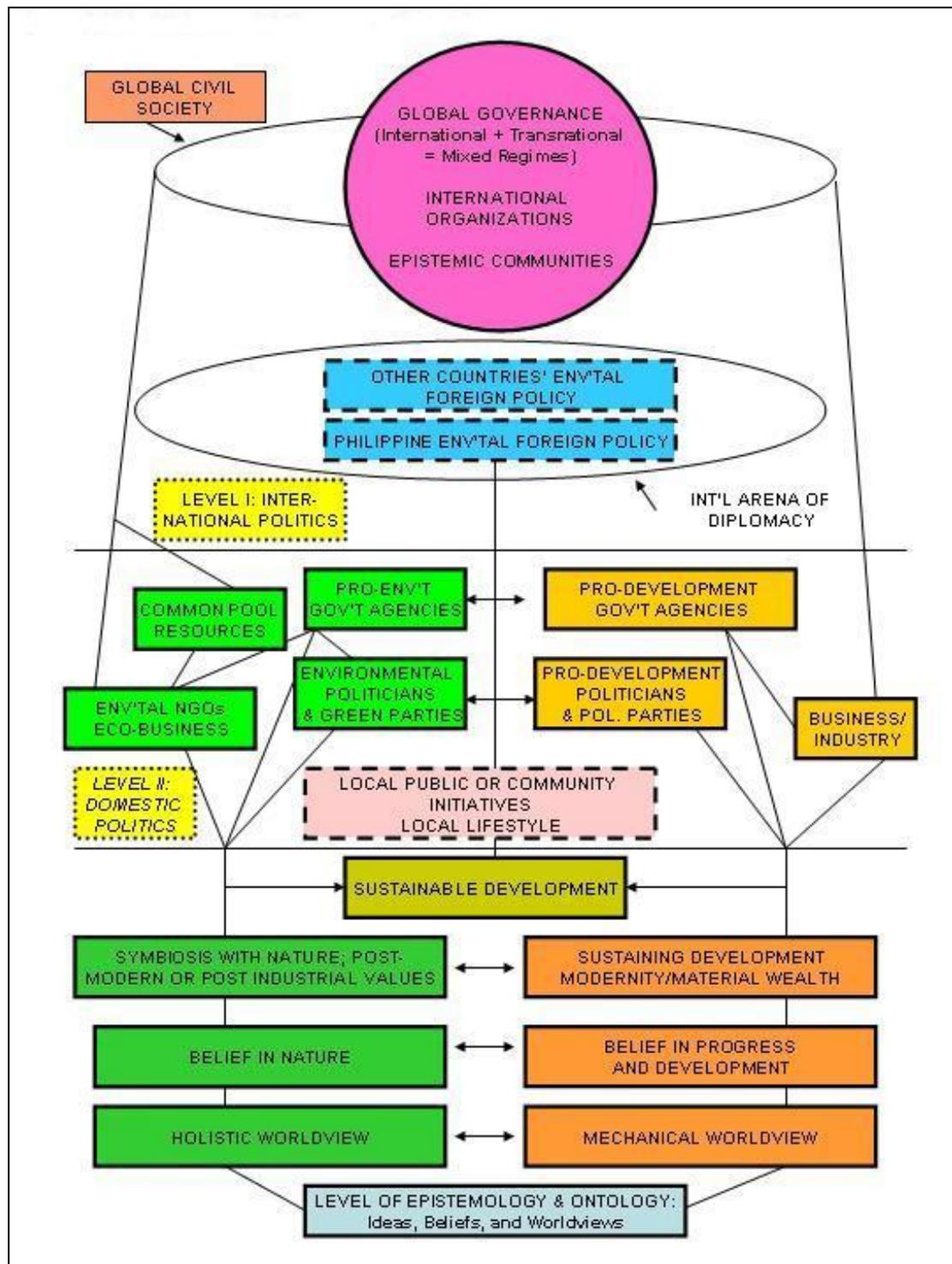


Figure 1: Global Environmental Governance
 Source: Ohta 2001.

Meanwhile, the second criterion in categorizing transnational networks consists in the primary functions that transnational actors perform which include: (1) information sharing, (2) capacity building and implementation, and (3) rule setting. *Information sharing* has been defined as a governance tool by which norms are diffused, and consensuses are built. The sharing of data and technologies on greenhouse gasses (GHGs) mitigation undertaken by the Climate Group and the World Business Council for Sustainable Development has been identified as an example. *Capacity building and implementation*, on the other hand, has been defined as a governance tool by which performances are assessed, and practices are evaluated for the purpose of meeting pre-determined domestic or inter-governmental standards. Under this function, the capacity building and technical assistance provided for by the World Bank's Carbon Finance-Assist has been cited as an example. Lastly, *rule-setting* has been defined as a governance tool by which norms are created through rules drawn to regulate actions. The activities of the

Conference of New England Governors and Eastern Canadian Premiers, and the Chicago Climate Change have been identified as examples under this function (Andonova et al. 2007).

One of the ways suggested by which the rule-setting function of transnational actors may be effectively put into use was through co-regulation. Under the regime of co-regulation, specific goals are to be set by public actors, while such specific goals are to be implemented by private actors according to strategies they themselves determined. Otherwise stated, “(s)tates would supply the strictness in an international co-regulatory scheme by negotiating specific targets. Firms would supply the flexibility by determining how they can best comply with the target or how they can transform industry practices to remain economically viable” (Telesetky 2011). Co-regulation includes voluntary environmental management agreements and negotiated rule-making.

Transnational actors have, likewise, assumed vital roles in *policy development*. Although transnational actors lacks formal or informal power of veto over domestic policies, they, nevertheless, exercise influence largely by way of ideational means. More particularly, transnational actors act as proposal actors and think tanks in national policy debates. “By educating, socializing, or otherwise influencing the ideas and preferences of key veto players as well as state bureaucrats and civil society actors interacting with them, they affect public policy worldwide” (Beland and Orenstein 2010).

Hybrid non-governmental organizations (NGOs), on the other hand, exemplify how policy development is shared by various types of transnational actors. Hybrid international NGOs are composed of NGOs and private companies, on one hand, and governments and its agencies on the other hand. In a hybrid international NGO, all the types of transnational actors have full rights of participation in policy development including the right to vote on final decisions. The International Red Cross, the World Conservation Union, the International Council of Scientific Unions, the International Air Association and other economic bodies combining NGOs, private companies, and governments, have been cited as examples (Willets 2001).

NGO’s consultative services in the Economic and Social Council (ECOSOC) of the United Nations (UN) are likewise examples of the influence asserted by transnational actors in policy development in the context of global governance. Three (3) groups of NGOs were recognized at UN’s ECOSOC: (1) a relatively few high-status NGOs that deal with most of ECOSOC’s work, (2) specialist NGOs that are confined with a few fields of activity, and (3) a roster of NGOs that are expected to make occasional contributions to ECOSOC (Willets 2001).

Transnational actors also engage in the process of *diffusing ideas and norms* across borders through: (1) passive leverage, (2) ideational diffusion, and (3) coercion, resource leverage, and persuasion. Passive leverage consists in transnational actors simply observing a policy change occurring in a neighboring, peer, or model country. Passive leverage employed by the European Union (EU) on aspirant members has been cited as an example. On the other hand, ideational diffusion consists in persuading people to support a policy change by furnishing them with information that may lead them to change their views. Conferences, seminars, and events conducted for the purpose of providing people with information have been cited as examples. Lastly, coercion, resource leverage, and persuasion mean that some transnational actors use of resources to leverage or coerce a policy direction. The requirement imposed by the EU to new member states, to adhere to certain norms, has been cited as an example (Beland and Orenstein 2010).

Finally, *lobbying* is one of the most crucial functions of transnational actors, particularly transnational companies and NGOs, in transnational governance. Transnational companies lobby the foreign government in cases of policy changes relating to health, safety, communication, and economy that are adverse to their businesses. Transnational companies lobby: (1) indirectly by seeking help from its own government in pressuring a foreign government where it conducts its business, (2) indirectly by seeking assistance from an international organization, (3) directly in its home country through the diplomatic embassy, and 4) directly in the foreign country through its governmental agencies (Willets 2001).

The Roles and Functions of Transnational Actors in Climate Change Governance in Cities

Cities have already been identified as one of the key areas of studies in transnational governance (Setzer 2009 citing Betsill and Bulkeley 2007), and climate change governance in particular, in view of their: (1) ample authority over land use, waste management, transportation, and energy consumption, (2) initiatives and innovative means in addressing climate change, and (3) participation in transnational networks of sub-national governments (TNSG) (Setzer 2009).

The participation of cities in TNSGs has become the focus of some transnational governance literature as notable outcomes of climate change governance are increasingly being felt in cities that form part of such networks. The participation of cities in TNSGs has likewise been central to the interest of various transnational governance studies because of the particular difficulty involved in establishing whether such networks are identifiable with the government or the non-governmental organizations (Setzer 2009).

The Cities for Climate Protection (CCP) program and the Network of Regional Governments for Sustainable Development (nrg4SD) are two (2) of the existing TNSGs that have been the subject matter of transnational research. CCP was founded in 1993 by ICLEI as a transnational network of municipal governments whose primary aim is to undertake activities and programs in the pursuit of mitigating the effects of climate change. Its member municipal governments have agreed to reduce GHG emissions in their operations within their respective jurisdictions. CCP, in turn, has agreed to furnish them with technical assistance, software tools, access to publications and case studies (Setzer 2009 citing ICLEI 2009). On the other hand, nrg4SD was launched in 2002 as a transnational network of regional governments. It offers programs relating to capacity building, technology transfer, financial assistance, information sharing, and exchange of practices in renewable energy and climate change governance at the regional level (Setzer 2009).

Setzer (2009) argues that the success of participation of cities in TNSGs is, however, largely dependent on several factors which include: (1) citizens' commitment, (2) funding availability, (3) local government authority, (4) proper identification, and understanding of environmental issues, (4) political will, and (5) informal networks.

Meanwhile, Martins et al. (n.d.) identifies the following as the factors affecting the success of developing climate change policies in the city level in general: (1) resource and capacity, (2) knowledge and information, and (3) institutions and governance. Resource and capacity include: (1) institutional capacity to undertake climate change actions, (2) presence of local actions, (3) allocation of financial and human resources, and (4) long-term urban planning. Meanwhile, knowledge and information include: (1) strong communication research, (2) vulnerability perception and strong risk management approach, and (3) strong science-policy interface. Finally, institutions and governance involve: (1) authority to coordinate and regulate climate change actions, (2) national programs to support local initiatives, (3) participation in transnational city networks, and 4) good governance stakeholder involvement and participation strategy (Martins et al. n.d.).

Transnational actors, particularly, TNSGs have been relatively successful in pushing for climate change-related actions and policies at the city level. In Ireland, a study revealed that the information sharing function of TNSGs has been determinative in shaping Ireland's climate change action and policies (Setzer 2009 citing Davies 2005). In Sao Paulo, Brazil, CCP has been the moving force behind the development of GHG emissions reduction policies, baseline emissions inventory, emission targets, and other local climate change action plans (Martins et al n.d. citing ICLEI, 1993). The said city has likewise implemented a Clean Development Mechanism project which was estimated to reduce GHG emissions by 11% in the said city in 2009. In Rio de Janeiro, Brazil, CCP has likewise been determinative of the development of baseline emissions inventory and other local climate change action plans.

Concededly, TNSGs play a central role in climate change governance. TNSGs show how cooperation among sub-national governments enhances their capacities to adapt to climate change. However, researchers have yet to come up with a more empirical and detailed account of the extent of influences of TNSGs in climate change governance at the city level (Busse 2008). More specifically, researchers have yet to conduct empirical studies on how TNSGs influence its member-cities in crafting measures and strategies in strengthening their adaptive capacities. Such studies may look into the manner by which TNSGs shape urban planning and infrastructure building in its member cities (Martins, et al., n.d.). On top of these, more elaborate investigations have yet to be undertaken to identify the specific outcomes of memberships of cities in TNSGs. Furthermore, Busse (2008) proposes to conduct further studies on the interrelations and interactions of various TNSGs. Busse (2008), likewise, takes note of the need to focus on the role of cities in developing countries that are members of TNSGs, in view of their increasing responsibility for greenhouse gas emissions.

Summary of Main Points and Gaps in Knowledge

The literature review has shown that transnational actors have gained acceptance as important factor in global climate governance, and they have various typologies. They are able to influence global and city-level climate governance through information sharing, lobbying, policy development, building/enhancing the capacity of targeted beneficiaries, financing relevant projects to respond to the challenges of climate change. City climate governance is further enhanced through their membership in TNSGs because the latter serves as a venue by which local governments are able to share information and best practices on climate mitigation and adaptation. The literature on climate governance, both theoretical and empirical, are aplenty but studies on how transnational actors are really able to influence governance at the city level are still wanting. The questions posed at the outset of this paper remains to be adequately answered. The two case studies below attempt to deal with these research questions.

CASE STUDIES

Two disaster-prone cities which had relatively successful cooperation with transnational actor of different nature are investigated mainly through narrative/qualitative analysis. The discourse is guided by the framework explained below.

Framework for Analysis

The two case studies are guided by framework shown on Figure 2 which is based on the main ideas culled from the literature review. The framework guides the reader on the nature of transnational actors, how they intervened and in what manner, and their effects on the cities.

The transnational actors, in general, international organizations, public or private and state or non-state, whose activities transcend national borders, collaborate with national and sub-national governmental and non-governmental actors, and engaged in governmental functions. They can be multinational corporations, international non-governmental organizations, social movements, epistemic communities, as well as, national and local governments This finds theoretical support from Andonova et al. 2007, Vivekanandan 2009, and Busse 2008.

The functions perform by transnational actors, in general, include the following: (1) information sharing, (2) capacity building and implementation, (3) rule setting, (4) lobbying, and (5) policy development. As guided by the literature review, "information sharing" refers how norms are diffused and how consensus is built. "Capacity building and implementation" means enabling partner agencies to perform their transnational actors through knowledge and skills upgrading, and assessment of their performance and practices for the purpose of meeting pre-determined domestic or inter-governmental standards. "Rule-setting" refers to norms created through rules drawn to regulate actions. "Lobbying" is influencing the shaping of public policy by communicating, educating, or informing policymakers about the advantage and disadvantages of a particular policy measure (all from Andonova et al. 2007: 62-66). Lastly, "policy development" includes those activities, from agenda-setting to policy adoption (Dunn 2004: 12).

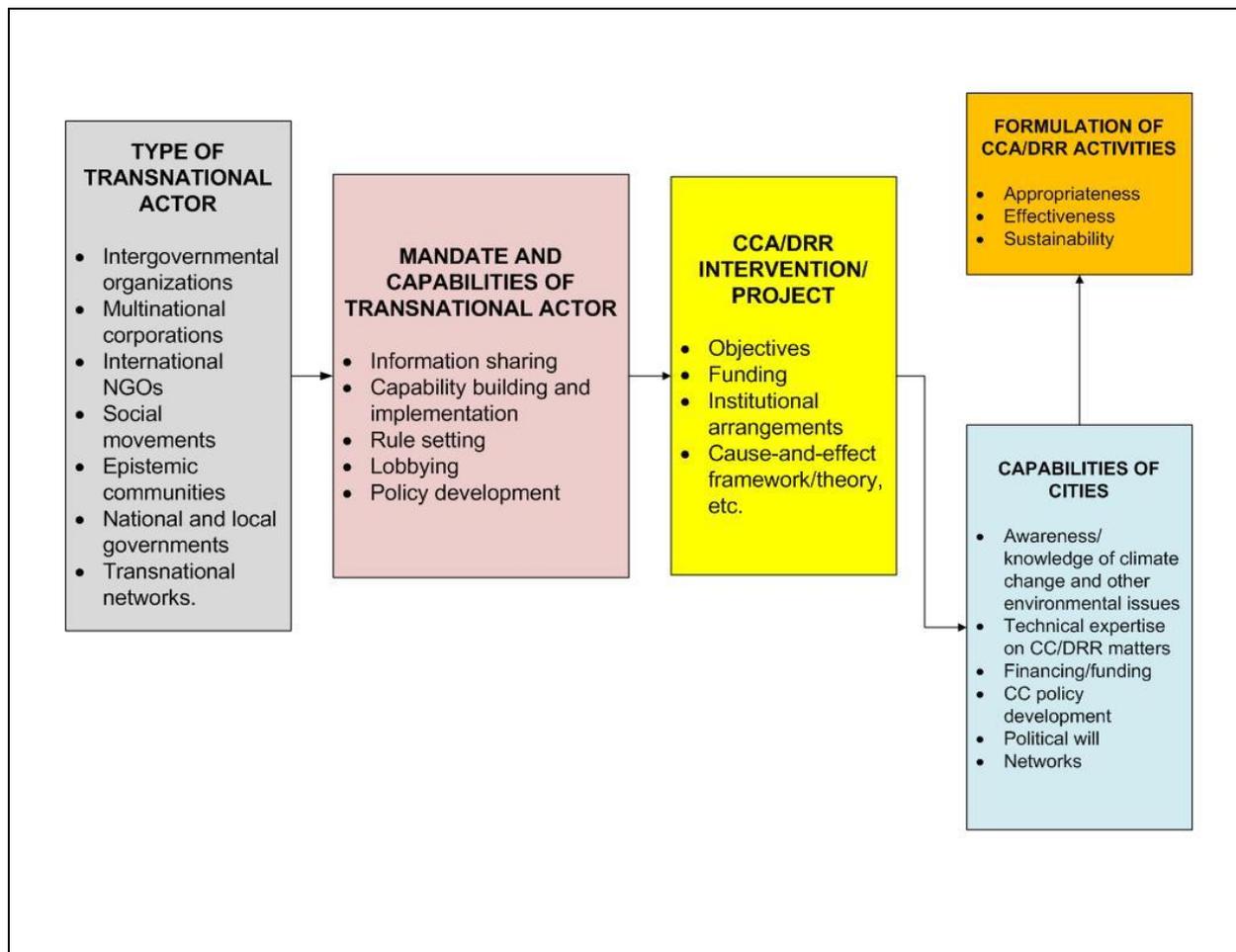


Figure 2. Framework for Analysis

According to an author, the following factors affect the success of developing climate change policies in the city level in general: (1) resource and capacity, (2) knowledge and information, and (3) institutions and governance (Martins et al. n.d.). For brevity but not being exclusionary, this paper includes ample financial resources/funds, clear and measurable objectives, functional institutional arrangement, and scientific cause-and-effect framework/theory on the impacts of climate change to the city.

The effects of the intervention of the transnational actors can be felt, according to an author (Setzer 2009), by examining the following: (1) citizens' commitment, (2) funding availability, (3) local government authority, (4) proper identification, and understanding of environmental issues, (4) political will, and (5) informal networks. Taking off from these suggestions, this paper looks at the effects of the TA's interventions on the following areas: (1) awareness/knowledge of the people on climate change, (2) building of the technical knowledge on climate change adaptation/disaster risk reduction, (3) financing/funding, (4) CC policy development, (5) strengthening/enhancing political will, and (6) building up of networks.

In doing a rapid assessment of the projects in the two cities, this paper uses the following definitions for each of the evaluation criteria:

- Appropriateness – related to acceptability in that it addresses the issue of whether policy objectives mesh with the value of the community or society.
- Effectiveness – achieving the valued desired outcome.
- Sustainability - being able to be used without being completely used up or destroyed (Patton and Sawicki, 1986: 161-163).

Case Study 1: Sorsogon City

Brief Profile of Sorsogon City

Sorsogon City, a component capital city of Sorsogon Province, was created in August 2000 through a national law (Republic Act 8806) which combined two municipalities – Bacon and Sorsogon. On the map, it is on 123° 53' to 124° 09' east longitude and from 12° 55' to 13° 08' north latitude. From the Philippines' capital region (Metro Manila), it is situated 600 kilometers away, hence, at the southernmost tip of the island of Luzon. The city is coastal – it is bordered in the east by Albay Gulf which opens up to the Pacific Ocean, and in the west by Sorsogon Bay which is connected to China Sea. Because of its geographical location, it is a transshipment corridor and gateway for the islands of Visayas and Mindanao (UN Habitat 2008: 3). See Figure 3.

The city is the largest city in the Bicol Region; it measures up to 312.92 square kilometers with 9,930 hectares dedicated to agriculture, 7,612.76 hectares covered by forests, and 72 hectares for built-up areas. It is divided into three districts and 64 *barangays* (villages), 37 of which lie along the coastal areas (UN Habitat 2008: 3).

Sorsogon City is also the most populous cities in the region. As of 2010, its population was pegged at 155,144 with an annual growth rate of 1.78 (in 2000-2007). The population density is 560 person/square kilometer There were around 30,290 households. The city's population is dominated by 95% Christian (i.e., Roman Catholic) residents (UN Habitat 2008: 3, and Sorsogon website 2013).

The main economic activities in the city are: agriculture, fishing, trade, and services. In the Philippine local government classification, the city is classified as second class for having obtained the second to the highest income among its peer-cities. As the capital city of Sorsogon Province, it serves as the latter's administrative, commercial, and educational center (Sorsogon website 2013).



Figure 3. Locational Map of Sorsogon City
Source: Sorsogon City Climate Change Office 2012

The city's climate is classified as Type II (using the Modified Coronas Classification System) where there is no dry season but with a pronounced rainfall from November to January. According to local data, rainfall usually starts late

September or early October and rainfall ranges from 2,800 to 3,500 mm. Rains usually last 200 days in a year which continue even in the driest months (UN Habitat 2008: 8).

The city experiences temperature which range from 21°C to 32°C and relative humidity of 82%. The prevailing winds are the monsoons and Pacific Trade Winds (which visits the city every April and May). From October to March, the Northeast Monsoon blows while the Southwest Monsoon occurs from June to September. Unfortunately, the city is located at the Philippines' geographical Zone 6 where three typhoons/cyclones pass in two years (UN Habitat 2008: 8).

Vulnerability to Climate Change

According to the projections of the national government's meteorological agency (i.e., Philippine Atmospheric, Geophysical, Astronomical Services Administration or PAGASA), under the A1B scenario (using the PRECIS model of the UK Met Office Hadley Centre for Climate Prediction and Research), the whole Province of Sorsogon, which includes the city, will experience 0.8°C to 1.1°C increase in temperature in 2020 and 1.5°C to 2.1°C in 2050 (UN Habitat 2008: 10).

On the other hand, seasonal rainfall in the province and city will decrease by as much as -6.8% in the March-April-May period and will increase from 5.1% to 10.8% in the other periods of the year 2020. By 2050, the decrease in seasonal rainfall in the March-April-May period will be almost double, -11.4%, and substantial increase to 7.4% to 27.3% in the other periods of the year (UN Habitat 2008: 10).

Owing to its geographical location and climatic conditions, it comes as a no surprise that it was visited by two strong tropical cyclones (locally named "Milenyo" in September, and "Reming" in November). In 2006 alone, the two super tropical cyclones with more than 200 kilometers per hour sustained maximum wind struck the city leaving more than 10,000 houses (33% of the city's houses) and PhP208 million (around US\$50 million at US\$1=PhP42) worth of damages. The city's poor and informal settlers were the hardest hit sector by the two typhoons which wiped out not only their houses but also their livelihood. From the vulnerability assessment conducted by the city government, it is estimated that 34 coastal barangays out of 64 barangays (or 53%) are in danger from strong surges brought by tropical cyclones (UN Habitat 2008: 12-13).

Increase in rainfall is another direct climate change problem by the city. With torrential rains, the city has experienced floods year in and year out. In 2009, for example, a weak storm (Signal No. 1) brought extremely heavy rains to the city which measured 300 millimeters within a short period of time. It brought massive destruction worth PhP200 million (around US\$48 million at US\$1=PhP42) in infrastructure and agricultural products. Again, from the vulnerability assessment of the city government, 20 barangays (or 31% of 64 *barangays* or villages in English) are prone to floods (UN Habitat 2008: 15-16).

The city fears that it would also fall victim to sea-level rise (SLR) just like its neighboring city, Legaspi City, which had experienced sea water rising since 1970 from the Pacific Ocean. According to stories of local residents, SLR must have already taken place in Barangays Poblacion and Cambulaga where about 50 and 15 meters of their lands were inundated by sea water since the 1950s. It is estimated by the city government that, again, 34 coastal *barangays* (53% of 64 *barangays*) are in danger from SLR (UN Habitat 2008: 10).

Landslide is another hazard that the city constantly faces. It comes with soil erosion and flashfloods which are triggered by increase in precipitation and volume of rainfall. Eight *barangays* or 13% of 64 *barangays* have been identified as vulnerable to landslides (UN Habitat 2008: 15).

Taking all of the hazards mentioned above, the city government was able to identify 12 “hotspot” *barangays* which include Barangay Cabid-an where the city hall is located (see Table 1). Of the 12 *barangays*, 8 are urban, 1 urbanizing, and the remaining 3 are rural. They all occupy around 2,246.91 hectares or 7% of the total city land area, and have 41,257 residents or 27% of the total city population (as of 2007). Some of these *barangays* are the ones with the fastest growing economies (from 1.74% to 3.23%) and population growth rates (from 3.83% to 22.61% of the period 2000-2007) (UN Habitat 2008: 19-20).

In an assessment conducted by UN Habitat in cooperation with the city government, it was found out that the city’s adaptive capacity is low due poor housing structures and infrastructure, climate sensitive livelihoods, poor state of the environment, high health risks, etc. (for details, see UN Habitat 2008: 40)

Barangay	Classification	Land Area (Ha.)	2007 Population	% Growth (2000-2007)
Balago	Urban	152.85	5,251	11.46
Bitan-O Dalipay	Urban	19.20	3,028	14.86
Cabid-an	Urban	223.56	5,426	22.61
Cambulaga	Urbanizing	37.10	4,097	22.03
Piot	Urban	65.96	2,572	7.5
Sampaloc	Urban	12.58	5,214	12.2
Sirangan	Urban	4.96	2,491	14.3
Talisay	Urban	12.40	2,660	6.58
Poblacion	Urban	174.51	4,882	3.83
Sto. Nino	Rural	385.13	2,008	4.78
Osiao	Rural	1,015.66	2,721	4.52
Gimaloto	Rural	143	907	7.17

Table 1. City Climate Change Hotspots
Source: UN Habitat 2008: 11.

The Transnational Actor and Its Intervention

The TA in this case is the United Nations Human Settlement Programme, popularly known as UN Habitat. This UN agency was established in 1978 “to prevent and ameliorate problems stemming from massive urban growth, especially among cities of the developing world.” It was elevated to a fully-fledged program of the UN System in January 2002 (UN Habitat-Philippines website 2009).

UN Habitat has a country office in the Philippines which was established in 2003. It is headed by a programme manager and supported by a technical team who are experts on various human settlement areas. They are supervised by the Regional Office for Asia and the Pacific based in Fukuoka, Japan (UN Habitat website 2009).

The intervention of UN Habitat¹ here is the project entitled, “Strengthening Philippine City Capacities to Address Climate Change Impacts – Sorsogon City Demonstration Project.” It was conceived in the context of achieving the city’s Millennium Development Goals (MDG) and target, i.e., MDG-F 1656 Outcome 3.3 – “Designing and Building with Nature Showcasing a Climate Resilient Urban Coastal Management in Sorsogon City.” The city is a demonstration site for the project of the UN system offices in the Philippines. It aimed to build “Sorsogon City with enhanced social and physical infrastructure for climate change resilience and responsiveness.” In particular, the project aimed to:

- Create synergies and links on climate change policies founded on global/ regional best practices;
- Introduce the urban dimension into national climate change policies/strategies anchored on global/regional best practices;
- Design and develop appropriate social and physical infrastructure for Sorsogon City to become climate change resilient city through implementation of a climate change-responsive city shelter plan;
- Pilot innovative climate change mitigation and adaptation technologies and mechanisms in the urban/coastal setting; and
- Codify a set of adaptation options for vulnerable human settlements.

It received funds from the Spanish and Norwegian governments (Sorsogon City Climate Change Office 2012: 6-7).

The Transnational Actor’s Entry into and Exit from Sorsogon City

UN Habitat’s selection of Sorsogon City in its climate change project was facilitated by two main factors: (1) Sorsogon City qualified to be one of the four pilot cities of UN Habitat’s *Cities and Climate Change Initiative* (CCCI), and (2) UN Habitat’s familiarity with the city which has been one of its sites for other projects in the past.

In 2009, UN Habitat conceived CCCI which aims to assist cities in developing and least developed countries prepare for climate change through mitigation and adaptation through pro-poor and innovative climate change policies and initiatives (UN Habitat website, 2009). CCCI received funding from the Norwegian government. Sorsogon City was chosen together with other three cities from other countries (namely: Esmeraldas, Ecuador; Kampala, Uganda; and Maputo, Mozambique) because it met the criteria for pilot sites, which are: a new emerging city/urban area, a coastal city, and vulnerable to climate change² (Rollo 2012 and Sorsogon RTD 2012). The Sorsogon City pilot project of UN Habitat’s CCCI was then implemented and complemented through the Joint Programme on Climate Change which was approved and supported by the Spanish government through the MDG Achievement Fund Thematic Window on Environment and Climate Change. Government agencies³ and UNDP then supported the project soon after many consultation meetings (UN Habitat Fukuoka, n.d.).

¹ The project was under the Cities and Climate Change Initiative (CCI) of UN Habitat’s Sustainable Urban Development Network which promotes enhanced climate change mitigation and adaptation in developing country cities. CCI also encourages collaboration by local authorities and their associations in global, regional, and national networks for the following objectives: (1) enhance policy dialogue so that climate change is firmly established on the agenda; (2) support local authorities’ efforts to bring about these changes; and (3) enhance awareness, education, and capacity-building in support of climate change strategies.

² The Manila Observatory and the Department of Environment and Natural Resources classified Sorsogon City as “Very High Risk” relative to combine Climate Disasters (UN Habitat-Sorsogon City, Agreement of Cooperation, 2009, p. 2).

³ Housing and Urban Development Coordinating Council (HUDCC), and National Economic and Development Authority (NEDA).

However, an equally important factor that was both admitted by UN Habitat-Philippine Office and the Sorsogon City government was the former's "familiarity" with the landscape, situations, and problems of the city through its previous other projects in the past⁴ (Rollo 2012 and Sorsogon RTD 2012). First, UN Habitat-Philippines has worked before with the city through its *Localizing the Millennium Development Goals in Key Cities in the Philippines* from 2004 to 2009 where it helped it create its one-stop-shop for local business licensing. The MDG localization project aimed "to enhance the capacities of local authorities and citizens group in improving access by the vulnerable sector to MDG-responsive basic services." Second, UN Habitat also provided shelter assistance to the city through the *Integrated Approaches to Poverty Reduction at the Neighborhood Level-A Cities Without Slums Initiative* (IMPACT) from 2005 to 2007 which aimed to develop the capabilities of the local governments and the urban poor communities to work together to develop shelter upgrading plans for capital investment financing. And lastly, UN Habitat, together with other financing agencies (i.e., World Bank (WB), Japan International Cooperation Agency (JICA)), and the Cities Alliance (CA), worked with Sorsogon City under the City Development Strategies 2 (CSD) to support the latter's infrastructure projects (Sorsogon City Climate Change Office 2012: 7-8, Rollo 2012, and Sorsogon RTD 2012).

The UN Habitat project ended in December 2012. Both camps believe that even though the engagement under the present Agreement on Cooperation (AoC) has expired, the transnational actors is not yet done because they have just begun and the problems have not yet been completely solved.

Working with Local Actors

The UN Habitat Project commenced right after the AoC was signed on 28 April 2009. UN Habitat and Sorsogon City were identified as the main implementing partners of the agreement. Thus, the UN office assumed the traditional role of overall supervision and backstopping of the project execution which include the following:

- Provide guidance, technical and financial assistance
- Review, monitor and certify project completion
- Resolve operational issues and concerns
- Provide capacity building to the city government
- Maintain accountability for the outputs and use of funds
- Initiate policy advocacy
- Purchase of all necessary equipment, and
- Documentation

On the other hand, the city government, as local implementor, was tasked to undertake the following:

- Create a city Technical Working Group (TWG) through an executive order
- Hire/detail a city project coordinator and other personnel
- Provide office space for project staff and consultants
- Support the development of community action plans for prioritized projects
- Work in full cooperation with UN Habitat
- Ensure documentation of projects and processes
- Submit narrative and financial reports to UN Habitat (Sorsogon City Climate Change Office 2012: 6)

⁴ Although unofficially acknowledged, the harrowing experiences of a UN Habitat-Philippine staff during Typhoon Reming (international name: "Durian") in 2006 in Sorsogon City could have convinced the UN agency that the local government needs the project very badly.

Even though UN Habitat played a lead role, with support from the city government, it employed consultative participatory approaches in the identification of issues and problems, and in the development of innovative and sustainable solutions to urban climate change problems so that stakeholders actively participate, own and accept the initiatives from the project. This was evident in the identification and prioritization of climate change issues and problems of the city, and the pilot *barangays* (Rollo 2012 and Sorsogon RTD 2012).

A month after the AoC took effect, a multi-stakeholder city consultation activity was held in May 2009 which led to the agreement to consider four key areas which must be prioritized to develop the city's resilience against climate change impacts and to enhance the stakeholders' capacity to local climate change action planning. These four key areas are: (1) housing and basic infrastructure, (2) livelihoods, (3) environmental management and climate change mitigation, and (4) climate and disaster risk reduction. In addition, five hotpot *barangays* were identified as pilot sites for the four key areas, i.e., Barangays Talisay, Bitan-O Dalipay, Cabid-an, Sirangan, and Sampaloc (Rollo 2012 and Sorsogon RTD 2012).

In each of the four key areas, local actors and even national actors from the civil society, government, academe, and professional organizations were tapped by the project to accomplish the various tasks:

- Housing and Basic Infrastructure - Philippine Institute of Environmental Planners, Philippine Institute of Civil Engineers (professional organizations); Housing and Urban Development Coordinating Council (national government agency); and Urban Poor Affairs Office, City Engineering Office, City Social Welfare and Development Office, and Public Information Office (all city government units).
- Livelihoods – Coastal Core (NGO); Department of Trade and Industry, and Technical Education and Skills Development Authority (all national government agencies); and City Agriculture Office, Urban Poor Affairs Office, City Social Welfare and Development Office (all city government units).
- Environmental Management – City Environment and Natural Resources Office, Public Information Office, City Mayor's Office, City Engineering Office, and City Council's Committee on Transportation (all city government units).
- Climate and Disaster Risk Reduction – Coastal Core (NGO); City Disaster Coordinating Council Action Officer, City Engineering Office, and City Social Welfare and Development Office (all city government units); and Department of Education's City Division Superintendent (a government agency officer based in the city) (Sorsogon City Climate Change Office 2012: 6).

There were some projects in the four key areas where there is active participation from the stakeholders and other local actors. However, there were also those where the city government played dominant roles owing to the nature of the problem and the technical knowledge required. In almost all of the projects, UN Habitat played mostly the roles of facilitator, supervisor, and as conduit of financial and technical assistance. Almost all of the "dirty work" was undertaken by the city government with assistance from local NGOs, professional organizations, and academe (Rollo 2012 and Sorsogon RTD 2012).

Accomplishments: Appropriateness, Effectiveness and Sustainability of the UN Habitat-Sorsogon City Project

The city government was able to accomplish the targets or deliverables of the project within the agreed timeframe (2009-2011, with extension until December 2012 for documentation). Two things can be said about the outputs of the project though. One, many were demonstrations conducted in the five pilot *barangays* which have to be replicated all over the city. The task of replicating them will necessary fell onto the shoulders of the city government with or without the support of UN Habitat. Second, some of the outputs still need to be "legislated" to assure that even with the change of guards, i.e., mayors and local legislators, they could still be sustainably implemented with budget, personnel, office, equipment, etc.

In the key area of housing and basic infrastructure, the IEC materials on shelter planning, and the community action planning for house retrofitting and site planning were conducted so far in only five pilot barangays. As a consequence of this, only 30 housing units were retrofitted as of December 2011. Moreover, the housing evaluation toolkit developed has still to be used in the other 59 barangays. Lastly, the development of local minimum housing standards, i.e., *Guidelines/Standards – Climate Change and Disaster Risk Reduction Sensitized Housing Design and Site Plans*, has yet to be legislated into a city ordinance by the *Sangguniang Panglungsod* (city legislative council).

For the second key area - livelihoods – only four skills trainings applicable to the five pilot barangays had been conducted. These were: carpentry, masonry, electrical house installation maintenance, and food processing (fish). The rationale for the prioritization of these skills trainings is to equip the fisherfolks, farmers, and peddlers living in the vulnerable barangays the skills necessary “to respond and repair their own houses in case of disasters” (UN Habita n.d.). As of September 2011, 76 participants graduated from the training programs. Lastly, the livelihood baselining tool and livelihood profiling were, again, limited to the five pilot barangays. The sustainability of these projects is in question because there was no mention on the accomplishment reports that the city government will institutionalize them through an executive order or city ordinance, or there are already existing legal or administrative orders that could support their sustainable implementation.

In the third key area of environmental management and climate change mitigation, three activities were conducted in pilot and non-pilot barangays, i.e., distribution of IEC materials on climate change in pilot and non-pilot barangays; television and radio broadcasting to pilot and non-pilot barangays of climate change infomercials which already ended in December 2011; and orientation seminars in the pilot barangays on climate change-responsive and efficient energy use. However, in this key area, many measures were legislated through executive order or city ordinance, although some have limited coverage area only. These are:

- *Sangguniang Panglungsod* (City Legislative Council) Ordinance No. 029, series of 2011 – requires conversion of two-stroke tricycle motors to a more efficient and emission-reducing motors plying the city roads
- Executive Order No. 015, series of 2010 – institutionalizes the ecological solid waste management system of Republic Act No. 9003 in the city hall
- Executive Order No. 011, series of 2011 – directs the replacement of incandescent bulbs, fluorescent lamps, compact fluorescent lamps, and other lighting fixtures used in all barangays streets and city building into light emitting diode (LED) lamps (100 LED streetlights had been installed so far per pilot barangay)
- Executive Order No. 12, series of 2011 – creates the GHG team of the city government which will conduct GHG inventory and accounting in the city
- Executive Order No. 18, series of 2011 – prohibits the use of expanded Polystyrene or Styrofoam as packaging material for foods and beverages being sold, offered and served within the premises of the city hall and its auxiliary offices and facilities

In the area of climate and disaster risk reduction, most of the activities were of limited coverage, i.e., the IEC activities on community-based disaster risk reduction management and climate change adaptation were conducted in the five pilot barangays; and a school cum evacuation center in Balogo Elementary School was completed in one *barangay* (Barangay Balogo) only as of 18 December 2011. There could be other public elementary and high schools scattered in the other 63 barangays that might need retrofitting similar to those made in Balogo Elementary School, hence, this should be continued. Unfortunately, the adoption of the structural design of the climate change-resilient school all over the city through a city government order is yet to be done.

One possible solution to sustain the accomplishments of the UN Habitat project and implement them on a city-wide scale is through the passage of an ordinance from the *Sangguniang Panglungsod* approving the climate-sensitive/enhanced comprehensive land use plan and city development plan which had been reviewed since 2010. This is just one of the plans of the local government to mainstream climate change in the city. With climate-sensitive comprehensive land use plan and city development plan, back-upped by GIS hazard maps created by the newly-created GIS office, the city government aims to mainstream climate change adaptation and mitigation measures into the annual city budget and investment plan.

It might still be premature to assess the effectiveness of the UN Habitat project in Sorsogon City. First, as the Programme Manager of UN Habitat-Philippines admitted, the engagement is over as far as the AoC is concerned, but the task is not yet done. They had barely scratched the surface, so to speak, because there are still many informal

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settlers in the hotspot coastal areas which would take years and huge amount of budget to relocate; alternative livelihoods have still to be provided to many climate-sensitive fisherfolks, farmers, peddlers, etc.; many more evacuation centers have to be built in at least 12 hotspot barangays, etc. Second, most of the activities were demonstrations piloted in five hotspot barangays; they have yet to be institutionalized through city legislative council ordinance or executive order and replicated on a city-wide level to gain full support, get implemented, and be sustainable in the future. Lastly, the acid test for the resiliency of the city still has to be conducted – unfortunately, through a disaster that will hit it.

Case Study 2: Dagupan City

Brief Profile of Dagupan City

Dagupan City, an independent component city of Pangasinan Province, was created by virtue of a national law (Republic Act No. 170) in June 1947. The city lies within 16°01' to 16°07' north and longitude 120°18' to 120°23' east. From Metro Manila (the national capital region of the Philippines), northward, it is 212 kilometers away. It is bounded on the north by Lingayen Gulf, on the northeast by the Municipality of San Fabian, on the east by the Municipality of Mangaldan, on the south by the Municipality of Calasiao and on the west by the Municipality of Binmaley (see Figure 4).

The city has a total land area of 44.46 square kilometers. Its land is divided to nine different land use types: agriculture (fishponds- 22.36%; croplands – 13.61%), residential (22.88%), commercial (2.73%), industrial (1.17%), institutional (1.53%), parks and playground (1.68%), open spaces (7.10%), roads (11.72%), and water bodies (15.22%). The city is entirely urban and has 31 *barangays* (towns).

One distinctive geological and topographical feature that affects Dagupan is the slithering of the Agno River through it until it spills out its water to the Lingayen Gulf. The Agno River Basin has a drainage area of 5,952 square kilometers and is the third largest river in Luzon and fifth in the Philippines. The river originates from the Cordillera Mountains, flows 270 kilometers southward, and passes through 90 kilometers of mountainous terrain and canyons until it reaches the gulf. Because of the mountain ranges that it passes through, the river's flood runoff is estimated annually at about 6,654 million cubic meters which reaches the plain in several hours in about a day. This has tremendous effect on the city which is a coastal plain having an almost flat terrain with slopes ranging from 0 to 3%, while the rest are considered as swampy areas, ponds, and other forms of wetlands or water bodies. It has an elevation that is not more than 2-3 meters above sea level. Waters from the Agno River find their way into the seven river courses which traverse the city, namely: Magueragday-Anolid, Bayaoas, Patogcawen, Calmay, Dawel, Tanap, and Pantal.



Figure 4. Locational Map of Dagupan City

Source: Wikipedia 2013.

Dagupan City had a total population of 163,676 as of 2010. The city's annual growth rate from 2000-2007 was 1.98% and had a population density of 4,400 person/square kilometer. Majority of the residents are Christian (Roman Catholic).

The main economic activities in Dagupan are fishery and aquaculture. Agriculture, poultry, cattle raising, manufacturing, and commerce are some of the other economic activities in the city. Outside Metro Manila, Dagupan is considered as one of the most competitive small-sized cities in the Philippines. In Pangasinan Province, it serves as the financial, commercial, and educational center.

Dagupan has Type I climate (using Modified Coronas Classification System) which is characterized by the dry (December-April) and wet season (May-November). Mean temperatures are 34°C-35°C in April-May. The hottest and coolest temperatures recorded 36.7°C and 18.00°C, respectively (Dagupan City n.d: 1-12).

Vulnerability to Climate Change

According to the projections of PAGASA, the country's meteorological agency, under the A1B scenario (using the PRECIS model), the whole Province of Pangasinan, which includes Dagupan, will experience 0.9°C to 1.1°C increase in temperature in 2020 and 1.8°C to 2.2°C in 2050.

Climate change will also affect seasonal rainfall in the city. According to PAGASA's projections, there will be a -6.0% decrease in the rainfall during the March-April-May period in the year 2020, and increases in rainfall from 6.1% to 54.3% (the highest in the Philippines in 2020) in the other periods of the same year. On the other hand, by 2050, while the decrease in rainfall in the March-April-May period will jump to -11.2, the increases in the other periods will be lower, from 1.1% to 22.9%, compared to those in the 2020 projections.

All these changes in the temperature and seasonal rainfalls may have implications on the natural hazards the city has experienced in the past, and still threaten it at present and in the future. These hazards are: earthquake and

liquefaction, storms, and flooding. Being in a coastal area with only 2-3 meters elevation, the city is a potential victim to SLR and tsunami in the future.

On 16 July 1990, Dagupan City was rocked by an earthquake which had an intensity of 7.1 in the Richter Scale. The earthquake, accompanied by floods, ravaged the city where 75% of the commercial buildings were declared useless, 39% of schools buildings were destroyed, 7,448 houses and 4 kilometers of road were damaged, a bridge and electric and telegraphic poles fell down, water pumping stations and transmission lines were rendered unserviceable, gasoline tanks and septic tanks got busted, and sewage pipes got deformed (Dagupan n.d.: 26).

From its records from 1998 to 2009, the city has had at least 11 super typhoons and one strong monsoon rain because it also lies in the typhoon path in the Philippines. The damages to infrastructure and agriculture, fishponds, and infrastructure ranged from PhP7.5 million up to PhP471 million (US\$179 thousand up to US\$1.0 million, using US\$1=PhP42) (Dagupan City n.d.: 31-32, and Dawis 2009). These do not include damages to households and businesses, and casualties.

Floods are perennial problem in the city. They occur whenever one or a combination of the following happens: (1) storm surge/strong typhoons, (2) prolonged rains, (3) high tide in the river systems, and (3) runoffs from the Agno River which traverse the river systems in the city and empty itself in the Lingayen Gulf. From records, the city had experienced three ravaging floods in 1935, 1972, and 2009. The 1935 floods flooded the whole city; in 1972, agricultural crops, fishponds, and properties were damaged; and in 2009, majority of the city area were flooded causing PhP200 million (US\$4.7 million) worth of damages. In the 2009 floods caused by a typhoon, the water's reach was between 0.60 meters to 2.50 meters. There were three fatalities and there was an outbreak of water-borne diseases (i.e., malaria and dengue). In a study conducted by the city government, more than 75% of the 31 *barangays* (i.e., 24 *barangays*) belong to medium to high risk flooding (Dagupan City n.d.: 31, and Dawis).

The combination of storm surge and high tide is another problem. In 2009, sea water caused by big waves propelled by strong currents and the rising tide entered the river mouth and clashed with the Dawel River water which was the exit of the Eastern Barangay river water tributaries. This destroyed 97% of the fishpens in the Dawel and Pantal Rivers intersection. The total damage was estimated at PhP13.8 million (US\$310 thousand) (Dawis 2009).

In a summary, according to a study, the city's vulnerabilities during disaster occurrences are the following: (a) eight *barangays* (26%) are highly vulnerable, (b) 3,165 households (11%) face direct risks in the event of any disaster, (c) 15,852 residents (11%) are at high vulnerability level, (d) only 20% of the total population are considered safe during floods, (e) 3,222 (65%) establishments are at medium to high vulnerability level, and (f) 8% of fishponds which are on the lowest lying areas along the river system are classified of high vulnerability (Dagupan City n.d.: 32-35).

The Transnational Actor and Its Intervention

The TA in this case is the Asian Disaster Preparedness Center (ADPC), a non-profit organization based in Bangkok, Thailand that supports the advancement of "safer communities and sustainable development" through the implementation of programs and projects on disaster risk reduction in Asia-Pacific countries. It was created in 1986 upon the recommendation of the then UN Disaster Relief Organization (now UN Office for the Coordination of Humanitarian Affairs) as an attachment to the Asian Institute of Technology. It provides technical assistance to 22 countries⁵ in the Asia Pacific region. The Center is governed and guided by an international Board of Trustees (21 members representing 15 countries) and advised by a Regional Consultative Committee (32 members from 26 countries) and Advisory Council (55 members from a wide range of agencies). It receives support and funding⁶ from

⁵ Afghanistan, Bangladesh, Bhutan, Brunei, Cambodia, China, India, Indonesia, Japan, Korea, Laos, Maldives, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, and Viet Nam.

⁶ Some of its donors are: Japan International Cooperation Agency, US Agency for International Development, Dutch Development Corporation, Asian Development Bank, Australian Agency for International Development, Canadian International Development Agency, Danish International Development Agency, UK's Department for International Development, European Community for Humanitarian Affairs, German Technological Cooperation, Global Finland, Norwegian Agency for Development Cooperation, UN Habitat, USAID-Office of Foreign Disaster Assistance, and World Bank.

local governments, national governments, NGOs, international financing institutions, and UN offices (ADPC website 2012).

The intervention in this case is the Program for Hydro-Meteorological Disaster Mitigation in Secondary Cities in Asia which is popularly known in its acronym PROMISE. It started in 2005 and ended in 2010. It built on the accomplishments of the Asian Urban Disaster Mitigation Program (AUDMP)⁷ funded by the US Agency for International Development- Office for Foreign Disaster Assistance. This institution also funded PROMISE worth US\$2.222 million from 2005 to 2010 (USAID and ADPC 2010: 2-4 to 2-5).

Like its predecessor (AUDMP), PROMISE also aimed to reduce the vulnerability of urban communities through enhanced preparedness and mitigation of hydro-meteorological disasters in South and Southeast Asian countries. Its specific objectives were:

1. Adoption of specific hydro-meteorological disaster preparedness and mitigation measures to manage hydro-meteorological disaster risk by stakeholders in targeted cities;
2. Increase stakeholder involvement and further enhancement of strategies, tools and methodologies related to community preparedness and mitigation of hydro-meteorological disasters in urban communities;
3. Enhance the coordination with USAID Missions to promote sustainability and ensure program activities accord with USAID country and regional strategies; and
4. Strengthen networks and regional linkages among relevant risk management institutions/organization for improved capacity for application and dissemination of lessons learned.

From these four specific objectives, four components of the program were formulated, which are:

1. City Demonstration Projects;
2. Regional and National Capacity Building;
3. Advocacy for Mainstreaming Risk Management in Urban Governance; and
4. Regional Networking and Information Dissemination.

Its initial demonstration cities were: Chittagong in Bangladesh, Hyderabad in Pakistan, Dagupan City in the Philippines, Kalutara in Sri Lanka, and Da Nang in Viet Nam. Later on, the coverage was expanded to three other cities (Jamalpur, Bangladesh; Jakarta, Indonesia; and Pasig, Philippines) (USAID and ADPC 2010: 2-1 to 2-5).

The Transnational Actor's Entry into and Exit from Dagupan City

ADPC and PROMISE's entry into Dagupan City was facilitated by an NGO, the Center for Disaster Preparedness (CDP), which is a regional resource center based in the Philippines and established in 1996. The center promotes community-based disaster risk management, facilitate interactive learning and discourse on disaster risk management, and advocate for policies and programs that protect the environment and mitigate disaster risk. It works with other NGOs, people's organizations, communities and government agencies (CDP website 2012).

⁷ The Asian Urban Disaster Mitigation Program (AUDMP) (1995-2004) was designed to respond to the need for safer cities in Asia. It aimed to reduce the disaster vulnerability of urban populations, infrastructure, critical facilities, and shelter in selected cities throughout Asia.

the Center for Disaster Preparedness had no prior knowledge about Dagupan City. Upon receiving instructions from the ADPC to look for candidates for PROMISE partnership, CDP, in 2005 began searching for Luzon Island-based local governments which would qualify in its three criteria, namely: (1) prone to hydro-meteorological hazard, (2) secondary city (i.e., medium-size, not mega-city), and (3) has strong interest to participate in the program⁸ (Luneta 2012).

From the side of Dagupan City government, it was prodded and convinced by the then National Disaster Coordination Council (now National Disaster Risk Reduction Management Council or NDRRMC⁹) and the Office of the Civil Defense (OCD) of the Department of National Defense to immediately submit technical requirements to show its willingness to participate (Molina 2012). For meeting the requirements mentioned above on time, Dagupan City was selected and recommended by the Center for Disaster Preparedness to the ADPC as city partner for PROMISE.

Officially, the engagement between the city and ADPC/CDP began on 7 March 2006 with the signing of a memorandum of understanding. Initially, the project duration for Dagupan City was 2006-2008 but was extended until 2009 to enable the city to complete its activities to integrate disaster risk reduction in schools, and to conduct action planning workshop on disaster risk reduction and climate change (USAID and ADPC 2010: 2-4). PROMISE may have ended already, but according to Luneta and Molina (2012), communications and cooperation between the city and the Center for Disaster Preparedness continue in the area of knowledge management (e.g., sharing of best practices/success stories by the city government officials to other local governments), and in technical advice to the city which has decided to continue the community-based disaster risk management in the remaining 23 non-pilot *barangays* (8 pilot *barangays* were included in the PROMISE projects).

Working with Local Actors

ADPC did not work directly with Dagupan City in the implementation of PROMISE. Instead, the Center for Disaster Preparedness was contracted by the ADPC through a grant agreement to act as “Implementing Partner.” As could be expected, the Center for Disaster Preparedness, under a MOU, was tasked to supervise all activities of PROMISE¹⁰, provide technical guidance, disburse and control funds, report the progress of projects to ADPC, and document accomplishments. The more specific tasks of the center were:

- Provide guidance to the development of the city’s Disaster Preparedness Plan;
- Coordinate with national government agencies and the academe to get their technical support;
- Organize national activities to mainstream disaster risk management in urban governance in partnership with the National Disaster Coordinating Council/Office of Civil Defense with the League of Cities; and
- Mobilize the expertise of ADPC in identifying appropriate community risk mitigation measures.

⁸ Officially, the three criteria were: (1) vulnerability to hydro-meteorological hazards of various kinds, namely floods, cyclones, storms, droughts, rain-triggered landslides, or a combination of these hazards; (2) growth potential (such as tourism development, in-migration, or growing industrialization) based on current trends, and increasing role of the city in the national economy; and (3) readiness and willingness of the city and stakeholders to utilize the lessons as well as the linkages and knowledge developed under the AUMDP implemented by the ADPC from 1995 to 2005.

⁹ NDCC was re-organized and re-named NDRRMC under the new national law, Disaster Risk Reduction and Management Act of 2010 (Republic Act 10121) approved in May 2010.

¹⁰ USAID Philippines Office representatives helped the ADPC supervise PROMISE project implementation activities.

On the other hand, the tasks of the Dagupan City government, as a “City Partner,” were also very specific. Aside from the usual expectations from a recipient local government – i.e., provide cooperate with the Center for Disaster Preparedness; create a technical working group; supply data or information needed; provide personnel, logistical, office space, and counterpart funds; account for the expenses – the MOU identified very specific tasks/expectations from the city government:

- Set up and maintain the Disaster Information Management System;
- Develop jointly with center the Emergency Health Training including Search and Rescue (SAR) and Medical First Responders (MFR); Legislate measures to sustain initiated activities of PROMISE;
- Participate in activities that will mainstream disaster risk management in urban governance;
- Participate in workshops to develop end-to-end early warning and evacuation systems;
- Lead the participatory risk assessment in communities; and
- Ensure replications of project experiences in other at-risk communities.

In the course of implementing PROMISE, the Center for Disaster Preparedness got support from local and national government agencies. These were: Department of Education (DepEd), Department of the Interior and Local Government (DILG), NDCC/OCD, Agno River Basin Flood Forecasting and Warning Center (ARBFFWC). The DepEd provided information on the structural integrity of schools in Dagupan City; the DILG assisted in coordinating the activities of PROMISE within the city; the NDCC/OCD supplied information on hydro-meteorological hazards in the city; and the ARBFFWC also provided information on the hazards of runoffs from the basin, and their early warning systems.

The Center for Disaster Preparedness’s contact office in Dagupan City was the latter’s City Agriculture Office (CAO) whose director reported directly to the mayor and the “reactive” City Disaster Coordinating Council (CDCC).¹¹ The reactive CDCC was headed by the mayor but was only activated after disasters had struck the city. CAO was chosen because of two reasons: (1) it had touched base with *barangay* residents due to its function to check their agricultural livelihoods, and (2) it had manpower to assist the center undertake the community-based disaster risk management sessions at the *barangay* level (Molina 2012).

In conducting community-based disaster risk management and participatory risk assessment, the Center for Disaster Preparedness and Dagupan City used the consultative participatory approach. community-based disaster risk management and participatory risk assessment were introduced through a workshop in March 2006. The aim of the workshop was to train the core trainers, who, then will train other trainers at the *barangay* level, specifically at the eight pilot *barangays* chosen by the Center for Disaster Preparedness and the city government, i.e., Bacayao Norte, Bacayao Sur, Lasip Chico, Lasip Grande, Manguin, Pogo Grande, Salisay, and Tebeng.

Accomplishments: Appropriateness, Effectiveness and Sustainability of the PROMISE-Dagupan City Project

The over-all aim of PROMISE was “enhanced preparedness for and mitigation of the destructive impacts of hydro-meteorological events on the vulnerable urban communities and the economic infrastructure” (USAID and ADPC 2010: 1-1).

Among the nine city demonstration sites of PROMISE, Dagupan can be considered as the most successful site because out of the 20 indicators of activity accomplishments, 18 activities were finished. One activity, i.e., holding of emergency drills, was not credited to the city anymore because it already existed even before PROMISE. The only task that the city was not able to do was the adoption of risk-centered land use/construction guidelines/building by laws. On the other hand, all the remaining eight cities (i.e., Da Nang, Chittagong, Jakarta, Kalutara, Pasig, Matara, Hyderabad, and Jamlapur) were only able to accomplish six to eight activities (USAID and ADPC 2010: 1-3).

¹¹ Local disaster coordinating councils which include CDCCs, were required to be created in each local government by Presidential Decree 1566 enacted in June 1978, the predecessor of the new Disaster Risk Reduction and Management Law of 2010 (Republic Act 10121) approved in May 2010. The local disaster coordinating councils, just like its national counterpart (the NDCC) were seen as “reactive” because they were only activated after disasters struck areas in the Philippines.

Following the four areas of concerns of PROMISE, the Center for Disaster Preparedness focused also on four core components, namely: community-based disaster risk management, disaster risk reduction mainstreaming, disaster risk reduction awareness rising, and knowledge capture and knowledge product development.

Community-based disaster risk management was the strategic core activity of the Center for Disaster Preparedness. By passing knowledge and skills on community-based disaster risk management to core and *barangay* participants, all other ensuring activities for the other components were identified. For the community-based disaster risk management component, they were able to identify and implement small-scale structural economic disaster mitigation projects (e.g., barangay solid waste recycling facility, improvement of the emergency operations centers in some of the piloted barangays, pavements elevation, etc.).

For the disaster risk reduction mainstreaming component, the city council passed an ordinance establishing a permanent city's emergency operation center (EOC) in 2007. Aside from creating the EOC, the same ordinance expanded the meaning of hazards which now include tsunami, earthquake, drought, and man-made hazards. Last, to standardize disaster risk reduction operations throughout the city, a disaster operations manual was developed in the same year for use in times of emergency.

To raise the disaster risk reduction awareness level of residents and neighboring local governments, the city government mandated the observance of "Disaster Safety Day" in the city every July 16. IEC materials in the form of calendars and bookmarkers were distributed to students and residents. Audio-visual presentations and orientation seminars were also held even in non-piloted *barangays*. Perhaps, the greatest achievement in disaster risk reduction awareness raising was the signing of a covenant among 42 representatives from various municipalities, cities, and provinces in Region 1 in April 2008 which was spearheaded by Dagupan. The covenant urged the local chief executives and signatories to promote and mainstream disaster risk reduction into their local government plans and programs.

Lastly, in the area of disaster risk reduction knowledge capture and knowledge product development, the Center for Disaster Preparedness developed a manual on disaster management for communities in 2009. It also organized the *First LGU Course on Governance and Disaster Risk Reduction* in Dagupan City in April 2008. In keeping with its mandate to document its Dagupan experiences, the center published best practices case studies and articles, and produced a video-documentary in 2008

It is said that the proof the pudding is in the eating. While it is admitted by the Center for Disaster Preparedness and Dagupan that the work towards building a resilient Dagupan is still a work in progress because PROMISE was only piloted in eight *barangays* (Luneta 2012 and Molina 2012), still there are two cogent evidences that would show that the partnership helped to make the city safer from natural disasters: (1) the city experienced zero casualty from three typhoons which occurred from 2008 to 2010, and (2) Dagupan City received five accolades from regional and national government agencies from 2007 to 2009 for having the best disaster risk reduction institution, policies, and practices .

While PROMISE was still being implemented in Dagupan, three typhoons passed through the city, namely: Typhoon Halong (17 May 2008), Typhoon Parma (8 October 2009), and Super typhoon Megi (18 October 2010). Expectedly, they brought damages to houses, buildings, infrastructures, crops, and fishponds through the torrential rains and floods. However, direct casualties from the three typhoons were near or actually zero. What was remarkable, and never before seen, was that city residents took the initiative to approach first the city government to have them evacuated to safer grounds. Those in the eight barangays, especially the model Barangay Mangin, followed their evacuation plans and routes and had with them their emergency supplies and equipments before the onslaught of the typhoons. There were instances that the residents of the piloted *barangays* even helped the city government in rescue and relief operations in other barangays. For dramatically reducing flood casualties, and making the residents more aware and pro-active on disaster risk reduction, the past two city mayors expressed gratitude to PROMISE and the Center for Disaster Preparedness (USAID and ADPC 2010: 3-43 to 3-45).

For having well-established DRDD plans, protocols, and relatively well-equipped, Dagupan City and Barangay Mangin, the model barangay, received two *Kalasag* (Shield) Awards each either from the Region 1 Disaster Coordinating Council and the National Disaster Coordinating Council from 2007 to 2009. The Center for Disaster

Preparedness also received an award from the regional coordinating council in 2008 for Best Performing NGO (USAID and ADPC 2010: 3-43 to 3-45).

Summary and Integration of the Two Case Studies

The two case studies offer interesting nuances in the ways transnational actors provided assistance to coastal cities/urban areas in the area of climate change governance. While both transnational actors have many similarities, they also have differences which might have affected the way they implemented their projects.

First, the similarities. The two transnational actors are international organizations which are committed to helping urban areas cope with disasters by working with local governments. They selected recipients of their technical and financial assistance through appropriate and fair criteria. However, their interventions were for the purpose of demonstrations only – hence, only one or two vulnerable urban areas from selected countries were considered. As for project activities, most of them were only meant for demonstration, hoping that by the time the project is terminated, they will be sustained and replicated/upscaled at the national level.

In identifying and prioritizing project activities, both transnational actors employed participative consultation where stakeholders' inputs are treated as equal as those of experts. They work side by side with local governments through memoranda of understanding or cooperation where the objectives of the partnership and the roles of each party were spelled out. The usual roles of transnational actors were usually supervising the over-all implementation of the project activities; financial resources generation and accounting; knowledge, methods, and skills sharing (especially those which they gained from previous yet related projects); and documentation of project accomplishments. On the other hand, the recipient cities were obligated to form technical working groups; provide counterpart funds, office spaces, logistics, equipments, and personnel; assist in the documentation of the project activities; account for the expenses; promote the project through active IEC activities; and mainstream the activities or their outputs to local development plans and practices so that all the gains could become sustainable. Lastly, as admitted by the transnational actors and their recipient local governments, both are still in the process of building the resiliency of the two cities, meaning, there is still much work to be done.

As for the differences, two distinct nuances became apparent. First, even though both transnational actors have “international” character, UN Habitat is a global intergovernmental agency supported by governments which are members of its mother unit, the United Nations; while the Asian Disaster Preparedness Center (ADPC) is a non-profit regional organization supported and governed by member-nation representatives and individual experts. As a UN agency, UN Habitat has a country office in the Philippines, hence, it directly worked, without a third party, with Sorsogon City. On the other hand, the Bangkok-based ADPC contracted out the transnational actors of building the resiliency of Dagupan through a local non-governmental organization – the Center for Disaster Preparedness – which became its “agent” in the Philippines. Instead of the ADPC, CDP dealt directly with Dagupan City on a regular basis. Second, while both transnational actors' projects aimed to build resilient cities, UN Habitat's project was on climate change adaptation while PROMISE focused on disaster risk reduction. Thus, it would be fascinating to know which between the two will be proven effective on building resilient cities – climate change or not. So far, it appears that PROMISE's disaster risk reduction activities have prepared Dagupan City residents for disaster, evidenced by the zero or near-zero casualty in three typhoon onslaughts which hit the city in 2008 up to 2010.

CONCLUSIONS

Up to what extent do international organizations (a.k.a. transnational actors or transnational actors in academic literature) affect urban climate governance? Theoretically speaking, depending on the nature of the problems in the disaster stricken areas, transnational actors are able to influence governance in so far as policy development and implementation are concerned. Except for the power to coerce and legitimize plans, programs, and policies which is usually reserved to the agents of state (i.e., national and local governments), transnational actors are able to shape climate governance because of their ability to shape opinions through intensive information sharing, their technical expertise on climate change, providing capacity building to their clients on vulnerability and risk assessments, and financing of climate change mitigation and adaptation measures.

From the two case studies, it was found out that one effective way to shape climate governance is through what can be termed as “roles contracting” where expectations or roles from both sides in the implementation of climate change-related projects could be specified through memorandum of agreement or cooperation (MOA/MoC). Here,

transnational actors can explore the possibilities of influencing policy- and decision-making at the local level, help shape the outcome of public policies, solicit the cooperation of all relevant actors from planning to implementation, do cost-sharing, specific objectives and targets, and install monitoring and evaluation mechanisms.

However, there are limits to the “contractual governance arrangement” between the cities and the transnational actors. One, it is not spared from local politics which could spell success or failure to projects. Some local legislative councils in the Philippines demand that any agreements entered into by their local chief executives have to be approved at their level. Second, if agreements in the MOA or MoC are not complied with, seldom do transnational actors take legal actions against the renegeing second party.

How are they able to work with local actors? There are two distinguishable strategies which the two transnational actors in the case studies employed. In the case of Sorsogon City, the UN Habitat worked directly with the city government, hence, the former can be referred to as the “agent” of change. In contrast, the regional NGO Asian Disaster Preparedness Center (ADPC) assigned a local “agent” (the Philippine-based Center for Disaster Preparedness) to implement the community-based DRM system with the Dagupan City Government. Here, the system of “agent-ing,” i.e., delegating or contracting out the implementation of projects from a geographically distant TA to a local agent, was utilized to save on costs and be more effective.

Where is the space of transnational actors in multi-level governance in these areas? Transnational actors are neither above or below states. Whether they come in the form of a public international organization or a non-state transnational organization, they still lack the coercive powers of states. Their means of inducing states or sub-state entities to cooperate, as found out in this paper through the case studies, is within a contractual arrangement – the spelling out of responsibilities for all parties for a common goal through contracts. The cooperation between the two could be scaled up if states or sub-states entities are made to participate in transnational networks of sub-national governments where the latter are informed of the latest knowledge and practices on climate governance which they could adopt back home.

Are their interventions appropriate, effective, and sustainable? Without going through a rigorous evaluation research, this paper concludes that:

On appropriateness - Based on interviews, stakeholders and beneficiaries believe that the climate change identified and prioritized were appropriate. One reason stated during the interviews which emerged was the so-called “lensing” using the transnational actors expertise, by hired experts, or those of the local stakeholders. “Lensing” means the identification and prioritization of project activities according to one’s mandate, expertise, ideology, or local knowledge.

On effectiveness – Dagupan City started with disaster management before going into climate change adaptation. Based on low disaster statistics, particularly “zero casualty” in three typhoons, and the numerous awards for best DRRM practices received by the city for the past years, the disaster management system, in a general sense, is effective. With a fully operational disaster management system, all that is needed is the full integration of climate change action plans. Credit goes to the transnational actors – the regional ADPC and the local Center for Disaster Preparedness – for the technical assistance. On the other hand, Sorsogon City enhanced its disaster management system only after the full blown climate change vulnerability and risk assessments in cooperation with the TA – the UN Habitat. The effectiveness of its climate change adaptation/disaster risk reduction plans have yet to be fully tested in times of disasters.

Two points emerged during the investigation. One, the projects initiated by the transnational actors in Sorsogon City and Dagupan City have two characteristics: (1) small in geographical scope; limited to several *barangays*, not the entire local government territories, and (2) most of the projects can be labelled as “demo-pilots,” i.e., demonstration and pilot-testing projects. This reveals the limitations of transnational actors – their assistance in urban climate governance is limited to what their funds can afford. In the final analysis, according to a UN Habitat-Philippines official, transnational actors like UN agencies cannot be a substitute to government.

On sustainability – In the two cities, there are efforts to institutionalize and sustain the projects by legitimizing them through local ordinances/resolutions, mainstreaming them into local development and land use plans, and providing local funds.

Suggestions for Further Study – The case studies have unearthed several questions worth researching. These are:

1. Which is more effective for transnational actors to perform its functions in the field: “agent-ing” or country-office approach?
2. Is “demo-piloting” of projects by transnational actors effective and sustainable?
3. Is “role contracting” between Transnational actors and local governments a good measure to influence climate change governance?

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