ASIA CLEAN ENERGY FORUM 2016

Establishing Low Carbon Cities (LCC) into Planners' and Decision Makers' Agenda:

A Framework towards Sustainable/Green transportation and Energy Efficiency, Quezon City, Philippines

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Objectives:

1. To provide solution in mainstreaming sustainable transportation and energy efficiency into city planners' and decision makers' agenda.

2. To develop a Low Carbon Cities Establishment Framework (LCCEF) in accomplishing city set target in reducing carbon emission using innovative solutions towards sustainable transportation/green and energy efficiency

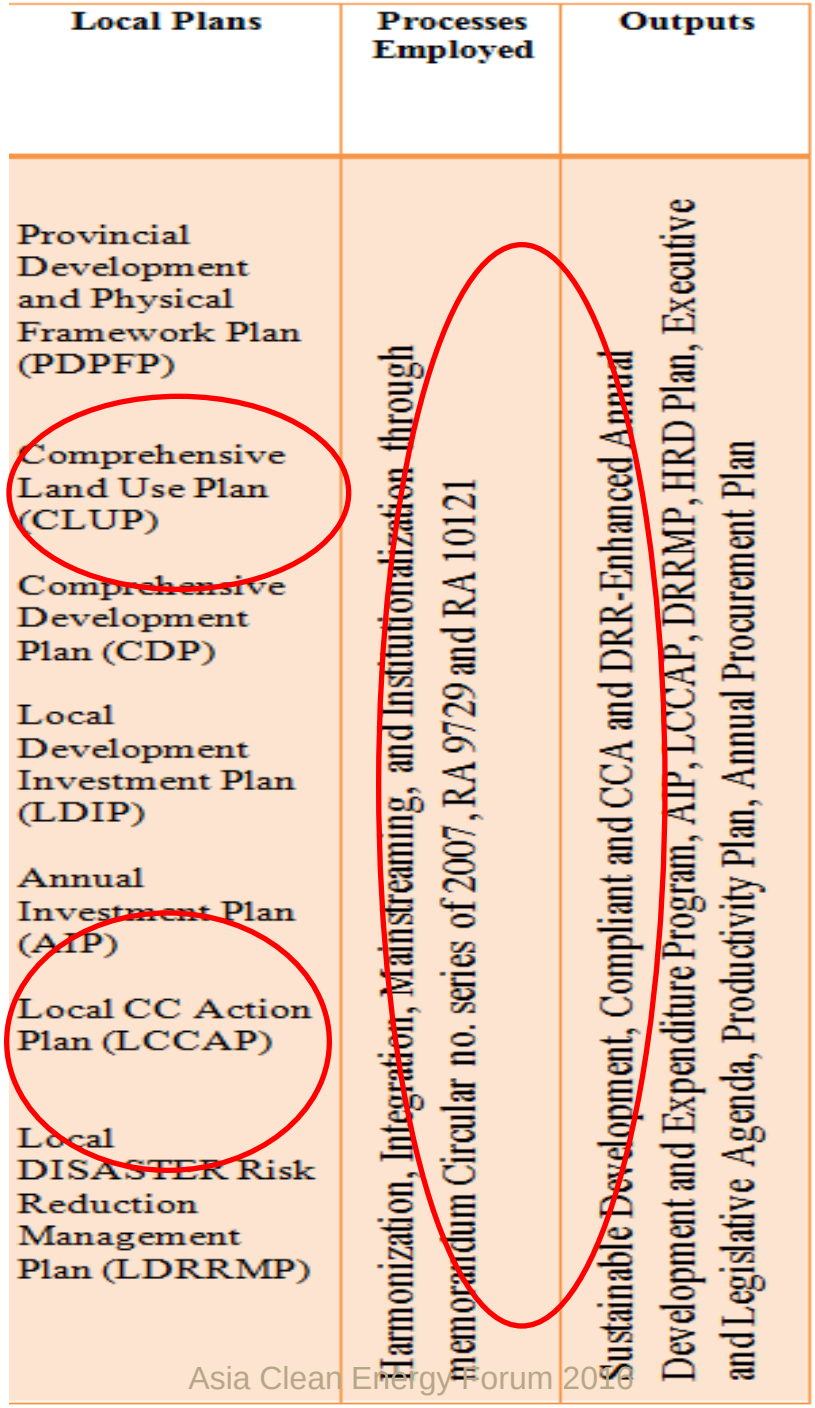
Table 2.1: Summary of the Philippines' Plans Related to DRR and CCA

International Frameworks on Development, CCA and DRR	National Frameworks on Development, CCA and DRR	Accompanying National and Regional Plans	Local Plans	Processes Employed	Outputs
Agenda 21 (1992)	Philippine Agenda 21 (1996)	Philippine Development Plan Philippine Investment Plan	Provincial Development and Physical Framework Plan (PDPFP) Comprehensive Land Use Plan (CLUP) Comprehensive Development Plan (CDP) Local Development Investment Plan (LDIP) Annual Investment Plan (AIP) Local CC Action Plan (LCCAP) Local DISASTER Risk Reduction Management Plan (LDRRMP)	Harmonization, Integration, Mainstreaming, and Institutionalization through memorandum Circular no. series of 2007, RA 9729 and RA 10121	Sustainable Development, Compliant and CCA and DRR-Enhanced Annual Development and Expenditure Program, AIP, LCCAP, DRRMP, HRD Plan, Executive and Legislative Agenda, Productivity Plan, Annual Procurement Plan
Millennium Development Goals (1998)	Philippine Millennium Development Targets and Indicators				
UN Framework Convention on Climate Change (commission enforce, 1994) **Kyoto Protocol, (adopted,1997) (entered into force 2005) Bali Plan of Action, etc.**	RA 9729 Climate Change Law of 2009 Republic Act 10174 or People's Survival Funds Act (2012) National Framework on Strategy on CC (2010-2022)	National Climate Change Action Plan (2011-2028)			
Hyogo Framework for Action (HFA) (2005-2015) and Post-2015 HFA, Sendai DRR Framework (2015-2030)	Philippine Disaster Risk Reduction and Management Law of 2010 RA 10121 National Disaster Risk Reduction and Management Framework (2011)	DRR/CCA Enhanced Regional Physical Framework Plan (RPFP) of Northern Mindanao 2013-2040 National Disaster Risk Reduction and Management Plan (2011-2028)			

(Source: Modified after MACEC, et al, 2011)

Source: Raza, 2015, Modified after MACEC, 2011

Philippines' Plans Related to Disaster Risk Reduction and Climate Change Adaptation and Mitigation

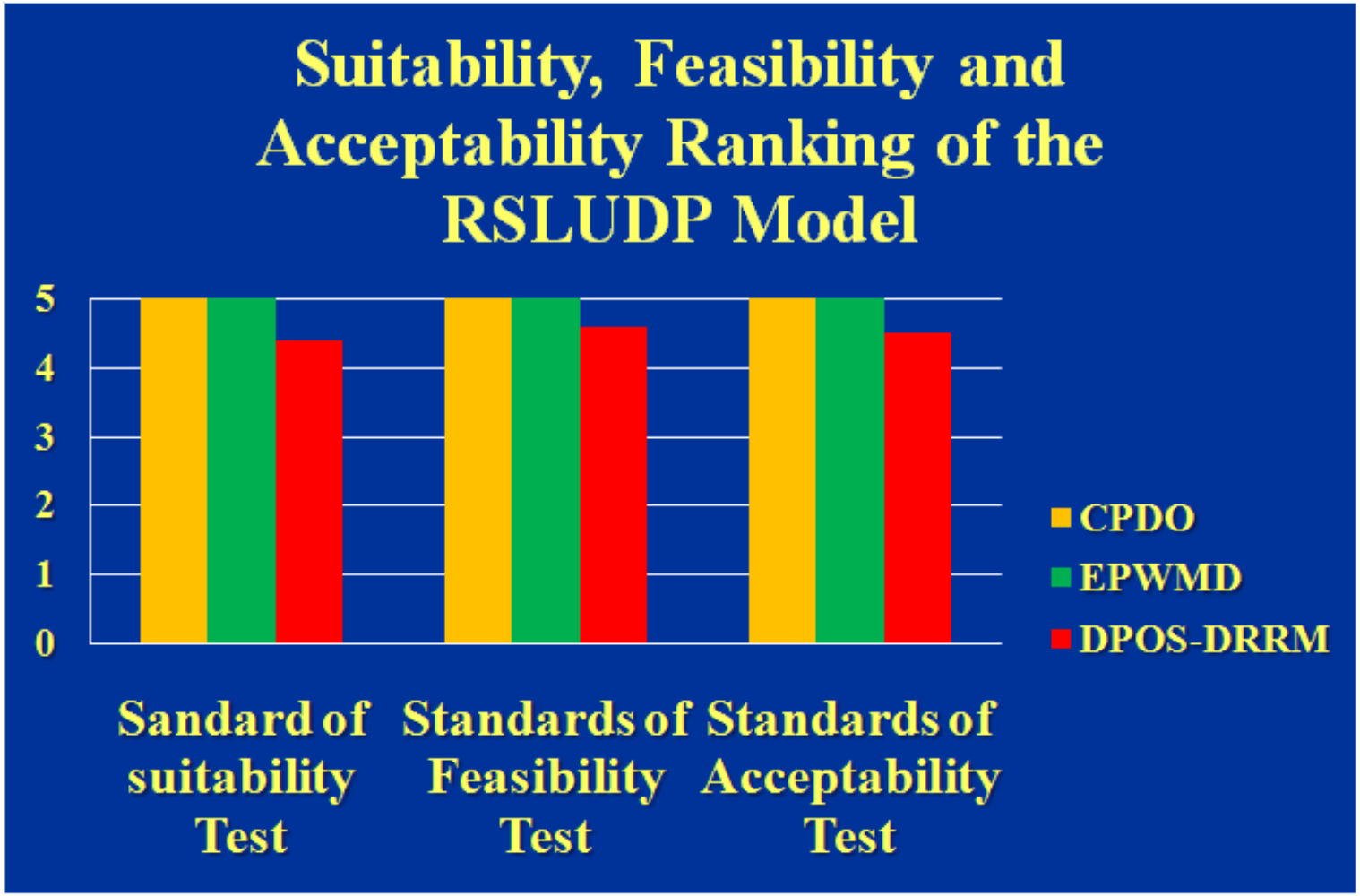


Participatory Process towards developing planners and decision makers' agenda

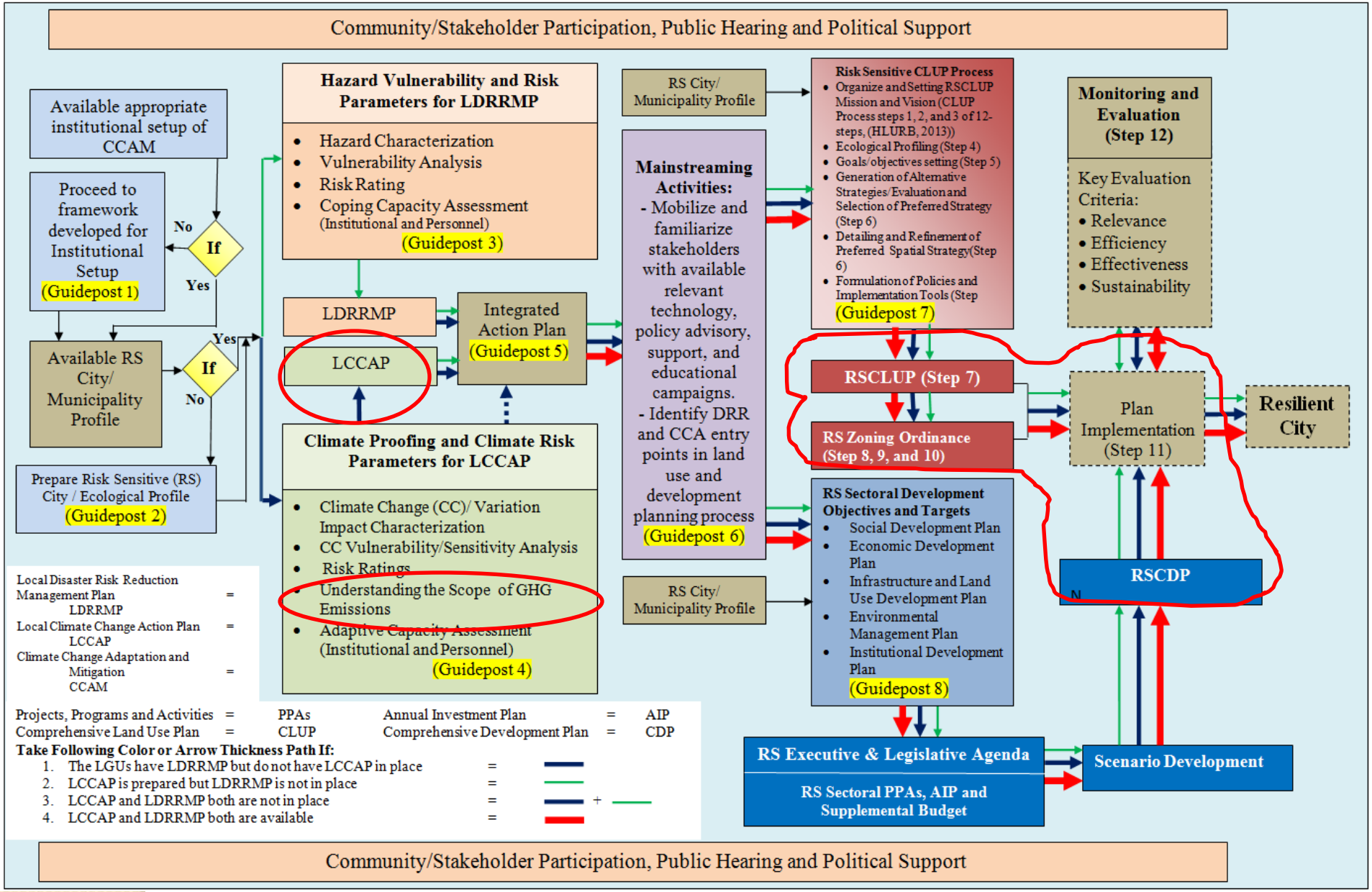
Source: Modified after Raza, 2015

Evaluation of Risk Sensitive Land Use and Development Planning (RSLUDP) Model by QCG

Source: Raza, 2015

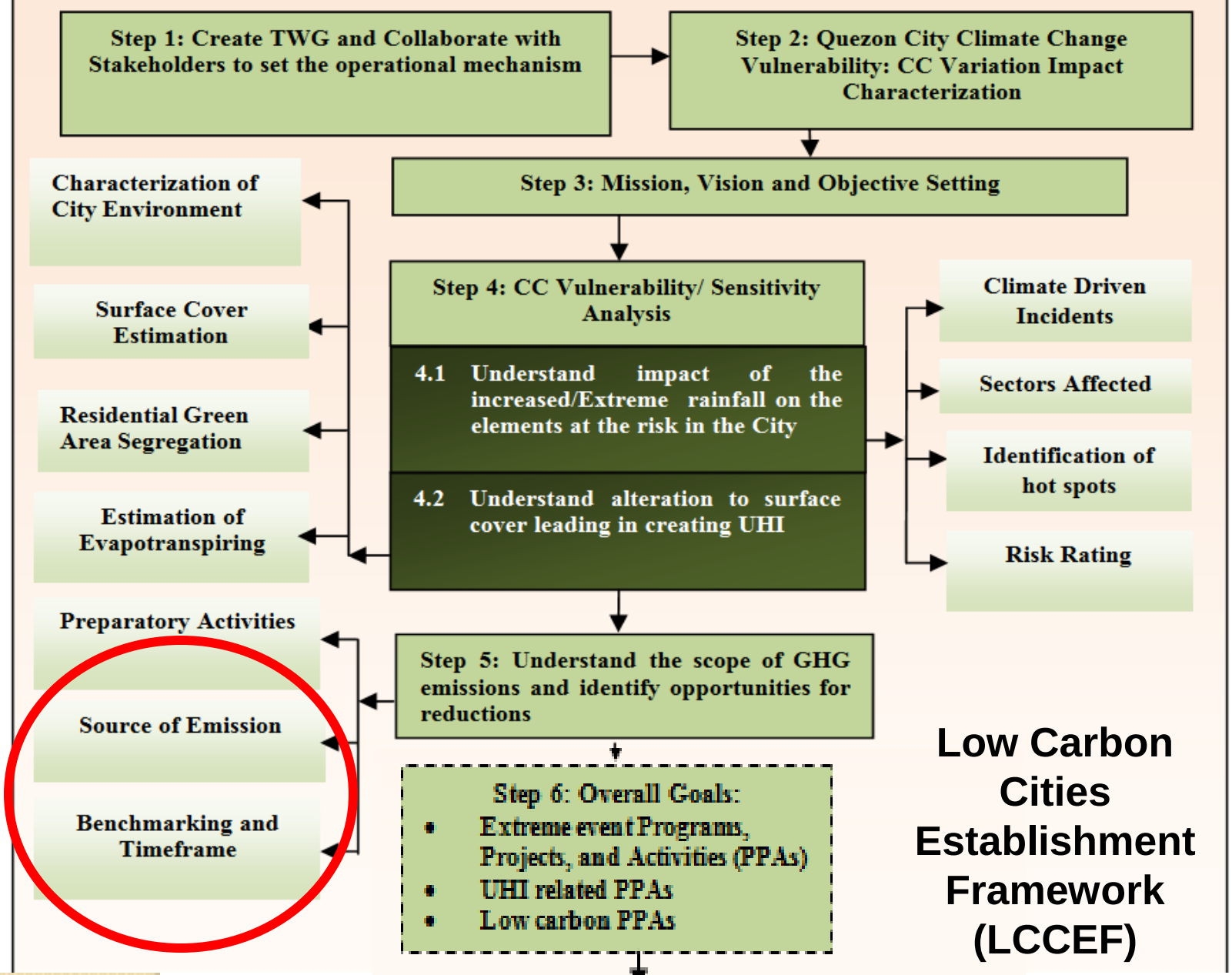


Source: Raza, 2015



Source: Raza, 2015

Risk Sensitive Comprehensive Land Use and Development Planning (RSCLUDP) Model



Low Carbon Cities Establishment Framework (LCCEF)

Source: Modified after Raza, 2015

Quezon City Greenhouse Gas Inventory 2010 Base Year

Community Level

Emission Source	2010 Volume	Unit	Total Emissions (tCO2e)	%
Stationary Energy - Fuel	403,328,060.00	liters	961,844.98	.13%
Stationary Energy - Electricity	3,926,193.36	MWh	2,038,479.59	.29%
Transportation	289,775,687.47	liters	709,806,272.66	99.51%
Solid Waste	705,640.72	tons	270,605.34	.04%
Waste Water - Septic Tanks	37,290,340.53	kg BOD	234,929.15	.03%
Sub-Total			**713,312,131.72**	
(Forestry)	2,545.89	hectares	(31,742.86)	
Total			**713,280,388.87**	

Entity Level

Sector	Total Emissions (eCO2)		%
	(kg)	(tCO2e)	
Buildings	39,000,857.99	39,000.86	62.42%
Transport	6,289,050.28	6,289.05	10.07%
Streetlights	14,922,134.77	14,922.13	23.88%
Waste	2,268,847.17	2,268.85	3.63%
Total	**62,480,890.21**	**62,480.89**	**100%**

Source: EPWMD-QCG, 2016

Source: EPWMD-QC, 2016

Republic of the Philippines
QUEZON CITY COUNCIL
Quezon City
19th City Council

PO19CC-438

71st Regular Session

ORDINANCE NO. SP-2447, S-2015

AN ORDINANCE CREATING THE QUEZON CITY GREEN TRANSPORT OFFICE UNDER THE DEPARTMENT OF PUBLIC ORDER AND SAFETY (DPOS), DEFINING ITS DUTIES, FUNCTIONS, AND RESPONSIBILITIES, PROVIDING FOR ITS COMPOSITION, APPROPRIATING THE NECESSARY FUNDS THEREOF AND FOR OTHER PURPOSES.

WHEREAS, Diesel-fueled vehicles and two-stroke gasoline engines, mostly from public utility vehicles are the largest mobile source of air pollution which are detrimental to public health and generate greenhouse gases (GHG) that contributes to global warming and climate change;

Republic of the Philippines
QUEZON CITY COUNCIL
Quezon City
19th City Council

PR19CC-105

16th Regular Session

RESOLUTION NO. SP-5847, S-2014

A RESOLUTION URGING THE LOCAL GOVERNMENT OF QUEZON CITY TO CONSIDER USING E-JEEPNEYS AND E-TRICYCLES FOR ITS VARIOUS MONITORING ACTIVITIES AND FOR OTHER PURPOSES.

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF QUEZON CITY IN REGULAR SESSION ASSEMBLED, to urge, as it does hereby urge the Local Government of Quezon City to consider using E-jeepneys and E-tricycles for its various monitoring activities and for other purposes.

ADOPTED: January 27, 2014.

Republic of the Philippines
QUEZON CITY COUNCIL
Quezon City
19th City Council

PR19CC-336

28th Regular Session

RESOLUTION NO. SP-5981, S-2014

A RESOLUTION STRONGLY URGING THE CITY GOVERNMENT TO CONDUCT A CITY-WIDE AWARENESS CAMPAIGN ON THE EFFECTS OF CLIMATE CHANGE AND WAYS OF REDUCING CARBON FOOTPRINT.

WHEREAS, experts at the Asian Development Bank stress that the Philippines need a strong national response to climate change, something that is lacking despite the fact that it is vulnerable to its effects;

WHEREAS, the Climate Change Commission reports that though majority of Filipinos have personally felt the effects of climate change, most have done nothing to reduce it. Worst still, a portion of the population do not know what climate change is;

WHEREAS, this resolution aims to reduce the City's carbon footprint by enhancing the overall energy efficiency of our society through the conduct of a city-wide awareness campaign that is both easy to understand and apply.

Asia Clean Energy Forum 2016

A vision towards achieving a Low Carbon and Sustainable City in the hope of becoming a model for other local government units to emulate

Rationale

Legal Mandates

Low Carbon and Sustainable City

Source: EPWMD-QCG, 2016

Formulation of QC Sustainable Transportation Framework

Green Transportation

CONCLUSION
Low Carbon City Strategy

RECOMMENDATION
To reduce the GHG emissions within the Community Level (2010 GHG Community Level Baseline) during the first year of implementation

PROGRAMS PROJECTS AND ACTIVITIES

- **QC Designated Low Emission Zone**
- **Seminar on Preventive Automobile and Best Driving Practices in QC Hall**
- **Installation of Air Quality Monitoring Stations**
- **Promote the use of E-vehicles within QC Hall Compound**
- **Bicycle Lane / "Tutubi" Bicycle Sharing System**
- **Biodiesel Project for every Public Utility Vehicle**
- **LED (Light Emitting Diodes) Traffic Lights and Streetlights**
- **E-Jeepneys**

OUTCOMES

- **Energy Efficiency, Renewable Energy and Sustainable/ Green Transportation**

NEXT STEPS
- **Continue Green Building Code Implementation**
- **LED Streetlights**
- **LED QC Building Lights**

THANK YOU AND HAVE A GREAT DAY