CLIMATESMART CITIES ASSESSMENT FRAMEWORK

Proceedings of Regional Workshops

New Delhi, Pune, Kolkata, and Chennai

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Prepared by:
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Registered offices:
Bonn and Eschborn, Germany
B-5/2, Safdarjung Enclave, New Delhi 110029
T: +91 11 49495353
F: +91 11 49495391
I: www.giz.de/india

Responsible:
Vaishali Nandan, Project Head, Climate Smart Cities
Sustainable Urban and Industrial Development (SUID) Cluster

GIZ India is responsible for the contents of this publication.
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1.INTRODUCTION

Cities bear a huge responsibility for balancing the needs of the present with the requirements of the future generations, in order to maintain equilibrium and to diminish the adverse effects of growing urbanisationon environment. The Ministry of Housing and Urban Affairs (MoHUA) has hence initiated the “ClimateSMART Cities Assessment Framework” (CSCAF) for the 100 smart cities under the Smart Cities Mission. The objective is to provide a clear roadmap for the cities and in effect, urban India as a whole, towards combating climate change while planning their actions within the city including investments. The CSCAF contains 30 indicators across 5 thematic categories and was launched in February 2019. The framework was then dissmenated to the 100 cities through 4 cluster workshops held in Delhi in April 2019.

With the feedback received during the consultations, the indicators were revised and the final online portal for the cities to upload the required data and evidences under the framework was opened on 1 July 2019. Simultaneously, nodal officers for all the 100 cities as well as the states were appointed in order to coordinate within the various departments and collect the required information. In order to facilitate the understanding of uploading the data and evidences required, 4 regional workshops were conducted between 12 and 20 July 2019 in 4 cities – New Delhi, Pune, Kolkata, and Chennai. The workshops were conducted with support from GIZ and National Institute of Urban Affairs (NIUA), and along with the engagement of experts from World Resources Institute (WRI) and Asian Development Bank (ADB). In total 94 cities participated in the four workshops (refer to annexure 3).

FIGURE 1: INAUGURAL SESSION

1.1 Format of the workshops

All the four workshops had the same format and agenda for the day. The workshop started with an inaugural session, presided over by the Ministry of Housing and Urban Affairs (MoHUA), along with the GIZ India and NIUA. The objectives for the workshops were set during during the inaugural session:

- Understanding the Indicators & methodology.
- Introduction of CSC online portal
- How to operate the online portal and the stages to upload the documents.
- Q&A – Open forum for the suggestions, queries & further understanding of any indicators.

Mr. Anand Iyer, Chief Project Manager, NIUA gave an overview of the CSCAF and thescheduled activities for the day. He further stressed that the framework is not a “grading” or “ranking” system comparing the cities, nor is it intended as a sub-mission or strategy for funding activities or projects.

This was followed by 5 techncial sessions on 5 categories of the CSCAF. In each of these sessions, experts from ADB and WRI gave a brief overview of the indicators, progression levels, evidence to be collected, and the respective/tentative data sources for each of the indicators. At the end of each session, questions and commentswere collected for clarification and further on the process, the steps of uploading documents in onlineportal were excersised.

2. TECHNICAL SESSIONS

2.1 Technical Sessions on each category

After the inaugural session, the cities were asked to login into the online portal using their user ids and passwords. Then the following experts from ADB and WRI presented their respective categories:

1. Mr. Harichandran – Energy and Green Buildings
2. Mr. Saqib Kadri – Urban Planning, Green Cover, and Biodiversity
3. Ms. Archana Patankar – Mobility and Air quality
4. Ms. Prerna Mehta – Integrated Water Resource management
5. Mr. AyanMazumder - Integrated Waste management

The participating cities in each group was given 10 minutes to understand the evidences required, upload the necessary documents in case they had brought the same, or clarify the sources for information. The expert then clarified the questions raised by the participants for each session for internal discussions and presented the outcomes of the dialogues through the toolkit booklet and uploading documents in portal.

FIGURE 2: PORTAL DEMONSTRATION

After the end of the technical sessions, Mr. Iyer and Mr. Vibhor Sood jointly explained each and every indicator, respective levels, data input format, and evidences required, as seen in the online portal for the participants to have a clear visual understanding. They also explained how to save and submit the form at the end.

FIGURE 3: PORTAL DEMONSTRATION

3. DISCUSSION ON INDICATORS

3.1. Unpacking Indicators on Energy and Green Buildings

FIGURE 4: EXPERT ON ENERGY AND GREEN BUILDINGS

INDICATORS
Indicator 1: Total electrical power in city derived from renewable energy sources **Indicator 2**: Per capita and Per area electricity consumption for municipal services **Indicator 3**: per capita fossil fuel (Diesel, Petrol, CNG, LPG) consumption for municipal services **Indicator 4**: Energy efficient street lighting in the city **Indicator 5**: Level of compliance and implementation procedures in place for green buildings **Indicator 6**: Percentage of buildings securing third party green building certification up to minimum level at completion stage
Q&A and Suggestions
Q. Where do we get the data? **A.** Data on total power consumption can be obtained from local power distribution companies **Q.** In Lucknow, it is very difficult to get data for electricity generated or consumed. The electricity board refuses to give a certified statement of this data **A.** NIUA on behalf of the Ministry of Housing and Urban Affairs will write to the electricity boards of such states **Q.** Do we calculate electricity consumption of everyone? **A.** No, just for municipal services **Q.** What should be the period of the data? **A.** The electricity records should be for last six months

3.2 Unpacking Indicators on Urban Planning, Green Cover, and Biodiversity

FIGURE 5: EXPERT ON URBAN PLANNING, GREEN COVER, AND BIODIVERSITY

INDICATORS
Indicator 1: Climate Action Plan **Indicator 2**: Disaster Resilience Plan **Indicator 3**: Rejuvenation and Conservation of Urban Environment **Indicator 4**: Proportion of Green Cover **Indicator 5**: Proportion of native tree species **Indicator 6**: Urban biodiversity
Q&A and SUGGESTIONS
Q. Should we count tree species or the number of trees? **A.** Count the native tree species **Q.** Which agencies are responsible for the evidences to be collected? **A.** Urban local bodies, State Disaster Management Authority, Forest Department, Irrigation Department, National Remote Sensing Centre **Q.** How do we compare percentage green cover across years? **A.** We use a comparative map based on satellite images **Q.** From where can we get satellite images? **A.** National Remote Sensing Centre, State Remote Sensing Centre **Q.** Where do we get data on trees? **A**. Forest Department and Horticulture Department

3.3 Unpacking Indicators on Mobility and Air

FIGURE 6: EXPERT ON MOBILITY AND AIR

INDICATORS
Indicator 1: Low carbon mobility **Indicator 2:** Low carbon buses **Indicator 3:** Public Transport Ridership Index **Indicator 4:** Percentage of coverage of Non-Motorized Transport network (pedestrian and bicycle) in the city **Indicator 5:** Clean Air Action Plan **Indicator 6:** Level of air pollution
Q&A and SUGGESTIONS
Q. What constitutes ridership? **A.** It should include trips made by ticket holding passengers as well as concessional pass holders **Q.** What is a low carbon bus? **A.** CNG, LPG, Hybrid, Biofuels and electric buses constitute low carbon buses **Q.** Where do we get data? **A.** Annual number of low carbon buses and buses in total can be obtained from the State/ Municipal Corporation, Transport Department. Expert advice: • Cities must increase the % of low carbon buses in the total public transport fleet • Data must be categorized according to type of fuel **Q.** Should the cycle track be dedicated, or mixed traffic lane can be considered as cycle tracks? **A.** Only dedicated cycle track to be considered. **Q.** All data of Air quality is in RSPM/SPM and we don't have data of PM 10 and PM 2.5 should we upload it? Can Smart poles be used for the Air quality status? **A.** Yes. **Q.** Why metros are not a part of Low carbon mobility Indicator and can we include metros in Public transport ridership index? **A.** Metro rail and sub-urban rails operate on electricity, hence not considered. Yes, metro ridership to be included.

3.4 Unpacking Indicators on Water Resource Management

FIGURE 7: EXPERT ON WATER RESOURCE MANAGEMENT

INDICATORS
Indicator 1: Water Resources Assessment and Management **Indicator 2:** Extent of Non-Revenue Water **Indicator 3:** Flood risk assessment and management **Indicator 4:** Wastewater Recycle and Reuse **Indicator 5:** Energy-efficient wastewater management system in the city **Indicator 6:** Energy-efficient water supply system in the city
Q&A and SUGGESTIONS
Q. The water department is not sharing data **A.** NIUA on behalf of the Ministry of Housing and Urban Affairs will write to the water departments of such states Concern: In Lucknow, there is no record of quantity of water sold and as a fixed tariff is set and thus, unable to calculate non-revenue water **Q.** What should the duration of the data be? **A.** Water supply records for last six months **Q.** What should be considered as Reuse of water? **A.** Water used for irrigation and or horticulture and or for the works which uses fresh water and if treated water is supplied, fresh water use is reduced. **Q.** Why wastewater used for irrigation cannot be considered as Reuse of wastewater? **A.** Water used for irrigation can be considered as re-use of wastewater. **Q.** Can wastewater used for urban greens can be considered as Reuse of wastewater? **A.** Yes.

Q&A and SUGGESTIONS

Q. How to calculate NRW when we are having Flat rates as the portal requires the data of Total Billed water?
A. Single Connection (for domestic use) shall be considered as to supply water for minimum 5 numbers of users and total volume of (billed) water shall be calculated as multiplication of total number of water users and per-capita water supply standard, fixed for the city. For bulk water supply (commercial use) such as industries, hospitals, restaurant, institute, approximation can be done by using the standards set in CPHEEO manual. However, to know the realistic value of NRW, cities must conduct the engineering and scientific studies through professionals.

Q. If latest water management plan is prepared in last 5 years can we upload that on portal?
A. Yes but the plan shall be applicable for 30 years water requirement of the city.

Q. Should we give declaration of Pumping and gravity supply of water separately?
A. Yes, but gravity and or pumping based water supply system shall be defined with clarity. Water pumps used in the system even for small part such as pumping water to overhead tanks and then supplying, cannot be considered as 100% gravity-based system**.**

Q. Government of Maharashtra had notified that water taken from water for city use has to be directed to river after treatment, so how we can cope up with the indicator of reuse of water?
A. A. Wastewater directed in river after treatment can't be considered as re-use. However, reason/purpose of such directive shall be further investigated to know if such directive is helping in reduction in use of fresh water in any form, if yes then it can be considered.

3.5 Unpacking Indicators on Waste Management

FIGURE8: EXPERT ON WASTE MANAGEMENT

INDICATORS
Indicator 1: City demonstrates reduction of waste generation in last 5 years **Indicator 2:** Extent of recyclables recovered, and Segregated Combustible Fractions (SCF)/ Refused Derived Fuel (RDF) Utilised **Indicator 3:** Recycled Aggregates (RA) and Recycled Concrete Aggregates (RCA) derived from City Construction and Demolition (C&D) waste are utilised **Indicator 4:** Greenhouse Gases (GHGs) emission reduced due to improved Municipal Waste processing and treatment facilities **Indicator 5:** Scientific Landfill is available with city as per SWM Rules, 2016 **Indicator 6:** Plan prepared and implemented for scientific landfill/ dumpsite closure considering GHG emissions
Q&A and SUGGESTIONS
Q. In Indore, we have a scientific landfill and it has been converted to a park. After how long can we open it the public? **A.** A period of 15 years must be observed before opening such a park to the public The two major problems faced by mostly all cities during the workshop were I. Availability of reliable data II. The concerned departments do not provide a certified statement of this data **Q.** If MRF started only 2 months ago how we can give data for a year? **A**.Characterization of different recyclable dry materials in the MRF facility can be furnished; the sale receipt of recyclable material to reyclling industry could be uploaded. SPSB authprozation to such recycling facility & authorized vendors details may be submitted **Q.** How to calculate the GHG Utilization or the amount of gas flared, what should be tool to do so? **A.** If the gas is simply flared, then GHG cannot be utilized (provided it is not being used as combustion fuel). If the amount of gas flared is 100% of the generated GHG, it could be calculated through the tool – *"Methane Commitment Model provided in the Global Protocol for Community Scale GHG Emissions (GPC, V2.0)"*

3.6 Next Steps and Closing Session

During the final sessions of the workshop, cities were encouraged to review the CSCAF booklet and the portal and start filling up the data required. The timelines for data upload was emphasised upon by the Ministry and the cities were urged to do their best in adhering to the dates. Cities were also informed on the next steps of evaluation and announcement of results.

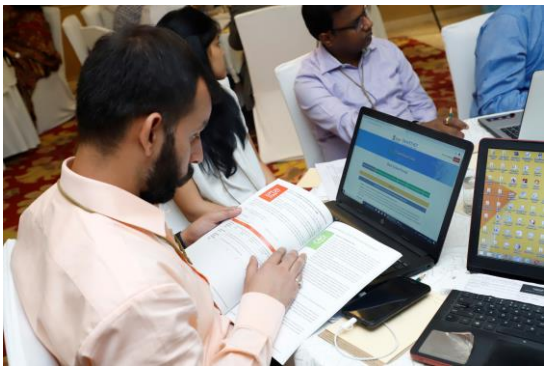
The participants also shared thoughts on how the CSCAF process could be improved. It was suggested to provide few best practices (case studies) to give an idea of interventions in city planning process.

Some additional questions continued about the uploading documents and their authentic validations on the portal. however, the participants' expectations from the beginning of the workshop were reviewed, concluding that nearly all the expectations were met over the course of the four days.

The workshops concluded with a vote of thanks all the participants on behalf of theorganising team, for their active participation and contributions over the course of the sessions and closed the workshop on an encouraging note.

FIGURE 9: WORKSHOPS CONCLUDED WITH A VOTE OF THANKS

ANNEXURE 1: PICTURES FROM THE WORKSHOPS



ANNEXURE 2: AGENDA FOR THE WORKSHOPS

Venue:

New Delhi, 12 July 2019
Pune, 13 July 2019
Kolkata, 19 July 2019
Chennai, 20 July 2019

Time	Topic / Details
09:30 – 10:00	**Registration**
10:00 - 10:05	**Welcome and Background** *Chief Executive Officer, Smart City (city organised in)*
10:05– 10:15	**Opening Remarks and GIZ perspective** *Mrs. Vaishali Nandan, Project Head, "Climate Smart Cities", GIZ India*
10:15 – 10:30	**Context setting – CSCAF for India** Introductory remarks and expected results *Mr. Lal Chhandama, Director (Smart Cities) MoHUA, GoI*
10:30- 11:00	**Presentation on the CSCAF** Origin, Timelines, Roles and Schedule for the rest of the day *Mr. Anand Iyer, Chief Project Manager, NIUA*
11:00- 11:15	**Tea Break**
11:15 –11:30	Quick Setting up of devices and Portal Login
11:30 –12:15	Unpacking Indicators on Energy and Green Buildings - Presentation on indicators - Q&A Session
12:15 – 13:00	Unpacking Indicators on Urban Planning, Green Cover and Biodiversity - Presentation on indicators - Q&A Session
13:00 – 14:00	**Lunch**
14:00 – 14:45	Unpacking Indicators on Mobility and Air Quality - Presentation on indicators Q&A Session
14:45 – 15:15	Unpacking Indicators on Water Resource Management - Presentation on indicators Q&A Session
15:15 – 15:30	**Tea Break**
15:30 – 16:15	Unpacking Indicators on Solid Waste Management - Presentation on indicators Q&A Session
16:15 – 16:45	Wrap-up time: Remaining work / inputs on any indicators across themes
16:45 – 16:55	**Concluding remarks and way forward** *Mr. Lal Chhandama, Director (Smart Cities) MoHUA, GoI*
16:55 – 17:00	**Vote of Thanks** *"Climate Smart Cites", GIZ India*

ANNEXURE 3: LIST OF CITIES PARTICIPATED

Attendance Sheet - Regional CSC Workshop				
S.No	Delhi	Pune	Kolkata	Chennai
	12-Jul	13-Jul	19-Jul	20-Jul
1	Agra	Ahmedabad	Agartala	Amravati
2	Ajmer	Aurangabad	Bhubaneswar	Bengaluru
3	Aligarh	Belgavi	Bhagalpur	Chennai
4	Prayagraj	Dahod	Bihar Sharif	Coimbatore
5	Amritsar	Gandhinagar	Bilaspur	Davanagere
6	Bareilly	Kalyan-Dombivali	Gangtok	Erode
7	Bhopal	Nagpur	Guwahati	Greater Warangal
8	Chandigarh	Nashik	Imphal	Kakinada
9	Dehradun	Panaji	Itanagar	Karimnagar
10	Dharamshala	Pimpri-Chinchwad	Kohima	Kochi
11	Faridabad	Pune	Muzaffarpur	Madurai
12	Gwalior	Rajkot	Namchi	Mangaluru
13	Indore	Silvasaa	Naya Raipur	Pondicherry
14	Jabalpur	Solapur	Pasighat	Port Blair
15	Jaipur	Surat	Patna	Salem
16	Jalandhar	Thane	Raipur	Shivamogga
17	Jammu	Vadodara	Ranchi	Thanjavur
18	Jhansi		Ranchi	Thoothukudi
19	Kanpur		Shillong	Tiruchirapally
20	Karnal		New Town Kolkata	Tirunelveli
21	Kota			Tirupati
22	Lucknow			Tirupur
23	Ludhiana			Tumakuru
24	Moradabad			Vellore
25	NDMC			Vishakhapatnam
26	Sagar			
27	Saharanpur			
28	Satna			
29	Srinagar			
30	Udaipur			
31	Ujjain			
32	Varanasi			
Total SC	**33**	**18**	**21**	**28**
Attended	30	13	20	30