

Pakistan Cooling Action Plan (PCAP)

Inaugural Stakeholder Workshop

December 21, 2021 Serena

Hotel, Islamabad

Hosted by Ministry of Climate Change (MoCC) & CLASP



Background

The revised NDCs for Pakistan have been shared by Ministry of Climate Change (MoCC), Government of Pakistan in COP 26 which includes the development of a 'Pakistan Cooling Action Plan (PCAP)' as a priority action to be undertaken.

An inaugural stakeholder workshop was hosted by MoCC and CLASP/HIMA[^]Verte in the wake of COP 26 to kick off development of the PCAP and chart a way forward in consultation with key stakeholders.

Objective

To establish a forum for all stakeholders expected to contribute towards development of the PCAP. The workshop included:

- Understanding of GHG emissions from the cooling sector, direct and indirect
- Providing a background of current work and available data on cooling sectors of Pakistan
- Developing an understanding of the Pakistan Cooling Action Plan (PCAP) amongst key stakeholders
 - Key features of PCAP
 - Discussing International examples of National Cooling Action Plan
- Obtaining commitment from key stakeholders to make relevant contributions
- Discussing the PCAP development process and way forward

Agenda

The meeting agenda was as follows.

Venue: Quetta Board Room, Serena Hotel, Islamabad
Time: 9:45 am to 1.00 pm.
Date: December 21, 2021

9.45 – 10.00 am	Registration
10.00 – 10.10 am	Welcome and Introduction Mr. Syed Mujtaba Hussain - Senior Joint Secretary, MoCC
10.10 – 10.15 am	Purpose of Workshop Mr. Ali Habib - National Team Leader, CLASP
10.15 – 10.25 am	Energy Efficiency Policies for Cooling Mr. Muhammad Umer, NEECA
10.25 – 10.35 am	Development of Pakistan Cooling Action Plan Ms. Amna Shahab - Project Manager, CLASP/HIMA [^] Verte
10.35 – 10.50 am	Country Cooling Mapping of Pakistan Mr. Areeb Hussain - Project Coordinator, CLASP/HIMA [^] Verte
10.50 – 11.00 am	Energy Efficiency and Conservation Solving Climate Crisis Ms. Azka Tauseef - WWF Pakistan
11.00 – 11.10 am	Kigali Amendment Preparedness Mr. Zia-ul-Islam - NPM, National Ozone Unit

11.10 – 11.30 am	Tea Break
11.30 – 12.00 pm	Sharing results of UNDP RAC Study - Dr. Mazhar Hayat, MoCC World Bank Fisheries Cold Chain Study - Ms. Rahat Jabeen, World Bank
12.00 – 12.40 pm	Remarks by Mr. Farooq Mehboob - President Elect, ASHRAE International Discussion and Way Forward
12.40 – 12.45 pm	Closing Remarks Mr. Irfan Tariq - DG Environment, MoCC
1.00 pm	Lunch

Proceedings:

The workshop began with a round of introductions followed by welcome and introductory remarks from Mr. Syed Mujtaba Hussain, Senior Joint Secretary from the Ministry of Climate Change. He highlighted the importance of developing a cooling action plan for Pakistan, that has been incorporated in the revised 2021 Nationally Determined Contributions (NDCs). He also pointed out the ambitious commitments made by Pakistan in COP 26 *“At the UN Climate Summit in Glasgow last month, Pakistan submitted an ambitious plan to reduce greenhouse gas emissions (GHG) by 50% by 2030”*. He reiterated the harmful impacts of climate change, specifically for Pakistan and appreciated this initiative which he stated was an important activity bringing together key stakeholders. He thanked participants for their attendance and encouraged them to contribute to a collaborative effort in making the project a success.

Mr. Ali Habib, National Team Leader for the PCAP project introduced the implementing organizations CLASP and HIMA[^]Verte and provided an overview of the mandate to work on the Pakistan Cooling Action Plan. He explained the objectives and purpose of the workshop and encouraged participants to provide constructive inputs relevant to PCAP development.

After the opening remarks and a round of introductions, the following presentations were delivered:

Development of Pakistan Cooling Action Plan – Amna Shahab, Project Manager CLASP/HIMA[^]Verte

Ms. Amna Shahab introduced the Clean Cooling Collaborative (previously known as the Kigali Cooling Efficiency Programme-KCEP) project and the main output of the development of Pakistan Cooling Action. She explained the importance and purpose of National Cooling Action plans and shared examples of National Cooling Plans being developed globally. She also provided an overview of the National Cooling Action Plan methodology and explained how it can be applied in Pakistan’s context to develop the Pakistan Cooling Action Plan. Development of the Pakistan Cooling Action Plan is expected to be completed by 2023.

Country Cooling Mapping of Pakistan – Areeb Hussain, Project Coordinator CLASP/HIMA[^]Verte

Mr. Areeb Hussain presented the composition of Pakistan’s cooling sector based on data available from existing reports, studies and assessments. There is a dearth of data to adequately map the entire sector. UNDP’s recent study on GHG emissions from Pakistan’s refrigeration and air conditioning sectors is the first study of its kind that provides details on composition and emissions profile of various cooling subsectors. However, the study is based on numerous assumptions and there are still many data gaps that results in limited insight into the composition and environmental impact of the cooling sector.

Energy Efficiency and Conservation Solving Climate Crisis - Azka Tauseef - WWF Pakistan

Ms. Azka Tauseef provided an overview of WWF Pakistan’s initiatives in addressing the climate challenge, showcasing various projects and impacts achieved to date. WWF highlighted their strong collaboration with the private sector in Pakistan. Ms. Tauseef also mentioned a WWF

initiative for providing clean energy solutions for off-grid communities under the title of SolaPanda.

Energy Efficiency Policies for Cooling - Muhammad Umar, Manager Technical NEECA

NEECA is one of the key stakeholders of the Clean Cooling Collaborative project, particularly in development and implementation of minimum energy performance standards for cooling appliances. Mr. Umar, highlighted ongoing activities being undertaken by NEECA especially those linked to cooling appliances such as MEPS for fans, domestic Air conditioners and refrigerators. He also reiterated NEECA's support in development of the Pakistan Cooling Action Plan.

Kigali Amendment Preparedness - Zia-ul-Islam, National Program Manager, National Ozone Unit

Mr. Zia-ul-Islam began by stating that he has been keen for Pakistan to develop a Cooling Action Plan for a couple of years and is very happy to see that it has finally materialized with the launch of the CLASP/HIMA^{Verte} PCAP project. Mr. Zia-ul-Islam highlighted the importance of this activity to enhance cooling energy efficiency in parallel to the Kigali Amendment which will enable phase-out of HFC emissions. He further outlined the phase out schedule for HFC's as per the timelines of the Kigali amendment and enabling activities being undertaken for its ratification.

Sharing results of UNDP RAC Study - Dr. Mazhar Hayat, MoCC

UNDP's study on GHG emissions from the refrigeration and air conditioning (RAC) sectors attempts to map the composition of Pakistan's cooling sector and contribution of GHG emissions from each of the cooling subsectors. Dr. Mazhar Hayat contributed to the study on behalf of the Ministry of Climate Change. He presented an assessment of baseline direct and indirect GHG emissions from the RAC sector. He shared expected reductions in these emissions to 2030 and 2050 by implementing improvement initiatives compared to "business as usual". He emphasized that despite this study providing a platform for further activities in this sector, it is based on many assumptions and estimations; there is still a dire need to obtain accurate and reliable data before developing an action plan.

Remarks from Mr. Farooq Mehboob (via Zoom), President Elect ASHRAE International:

Mr. Farooq Mehboob introduced ASHRAE international to the participants and explained the organizations aims, objectives and provided an overview of various activities that include technical working groups that provide standards and specifications for cooling in buildings amongst other things. He then stressed the importance of accurate and reliable data and clearing spelling out the goals, priorities and milestones for an action plan. He offered support to the Ministry of Climate Change by indicating that the platform of ASHRAE can be leveraged to obtain services from international experts, often free of cost. ASHRAE has technical committees for Climate Change and Environment Impact which could be involved.

World Bank Fisheries Cold Chain Study - Rahat Jabeen (via Zoom), World Bank

The World Bank has an ongoing study on fisheries cold chains in Pakistan. The study is undergoing internal review, therefore findings could not be made public at the moment. However, Ms. Rahat Jabeen shared the overall objectives, scope and focus areas for the study with the participants. She said that they will involve the CLASP/HIMA^{Verte} team in this study.

Discussion and Way Forward:

The following issues were raised and discussed by participants:

- Mr. Mosuf Ali, consultant NOU raised the possibility of including standards and specifications for refrigerants along with minimum energy performance standards (MEPS). This approach was not recommended by some participants as it can potentially limit flexibility in adoption of new technologies in the future. Mr. Zia Ul Islam from the National Ozone Unit (NOU) also did not recommend including refrigerants in MEPS as this can cause confusion within the industry. Furthermore, a refrigerant transition strategy is included in the planned PCAP process. NEECA is considering adopting refrigerants standards based on global warming potential (GWP) levels. A practical option for Pakistan could be government bulk procurement standards for low GWP

refrigerants which can be adopted by provincial governments.

- Mr. Asif Khan, representative of JICA raised the issue of release of refrigerants from the ship-breaking yard in Gaddani, Balochistan. Mr. Zia Ul Islam stated that the NOU has approached the Gaddani Shipbreaking Association and Baluchistan EPA several times with the offer of donating refrigerant recovery and recycling units, but unfortunately have not received any response to date.
- Mr. Changezi, Chairman of Pakistan Council of Architects & Town Planners said that buildings contribute about 40% of total emissions from cooling and are therefore an important area of focus for improving efficiency. Design of buildings to minimize use of cooling appliances and maximizing their performance and efficiency should be one of the key components of the action plan. He offered assistance from his association where needed.
- Mr. Malik Tariq from the Pakistan Electrical and Electronic Manufacturers Association (PEEMA)/DWP Group commented that the production numbers of air conditioners in 2020 was 1.2 million, instead of 850,000 given in the UNDP study.
- Issue of old air conditioners still in operation. ASHRAE recommends life of air conditioners between 5-7 years, but in Pakistan it is over 10-15 years with R-22 refrigerant still in use. Mr. Zia Ul Islam mentioned that as per the refrigerant phase out plan, R-22 is allowed until 2030.
- Rising demand for central air conditioning over the last few years. There is a contrast in demand from public and private sectors. For the private sector, operating cost is important so sizing of air conditioners is given high importance. For the public sector, the only concern is cooling without consideration for operating cost, which unfortunately results in oversizing of systems. Example, air conditioning installed in orange line project was 10,000 tons. Awareness raising and regulations for large commercial air conditioning is an important sector that should be considered.
- Servicing sector has an important role, but does not have the training and awareness on emissions from refrigerants. Outdated practices are still commonly employed, which results in commercial losses as well as environmental damage. NOU is conducting trainings in collaboration with TEVTA, but there is still a lot of scope and such training needs to be widespread.
- Impact of COVID-19 on air quality has impacted fresh air circulation design in architecture. This is a new aspect that is missing from commonly used standards. Going forward it should be an important consideration when designing regulations or standards.
- Dr Mazhar Hayat mentioned that end-of-life refrigerant gas recovery should be included as a manufacturer responsibility under the concept of “extended producer responsibility” (EPR). The difficulty with this approach is that appliances once sold commonly change hands several times and it is almost impossible to track where it ends up, therefore very difficult for manufacturers to ensure recovery.

Conclusion and Key Takeaways:

- Need for accurate and reliable data is essential in developing effective strategies or policies for the cooling sector. The UNDP RAC GHG emissions study provides a good starting point, however there are several data gaps that need to be addressed.
- The discussions and inputs from participants are useful but the challenge now is how to consolidate them and ensuring that they are effectively incorporated in the PCAP.
- Stakeholder ownership is essential. This is not an activity for a single organization, rather all relevant parties must come together and contribute including both public and private sectors.
- The workshop was concluded by Mr. Syed Mujtaba Hussain by reiterating the importance of the development of a Pakistan Cooling Action Plan. He requested additional technical support from CLASP/HIMA^Verte on developing legal structures such as a Working Group in addition to the PCAP that will ensure effective implementation of policies and strategies for emission reduction from the cooling sector.

List of participants

Representatives from government and private sector participated in this consultative meeting. These included Ministry of Climate Change, National Energy Efficiency and Conservation Authority, National Ozone Unit, Global Change Impact Study Centre, Pakistan Electric Fan Manufacturers Association, Pakistan Electronic Manufacturers Association, UNIDO, UNDP, ASHRAE, WWF - Pakistan, UNEP, JICA and the World Bank.

Sr No.	Name	Designation	Organization
1	Mr. Syed Mujtaba Hussain	Senior Joint Secretary	Ministry of Climate Change
2	Mr. Ateeq Ahmed	Manager R&D	PEL/PEMA
3	Mr. Ehsan Mujtaba	Secretary General	PEFMA
4	Mr. Waqas Ali Qureshi	Product Head	PEL
5	Mr. Arif Changezi	Chairman	Pakistan Council of Architects & Town Planners
6	Mr. Asif Khan	Consultant	JIZO Laboratory
7	Ms Azka Tauseef	Coordinator CEP	WWF
8	Mr. Malik Tariq	Country Manager	PEEMA/DWP Group
9	Mr. Rehan Ahmed	Deputy Manager Design	DWP Group
10	Mr. Mosuf Ali	Consultant	NOU
11	Mr. Tanvir Mahmud	Consultant	UNEP
12	Mr. Arif Goheer	Coordination Head	GCISC, MoCC
13	Dr. Mazhar Hayat	GM Operations	ICEAGE
14	Mr. Zia ul Islam	NPM	NOU
15	Mr. Muhammad Umar	Technical Manager	NEECA
16	Mr. Azmat Shah	O.S	NOU
17	Ms. Saadia Qayyum	Energy Specialist	World Bank
18	Mr. Usman Manzoor	Head Environment Unit	UNDP
19	Ms. Hadika Jamshaid (on Zoom)	Consultant	MoCC
20	Mr. Farooq Mehboob (on Zoom)	President Elect	ASHRAE International
21	Ms. Rahat Jabeen (on Zoom)	Environmental Specialist	World Bank
22	Mr. Ali Habib	National Team Leader	CLASP/HIMA^Verte
23	Ms. Amna Shahab	Project Manager	CLASP/HIMA^Verte
24	Mr. Areeb Hussain	Project Coordinator	CLASP/HIMA^Verte
25	Mr. Abdul Rehman	Project Consultant	CLASP/HIMA^Verte