**RCE Chandigarh: UNDP’s SDG Action Award 2020 for Environment Sustainability**

**Annexure-1**

**Brief Summary**

RCE Chandigarh’s lead agency Punjab State Council for Science & Technology has received Sustainable Development Goal Action Award 2020 for ‘Environment Sustainability’ from UNDP and Government of Punjab, India for promoting Cleaner Technologies to enhance Climate Resilience Capacity within the region:

1. Demonstrating first-of-its-kind technology for utilization of paddy straw by producing briquettes resulting in

* Utilizing of 40,000 tonnes of paddy straw from 35 villages
* Generating extra revenue for farmers
* Curbing stubble burning
* Availability of Green Fuel with direct mitigation of >70,000 tonnes of CO2 per annum.
* Second unit with 4-times higher capacity i.e. of 100 TPD has been set up in the region.

1. Reducing carbon footprints in region’s MSMEs by annual reduction of 5.88 lakh tonnes CO2 and reduction of 52,000 tonnes of particulate matter in atmosphere by following 3 technologies:

* Zigzag firing technology in brick kilns
* Increasing efficiency of Air Pollution Control System in induction furnace units
* Maintenance free waste heat recovery system in re-rolling mills.

**Details**

RCE Chandigarh’s lead agency Punjab State Council for Science & Technology has been honoured with Sustainable Development Goal Action Award 2020 for ‘Environment Sustainability’ for promoting Cleaner Technologies to enhance Climate Resilience Capacity in the region by United Nations Development Programme’s Sustainable Development Goals Coordination Centre and Govt of Punjab. The award is presented for contribution towards sustainable development in the region with exemplary initiatives with significant impacts.

The RCE has carried out pioneering work in demonstrating economically viable technological interventions to address two main grand challenges of the state namely, gainful utilization of Paddy Straw and reducing carbon footprint of MSMEs.

The RCE after extensive research & development, mobilized support from Ministry of Environment, Forests & Climate Change (MoEF&CC), Govt. of India for large scale production of briquettes from paddy straw under National Climate Change Action Programme. A holistic end-to-end approach was followed to bring it on ground. As a result, within one year of getting the first paddy straw based plant of 24 TPD capacity set up at village Jalalabad East, District Moga and the second unit with 4-times higher capacity has been set up in the state at village Kulburchan, District Patiala of Punjab , India.

These first-of-their-kind paddy straw based briquetting plants would utilize 40,000 tonnes paddy straw from around 35 villages in their vicinity thereby providing revenue to the farmers, curb stubble burning and yield direct mitigation of more than 70,000 tonnes of CO2 per annum. The briquettes produced are finding use in industries as Greener Fuel.

The RCE has also developed and demonstrated following 3 novel tech interventions for reducing Green House Gases (GHGs), particulate matter and fossil fuel consumption in MSMEs:-

* Zigzag firing technology in brick kilns resulting in reduction of 15% fuel consumption and 75% particulate emissions.
* Fume capturing followed by Air Pollution Control System in Induction Furnace units leading to daily collection of 200-300 kg of dust in air filters in each unit.
* Maintenance free waste heat recovery system in rerolling mills leading to 5-10% reduction of fuel consumption.

After meticulously planned on-site experimentation, these three cleaner tech interventions were demonstrated in one industrial unit each and after detailed monitoring, the State Pollution Control Board approved the technologies further for replication. Subsequently, the efficiency, cost effectiveness and industry participation led to adoption of these technologies by 1300 MSMEs in a short span of three years, thereby, generating private sector investment of Rs. 300 crores on cleaner technologies in the State. In turn, the industry stands benefitted to the tune of Rs.334 crore on account of reduced energy consumption due to saving in fuel & electricity. This has also resulted in annual reduction of 5.88 lakh tonnes CO2 equivalent to sequestration capacity of 294 lakh trees and reduction of 52,000 tonnes of particulate matter in the atmosphere. Further, it has benefitted 25000 workers in 1300 MSMEs by providing them cleaner work zone.

As the scalability and replicability of these interventions stands well tested on ground, the state of Punjab could be the leader in offering above solutions to other states in the country. The RCE has already provided technical support to five other states in adopting cleaner technologies in rerolling and brick sector.