

**GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA**

UNSTARRED QUESTION NO:290
ANSWERED ON:22.07.2015
Temperature Patterns
Gandhi Shri Feroze Varun

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) the monthly temperature patterns during the months of March-July (with peak temperature) for the last three years and the current year, so far, State/UT-wise; and
- (b) the initiatives taken by the Union Government to provide Low Cost Cooling Solutions during the above mentioned period?

Answer

The MINISTER OF STATE FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(SHRI Y. S. CHOWDARY)

(a) The mean maximum and highest maximum temperatures recorded during the period 2012 to 2015 at the observatories of ESSO-IMD in different states are given in Annexure-I.

(b) Government has taken note of the initiatives of individual innovators/institutions in developing the low cost cooling technologies. The National Innovation Foundation (NIF), an aided institution of the Department of Science & Technology (DST), has taken the initiative in pooling the information on the innovations of grass root innovators and students in the field of low cost cooling technology. Some of the documented innovations are natural water cooler, mitti cool –the clay fridge, cooler cum fridge, ceiling air cooler, tender coconut breaking and instant cooling machine, umbrella that cools in hot summer, portable air cooler, rural refrigerator, room heat reducer etc.

Ministry is implementing various technology development and demonstration schemes and supports Extra Mural R&D Projects through competitive grant mechanism to scientists/innovators to develop & demonstrate technologies to make available the benefits of such innovative technologies to the people. These schemes are open in all areas of technology development and demonstration including the area of low cost cooling technology.

In addition, National Innovation Foundation helps grass root innovators, students to convert their ideas into prototypes and products for societal use. The Foundation also financially supports the innovators through Micro Venture Innovation fund to make available the benefits of such innovative technology to the people.

In addition to this other solar energy based technologies include Vapour Jet Cooling System, Open Cycle Desiccant Cooling Systems, and Solar operated Vapour Compression System are also in operation.

Both commercially available machines - Vapour Compression Machines (VCM) & Vapour Absorption Machines (VAM) – can run on solar energy; VCM on solar photovoltaics connected with an inverter to convert DC power to AC power and VAM on solar thermal collectors with the type of collectors decide on the basis type of VAM used (single/ double/ triple effect). Solar cooling systems both working on solar photovoltaic and on thermal collectors have been developed and installed in the field.