



DRDO

Press Release
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DRDO BHAWAN
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DRDO Technology to Improve Access in Mountain Regions with Low Cost Foot Bridges

A mountain foot bridge for civil applications developed by R&DE (E), a premier DRDO laboratory was handed over for public use by Dr. R Chidambaram the Principal Scientific Advisor to Government of India today i.e. 17th July 2014, near HESCO (Himalayan Environmental Studies and Conservation Organization), Dehradun, Uttarakhand. Speaking on the occasion Dr Chidambaram highlighted the contribution of S&T agencies in improving lives of people in rural and remote areas.

Dr Avinash Chander, Scientific Advisor to Raksha Mantri, Secretary Deptt of Defence R&D and DG DRDO in his message sent on the occasion said, "DRDO is an innovation based organization and ensures that its technologies developed for armed forces are useful for public welfare as well. The technology of making Foot Bridges for armed forces developed by DRDO can be utilized to bring relief to the flood affected people. Handing over of two such bridges is an example of taking technologies to the people for larger benefit of masses. The low cost mountain foot bridges costing just Rs 6.5 lakh each, being easy to transport and deploy are expected to be of great help by making disaster hit regions accessible and thus facilitating relief and rescue work".

The bridge is an adaption of 35 m man-portable 'Mountain Foot Bridge' (MFB) developed for the armed forces for bridging dry/wet gaps up to 35 m long, with a pathway of 0.8m width especially for inaccessible high altitude regions. After Uttarakhand disaster in 2013, during a visit of PSA and SA to RM at R&DE(E), Pune, it was proposed to develop suitable foot bridges similar to mountain footbridge but in steel to keep the cost of the bridge low. The 13.5 m steel bridge for civil applications has a 1.5 m wide pathway, is launched using the launching system of 35 m Mountain Foot Bridge (MFB) and is deployable within 2 to 3 hrs. Its launch does not require accesses to far-bank or elaborate site preparations and is therefore ideal in disaster situation.

The original bridge successfully developed and realized by DRDO for the armed forces to suite rapid deployment in mountainous regions is capable of bridging gaps up to 35 m. The components of military bridge made of high-strength aluminum alloy are man-portable and weigh less than 18 kg each. The bridge is design to withstanding conditions prevailing in glacial regions. Its man-portable launching system allows bridge to be constructed from near-bank without any access to far-bank. The joints of the bridge facilitate easy assembly in cold conditions and a 35m bridge can be launched in about one hour. Though it is designed to prevent any appreciable accumulation of fresh snow, it has been designed for

accumulation of up to 250 mm of fresh snow having density up to 200 kg/m³. The military bridging system has successfully completed user assisted technical trials in Assam and Arunachal Pradesh.

Speaking on the occasion, Shri Anil Datar, DS and Director General (Armaments and Combat Systems) stressed on corporate social responsibility of DRDO and called upon scientific community to explore civilian spin offs of defence technologies. He also gave a brief account of immense contribution of DRDO in developing such spin off technologies. Dr Guruprasad, Director R&DE (E) DRDO narrated the development of this bridge. Dr. Anil Joshi founder of HESCO promised to work on delivering this technology to remote areas of Himalayas.

Ravi Kumar Gupta
Scientist 'G' and Director
Directorate of Public Interface,
DRDO Hqrs, Ministry of Defence
Room 117, DRDO Bhawan
New Delhi-110011
Ph +911123011073



Left to Right: **Dr AK Gupta**, Outstanding Scientist and Director Instruments Research & Development Establishment (IRDE) Dehradun, **Dr. S. Guruprasad** Outstanding Scientist and Director, Research & Development Establishment (Engineers), Pune, **A village lady**, Dr Anil Joshi founder of NGO Himalayan Environmental Studies & Conservation Organization (HESCO), Dehradun, **Shri RC Agarwal**, Outstanding Scientist and Director, Defence Electronics Application Laboratory (DEAL), **Dr. R. Chidambaram**, Principal Scientific Adviser to the Government of India and **Shri AM Datar**, Distinguished Scientist and Director General, Armament & Combat Engineering Systems (ACE), DRDO.