

GOVERNMENT OF INDIA
MINISTRY OF DEFENCE
DEFENCE RESEARCH & DEVELOPMENT ORGANISATION
LOK SABHA
UNSTARRED QUESTION NO. 3693
TO BE ANSWERED ON 25TH MARCH, 2022

BIO-TOILETS BY DRDO

3693. DR. KRISHNA PAL SINGH YADAV:
DR. SHRIKANT EKNATH SHINDE:
SHRIMATI APARUPA PODDAR:
DR. HEENA GAVIT:
DR. SUJAY RADHAKRISHNA VIKHE PATIL:
SHRI UNMESH BHAIYYASAHEB PATIL:
SHRI RAJENDRA DHEDYA GAVIT:

Will the Minister of Defence be pleased to state:

- (a) the salient features of the bio-toilets developed by the Defence Research and Development Organization (DRDO);
- (b) whether DRDO is using dung/cow dung in the said bio-toilets;
- (c) if so, the details thereof; and
- (d) the number of such bio-toilets constructed in the country along with the number of beneficiaries of such toilets, State/UT-wise?

A N S W E R

MINISTER OF STATE
IN THE MINISTRY OF DEFENCE

(SHRI AJAY BHATT)

(a): The major features of bio-toilet developed by Defence Research and Development Organisation (DRDO) are as under:

- It makes use of an anaerobic (without oxygen) process through which the human waste is digested by consortium of bacteria.
- Bio-toilet has been customized and different designs have been developed for use under different geo-climatic conditions.

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(b) & (c): Yes, Sir. The Cow dung is used for the enrichment bacterial consortium. Following four types of bacteria are present in the consortium:

- Hydrolase
- Acidogenase
- Acitogenase
- Methogens

(d): DRDO has transferred the technology to approximately 60 industries all over the country. These industries have installed bio-digesters across the country. A total number of about 16000 bio-digesters have been installed in more than 20 states. In addition, more than 2.5 lakhs bio-digesters have been installed in Indian Railways coaches, which cater to the need of more than 100 lakhs passengers on daily basis.
