

GOVERNMENT OF INDIA
MINISTRY OF DEFENCE
DEFENCE RESEARCH & DEVELOPMENT ORGANISATION
LOK SABHA

UNSTARRED QUESTION NO.2697
TO BE ANSWERED ON 4th August, 2021

BIO-TOILETS BY DRDO

2697. SHRI GANESH SINGH:

Will the Minister of DEFENCE be pleased to state:

- (a) the main features of bio-toilets developed by the Defence Research and Development Organisation(DRDO);
- (b) whether the DRDO is using cowdung in the said bio-toilets;
- (c) if so, the details thereof; and
- (d) the number of bio-toilets constructed so far, State-wise including district Satna along with the number of people benefited so far?

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:
 - (i) It makes use of an anaerobic (without oxygen) process through which the human waste is digested by a consortium of bacteria
 - (ii) Bio-toilet has been customized and different designs have been developed for use under different geo-climatic conditions.
- (b) & (c): Yes, Sir. The Cow dung is used for the enrichment bacterial consortium. Following four types of bacteria are present in the consortium:

...2/-

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- (i) Hydrolase
- (ii) Acidogenase
- (iii) Acitogenase
- (iv) Methogens

(d) State wise details of bio-toilets constructed are attached as Annexure.

However, till date no bio-toilet has been constructed in District Satna.

Total 16507 bio-digesters have been installed in different states. Bio-digesters have many variants as per the number of users and considering the design for 5-7 users, atleast 80000-112000 people have been benefitted by these bio-toilets.

ANNEXURE REFERRED TO IN REPLY TO PART (d) OF LOK SABHA UNSTARRED QUESTION NO. 2697 FOR ANSWER ON 04.08.2021 REGARDING 'BIO-TOILET BY DRDO'.

S. No.	State	No. of Biodigesters
1.	Jammu	250
2.	Punjab	151
3.	Haryana	3
4.	Delhi	60
5.	Uttar Pradesh	42
6.	Telangana	150
7.	Rajasthan	4400
8.	Assam	100
9.	Andhra Pradesh	40
10.	Uttarakhand	500
11.	Maharashtra	60
12.	Jharkhand	20
13.	Bihar	187
14.	Tamil Nadu	20
15.	West Bengal	3
16.	Kerala	80
17.	Lakshadweep	1863
18.	Goa	7000
19.	Arunachal Pradesh	40
20.	Karnataka	20
21.	Odisha	30
22.	Chandigarh	8
23.	Madhya Pradesh	100
24.	Himachal Pradesh	40
25.	Tripura	5
26.	Leh	750
27.	Mizoram	585
	Total	16507
