

GOVERNMENT OF INDIA
MINISTRY OF AGRICULTURE AND FARMERS WELFARE
DEPARTMENT OF AGRICULTURAL RESEARCH & EDUCATION

LOK SABHA
UNSTARRED QUESTION NO. 1734
TO BE ANSWERED ON 08/03/2016

IMPACT OF SOIL EROSION ON AGRICULTURE

1734. SHRI AJAY NISHAD:

Will the Minister of AGRICULTURE AND FARMERS WELFARE
कृषि और कृषक कल्याण मंत्री be pleased to state:

- (a) whether agricultural production has declined in certain parts of the country due to soil erosion, land degradation and desertification;
- (b) if so, the details thereof, State-wise;
- (c) whether any study has been conducted on soil erosion and land degradation/desertification in the country including Maharashtra;
- (d) if so, the details and the results thereof, State-wise; and
- (e) the measures being adopted to check land degradation and enhance soil fertility?

A N S W E R

MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE AND FARMERS WELFARE
कृषि और कृषक कल्याण मंत्रालय में राज्य मंत्री
(DR. SANJEEV KUMAR BALYAN)

(a) & (b): As such no specific survey on decline in agricultural production due to soil erosion, land degradation and desertification has been conducted. However, the expected loss of potential production due to water erosion computed by Indian Institute of Soil & Water Conservation (IISWC) in red, black and alluvial soils of rainfed areas in India under major cereal, oilseed, and pulse crops comes out to be around 16%. In other words had the erosion not taken place, the country could have got additional production to the tune of 13.48 million tonnes. State-wise details are given in **Annexure-I**.

(c) & (d): Yes, Madam. As per the harmonized database, the extent of land degradation in the country is 120.4 million ha comprising of 82.6 million ha under water erosion, 12.0 million ha under wind erosion, 24.7 million ha under chemical degradation and 1.0 million ha under physical degradation. The state-wise details, including Maharashtra, are given in **Annexure-II**.

As per Desertification Status Map of Space Application Centre, ISRO 2007, the area undergoing desertification is 81.45 million ha, which constitutes 24.78% of country's geographical area. The state-wise details are placed at **Annexure III**.

(e) In order to prevent soil erosion and land degradation/ desertification, the Government of India, has been implementing several programs, namely; National Watershed Development Project for Rainfed Areas (NWDPA), Soil Conservation in the Catchments of River Valley Project, Flood Prone River (RVP&FPR), Integrated Wastelands Development Programme (IWDP), Drought Prone Areas Programmes (DPAP) and Desert Development Programme (DDP) across the country. These programmes have been amalgamated into a single modified programme called Integrated Watershed Management Programme (IWMP) with effect from 26.02.2009. The major activities taken up under IWMP *inter alia* include ridge area treatment, drainage line treatment, soil and moisture conservation, rainwater harvesting, nursery raising, afforestation, horticulture, pasture development etc. The IWMP has now become one of the major components of Prime Minister's Krishi Sinchai Yojana (PMKSY).

The Indian Council of Agricultural Research through IISWC provide technical backstopping and organizes regular training courses for field functionaries and farmers on participatory watershed management.

The Government is implementing National Mission for Sustainable Agriculture (NMSA) since April 2014 with a component of Reclamation of Problem soils *viz.*, saline, alkali and acid soils.

In order to improve soil health and fertility, the Government under the component of soil health management of NMSA is promoting soil test based balanced and integrated nutrient management in the country through setting up/strengthening of soil testing laboratories, establishment of bio-fertilizer and compost unit, use of micronutrients, trainings and demonstrations on balanced use of fertilizers etc. Recently, a National Mission on Soil Health Card has been launched to provide soil tested based fertilizer recommendation to all the farmers in the country.

Loss in potential production (cereals, pulses and oilseeds) due to soil erosion by water in rainfed areas in different states.

State	Potential loss in Production (million tonnes per annum)
Karnataka	2.11
Madhya Pradesh	2.03
Maharashtra	1.60
Andhra Pradesh	1.17
Orissa	1.06
Chhattisgarh	1.01
Uttar Pradesh	0.80
Assam	0.64
Gujarat	0.52
Rajasthan	0.50
Tamil Nadu	0.35
West Bengal	0.34
Jharkhand	0.32
Uttarakhand	0.17
Himachal Pradesh	0.14
Nagaland	0.13
Bihar	0.12
Manipur	0.07
Arunachal Pradesh	0.07
Jammu & Kashmir	0.07
Kerala	0.06
Meghalaya	0.05
Goa	0.04
Sikkim	0.03
Mizoram	0.03
Tripura	0.03
Haryana	0.01
Punjab	0.01
Delhi	0.00
Total	13.48

Table: State-wise extent of land degradation including soil erosion in India

S.No.	State	Degraded lands (‘000 ha)
1	Andhra Pradesh (erstwhile)	9193
2	Arunachal Pradesh	2154
3	Assam	4571
4	Bihar	1371
5	Chhattisgarh	4784
6	Goa	122
7	Gujarat	3129
8	Haryana	551
9	Himachal Pradesh	1065
10	Jammu & Kashmir	2094
11	Jharkhand	3943
12	Karnataka	8093
13	Kerala	2608
14	Madhya Pradesh	14095
15	Maharashtra	9728
16	Manipur	1768
17	Meghalaya	1732
18	Mizoram	1163
19	Nagaland	1550
20	Orissa	3722
21	Punjab	494
22	Rajasthan	20424
23	Sikkim	60
24	Tamil Nadu	2997
25	Tripura	785
26	Uttar Pradesh	14405
27	Uttarakhand	1435
28	West Bengal	2140
29	Delhi	28
30	Andaman & Nicaobar Islands	71
31	Others*	125
	Total	120400

Table: State-wise area under Desertification (in hectare)

State	Area under Desertification
A.P	3971833
Arunachal Pradesh	0
Assam	0
Bihar	414783
Chattisgarh	1844704
Goa	0
Gujarat	12744447
Haryana/Delhi	235010
H.P.	2210197
J&K	13497418
Jharkhand	1818886
Karnataka	1523462
Kerala	0
M.P.	2599018
Maharashtra	10687341
Manipur	0
Meghalaya	0
Mizoram	0
Nagaland	0
Orissa	546924
Punjab	10380
Sikkim	0
Rajasthan	22966167
T.N.	451028
Tripura	0
U.P	2125628
Uttarakhand	2685251
W. Bengal	1117480
TOTAL	81449957
