

1	2
Nagaland	0.03
Orissa	0.50
Punjab	0.69
Rajasthan	1.00
Sikkim	0.01
Tamil Nadu	2.82
Tripura	0.06
Uttaranchal	0.18
Uttar Pradesh	2.38
West Bengal	2.04
A&N Islands	0.01
Chandigarh	0.08
Dadra & Nagar Haveli	0.01
Daman & Diu	0.01
Delhi	1.13
Lakshadweep	0.00
Pondicherry	0.06
ALL INDIA	24.71

State/UT-wise breakup of shortage in terms of different income groups is not available.

Research on fly ash for replacement of sand

388. DR. K.V.P. RAMACHANDRA RAO: Will the Minister of HOUSING AND URBAN POVERTY ALLEVIATION be pleased to state:

(a) whether it is a fact that the research on use of fly ash for part replacement of sand for construction purpose has been taken up;

- (b) if so, the details thereof;
- (c) the present status thereof; and
- (d) the success rate achieved thereon?

THE MINISTER OF HOUSING AND URBAN POVERTY ALLEVIATION (KUMARI SELJA): (a) to (d) The position as reported by the National Council for Cement and Building Materials (NCCBM) is given below:

- (i) Fly ash as such is not utilized as replacement of sand. When high volume of fly ash is used in concrete, a part of it replaces cement and a small part of it replaces fine aggregate.
- (ii) Bottom ash which is coarse than fly ash is being tried now to replace sand.
- (iii) NCCBM has completed the following projects:
 1. High volume fly ash concrete hollow blocks
 2. Maximizing use of fly ash in cement, concrete and other building materials.
 3. Development of roller compacted concrete for construction of roads, embankments and dams.
 4. Use of bottom ash for making concrete blocks.
- (iv) High volume fly ash concrete is used in many projects particularly in roller compacted concrete. Bottom ash is not yet being used as part replacement of sand.

Slum population in Delhi and Mumbai

389. SHRI N.K. SINGH: Will the Minister of HOUSING AND URBAN POVERTY ALLEVIATION be pleased to state:

- (a) the percentage of population in Delhi and Mumbai living in slums respectively;
- (b) whether any slum have been removed from the two cities in the last two years;
- (c) if so, the number and locations thereof; and