GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FORESTS AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION No. 970
TO BE ANSWERED ON 18.09.2020

Depletion of Bio-diversity

970. SHRI ANURAG SHARMA:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

(a) the measures being taken to prevent depletion of bio-diversity due to large scale exploitation of Himalayan forests in the country;
(b) the legal provisions being recommended to prevent the problems like drying of rivers, depleting groundwater sources, melting of glaciers, excavation of mountains and pollution related to solid and hazardous waste; and
(c) the benefits derived by ensuring greater democratic public participation in environmental reforms/measures that have been undertaken so far?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI BABUL SUPRIYO)

(a) Central Government has taken various initiatives to prevent the depletion of biodiversity in Himalayan forests. These includes promotion of diverse models/approaches of restoration of degraded lands, promotion of e*x-situ* conservation of threatened species, documentation and feasibility analysis of biodiversity rich areas for promoting in-situ conservation by establishing Biosphere Reserves, sensitization and capacity building of diverse group of stakeholders towards conservation and sustainable use of Himalayan biodiversity, in depth research on assessment of ecological regimes in Indian Himalayan Region, implementation of three trans boundary cooperation projects for conservation and development initiatives at landscape level, etc. Detail of aforementioned initiatives is enclosed at **Annexure-I.**

(b) The Central Government, though its various legislations/Acts such as Biological Diversity Act, 2002, Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981, Environment (Protection) Act, 1986, Forest (Conservation) Act, 1980, Wildlife (Protection) Act, 1972, River Ganga (Rejuvenation, Protection and Management) Authorities order, 2016, Solid Waste Management Rules, 2016and Hazardous andOther Wastes (Management and Transboundary Movement) Rules, 2016, etc. has provided for conservation,

protection and sustainable development of natural resources and pollution related to solid and hazardous waste in the country.

Further, Central Ground Water Authority (CGWA) has been constituted under Section 3 (3) of the "Environment (Protection) Act, 1986" for the purpose of regulation and control of ground water development and management in the Country, which includes depletion of ground water

(c) Enhanced public participation in conservation, development and enrichment of forest cover in the countryhas yielded multiple benefits to the forest fringe communities through afforestation programs, Integrated Watershed Development programs, Integrated Development of Wildlife Habitat, etc. The aim is to supplement the efforts of the States and UTs by ensuring public participation towards protection and management of forests. These initiatives have resulted in enhancing sense of ownership of forest resources, capacity development at grassroots and usufruct sharing (through Joint Forest Management and ecotourism activities) among the forest fringe communities.

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Annexure-I

Annexure referred to the LSUQ No. 972 part (a) asked by Shri Anurag Sharma regarding "Depletion of biodiversity" due for answer on 18.09.2020

1. Details of restoration programmes carried out over the years by the G.B. Pant 'National Institute of Himalayan Environment'(NIHE) in different Himalayan region to conserve biodiversity:

Sl. No.	Measures/Approaches	Details of location and area
1.	Integrating Science with Religion for Wasteland Rehabilitation	• Area: Badrinath (3,133 m asl), Distt. Chamoli • Plantation: 36,697 seedling • Plantation species: *Juniperusmacropoda, Betulautilis, Hippophaesalicifolia*
3.	Afforestation of community degraded land (1992)	• Area: Arah Village (Bageshwer), 9 ha • Plantation of Bamboo saplings.
4.	Establishment of a Sacred Forest (2004-07)	• Area: Kolidhaik village (Lohaghat, Uttarakhand) • Plantation : 8000 tree saplings • Major species *Alnusnepalensis, Quercusleucotrichophora, Grewiaoptiva, Celtisaustralis*
5.	Sloping Watershed Environment Engineering Technology (SWEET)	• To achieve twin goals of ecological restoration of degraded lands and livelihoods enhancement of stakeholders • Executed in Kosi (Almora) watershed
6.	Agro-forestry for Rehabilitation of Culturable Wastelands (1990-2012)	• Degraded community land on 14 ha wasteland of Bansbara village, Rudrapryag District (Uttarakahnd) • Main species: *Boehmeriarugulosa, Grewiaoptiva&Ficusglomerata* (fodder trees), *Albizzialebbek, Celtisaustralis&Dalbergiasissoo* (timber trees), and *Pyruspashia&Sapiumsebiferum*(fuelwood).
8.	Wasteland Restoration Through Silvi-Pasture Development (2002-05)	• Community wasteland (40 ha) was taken up for silvi-pasture development (20 ha in Dobh-Srikot and 5 ha in Bhimli villages in Pauri-Garhwal, and 15 ha in Katarmal village in Almora district). • Planted MPTS and measures such as, gully plugging, land leveling, maintenance and repair of terrace risers and cropfield bunds were executed for soil and water conservation.

9.	Fodder Bank Development on Community Wasteland (2009–2012)	• Maikhanda village cluster in District Rudraprayag, Garhwal Himalaya by taking up 6 ha village community wasteland. • Fodder species (including trees, shrubs and herbs) viz., Ringal*Bamboo (Chimnobambusafalcata,Thamnocalamusspathiflorus, Arundinaria spp.), tree species (Bauhinia variegata, Celtisaustralis, Debregeasiasalicifolia, Ficusnemoralis, F. auriculata, F. subincisa, Morus alba, Quercusglauca, Q. leucotricophora) and introduced grass species (Napier, Pennisetum purpureum,* Joint star, Makuni, Cox foot, etc.) were planted.
10.	Participatory Rehabilitation of Bhimtal Lake Catchment, Nainital (2002-2010)	• Vegetative and engineering measures were employed in about 55 ha degraded community land using four land use models (viz., Multi-purpose tree species; Silvi-pasture development; Aromatic plants cultivation; and Agrihorticulture). • In the multi-purpose tree species model, a total of 38,322 saplings of more than 20 MPTs were planted those registered 16–37% mean survival after 5 years.
11.	Kailash Sacred Landscape Development Initiative (ICIMOD funded) Project (2014-20)	• Nakina village Van-panchayat (Pithoragarh); Plantation area: 2 ha; Species: *Quercusleucotricophora, Quercusglauca* • Majhera village Van-panchayat; Plantation area: 2 ha; Species: *Quercusleucotricophora, Quercusglauca* • Chitgal village Panchayat, Plantation area: 4 ha; Seedlings of Oak, and *Diploknemabutyracea* planted • Digtoli van panchayat (Pithoragarh): Plantation area: 2.5 ha; Species: *Cinnamomumtamala, Zanthoxyllumarmatum, Quercusglauca* • Jajoot (Pithoragarh): Plantation area 1.5 ha; Species: *Quercuslecotricophora, Q. glauca, Alnus; Pittosporumeriocarpum, Morus alba*, etc. • Lumti (Pithoragarh): Plantation area 3 ha; Species: *Quercuslecotricophora, Q. glauca, Alnus; Pittosporumeriocarpum, Morus alba, Cinnamomumtamala*, etc.
12.	Contour Hedgerow Farming System and Bio-engineering	Plantation of two rows of nitrogen-fixing native hedge species along the contour lines was developed to control of soil stabilisation and erosion in Sikkim

	Measures in Sikkim	region.

2. **Details of promoting ex-situ conservation of threatened medicinal plants at farmer's field:**

Sl.No.	Measures/Approaches	Details of location and area
1.	Cluster based approach	Kullu district, Himachal Pradesh Farmers field - > 6 ha Farmers families – 24
2.	Cluster based approach	Champawat district, Uttarakhand Farmers field – 15 ha Farmers – 146 families
3.	Cluster based approach	Lata area, Chamoli and Uttarkashi district Farmers field – 16 ha Farmers – 170 families
4.	Cluster based approach	Chaudas area, Pithoragarh Farmers field - 5 ha Farmers families – 172

3. Promoting e*x-situ* conservation of threatened and high value medicinal plants through propagation packages and cultivation at farmer's field.
4. Documentation and feasibility analysis of biodiversity rich areas for promoting in-situ conservation in the Indian Himalayan region by establishing Biosphere Reserves.
5. Sensitizing and capacity building of diverse group of stakeholders towards conservation and sustainable use of Himalayan biodiversity.
6. By undertaking in depth research on understanding ecological status of forests in different parts of IHR.
7. Implementation of three transboundary cooperation projects for conservation and development initiatives at landscape level. These include (i) Kailash Scared Landscape Conservation and Development Initiative; (ii) Kanchenzunga landscape conservation and development initiative, and (iii) the landscape initiative for far eastern Himalayas.