प्रो. राम गोपाल यादव: यह सवाल इसी से जुड़ा हुआ है कि इन 21 cities में ये क्या व्यवस्था कर रहे हैं?

श्री गजेन्द्र सिंह शेखावत: माननीय सभापति महोदय, जैसा मैंने पिछले प्रश्न के उत्तर में भी कहा था कि ऐसे 21 शहर हैं, यदि आप अनुमति दें, तो मैं इनकी सूची पढ़ कर बता देता हूँ।

श्री सभापति: जल्दी।

श्री गजेन्द्र सिंह शेखावत: यह सूची नीति आयोग ने उपलब्ध कराई है - दिल्ली, गाँधीनगर, गुरुग्राम, यमुना नगर, बेंगलुरु, इंदौर, रतलाम, अमृतसर, जालंधर, लुधियाना, मोहाली, पटियाला, अजमेर, बीकानेर, जयपुर, जोधपुर, चेन्नई, वेल्लोर, हैदराबाद और आगरा। महोदय, लेकिन मैंने पहले प्रश्न के उत्तर में भी यह निवेदन किया था कि ये जो 20 शहर हैं, इनके अतिरिक्त गाज़ियाबाद 21वां शहर है, इनमें से 15 शहर ऐसे हैं, जिनमें dual water sources हैं, जिनमें surface water river या dam से आ रहा है। उस पानी पर भी ये 15 शहर निर्भर हैं। इसलिए जितनी चिन्ता माननीय सदस्य ने व्यक्त की है, वैसी चिन्ता का विषय नहीं है। लेकिन फिर भी जो बचे हुए शहर हैं, जहां dual water resources नहीं हैं, वहां आसानी से ऐसा किया जा सकता है, क्योंकि जैसा मैंने पिछले प्रश्न के उत्तर में भी कहा था कि वे अधिकांशत: पंजाब में हैं और वहां नहरों का ग्रिड आसानी से उपलब्ध है।

MR. CHAIRMAN: Q.No.224

Climate resilient infrastructure

*224. PROF. M.V. RAJEEV GOWDA: Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

(a) the number and details of natural disasters that can be linked to climate change in the last three years, year-wise and State-wise;

(b) whether Government has undertaken any study for better prediction of these disasters in future;

(c) whether Government has made any consultations with private stakeholders to assess immediate financial risks in various sectors in case of natural disasters;

(d) if not, reasons therefor;

(e) whether climate change aspects have been considered while building new infrastructure, if so, details of climate resilient infrastructure created during last three years, project-wise, State-wise; and

(f) details of infrastructure retro-fitted for climate resilience during last three years, State-wise?

THE MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE (SHRI BABUL SUPRIYO): (a) to (f) A Statement is laid on the Table of the House.

Statement

(a) The climate model simulation studies done by various agencies including Intergovernmental Panel on Climate Change (IPCC) project possible linkages of climate change with frequency and intensity of weather related events. However, there is paucity of data to establish direct correlation of climate change with occurrence natural disasters. The state-wise, year-wise list of disaster weather events experienced during last three year viz. 2017, 2018 & 2019 are given in Annexure-I (*See* below). The details of cyclonic storms of the recent past are given in the Annexure-II (*See* below).

(b) India Meteorological Department (IMD) is continuously monitoring the development of severe weather phenomena and accordingly issues forecast and warning in different spatial and temporal scales. These are shared with disaster management authorities in the district. State and national level for better preparedness to face the same and for taking effective mitigation measures for saving lives and properties. Continuous efforts are also on to improve the accuracy of prediction so as to provide better service to the society.

(c) and (d) The stakeholder consultation is an integral part of development of any national policy framework by the Government. The National Disaster Management Plan which, aims to make India disaster resilient, incorporates an integrated approach that ensures the involvement of government agencies, numerous other relevant organizations, private sector participants, and local communities. In order to encourage participation of insurance sector, consultations have been held with Insurance Regulatory and Development Authority from time to time.

(e) and (f) Resilience is a term used in disaster management literature. Its use in climate studies including as applied to cities is fairly recent and the specific meaning in its use varies with context. The Government is seized of the matter and is addressing climate change through international cooperation and national promotional and regulatory measures. Internationally, India is Party to the United Nations Framework Convention on Climate Change (UNFCCC), its Kyoto Protocol and Paris Agreement. India is meeting

all its commitments and obligations under these instruments, and independent studies rate India's efforts highly. The extent of climate change will depend on climate action by all countries, especially developed countries. Climate adaptation and climate resilience for the future will also need the provision of finance and technology from developed countries.

Prime Minister of India has launched a global Coalition for Disaster Resilient Infrastructure (CDRI) at the United Nations (UN) Climate Action Summit 2019 held in New York City, USA, on September 23, 2019. This partnership of national governments, UN agencies and programmes, multilateral development banks, financing mechanisms, private sector, and knowledge institutions aims to promote the resilience of new and existing infrastructure systems to climate and disaster risks, thereby ensuring sustainable development. CDRI envisions enabling measurable reduction in infrastructure losses from disasters, including extreme climate events. It aims to enable the achievement of objectives of expanding universal access to basic services and enabling prosperity as enshrined in the Sustainable Development Goals, while also working at the intersection of the Sendai Framework for Disaster Risk Reduction and the Paris Agreement.

National Action Plan on Climate Change (NAPCC) provides the overarching framework for all climate actions and comprises eight missions in specific areas of solar energy, enhanced energy efficiency, sustainable habitat, water, sustaining Himalayan ecosystems, Green India, sustainable agriculture and strategic knowledge for climate change. National Mission on Sustainable Habitat is being implemented through three flagship missions/programmes of the Ministry of Housing & Urban Affairs, namely, (a) Atal Mission on Rejuvenation and Urban Transformation (AMRUT); (b) Swachh Bharat Mission, and (c) Smart Cities Mission. The objective of Smart Cities Mission launched on 25 June 2015 for developing 100 cities as Smart Cities, is to promote cities which give a decent quality of life to its citizens, a clean and sustainable environment with application of 'Smart Solutions'. Smart water, wastewater and solid waste management projects have been taken up in order to promote the concept of circular economy.

Climate-Smart Cities Assessment Framework among 100 Smart Cities has been launched to assess climate-relevant parameters and provide a clear roadmap for cities towards combating climate change while planning their projects and investments.

Annexure-I

List of disaster weather events experienced during last three years, viz. 2017, 2018 & 2019 (excluding cyclone)

Year 2017

State	Cold wave	Dust storm	Floods and H R	Gale	Heat Wave	Lightning	Snowfall	Squall	Thunderstorm
1	2	3	4	5	6	7	8	9	10
Andhra Pradesh					1	6			
Arunachal Pradesh			1	1					
Assam			9			1		1	9
Bihar			4			13		1	11
Chhattisgarh			2			1			5
Gujarat			1			1			
Himachal Pradesh	2		9			5		1	
Jammu and Kashmir			4	1		3	5		2
Jharkhand					2	2			19
Karnataka			17	2		24			6
Kerala			5	1		1			
Madhya Pradesh	1					9			
Maharashtra			9		6	28			

1	2	3	4	5	6	7	8	9	10
Manipur			1						
Meghalaya			1						
Nagaland			1						
Odisha			2		8	7			1
Rajasthan	1	2	7			10			
Sikkim			1						
Tamil Nadu			4	2		7			6
Telangana					12	3			7
Tripura			2						
Uttar Pradesh	5		4			6			5
Uttarakhand			2			1	1		
West Bengal			2		1	3		3	8

Year 2018

States\Events	Cold wave	Dust storm	Floods and HR	Gale	Heat wave	Squall	Lightning	Snowfall	Thunderstorm
1	2	3	4	5	6	7	8	9	10
Jammu and Kashmir			6	3			3	5	
Bihar	7								8
Uttar Pradesh	4	4	21		2		14		10
Maharashtra	2		10		5		5		3
Madhya Pradesh	1	2	5				5		
Rajashtan	1	3	7				9		3
Jharkhand	4				1				32
Kerala			22		3		6		6
Chattisgarh					1		1		8
West Bengal			2			3	1		19
Andhra Pradesh			1			1			
Karnataka			5	4			2		9
Odisha			1				5		
Assam			3						7
Arunachal Pradesh			1						

1	2	3	4	5	6	7	8	9	10
Gujarat			2						
Manipur			1						
Mizoram			1						
Punjab			1						
Tamilnadu			3						
Uttarakhand			1						

Year 2019

States\Events	Cold wave	Dust storm	Floods and HR	Heat wave	Squall	Lightning	Snowfall	Thunderstorm
Jammu and Kashmir			7			4	9	
Madhya Pradesh	1		4			7		1
Maharashtra	1		11	15	1	12		
Kerala				6		12		
Bihar			2	4				10
Rajasthan		1	16	1		3		
Jharkhand			2		2			23
Assam			1			1		1
West Bengal								6
Mizorm			1					

Annexure-II

List of cyclonic storms of the recent past

Cyclonic Storms in 2017

Sl. No.	Cyclonic Storm	Date, Time & Place of Genesis (Lat.°N/ Long.°E)	Date, Time (UTC) place (Lat. °N/Long.°E) of landfall	Estimated Max. wind speed, Date & Time
1.	Cyclonic Storm 'Maarutha' over the Bay of Bengal (15-17 April 2017)	15th April 2017, 0000 UTC over southeast Bay of Bengal (12.0/88.0)	Crossed Myanmar coast near Sandoway (Thandwe) (18.4/94.3) on 16th April 2017 between 1800-1900 UTC	40 knots at 2100 UTC of 15th April 2017
2.	Severe Cyclonic Storm 'Mora' over the Bay of Bengal (28-31 May 2017)	28th May, 0000 UTC over eastcentral Bay of Bengal (14.0/88.5)	Crossed Bangladesh coast close to south of Chittagong near 22.0°N/91.9°E during 0400-0500 UTC	60 knots at 2100 UTC of 29th May
3.	Very Severe Cyclonic Storm 'Ockhi' over the Bay of Bengal (29 November-05 December 2017)	29th November, 0300 UTC over southwest Bay of Bengal (6.5/81.8)	Weakened over northeast Arabian Sea and adjoining south coastal Gujarat and north coastal Maharashtra at 2100 UTC of 5th December	85 knots at 0600 UTC of 2nd December

Cyclonic Storms in 2018

Sl. No.	Name	Dates active	Peak classification	Sustained wind speeds	Pressure	Areas affected
1.	Daye	September 19-22	Cyclonic storm	65 km/h (40 mph)	992 hPa (29.29 inHg)	Andhra Pradesh, East India, Central India, North India
2.	Titli	October 8-12	Very severe cyclonic storm	150 km/h (90 mph)	970 hPa (28.64 inHg)	Andhra Pradesh, East India
3.	Gaja	November 10-19	Very severe cyclonic storm	130 km/h (80 mph)	976 hPa (28.82 inHg)	Andaman Islands, Tamil Nadu (India), Sri Lanka
	Phethai	December 13-18	Severe cyclonic storm	100km/h (65 mph)	993 hPa (29.32 inHg)	East India, Northeast India

Cyclonic Storms in 2019 (Till Date)

Sl. No.	Details of the Cyclones
1.	Cyclonic Storm PABUK, over Andaman Sea during 4th - 8th January; weakened over the Sea.
2.	Extremely Severe Cyclonic Storm FANI, over the Bay of Bengal, 26th April - 04th May; crossed Odisha coast.
3.	Very Severe Cyclonic Storm VAYU, over the Arabian Sea, 10th - 17th June; weakened over the Sea.
4.	Very Severe Cyclonic Storm HIKAA, over the Arabian Sea, 22nd - 25th September; did not cross Indian Coast.
5.	Super Cyclonic Storm KYARR, over the Arabian Sea, 24th October - 2nd November; did not cross Indian Coast.
6.	Extremely Severe Cyclonic Storm MAHA over the Arabian Sea, 30th October - 7th November; moved across Lakshadweep Islands and weakened over the Sea
7.	Very Severe Cyclonic Storm BUL BUL over the Bay of Bengal, 5th - 11th November; crossed west Bengal - Bangladesh coasts.

PROF. M.V. RAJEEV GOWDA: Sir, in the last Budget, the Government announced an Infrastructure Investment Plan of ₹100 lakh crore. By October 31, there was supposed to be a National Infrastructure Pipeline Report. What kind of climate change resilience components have been incorporated in this mega infrastructure plan?

MR. CHAIRMAN: Mr. Minister, what kind of climate change.

SHRI BABUL SUPRIYO: Yes, Sir. There has been an Intergovernmental Panel on Climate Change (IPCC) which defines the resilience in terms of capacity of social, economic, and environmental systems to cope with a hazardous event or trend or disturbance. ...*(Interruptions)*...

MR. CHAIRMAN: The Minister has to read from the Report.

SHRI BABUL SUPRIYO: For the specific figure that you have asked for, the detailed report is given in the annexure. If you want anything else, I shall be more than happy to send it to you directly.

PROF. M.V. RAJEEV GOWDA: Sir, there are numerous natural and other methods across domains like mangroves, afforestation, better urban planning, etc. All these could incorporate climate resilience right away. What kind of system or approach is the Ministry following to ensure that we are climate change disaster-resilient across various domains?

SHRI BABUL SUPRIYO: Hon. Prime Minister has in the. ...*(Interruptions)*...

सुश्री दोला सेन: चेयरमैन साहब, मंत्री जी फिर प्रधान मंत्री का नाम ले रहे हैं।

MR. CHAIRMAN: He has to say about the scheme or the programme of the Government. ...*(Interruptions)*...

सुश्री दोला सेन: अभी वे नाम ले रहे हैं।

श्री सभापति: मुझे मालूम है कि क्या बोलना है और क्या नहीं। My point is, इसे विवाद में मत लाइए। यह काउंटर होगा, इसलिए मैंने मना किया था। अगर फिर भी आपको नाम लेना है, लीजिए, मुझे कोई आपत्ति नहीं है। You should understand the purpose of my saying so. मैं भी कोई मज़ाक के लिए नहीं कह रहा हूं।

SHRI BABUL SUPRIYO: Sir, our hon. Prime Minister had launched a global Coalition for Disaster Resilient Infrastructure (CDRI) at the United Nations Climate

Action Summit 2019 held in New York City. There is this partnership of national Governments — this is an intergovernmental mechanism — the UN agencies and programmes, multilateral development banks, financing mechanisms, etc. For that, Rs.480 crore have been spent for establishing the Secretariat in the country. The second part was: What are the steps taken by the Government of India to combat climate change? There are several steps that have been taken under the National Action Plan on Climate Change (NAPCC) which includes eight national missions being implemented by various Ministries and not only the Ministry of Environment, Forest and Climate Change. The national missions include Solar Mission, Mission on Enhanced Energy Efficiency, Water Mission, Mission on Sustainable Habitat, Mission on Sustaining Himalayan Ecosystems, Green India Mission, Mission on Sustainable Agriculture and Mission on Strategic Knowledge for Climate Change. We are committed to bring down the emission intensity, to reduce it by 33-35 per cent by 2030. That is the goal.

MR. CHAIRMAN: Question No.225. Today, you are heavily loaded. ...*(Interruptions)*... He has prepared well. I appreciate it. The MoS has got too many questions.

वन्य जीवों के कारण होने वाली मानव जीवन की हानि हेतु मुआवजा

*225. **श्री राजमणि पटेल**: क्या **पर्यावरण, वन और जलवायु परिवर्तन** मंत्री यह बताने की कृपा करेंगे कि:

(क) क्या सरकार ने वन्य-जीवों के कारण मानव जीवन की हानि होने अथवा लोगों के घायल होने पर मुआवजा प्रदान करने के लिए कोई प्रावधान किया है;

(ख) यदि हां, तो इस संबंध में अपनाई जाने वाली प्रक्रिया सहित तत्संबंधी ब्यौरा क्या है; और

(ग) विगत तीन वर्षों के दौरान इस संबंध में संवितरित की गई मुआवजा राशि का ब्यौरा क्या है?

पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय में राज्य मंत्री (श्री बाबुल सुप्रियो): (क) से (ग) एक विवरण सदन के पटल पर रखा गया है।

विवरण

(क) और (ख) जी हां। वर्तमान में, वन्य पशुओं द्वारा मनुष्यों के मारे जाने या जख्मी किए जाने के संबंध में मुआवजे के भुगतान हेतु केन्द्र और राज्य दोनों स्तरों पर व्यवस्था की गई है।