

'Sharing is Caring'

If you have friends preparing for Civil Services, tell them that they can also receive Updates from PrepMate IAS by sending 'Name' and 'State' through WhatsApp on 75979-00000

1. Hathras stampede kills 121: Why stampedes take place

Why in News?

121 people, almost all women, were killed on July 2 in a stampede during a religious gathering in Uttar Pradesh's Hathras district.

This is not the first time when a large number of people have lost their lives in a stampede at a religious gathering. According to collated data, 79% of all stampedes in India from 1954-2012 took place in religious mass gatherings.



First, what is a stampede?

Stampede is defined as "an impulsive mass movement of a crowd that often results in injuries and deaths"

It can also be described as the "disruption of the orderly movement of crowds... leading to injuries and fatalities", often "in response to a perceived danger, loss of physical space", or "a will to attain something seen as gratifying".

Why do stampedes kill?

Most stampede casualties are caused by traumatic asphyxia — there is partial or complete cessation of respiration due to external compression of the thorax and/or upper abdomen.

Notably, significant compression forces, enough to hurt and kill humans, have been reported in even moderate crowds of six to seven people pushing in one direction.

Other possible reasons for stampede-related deaths include myocardial infarction (heart attack, caused by decreased or complete cessation of blood flow to a portion of the heart), direct crushing injury to internal organs, head injuries, and neck compression.

How does human psychology lead to stampedes?

Stampedes almost always take place during mass gatherings — either spontaneous gatherings, like in a metro station during the rush hour, or planned ones, like the Hathras satsang.

Almost all stampedes are either triggered or made worse by panic. In panic-producing situations cooperative behavior is needed for success and is rewarding to individuals as long as everybody cooperates. However, once the cooperative pattern of behavior is disturbed, cooperation ceases to be rewarding to the individuals.

Taking the example of a fire emergency in a movie theatre, while it pays to cooperate and not push each other, if a few uncooperative individuals block the exits by pushing, "any individual who does not push can expect that he will be burned". Thus pushing becomes an advantageous (rather least disadvantageous) form of behaviour for individuals, but at the level of the group, it can lead to disastrous circumstances.

Psychology behind Hathras Stampede

Some stampedes may also be triggered by what sociologist Neil J Smelser refers to as "craze". In Theory of Collective Behavior (1962), he defined the term as "[the] mobilisation for action based on a positive wish-fulfillment belief". This belief can be rational or irrational. But in large group settings, it percolates to every member and can make them act in detriment to their own individual interests.

Take for example what happened in Hathras. Uttar Pradesh Chief Secretary Manoj Kumar Singh, after visiting the site of the tragedy, said: "I am told that people rushed to touch his [the preacher's] feet and tried to collect soil [from where he walked], and a stampede took place".

How does the physical organisation of spaces contribute to stampedes?

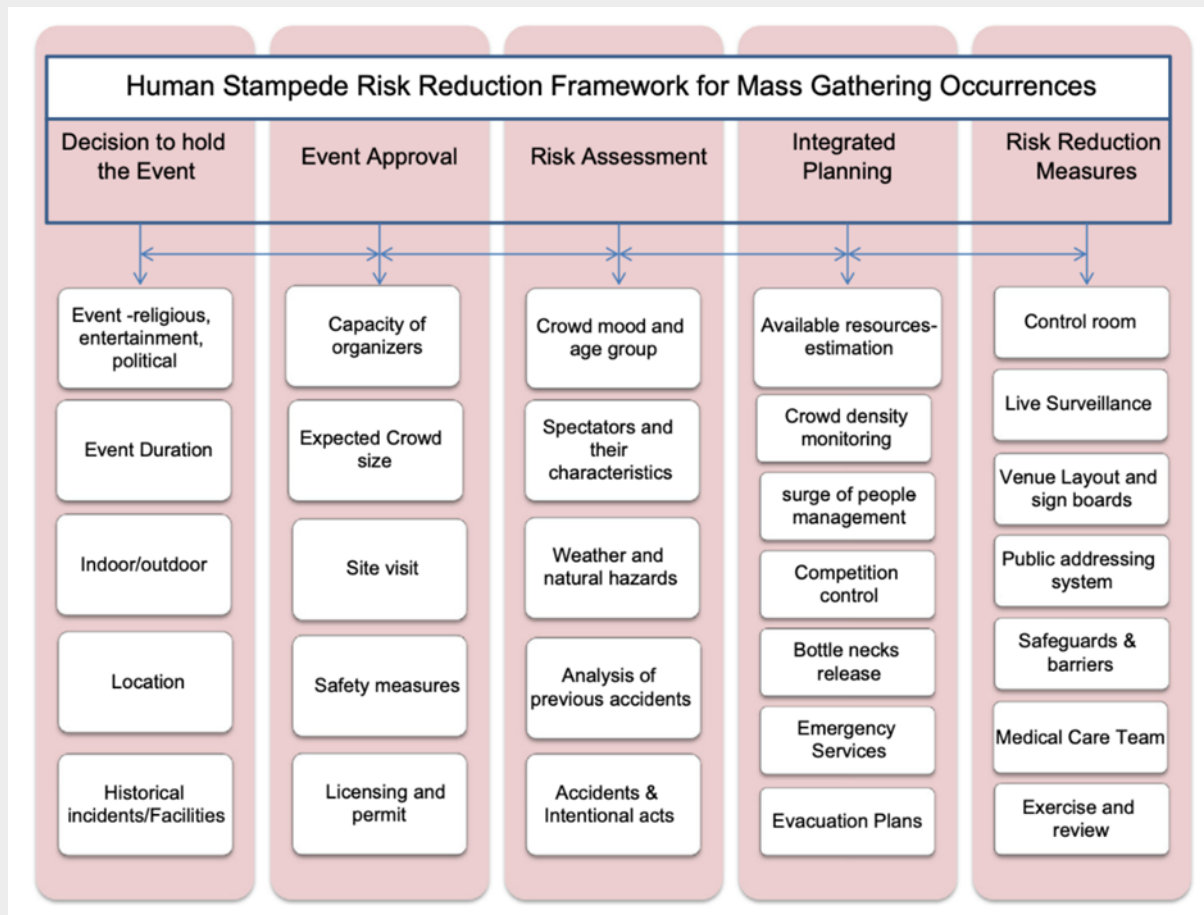
Psychology of mass behaviour, however, is not the only factor behind stampedes. Many stampedes can be prevented simply through better design of spaces where mass gatherings take place (or are likely to take place spontaneously). This in turn may even prevent panic from setting in.

Crowd density (number of people per unit of area) should play a crucial role in determining how spaces for mass gatherings should be decided.

How to better prevent stampedes, or at least, mitigate their risks?

In an ideal scenario, planners must not allow more than a number of people to enter a contained space. But this is not always possible. In such situations, the number and placement of exits becomes crucial, as does event organisers' vigilance, monitoring, and real-time preventive interventions.

Illyas and others wrote: "Planning for mass gatherings is an inter-agency, multi-disciplinary approach which relies on the identification of potential hazards to the design and execution of appropriate mitigation measures". They developed the following stampede risk-reduction framework.



Among other things, the researchers emphasised on live surveillance of the crowd to “enable the organisers to monitor the pressure buildup, increase in crowd density, bottlenecks, and to identify the source of crowd disturbance”. This, they argue, can help organisers manage crowds.

Also crucial is communication, between organisers who are often from different bodies, organisations (temple authorities, local administration officials, and the police), as well as between organisers and the crowd. Organisers for a situation where a warning has to be issued, and know “who will be responsible for issuing the warning and how the crowd will be informed”.

What are some notable deadly stampedes which took place in India? Why did they occur?

Allahabad, India (1954): Probably the most fatal Kumbh Mela stampede in history. The first post-Independence Kumbh was plagued by a lack of crowd control mechanisms, poor planning, and excessive presence of VIPs. What triggered the tragedy was a crowd surge that broke through the barriers, separating them from a procession of sadhus. Around 800 died. Lessons from the 1954 tragedy continue to be foundational for the management of the Kumbh Mela, the largest religious gathering in the world.

Wai, India (2005): The annual pilgrimage at the Mandhardevi temple in Maharashtra’s Satara district turned tragic when more than 340 people were trampled to death, and hundreds

injured. The stampede occurred when some people fell down the steps made slippery by devotees breaking coconuts.

Relevance: GS Prelims & Mains Paper III; Disaster Management

Source: Indian Express

2. Critically endangered Great Indian Bustards' recovery program, and what lies ahead

Why in News?

Last month, the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) approved Rs 56 crore funding for the next phase of the conservation program of the Great Indian Bustard (GIB) and the Lesser Florican for the 2024-2029 period.



The proposal for the next phase, prepared by the Wildlife Institute of India (WII), an autonomous body under the Union Environment Ministry, includes key targets such as rewilding Bustards bred in ex-situ conservation centres, conducting detailed population studies in Rajasthan and other Bustard range states and developing artificial insemination techniques.

The Bustard and Lesser Florican are both critically endangered species. Only 140 Bustards and less than 1,000 Lesser Floricans survive. Over 120 Bustards are found in the desert and semi-arid landscape of Rajasthan alone; the rest survive in the wild in other range states of Gujarat, Maharashtra, Karnataka, and Andhra Pradesh while Madhya Pradesh, another range state, has not recorded a Bustard sighting for several years.

Here's a look at what is the Bustard conservation program, what has been achieved so far and what needs to be done to secure their habitats

Decline in Great Indian Bustard Population

The Great Indian Bustard is a large bird found only in India. It is known to be a key indicator species of the grassland habitat, which means its survival also signals the health of grassland habitats.

Over the past four decades, its population has declined steadily from being in the range of 700 individuals to less than 150 as of today, as per the Rajasthan Forest Department. Loss of their habitat to rising farmlands in semi-arid regions of Rajasthan, depredation of eggs by other predators such as dogs, monitor lizards and humans and more recently, death due to overhead power lines have caused their numbers to decline.

In fact, the threat from power lines was the subject matter of a recent plea before the Supreme Court which resulted in an important order. The Supreme Court, while agreeing with the government's contention that overhead power lines could not be entirely eliminated from the bustard's habitats, had constituted an expert committee to determine the "scope, feasibility and extent" of overhead and underground electric lines in the area.

The poor frontal vision of the GIB's and their inability to swerve away from overhead power lines in their flying path, owing to their large size, are two key factors leading to their collision with transmission lines. A 2020 WII study estimated that 18 GIB's die annually due to collision with overhead high-tension power lines in the Thar landscape. Such a high mortality rate can wipe away the bird's wild population, the WII had noted.

The committee was also asked for other measures for better conservation of the bird. While examining this case, the Supreme Court also recognised the right of the people against adverse impacts of climate change as part of the fundamental right to life and right to equality.

Recovery Programs

The first steps to address the decline of the bustard population were taken between 2012-2013, when the Rajasthan government as well as the Environment Ministry began a long-term Bustard and Lesser Florican recovery project. The recovery project firmed up more in the year 2016 when it received a funding outlay of Rs 33.85 crore for seven years. This money was sanctioned to improve the bird's habitat and start a conservation breeding program.

The Compensatory Afforestation Fund, which consists of money collected for afforestation in lieu of diversion of forests for non-forest uses, funded this project. Later, in July 2018, a tripartite agreement was signed between the Ministry of Environment, Forest and Climate Change, Rajasthan Forest Department and Wildlife Institute of India (WII).

This involved opening long-term conservation breeding centres (CBC) in Ramdevra and Sorsan, implementing field research projects such as telemetry-based bird tracking and population surveys, habitat management as well as outreach to local communities.

What has been achieved so far at the breeding centres?

Before the development of the CBC in Ramdevra, work on the conservation breeding in June 2019 at the temporary facility in Sam, Jaisalmer. conservation breeding began by collecting eggs from the wild. The eggs are incubated artificially at the centres and hand-reared in the breeding centre itself. Later, chicks that attained adulthood at the centre have mated and given birth to the next generation.

The breeding centres now have a founder population of 40 GIBs, of which 29 were those whose eggs were collected from the wild. The remaining 11 were born to those who were mated at the centre.

The scientific reasoning behind creating a founder population is to have a minimum viable population to prevent the probability of extirpation of the captive population and to capture the genetic variability of the source population. A minimum of 20 adult birds including 15

females is needed to establish a minimum viable population in captivity, as per the 2018 tripartite agreement.

The WII team plans to continue collecting four to six eggs per year until the captive-bred birds are released in the wild. For Lesser Floricans, since their population is still around 1,000, only two or four eggs will be collected from the wild.

What's planned ahead?

While the total length of the next phase of the GIB and Lesser Florican conservation is 2024-2033, the immediate next phase will run till 2029. The target of the project would be to complete the upgradation of the CBC at Ramdevra and development of the Lesser Florican CBC at Sorsan, both in Rajasthan. The Ramdevra facility would also include a new lab for artificial insemination, which the WII plans to use from 2026 onwards.

Conducting population surveys in Jaisalmer, other parts of Rajasthan and the range states of Gujarat, Maharashtra, Karnataka, Andhra Pradesh and Madhya Pradesh will be done in the next two years. The most important target in the next five years would be releasing the captive-bred GIBs in the wild. The actual release in the wild would be preceded by soft release in enclosures in Rajasthan. The captive-bred GIBs would also be trained for release in these enclosures, as per WII scientists.

What has been done for habitat management and are they secure for rewilding of captive Bustards?

On its part, WII has mapped the threats posed by power lines and renewable infrastructure across the 20,000 sq km GIB landscape. In collaboration with Humane Society International, 801 dogs were sterilized in 23 villages in and around the Desert National Park in 2018-19 while GIB predators such as monitor lizards, foxes and dogs were also captured and translocated from Bustard breeding areas, as per WII's annual report on the recovery program.

Relevance: GS Prelims & Mains Paper III; Environment

Source: Indian Express

3. INDIA-MONGOLIA JOINT MILITARY EXERCISE NOMADIC ELEPHANT COMMENCES IN MEGHALAYA

Why in News?

The 16th edition of India-Mongolia Joint Military Exercise NOMADIC ELEPHANT commenced today, at Foreign Training Node, Umroi (Meghalaya). The Exercise is scheduled to be conducted from 03rd to 16th July 2024.

Annual exercise

Exercise NOMADIC ELEPHANT is an annual training event conducted alternatively in India and Mongolia. Last edition was conducted in Mongolia in July 2023.

Purpose of Joint exercise

Exercise NOMADIC ELEPHANT will enable both sides to share their best practices in Tactics, Techniques and Procedures of conducting joint operations. The exercise will also facilitate

developing inter-operability, bonhomie and camaraderie between the two armies. This will also enhance the level of defence cooperation, further augmenting bilateral relations between the two friendly nations.

India-Mongolia Military Ex. 'Nomadic Elephant' commenced in Meghalaya



Edition: 16th
Venue: Umroi, Meghalaya
Dates: 3 to 16 July 2024

Relevance: GS Prelims; International Relations
Source: PIB