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# Heatwaves and Lightning Enter India's Notified Disaster Framework, Transforming Climate Risk Financing and Disaster Resilience

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## Recent Developments:

The **Ministry of Home Affairs** has added **heatwaves and lightning** to India's nationally notified list of disasters, taking the total number of notified disasters to **14**.

The decision follows the recommendation of the **Sixteenth Finance Commission (FC-XVI)** and the new operational framework for disaster-risk funds for **2026–27 to 2030–31**. The FC-XVI specifically recommended national recognition of both hazards because of their increasing severity, frequency and mortality.

The change removes the earlier financial disadvantage faced by heatwaves, under which States could generally treat heatwaves as **local disasters** and use only a limited portion of their State Disaster Response Fund.

Heatwaves can now be addressed through both **immediate relief mechanisms under the SDRF** and **long-term risk-reduction measures under the SDMF**.

The reform is significant because extreme heat is no longer only a meteorological or public-health concern; it is increasingly a **disaster-governance, fiscal and development challenge**.

## Why Recognition of Heatwaves as a Notified Disaster Matters:

### *Earlier Funding Constraint:*

Before national notification, States could classify heatwaves as **local disasters** and utilise SDRF resources subject to a ceiling of up to **10% of their annual SDRF allocation**.

This arrangement created an asymmetry because disasters such as floods and cyclones had access to the regular notified-disaster framework, while heatwaves faced additional financial restrictions.

The new framework places **heatwaves on a more equal financial footing** with other nationally notified disasters.

### *Shift from Relief to Risk Reduction:*

The reform enables States to address both the **immediate consequences** and the **underlying vulnerability** associated with extreme heat.

SDRF resources can support eligible **relief and compensation**, while SDMF resources can support longer-term measures such as **cooling infrastructure, early-warning systems and heat-resilient public facilities**.

This represents a shift from a predominantly **response-oriented approach** towards a more comprehensive disaster-risk-reduction framework.

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## **India's Disaster Finance Architecture:**

### ***Constitutional and Institutional Basis:***

Under **Article 280 of the Constitution**, the Finance Commission recommends principles governing financial transfers and disaster-management funding arrangements.

The **Disaster Management Act, 2005** provides the broader statutory framework for disaster management in India.

Disaster financing operates through State-level and national-level mechanisms designed to ensure that States can respond to disasters while receiving additional assistance when their own resources are inadequate.

### ***Sixteenth Finance Commission Recommendations:***

The FC-XVI recommended approximately **₹2.04 lakh crore** for State-level disaster funds for **2026–27 to 2030–31**, representing a substantial increase over the previous Finance Commission's allocation.

The State-level allocation comprises two principal components:

- o**State Disaster Response Fund (SDRF)**: Approximately **₹1.64 lakh crore**, intended primarily for disaster response and relief.

- o**State Disaster Mitigation Fund (SDMF)**: Approximately **₹0.41 lakh crore**, intended for measures that reduce disaster risk and vulnerability.

The FC-XVI also recommended **₹79,406 crore** for national disaster funds during the same award period.

Allocation among States incorporates a **Disaster Risk Index**, which considers factors such as hazard, exposure and vulnerability, alongside historical expenditure considerations.

### ***Role of National Disaster Funds:***

National-level disaster funds supplement State resources when the magnitude of a disaster exceeds the State's financial capacity.

This architecture reflects the principle that **disaster response is primarily State-led but financially supported through cooperative fiscal federalism**.

The framework therefore combines State-level responsibility with national-level fiscal support.

## **Growing Heat Risk in India:**

### ***Increasing Exposure:***

Extreme heat is becoming a major climate-risk multiplier because it affects **health, labour productivity, agriculture, water demand, electricity consumption and urban infrastructure**.

A district-level assessment by the **Council on Energy, Environment and Water** found that **57% of India's 734 districts**, covering approximately **76% of the population**, face high to very high heat risk.

The assessment considers multiple dimensions of risk rather than temperature alone, including **hazard, exposure and vulnerability**.

Rising **night-time temperatures** are particularly concerning because warmer nights reduce the body's ability to recover from daytime heat exposure.

Increasing humidity can further intensify heat stress by reducing the effectiveness of **evaporative cooling through sweating**.

### ***Climate and Development Linkages:***

Heatwaves disproportionately affect **outdoor workers, agricultural labourers, construction workers, elderly persons, children and economically vulnerable households**.

Extreme heat can reduce labour productivity, increase cooling demand and place additional pressure on electricity and water systems.

Therefore, heat resilience must be integrated into **urban planning, public health, labour policy, housing, water management and energy planning**.

### **Heat Action Plans and Implementation Gap:**

#### ***Role of Heat Action Plans:***

The **National Disaster Management Authority** has promoted **Heat Action Plans (HAPs)** to help States, districts and cities identify heat risks and implement short-, medium- and long-term interventions.

A comprehensive HAP should include **risk mapping, early warning, public communication, healthcare preparedness, cooling arrangements, water availability and targeted protection of vulnerable groups**.

India has expanded the number of HAPs considerably, but their quality and implementation capacity remain uneven.

#### ***Major Implementation Challenges:***

Many local governments lack adequate **technical expertise, dedicated financing, reliable risk data and institutional coordination**.

Earlier assessments found that many HAPs relied on departments to identify or reallocate their own resources instead of having dedicated financial mechanisms.

The new access to SDMP resources creates an opportunity to convert HAPs from **planning documents into financially supported resilience programmes**.

States should therefore develop **appraisable, location-specific projects** instead of relying only on broad policy commitments.

### **What Can Disaster Funds Finance for Heat Resilience?:**

#### ***Immediate Response under SDRF:***

SDRF resources can support eligible **relief measures and compensation** associated with notified heatwave impacts.

Effective response requires reliable identification and reporting of heat-related deaths, illnesses and livelihood losses.

Health departments should therefore integrate heat surveillance with disaster-management systems.

### ***Long-Term Mitigation under SDMF:***

SDMF resources can support **cooling shelters, heat-resilient public infrastructure, early-warning systems, urban greening, reflective surfaces and climate-sensitive planning.**

Investments should prioritise vulnerable settlements, high-risk occupational groups and areas with limited access to cooling and healthcare.

Projects should be preceded by **risk and vulnerability assessments** so that scarce mitigation funds are directed towards locations with the greatest potential risk reduction.

### **Strengthening Health Surveillance and Loss-and-Damage Data:**

#### ***Need for Better Heat-Health Data:***

Accurate data on heat-related mortality and morbidity is essential because disaster financing increasingly depends on **verified loss and damage.**

Existing surveillance systems primarily identify recognised heatstroke cases but may underestimate the wider burden of heat-aggravated **cardiovascular, respiratory and renal conditions.**

India therefore needs a stronger **heat-attributable mortality and morbidity surveillance system** integrating meteorological, health and demographic information.

#### ***Data for Evidence-Based Governance:***

District-level heat-risk mapping should combine **temperature, humidity, population vulnerability, occupational exposure, health infrastructure and urban characteristics.**

Such integrated datasets can improve targeting of HAPs, SDMF investments and emergency interventions.

### **Technology and Innovative Financing:**

#### ***Multi-Hazard Early Warning Systems:***

India should strengthen real-time warning systems by integrating meteorological observations, satellite data, health surveillance and local communication networks.

The **Cell Broadcast Alert System** can disseminate warnings for hazards such as lightning, flash floods, thunderstorms and other events requiring rapid public alerts.

Similar systems can support heat warnings by providing **location-specific and time-sensitive alerts** to vulnerable populations.

#### ***Parametric Insurance:***

States can explore **parametric insurance**, under which predetermined payouts are automatically triggered when an agreed temperature threshold or other measurable condition is reached.

Such instruments can provide faster financial support without waiting for lengthy post-disaster damage assessments.

Parametric mechanisms should complement, rather than replace, public disaster-financing systems and social-protection measures.

## **Key Priorities for the Road Ahead:**

### ***Universal and Risk-Based Heat Planning:***

Every high-risk district and urban local body should develop a **risk-informed Heat Action Plan** based on local climate, demographic and infrastructure conditions.

HAPs should be linked directly with **State budgets, SDMF projects and municipal development plans**.

### ***Build Local Technical Capacity:***

States should establish dedicated technical teams capable of preparing **costed, scientifically appraised and fundable mitigation projects**.

Universities, research institutions, civil-society organisations and specialised agencies can support local governments through technical assistance and capacity building.

### ***Integrate Heat Resilience into Development:***

Heat resilience should become part of **building codes, urban design, transport planning, labour regulations, housing policy and public-health systems**.

Nature-based solutions such as urban forests, wetlands, water bodies and shaded public spaces can reduce heat exposure while generating wider environmental benefits.

### ***Protect Vulnerable Communities:***

Heat action should prioritise **informal workers, agricultural labourers, elderly persons, children, low-income households and people living in poorly ventilated housing**.

Labour regulations can incorporate heat-rest schedules, drinking-water access, shaded workspaces and flexible working hours during extreme heat.

## **Conclusion:**

The recognition of **heatwaves and lightning as nationally notified disasters** represents an important evolution in India's disaster-governance framework. It aligns disaster financing more closely with the country's changing risk profile and enables States to combine **immediate relief with long-term mitigation**.

However, financial eligibility alone cannot create resilience. The effectiveness of the reform will depend on converting Heat Action Plans into **well-designed, adequately financed and locally implemented projects**, strengthening heat-health surveillance, improving technical capacity and integrating climate resilience into development planning.

India should therefore move from a **reactive disaster-response model towards anticipatory, risk-informed and climate-resilient governance**. The objective should be not merely to compensate communities after extreme heat causes losses, but to reduce exposure and vulnerability before the disaster occurs.

## **Value Addition for UPSC:**

### ***Key Data Points:***

**Notified disasters: 14**, following the addition of heatwaves and lightning.

**State disaster funds recommended by FC-XVI: Approximately ₹2.04 lakh crore for 2026–27 to 2030–31.**

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**SDRF:** Approximately **₹1.64 lakh crore** under the detailed FC-XVI recommendation.

**SDMF:** Approximately **₹0.41 lakh crore** under the detailed FC-XVI recommendation.

**National disaster funds:** **₹79,406 crore** recommended for the same period.

**Heat-risk exposure:** **57% of Indian districts**, representing approximately **76% of the population**, face high to very high heat risk.