

## 6. Personality In News- Madhav Gadgil – Environment

Renowned ecologist Madhav Gadgil passed away, leaving behind a profound impact on ecological conservation, particularly in the Western Ghats.

### Madhav Gadgil- Ecologist, Thinker, and Environmental Reformer

Madhav Dhananjaya Gadgil was a pioneering Indian ecologist, widely regarded as the “father of modern Indian ecology.” His work bridged science, public policy, grassroots democracy, and ethics, making him one of the most influential environmental thinkers in India.

#### **Gadgil’s scholarship combined**

1. Rigorous ecological science
2. Deep concern for social justice
3. Faith in decentralised, participatory governance

#### **His intellectual legacy is most visible in debates on**

1. Western Ghats conservation
2. Community forest management
3. Ecology–development trade-offs

### Major Contributions of Madhav Gadgil

**Western Ghats Ecology Expert Panel (WGEEP)** – Gadgil chaired the Western Ghats Ecology Expert Panel, constituted in 2010. The panel’s report (2011), popularly called the Gadgil Report, remains one of India’s most comprehensive ecological assessments.

#### **It emphasised**

1. Ecological limits to growth
2. Precautionary principle
3. Sustainable and participatory development

**Environmental Legislation and Institutions** – Played a key role in shaping the Biological Diversity Act, 2002, which

1. Recognises community rights over biodiversity
2. Establishes Biodiversity Management Committees (BMCs)

Founder of the Centre for Ecological Sciences (CES) at Indian Institute of Science (IISc), a premier hub for ecological research in India.

**Governance Philosophy** – Strong advocate of bottom-up environmental governance.

Argued that

1. Conservation cannot succeed without local community consent
2. Traditional ecological knowledge is as important as modern science

His approach contrasted sharply with top-down, exclusionary conservation models.

**Awards and Intellectual Legacy** – Padma Bhushan for contributions to science and environment. Tyler Prize for Environmental Achievement (often called the “environmental Nobel”).

#### **Influential books**

1. This Fissured Land – ecological history of India
2. Ecology and Equity – links environmental degradation with social inequality

His writings continue to inform debates on environmental justice and development ethics.

### Western Ghats Ecology Expert Panel (WGEEP)- Background

**WGEEP Was Constituted** – The Western Ghats, a global biodiversity hotspot, faced-

1. Deforestation

2. Mining and quarrying
3. Unregulated urbanisation
4. Climate change pressures

In response, the Ministry of Environment constituted WGEEP in March 2010.

#### **Mandate of the Panel**

1. Assess ecological sensitivity of the Western Ghats
2. Identify Ecologically Sensitive Areas (ESAs)
3. Recommend Ecologically Sensitive Zones (ESZs)
4. Propose mechanisms for sustainable development and conservation

#### **Key Recommendations of the Gadgil Panel**

**Entire Western Ghats as an Ecologically Sensitive Area** – Recommended that the entire Western Ghats (1,29,037 sq km) be declared an ESA.

#### **Rationale**

1. Ecological processes do not follow administrative boundaries
2. Fragmented protection weakens ecosystem integrity

#### **Three-Tier Sensitivity Zoning**

##### **ESZ-1 (Highest Sensitivity)**

1. Strict restrictions
2. No mining, quarrying, or polluting industries

##### **ESZ-2 (Moderate Sensitivity)**

1. Controlled development
2. Regulated infrastructure and land use

##### **ESZ-3 (Lower Sensitivity)**

1. Limited and carefully regulated development

#### **Restrictions on High-Impact Activities**

Ban on-

1. Mining and quarrying
2. Genetically Modified crops
3. New hill stations
4. Large-scale SEZs

Emphasised sustainable livelihoods, not blanket bans.

**Western Ghats Ecology Authority (WGEA)** – Proposed a statutory Western Ghats Ecology Authority

1. Multi-state representation
2. Scientific autonomy
3. Community participation

**Challenges and Controversies** – Strong resistance from

1. State governments
2. Mining and plantation lobbies
3. Sections of local populations fearing livelihood loss

#### **Criticism focused on**

1. Perceived “anti-development” stance
2. Fear of bureaucratic overreach

**Kasturirangan Committee (2013)**– After rejection of the Gadgil Report, the government appointed the Kasturirangan Committee.

### **Key differences**

1. Reduced ESA to 56,825 sq km
2. Excluded many inhabited villages
3. Favoured a more technocratic, top-down approach

### **Result**

1. Weaker ecological safeguards
2. Continued policy ambiguity

### **Nilgiri Biosphere Reserve (NBR) – Overview**

**Concept of a Biosphere Reserve** – Biosphere Reserves are designated under UNESCO Man and the Biosphere Programme.

#### **Aim to integrate**

1. Biodiversity conservation
2. Sustainable development
3. Research and education

**Location and Extent** – Located in the Nilgiri Mountains of the Western Ghats.

#### **Spans across**

1. Tamil Nadu
2. Kerala
3. Karnataka

Total area- 5,520 sq km

Largest protected forest landscape in India

**Protected Areas within NBR** – Includes several iconic reserves

1. Mudumalai Wildlife Sanctuary
2. Wayanad Wildlife Sanctuary
3. Bandipur National Park
4. Nagarhole National Park
5. Mukurthi National Park
6. Silent Valley National Park

### **Ecological Characteristics**

#### **Forest Types**

##### **Tamil Nadu & Kerala**

1. Evergreen and semi-evergreen forests
2. Montane sholas and grasslands

##### **Karnataka-**

1. Predominantly dry deciduous forests
2. Patches of moist deciduous and scrub

#### **Flora**

1. Over 3,500 flowering plant species
2. Around 1,500 endemic species

#### **Notable endemics**

1. Rhododendron nilagiricum
2. Michelia nilgirica
3. Garcinia gummi-gutta
4. Actinodaphne malabarica

## Fauna

1. Mammals- 100+ species
2. Birds- 550+ species
3. Reptiles & Amphibians- 30+ species
4. Butterflies- 300+ species

## Endangered species include

1. Tiger (*Panthera tigris*)
2. Asian Elephant (*Elephas maximus*)
3. Lion-tailed macaque (*Macaca silenus*)
4. Nilgiri Tahr
5. Gaur

**Cultural and Tribal Heritage** – “Nilgiri” means Blue Mountains, named after blue flowering plants.

## Indigenous tribes

1. Todas
2. Kotas
3. Irulas
4. Kurumbas
5. Paniyas
6. Cholanaickens

## Their traditions-

1. Sacred groves
2. Ethnomedicine
3. Community-based conservation practices

**Gadgil's Legacy in the Nilgiri Biosphere Reserve** – Gadgil's ecological philosophy strongly influenced conservation thinking in the Nilgiris. His emphasis on

1. Ecologically Sensitive Areas
2. Community participation
3. Decentralised decision-making

## Helped

1. Prevent unchecked mining and urbanisation
2. Protect tribal rights and knowledge systems

Though not fully implemented, the Gadgil Report remains a benchmark for

1. Science-based environmental governance



## 2. Ethical development planning

### Conclusion

Madhav Gadgil's legacy transcends policy documents. He reframed environmentalism as

1. A question of democracy
2. Equity
3. Intergenerational justice

The Nilgiri Biosphere Reserve stands as a living testament to his vision

Where conservation, culture, and livelihoods coexist. In an era of climate change and ecological collapse, Gadgil's ideas remain more relevant than ever—reminding India that development without ecological wisdom is ultimately self-defeating.

**Source-** <https://indianexpress.com/article/cities/pune/ecologist-environmentalist-madhav-gadgil-passes-away-family-remembers-him-10461477/>

