



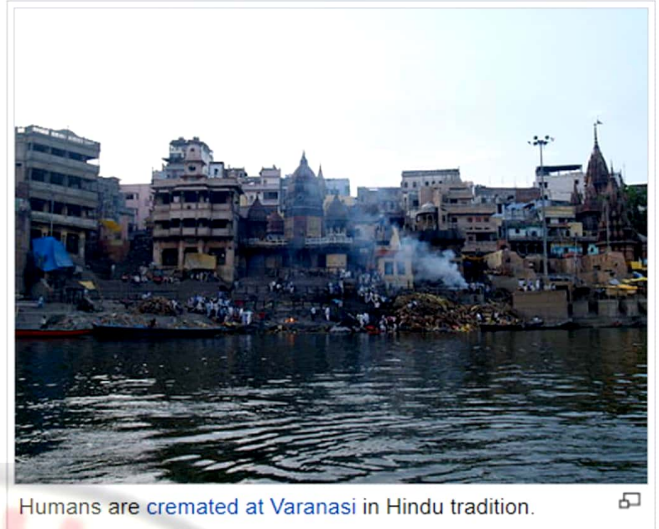
Environmental Projects

Pollution of the Ganges

Pollution of the Ganges (or Ganga), the largest river in India, poses significant threats to human health and the larger environment.^[1] Severely polluted with human waste and industrial contaminants, the river provides water to about 40% of India's population across 11 states,^[2] serving an estimated population of 500 million people which is more than any other river in the world.^{[3][4]}

Today, the Ganges is considered to be the sixth-most polluted river in the world.^{[5][6]} Raghbir Singh, an Indian photographer, has noted that no one in India spoke of the Ganges as polluted until the late 1970s. However, pollution has been an old and continuous process in the river as by the time people were finally speaking of the Ganges as polluted, stretches of over six hundred kilometres were essentially ecologically dead zones.^[7]

A number of initiatives have been undertaken to clean the river but failed to deliver as desired results.^[8] After getting elected, India's Prime minister Narendra Modi affirmed to work in cleaning the river and controlling pollution.^[9] Subsequently, the *Namami Gange* project was announced by the government in the June 2014 budget.^[10] An estimated Rs 2,958 Crores (US\$460 million) have been spent until July 2016 in various efforts in cleaning up of the river.^[11]



Humans are cremated at Varanasi in Hindu tradition.

Ganges Action Plan

The Ganges Action Plan (GAP) was launched by Rajiv Gandhi, the then Prime Minister of India, on June 1986 with covering 25 Class I towns (6 in Uttar Pradesh, 4 in Bihar and 15 in West Bengal);^[34] Rs 862.59 crore were spent. Its main objective was to improve the water quality by the interception, diversion and treatment of domestic sewage and to prevent toxic and industrial chemical wastes from identified polluting units from entering the river. The other objectives of the GAP are as follows:

- Control of non-point pollution from agricultural run off, human defecation, cattle wallowing and the disposal of human remains in the river.



Ganges Canal dried for cleaning

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Implementation

The [Commission on Sustainable Development](#) acts as a high-level forum on sustainable development and has acted as preparatory committee for summits and sessions on the implementation of Agenda 21. The UN Division for Sustainable Development acts as the secretariat to the Commission and works "within the context of" Agenda 21. ^[citation needed]

Implementation by member states remains voluntary, and its adoption has varied. ^[citation needed]

Local level

The implementation of Agenda 21 was intended to involve action at international, national, regional and local levels. Some national and state governments have legislated or advised that local authorities take steps to implement the plan locally, as recommended in Chapter 28 of the document. These programs are often known as "Local Agenda 21" or "LA21".^[8] For example, in the [Philippines](#), the plan is "Philippines Agenda 21" (PA21). The group, ICLEI-Local Governments for Sustainability, formed in 1990; today its members come from over 1,000 cities, towns, and counties in 88 countries and is widely regarded as a paragon of Agenda 21 implementation.^[9]

Europe turned out to be the continent where LA21 was best accepted and most implemented.^[10] In Sweden, for example, all local governments have implemented a Local Agenda 21 initiative.^[11]



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Structure

Agenda 21 is a 351-page document divided into 40 chapters that have been grouped into 4 sections:

- **Section I: Social and Economic Dimensions** is directed toward combating poverty, especially in [developing countries](#), changing consumption patterns, promoting health, achieving a more sustainable population, and sustainable settlement in decision making.
- **Section II: Conservation and Management of Resources for Development** includes atmospheric protection, combating [deforestation](#), protecting fragile environments, conservation of biological diversity ([biodiversity](#)), [control of pollution](#) and the management of [biotechnology](#), and [radioactive wastes](#).
- **Section III: Strengthening the Role of Major Groups** includes the roles of children and youth, women, [NGOs](#), local authorities, business and industry, and workers; and strengthening the role of [indigenous peoples](#), their communities, and farmers.
- **Section IV: Means of Implementation** includes science, [technology transfer](#), [education](#), [international institutions](#), and financial mechanisms.^[3]

Development and evolution

The full text of Agenda 21 was made public at the UN Conference on Environment and Development ([Earth Summit](#)), held in Rio de Janeiro on 13 June 1992, where 178 governments voted to adopt the program. The final text was the result of drafting, consultation, and negotiation, beginning in 1989 and culminating at the two-week conference.^[citation needed]

Rio+5 (1997)

In 1997, the [UN General Assembly](#) held a special session to appraise the status of Agenda 21 (Rio +5). The Assembly recognized progress as "uneven" and identified [key trends](#), including increasing [globalization](#), widening inequalities in income, and continued deterioration of the [global environment](#). A new [General Assembly Resolution](#) (S-19/2) promised further action.^[citation needed]

Rio+10 (2002)

Main article: [World Summit on Sustainable Development](#)

The Johannesburg Plan of Implementation, agreed to at the [World Summit on Sustainable Development](#) ([Earth Summit 2002](#)), affirmed UN commitment to "full implementation" of Agenda 21, alongside achievement of the [Millennium Development Goals](#) and other international agreements.^[citation needed]

Agenda 21 for culture (2002)

Main article: [Agenda 21 for culture](#)

The first World Public Meeting on Culture, held in [Porto Alegre](#), Brazil, in 2002, came up with the idea to establish guidelines for local cultural policies, something comparable to what Agenda 21 was for the [environment](#).^[4] They are to be included in various [subsections](#) of Agenda 21 and will be carried out through a wide range of [sub-programs](#) beginning with [G8 countries](#).^[citation needed]

Rio+20 (2012)

Main article: [United Nations Conference on Sustainable Development](#)

In 2012, at the [United Nations Conference on Sustainable Development](#) the attending members reaffirmed their commitment to Agenda 21 in their outcome document called "The Future We Want". Leaders from 180 nations participated.^[citation needed]

Sustainable Development Summit (2015)

Main article: [Sustainable Development Goals](#)

Agenda 2030, also known as the Sustainable Development Goals, was a set of goals decided upon at the UN Sustainable Development Summit in 2015.^[5] It takes all of the goals set by Agenda 21 and re-asserts them as the basis for sustainable development, saying, "We reaffirm all the principles of the Rio Declaration on Environment and Development..."^[6] Adding onto those goals from the original Rio document, a total of 17 goals have been agreed on, revolving around the same concepts of Agenda 21; people, planet, prosperity, peace, and partnership.^[7]

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Controversies and problems

Project Tiger's efforts were hampered by [poaching](#), as well as debacles and irregularities in [Sariska](#) and [Namdapha](#), both of which were reported extensively in the Indian media. The [Forest Rights Act](#) passed by the Indian government in 2006 recognizes the rights of some forest dwelling communities in forest areas. This has led to controversy over implications of such recognition for tiger conservation. Some have argued that this is problematic as it will increase conflict and opportunities for poaching; some also assert that "tigers and humans cannot co-exist".^{[9][10]} Others argue that this is a limited perspective that overlooks the reality of human-tiger coexistence and the role of abuse of power by authorities, rather than local people, in the tiger crisis. This position was supported by the Government of India's Tiger Task Force, and is also taken by some forest dwellers' organizations.^{[11][12]}

Agenda 21

Agenda 21^[1] is a non-binding [action plan](#) of the [United Nations](#) with regard to [sustainable development](#).^[2] It is a product of the [Earth Summit](#) (UN Conference on Environment and Development) held in [Rio de Janeiro](#), Brazil, in 1992. It is an [action agenda](#) for the UN, other [multilateral](#) organizations, and individual governments around the world that can be executed at local, national, and global levels.^[citation needed]

The "21" in [Agenda 21](#) refers to the original target year of 2021 where they were hoping to achieve their development goals by then. It has been affirmed and had a few modifications at subsequent UN conferences. Since it found 2021 [was too aggressive](#), its new timeline is targeting 2030. Its aim is to achieve global sustainable development. One major objective of the [Agenda 21](#) initiative is that every local government should draw its own local [Agenda 21](#). Since 2015, [Sustainable Development Goals](#) or also known as the [Millennium Development Goals](#) are included in the newer [Agenda 2030](#).^[citation needed]

Agenda 21



Cover of the first edition (paperback)

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Project Tiger

Project Tiger is a [tiger conservation](#) programme launched in April 1973 by the Government of India during Prime Minister Indira Gandhi's tenure.^[1] Kailash Sankhala was the first director of Project Tiger.^[2]

The project aims at ensuring a viable population of [Bengal tigers](#) in their natural habitats, protecting them from extinction, and preserving areas of biological importance as a natural heritage forever represented as close as possible the diversity of [ecosystems](#) across the distribution of tigers in the country. The project's task force visualized these [tiger reserves](#) as breeding nuclei, from which surplus animals would migrate to adjacent forests. Funds and commitment were mastered to support the intensive program of habitat protection and rehabilitation under the project.^[3] The government has set up a Tiger Protection Force to combat [poachers](#) and funded relocation of villagers to minimize human-tiger conflicts.

During the tiger census of 2006, a new methodology was used extrapolating site-specific densities of tigers, their co-predators and prey derived from [camera trap](#) and sign surveys using [GIS](#). Based on the result of these surveys, the total tiger population was estimated at 1,411 individuals ranging from 1,165 to 1,657 adult and sub-adult tigers of more than 1.5 years of age.^[4] Owing to the project, the number of tigers increased to 2,226 as per the census report released in 2015.^[5] State surveys have reported a significant increase in the tiger population which was estimated at around 3,000 during the 2018 count (as part of a four yearly tiger census).^[6]



Save Tiger



Logo of National Tiger Conservation Authority

Objectives

Project Tiger's main aims are to:

- reduce factors that lead to the depletion of tiger habitats and to mitigate them by suitable management. The damages done to the habitat shall be rectified so to facilitate the recovery of the ecosystem to the maximum possible extent.
- ensure a viable tiger population for economic, scientific, cultural, aesthetic and ecological values.

The monitoring system [M-STRIPES](#) was developed to assist patrol and protection of tiger habitats. It maps patrol routes and allows forest guards to enter sightings, events and changes when patrolling. It generates protocols based on these data, so that management decisions can be adapted.^[7]



Bengal tiger

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- Research and development to conserve the biotic diversity of the river to augment its productivity.
- Development of sewage treatment technology such as Up-flow Anaerobic Sludge Blanket (UASB) and sewage treatment through afforestation.
- Rehabilitation of soft-shelled turtles for pollution abatement.
- Resource recovery options such as methane production for energy generation and use of aquaculture for revenue generation.
- To act as trend setter for taking up similar action plans in other grossly polluted stretches in other rivers.
- The ultimate objective of the GAP is to have an approach of integrated river basin management considering the various dynamic interactions between abiotic and biotic eco-system.

Notwithstanding some delay in the completion of the first phase of the GAP it has generated considerable interest and set the scene for evolving a national approach towards replicating this program for the other polluted rivers of the country. The Government of India proposed to extend this model with suitable modifications to the national level through a National River Action Plan (NRAP). The NRAP mainly draws upon the lessons learnt and the experience gained from the GAP besides seeking the views of the State Governments and the other concerned Departments/Agencies. Under NRCP scheme the CPCB had conducted river basin studies and had identified 19 gross polluted stretches and 14 less polluted stretches along 19 rivers, which include 11 stretches situated along 7 rivers of M.P. It was much more effective as compared to the previous launched programs.^[citation needed]

Phase II covered 59 towns in five states; Rs 505.31 cr were spent. Rivers such as Yamuna, Gomti, Damodar, Mahananda had separate action plans.^[35]

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