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## Paper III & Current Issues

Analysis for UPSC & State PSC  
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Disaster Management

Internal Security



Agriculture



Biodiversity



Economy



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Ashish Malik

3rd Edition

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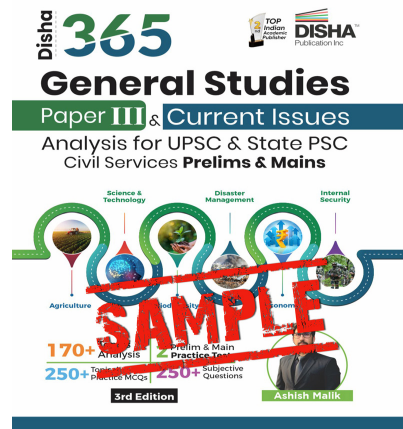


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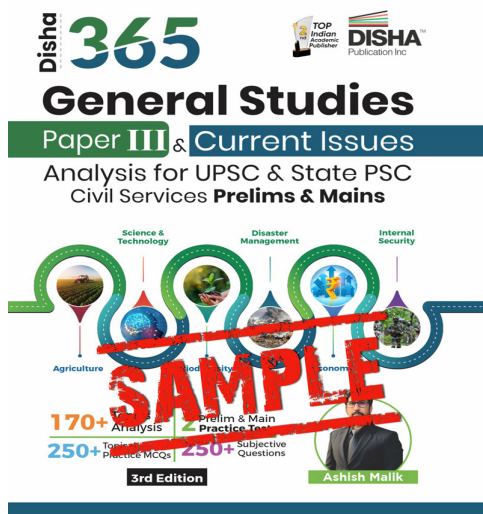
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# Unit-1 : Environment

## 1.6 World Sustainable Development Summit 2022

### Prelims & Mains

#### Why in news

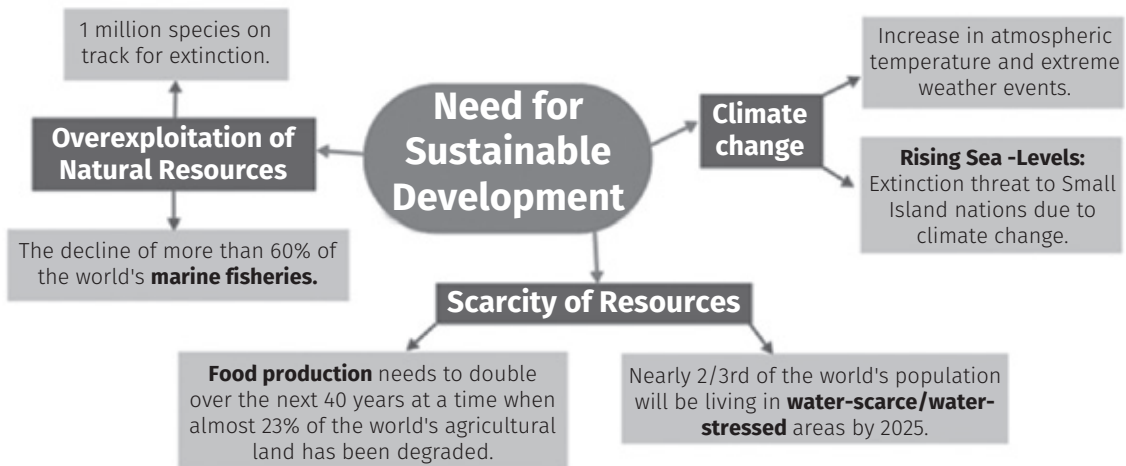
- ⊙ **The Energy and Resources Institute (TERI)** hosted TERI's annual flagship event, the World Sustainable Development Summit (WSDS) 2022.
- ⊙ Prime Minister addressed this 21st World Sustainable Development Summit 2022 (WSDS-22) on the **theme 'Towards a Resilient Planet: Ensuring a Sustainable and Equitable Future.**

#### What is Sustainable Development?

- ⊙ **'Development which meets the needs of the present without compromising the ability of future generations to meet their own needs'.**
- ⊙ This most widely accepted definition of Sustainable Development was given by the **Brundtland Commission** in its report **Our Common Future (1987).**
- ⊙ Sustainable development (SD) calls for concerted efforts towards building an inclusive, sustainable and resilient future for people and planet.

#### Significance

- ⊙ The Summit platform has brought together thought leaders, heads of state and government, scholars, corporate, youth groups, and civil society representatives from across the world.
- ⊙ The Summit series has established itself as a responsible and an effective platform for mobilizing opinion-makers to identify and advance pioneering actions to address some of the most relevant issues concerning sustainable development.



### Objective of World Sustainable Development Summit

- ⊙ It aims to provide long-term solutions to the global community on issues related to sustainable development.
- ⊙ It brings various stakeholders on a single platform and initiates a step towards achieving constructive action in combating issues pertinent to the future of humanity.

### India at the World Sustainable Development Summit

1. **Energy:** India's energy needs are expected to double in the next 20 years. India's non-fossil energy capacity will reach 500GW by 2030, meeting 50% of the country's energy requirements by then.
- ⊙ **Through Ujjwala Yojana**, more than 90 million households have been provided access to clean cooking fuel.
- ⊙ **India's LED bulb** distribution scheme has helped save more than 220 billion units of electricity, and reduced 180 billion tonnes of carbon dioxide emissions per year.
2. **Financing:** Environmental sustainability can only be achieved through climate justice. "Successful climate action also need adequate financing.

For this developed countries need to fulfil their commitments on finance and technology transfer.

3. **Ramsar Sites:** India is now having 49 Ramsar sites (wetlands) spread over more than 1 million hectares. India is a megadiverse country. With 2.4% of the world's land area, India accounts for nearly 8% of the world's species.
4. **Combating climate crisis:** India will reduce its total projected carbon emissions by one billion tonnes by 2030, reduce the carbon intensity of its economy by 45% by 2030, over 2005 levels, and achieve net-zero emissions by 2070.
5. India has initiated the **Coalition for Disaster Resilient Infrastructure (CDRI)** which aims to build strong infrastructure in areas prone to frequent natural disasters.
6. On the sidelines of CoP26, India also launched an initiative called "**Infrastructure for Resilient Island States**" for vulnerable island nations.
7. **Launched LIFE - Lifestyle For Environment Initiative:** LIFE is about making lifestyle choices to improve our planet. LIFE will be a coalition of like-minded people across the world who will promote sustainable lifestyles. They will be called 3Ps - Pro Planet People. This global movement is the Coalition for LIFE.

## Practice Questions

1. Which of the following statements is/are correct regarding World Sustainable Development Summit (WSDS) 2022?
    1. It was hosted by The Energy and Resources Institute (TERI)
    2. The theme of (WSDS) 2022 was 'Towards a Resilient Planet: Ensuring a Sustainable and Equitable Future.
    3. Sustainable development (SD) calls for concerted efforts towards building an inclusive, sustainable and resilient future for people and planet.
- Code:
- |             |                |
|-------------|----------------|
| (a) 1 and 2 | (b) 2 and 3    |
| (c) 1 and 3 | (d) 1, 2 and 3 |

2. Consider the following statements:
1. India’s energy needs are expected to double in the next 20 years.
  2. India’s non-fossil energy capacity will reach 500GW by 2030, meeting 50% of the country’s energy requirements by then.
  3. India’s LED bulb distribution scheme has helped save more than 220 billion units of

electricity, and reduced 180 billion tonnes of carbon dioxide emissions per year.

Select the correct statements from above:

- (a) 1 and 3                      (b) 2 only  
(c) 1, 2 and 3                (d) 1 and 2
3. “What is Sustainable Development? Why is it more significant today than ever given climate change and other global crisis?” (250 words)

### 3.18 IndiGen Genome Project Prelims & Mains

#### Why in news?

The **government has given clearance** to an ambitious gene-mapping project, estimated to be worth Rs 238 crore. The Genome India Project, which has been described by those involved as the “first scratching of the surface of the vast genetic diversity of India”, involve over 20 scientists from institutions including the Indian Institute of Science (IISc) in Bengaluru and a few IITs.

#### Background

One of the most comprehensive genome mapping projects in the world is the Human Genome Project (HGP), which began in 1990 and reached completion in 2003. The project was able to identify the locations of many human genes and provide information about their structure and organisation.

#### What is a genome?

Every organism’s genetic code is contained in its Deoxyribose Nucleic Acid (DNA), the building blocks of life. A genome, simply put, is all the genetic matter in an organism. It is defined as “an organism’s complete set of DNA, including all of its genes. Each genome contains all of the information needed to build and maintain that organism.

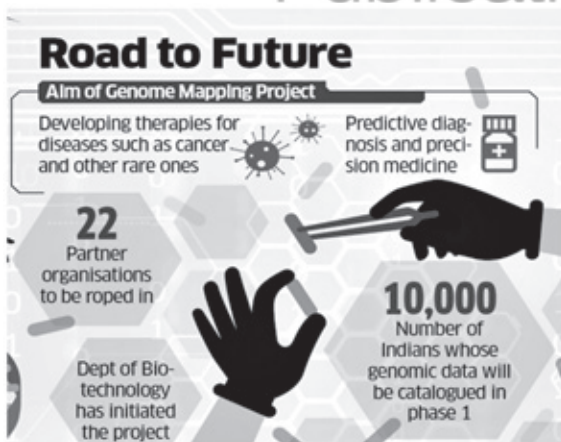
In humans, a copy of the entire genome — more than 3 billion DNA base pairs — is contained in all cells that have a nucleus

#### ‘Genome India’ Project

- ⊙ Its aim is to ultimately build a grid of the Indian “reference genome”, to understand fully the type and nature of diseases and traits that comprise the diverse Indian population. For example, if the Northeast sees a tendency towards a specific disease, interventions can be made in the region, assisting public health, which make it easier to battle the illness.
- ⊙ It is implemented by the CSIR-Institute of Genomics and Integrative Biology (IGIB), Delhi and CSIR-Centre for Cellular and Molecular Biology (CCMB), Hyderabad.

#### Benefits:

- ⊙ Epidemiology of genetic diseases to enable cost effective genetic tests,
- ⊙ Carrier screening applications for expectant couples,
- ⊙ Enabling efficient diagnosis of heritable cancers and
- ⊙ Pharmacogenetic tests to prevent adverse drug reactions.



## Practice Questions

1. Consider the following statements:
1. A genome is defined as “an organism’s complete set of DNA.
  2. Every organism’s genetic code is contained in its Deoxyribose Nucleic Acid (DNA), the building blocks of life
- Which of the above is/are correct?
- (a) 1 only                      (b) 2 only  
 (c) Both                        (d) None
2. The Genome India Project, which has been described as the “first scratching of the surface of the vast genetic diversity of India” Critically Discuss. (250 words)

## 4.16 Gati Shakti Infrastructure Plan Prelims & Mains

### Why in News?

- ⊙ PM launches Gati Shakti- National Master Plan for infrastructure development.
- ⊙ Gati Shakti – a digital platform – will bring 16 Ministries including Railways and Roadways together for integrated planning and coordinated implementation of infrastructure connectivity projects.

### What is Gati Shakti Master Plan?

- ⊙ Gati Shakti is different from the already announced national infrastructure pipeline and national monetisation pipeline.
- ⊙ Gati Shakti master plan is more about bringing the coordination for the planning of all infrastructure connectivity projects that have been announced under the national infrastructure pipeline.

## PM GATISHAKTI



- Driven by seven engines: Roads, railways, Airports, Ports, Mass Transport, Waterways, And Logistics Infrastructure.
- National Master Plan aimed at world class modern infrastructure and logistics synergy



Formulation of Master Plan for expressways. Completing 25000 km national highways in 2022-23



- Unified Logistics Interface Platform allowing data exchange among all mode operators
- Open Source Mobility Stack for seamless travel of passengers
- 4 Multimodal Logistics parks through PPP to be awarded in 2022-23



- Integration of Postal and Railways Network facilitating parcel movement.
- One Station One Product
- Extending coverage under Kavach
- 400 new generation Vande Bharat Trains



- Multimodal connectivity between mass urban transport and railways stations
- National Ropeways Development Plan as sustainable alternative to conventional roads
- Capacity building for infrastructure Projects

- It will bring maximum planning and coordination and minimise delays between the government stakeholders, in this case, various ministries.

**About Scheme:**

- This will help in bringing down the logistics cost.
- Gati Shakti targets to cut logistic costs, increase cargo handling capacity and reduce the turnaround time.
- plan aims to lend more power and speed to projects by connecting all concerned departments on one platform,
- Plan would spur manufacturing competitiveness by facilitating ease of doing business through improved connectivity and is a giant step towards unlocking India’s growth potential and creating jobs.
- The multi-modal connectivity will provide integrated and seamless connectivity for movement of people, goods and services from one mode of transport to another. It will facilitate the last mile connectivity of infrastructure and also reduce travel time for people.

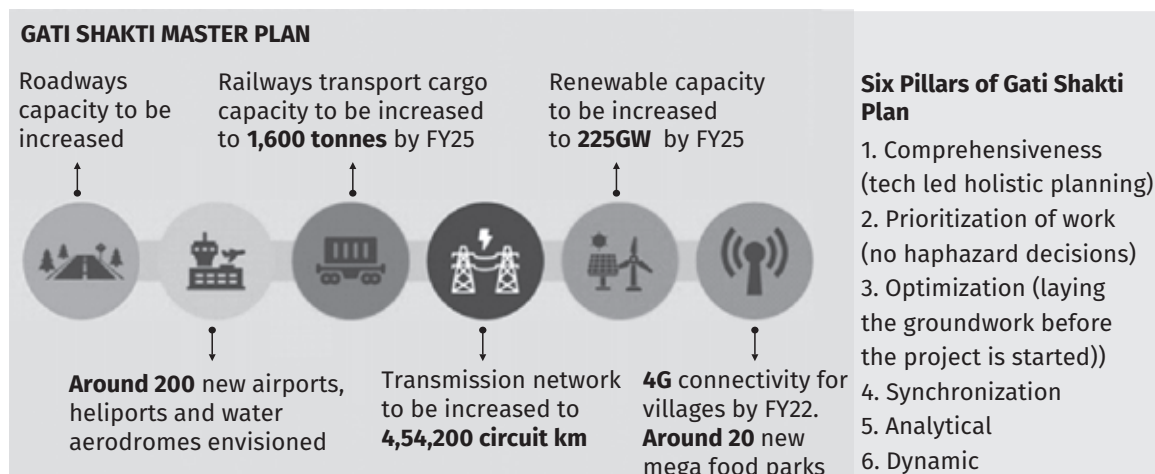
**Need of the Project:**

- The large gap between macro planning and micro execution, issues such as lack of coordination, lack of prior knowledge, and thinking and working in silos were causing construction delays and money waste.

- The master plan is expected to transform the infrastructure sector by ensuring integrated, seamless, and timely delivery of projects within budgeted costs, free of delays and cost overruns caused by multiple changes, and will further encourage private companies to partner with government projects, boosting the Indian economy.

**Concerns Related to Gati Shakti**

- Low Credit Acceptance:** Even though the government has implemented “substantial” banking sector reforms and the Insolvency and Bankruptcy Code has resulted in roughly Rs. 2.4 lakh crore in bad loan recovery, there are worries regarding falling credit offtake trends.
- Banks provide credit off-takes to assist firms to obtain finance for future projects by promising future income and demonstrating the existence of a market.
- The dearth of Demand:** There is a lack of private and investor demand in the post-Covid-19 scenario.
- Structured Difficulties:** Project execution is extremely sluggish by global standards due to land acquisition delays and legal issues. In terms of land access and environmental clearances, obtaining permissions is extremely complex; moreover, current litigation in court slows infrastructure development.



**Practice Questions**

1. Which of the following is/are correct regarding PM Gati Shakti mission:
  1. It mainly targets to cut logistic costs, increase cargo handling capacity and reduce the turnaround time.
  2. It can spur manufacturing competitiveness by facilitating ease of doing business through improved connectivity and is a giant step towards unlocking India’s growth potential and creating jobs.
  3. It is based on 4 pillar strategy that aims to lend more power and speed to projects by connecting all concerned departments on one platform

- Code:
- (a) 1 and 2                      (b) 2 and 3  
 (c) 1 and 3                      (d) 1, 2 and 3
2. “The real significance of PM Gati Shakti lies at The large gap between macro planning and micro execution of Infrastructure in our country.” Discuss. (200 words)
  3. “PM Gati Shakti is the master plan which is expected to transform the infrastructure sector” Critically Analyse (250 words)


**5.15 ‘Red Atlas Action Plan Map’ Atlas and Coastal Flood Warning System App (CFLWS) Prelims & Mains**

**Why in news?**

Tamil Nadu is all set to deploy an ‘intelligent flood warning system’ in Chennai, which will enable officials to get area-wise inundation details during the monsoon.

**‘Red Atlas Action Plan Map,’**

- ⊙ It is a first of its kind ready reckoner, prepared by the Ministry of Earth Sciences to aid Tamil Nadu government in effective flood mitigation in Chennai which witnessed the worst deluge in 2015.
- ⊙ The atlas, with probable scenarios for different rainfall periods, aims at flood mitigation, preparedness, operations and management aspects.



## Red Atlas Action Plan Map

Unveiled for Flood Mitigation in Chennai

### WHAT IS RED ATLAS ACTION PLAN MAP?

Vice-President M Venkaiah Naidu unveiled the ‘Red Atlas Action Plan Map’ atlas and the ‘Coastal Flood Warning System App (CFLWS-Chennai)’ for flood mitigation in Chennai, Tamil Nadu. Both the atlas and the CFLWS-Chennai are intended as decision support systems covering aspects, including preparedness and prevention.

### Significance of Red Atlas Action Plan Map

- It is a first of its kind ready reckoner map, prepared by the Union Ministry of Earth Sciences to aid state government of Tamil Nadu .
- The atlas is aimed at flood mitigation, preparedness, operations and management aspects.
- This manual besides showcasing the probable scenarios for different rainfall periods also provides information on corporation wards that are likely to be affected due to flooding, and the areas that may need evacuation in Chennai by taking into account all historical datasets.

### What is ‘Coastal Flood Warning System App (CFLWS-Chennai)’?

The CFLWS-Chennai is a complete webGIS-based decision support system. It can be used both for mitigation planning operations before flooding as well as in real time to for aspects like relief work.



**About CFlOWS:**

- ⦿ The technology, called CFlOWS, is India's first integrated coastal flood warning system.
- ⦿ It was conceptualised by the office of the Principal Scientific Adviser to the Union Government, after the devastating 2015 Chennai floods.

**How it works?**

1. It's an integrated GIS-based decision support system to provide forecast on potential inundation 10 days in advance.
2. Ministry of Earth Sciences and TN government have jointly developed it.
3. It will be hosted and made operational at NCCR with meteorological data inputs from IMD, NCMRWF and INCOIS.
4. The system can simulate the scenario and predict what will happen in a particular area

5. It has 6 modules, including 3D visuals of flooding in infrastructure, buildings, roads and ward boundaries
6. Mirror images of CFlOWS will be setup in CRA, Greater Chennai Corporation and IMD

**Significance:**

The system is being considered a game-changer, not just for Chennai, but also for other coastal cities such as Mumbai where urban flooding has become the norm.

**Why Chennai is prone to flooding?**

- ⦿ Chennai is prone to flooding due to a combination of topography, high population density and unplanned rapid urbanisation.
- ⦿ Though it is blessed with three natural drainage systems- Cooum, Adyar and Buckingham Canal, the city literally went underwater in 2015 with three consecutive weather systems bringing unprecedented rain.

## Practice Questions

1. Coastal Flood Warning System App (CFlOWS) has been in the news, is associated with which state?  
(a) Kerala  
(b) Goa  
(c) Odisha  
(d) Tamil Nadu
2. Consider the following statements regarding Red Atlas Action Plan Map
  1. It aims at flood mitigation, preparedness, operations and management aspects
  2. Its a first of its kind ready reckoner, prepared by Ministry of Environment.  
Which of the above is/are correct?  
(a) 1 only  
(b) 2 only  
(c) Both  
(d) None
3. How does Coastal Flood Warning System App be an important tool to address the problem of urban flooding? (250 words)

## 6.13 Bru-Reang Refugee Agreement Prelims & Mains

### Why in news?

Twenty-three years after ethnic clashes in Mizoram forced **37,000 people of the Bru (or Reang) community** to flee their homes to neighbouring Tripura, an **agreement has been signed** to allow them to remain permanently in the latter state.

The agreement among the Bru leaders and the governments of India, Tripura, and Mizoram, **signed in New Delhi**, gives the Bru the choice of living in either state.

### Background

- ⊙ The Bru or Reang are a community indigenous to Northeast India, living mostly in Tripura, Mizoram, and Assam. In Tripura, they are recognised as a Particularly Vulnerable Tribal Group (PVTG).
- ⊙ In October 1997, following ethnic clashes, nearly 37,000 Bru fled Mizoram's Mamit, Kolasib, and Lunglei districts to Tripura, where they took shelter in relief camps.



- ⊙ Since then, over 5,000 have returned to Mizoram in nine phases of repatriation, while 32,000 people from 5,400 families still live in six relief camps in North Tripura.

### What is in the Bru agreement?

- ⊙ All Bru currently living in temporary relief camps in Tripura will be settled in the state, if they want to stay on.
- ⊙ The Bru who returned to Mizoram in the eight phases of repatriation since 2009, cannot, however, come back to Tripura.
- ⊙ The Centre will implement a special development project for the resettled Bru; this will be in addition to the ₹600 crore fund announced for the process, including benefits for the migrants.
- ⊙ Each resettled family will get 0.03 acre of land for building a home, Rs 1.5 lakh as housing assistance, and Rs 4 lakh as a one-time cash benefit for sustenance.
- ⊙ They will also receive a monthly allowance of Rs 5,000, and free rations for two years from the date of resettlement.
- ⊙ All cash assistance will be through Direct Benefit Transfer (DBT).

### Cultural Aspect:

Apart from their own Kaubru tongue, the Bru speak both Kokborok and Bangla, the two most widely spoken languages of the tribal and non-tribal communities of Tripura.

### Concerns/Challenges:

- ⊙ It could set a **bad precedent** and "legitimise" the ejection of minority communities by ethnocentric states.
- ⊙ The displaced **Brus who returned to Mizoram** have already begun demanding a package equivalent to the one those who stayed behind in the Tripura relief camps
- ⊙ It could **fuel conflict with the locals of Tripura** (between Brus and Bengali non-tribal people)
- ⊙ **Forests would be razed down** so as to provide the land needed for settling Brus. Nearly 162 acres will be needed for the process and since Tripura is a small state, the government would look to diversion of forest land for human settlement purpose.

## Practice Questions

- Bru-Reang refugee, in news recently, is between the states of:
  - Assam and West Bengal
  - Mizoram and Nagaland
  - Tripura and Meghalaya
  - Assam and Arunachal Pradesh
- Consider the following statements regarding Bru or Reang Community:
  - The Bru speak only one language i.e. Kaubru tongue
  - In Tripura, they are recognised as a Particularly Vulnerable Tribal Group (PVTG).

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Which of the above is/are correct?

- (a) 1 only                      (b) 2 only  
(c) Both                         (d) None

3. What is in the Bru agreement? How is it significant from India's Internal Security's point of View. Do mention its related challenges and some way forward. (250 words)

## Answers for Prelims & Mains

### 1.6 World Sustainable Development Summit 2022

1. (d)  
2. (c)

### 3.18 IndiGen Genome Project

1. (c)

### 4.16 Gati Shakti Infrastructure Plan

1. (a)

### 5.15 'Red Atlas Action Plan Map' Atlas and Coastal Flood Warning System App (CFLOWS)

1. (d)

2. (a) Statement 2 is incorrect: It is prepared by the Ministry of Earth Sciences to aid Tamil Nadu government in effective flood mitigation in Chennai

### 6.13 Bru-Reang Refugee Agreement

1. (c) Recently, The agreement among the Bru leaders and the governments of India, Tripura, and Mizoram, signed in New Delhi, gives Bru the choice of living in either state.  
2. (b) Statement 1 is incorrect: Apart from their own Kaubru tongue, the Bru speak both Kokborok and Bangla, the two most widely spoken languages of the tribal and non-tribal communities of Tripura.