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# **Dialogue on Desertification, Land Degradation and Drought**

## Why in News

Recently, the Prime Minister delivered a keynote address at the United Nations (UN) "High-Level Dialogue on Desertification, Land Degradation and Drought" via video conference.

- He spoke as the President of the 14<sup>th</sup> Session of the Conference of Parties (CoP) of United Nations Convention to Combat Desertification (UNCCD).
- The Dialogue will encourage all member states to adopt and implement Land Degradation Neutrality (LDN) targets and National Drought Plans.

- Highlighted Steps Taken by India:
  - India is on track to achieve its national commitment on Land Degradation Neutrality (LDN) (Sustainable Development Goal target 15.3).

**LDN** is a **state** whereby the **amount and quality of land resources**, necessary to support ecosystem functions and services and enhance food security, **remains stable or increases** within specified temporal and spatial scales and <u>ecosystems</u>.

- Working to **restore 26 million hectares** of degraded land by **2030**.
  - This would contribute to India's commitment to achieving **an additional carbon sink of 2.5 to 3 billion tonnes** of carbon dioxide equivalent (a part of the **Nationally Determined Contribution (NDC)** target under the 2015 <u>Paris Agreement</u>).
- Over the last 10 years, around 3 million hectares of forest cover has been added.
- For Example: The <u>Banni region</u> in <u>Rann of Kutch</u> in Gujarat suffers from highly degraded land and receives very little rainfall.

In that region, **land restoration is done by developing grasslands**, which helps in achieving land degradation neutrality.

- On Challenges Faced by Developing World:
  - Today, land degradation affects over two-thirds of the world.
  - India is assisting fellow developing countries to develop land restoration strategies.
  - A Centre of Excellence is being set up in India to promote a scientific approach towards land degradation issues. It is at Indian Council of Forestry Research and Education.

ICFRE, based in **Dehradun**, is an **autonomous body** of the **Ministry of Environment, Forest and Climate Change**.

## Land Degradation

- About:
  - Land degradation is caused by **multiple forces**, including **extreme weather conditions**, particularly drought.
  - It is also caused by human activities that pollute or degrade the quality of soils and land utility.
- Impact:
  - **Desertification** is a consequence of **severe land degradation** and is defined as a process that creates arid, semi-arid and dry sub-humid areas.
  - It accelerates <u>climate change</u> and <u>biodiversity loss</u>, and <u>contributes to</u> droughts, wildfires, involuntary migration and the <u>emergence of zoonotic</u> <u>infectious diseases</u>.

- Global Efforts to Check Land Degradation:
  - United Nations Convention to Combat Desertification (UNCCD): It was established in 1994, the sole legally binding international agreement linking environment and development to sustainable land management.

The **Delhi Declaration of 2019**, signed by 14<sup>th</sup> CoP of the UNCCD, called for **better access and stewardship over land**, and emphasised gender-sensitive transformative projects.

- **The Bonn Challenge:** To bring 150 million hectares of the world's deforested and degraded land into restoration by 2020, and 350 million hectares by 2030.
- **Great Green Wall:** Initiative by Global Environment Facility (GEF), where eleven countries in Sahel-Saharan Africa have focused efforts to fight against land degradation and revive native plant life to the landscape.
- India's Efforts to Check Land Degradation:
  - India is focusing on sustainable land and resource management for livelihood generation at community level for making the local lands healthier and productive for providing a better homeland and a better future for its inhabitants.
  - The National Action Programme for combating <u>desertification</u> was prepared in 2001 to take appropriate action in addressing the problems of desertification.
  - Some of the **major programmes** which address issues related to land degradation and desertification, being implemented currently are as follows:
    - Integrated Watershed Management Programme (IWMP) (Pradhan Mantri Krishi Sinchayee Yojana)
    - National Afforestation Programme (NAP),
    - National Mission for Green India (GIM),
    - The <u>Mahatma Gandhi National Rural Employment Guarantee Scheme</u> (<u>MGNREGS</u>),
    - Soil Conservation in the Catchment of River Valley Project,
    - National Watershed Development Project for Rainfed Areas (NWDPRA),
    - Fodder and Feed Development Scheme-component of Grassland Development including Grass Reserves.
    - Command Area Development and Water Management (CADWM) programme,
    - Soil Health Card Scheme, etc.

#### Source: IE

## EU's Generalised Scheme of Preferences

#### Why in News

Recently, a resolution was adopted by the European Parliament, urging the <u>European Union</u> (EU) Commission to consider the temporary withdrawal of the Generalised Scheme of Preferences Plus (GSP+) status given to Sri Lanka.

- Sri Lanka regained the GSP +, or the EU's Generalised Scheme of Preferences in 2017.
- The EU is Sri Lanka's second-largest trading partner after China and its second main export destination.

# Key Points

- About:
  - The Generalised Scheme of Preferences (GSP) is a set of EU rules allowing exporters from developing countries to pay less or no duties on their exports to the European Union.

It **helps developing countries to alleviate poverty and create jobs** based on international values and principles, including labour and human rights.

- The EU's GSP is widely recognised as the most progressive in terms of coverage and benefits.
- Types:
  - Standard GSP:
    - For low and lower-middle income countries. This means a partial or full removal of customs duties on two thirds of tariff lines.
    - Developing countries are automatically granted GSP if they are classified as having an income level below "upper middle income" by the World Bank and do not benefit from another arrangement (like a Free Trade Agreement) granting them preferential access to the EU market.
    - Beneficiaries: Bangladesh, Cambodia and Myanmar.
  - GSP+:
    - The special incentive arrangement for sustainable development and good governance.
    - It slashes these same tariffs (that under standard GSP) to 0% for vulnerable low and lower-middle income countries that implement international conventions related to <u>human rights</u>, <u>labour rights</u>, protection of the environment and good governance.
    - Beneficiaries: Armenia, Bolivia, Cabo Verde, Kyrgyzstan, Mongolia, Pakistan, The Philippines and Sri Lanka.
  - EBA (Everything But Arms):

The special arrangement for least developed countries, providing them with duty-free, quota-free access for all products except arms and ammunition.

- Monitoring Beneficiaries:
  - The EU continuously monitors and reviews GSP+ beneficiary countries' effective implementation of the international conventions on human rights, labour rights, environmental protection, and good governance.
  - This monitoring includes exchanges of information, dialogue and visits and involves various stakeholders, including civil society.

## **Generalised System of Preferences**

## • About:

- <u>Generalized System of Preferences</u> is an umbrella that comprises the bulk of preferential schemes granted by industrialized nations to developing countries.
- It involves reduced <u>Most Favored Nations (MFN)</u> Tariffs or duty-free entry of eligible products exported by beneficiary countries to the markets of donor countries.
- The idea of granting developing countries preferential tariff rates in the markets of industrialized countries was originally presented at the first <u>United Nations</u> <u>Conference on Trade and Development (UNCTAD)</u> conference in 1964.
- The GSP was adopted at UNCTAD in New Delhi in 1968 and was instituted in 1971.

There are currently **13 national GSP schemes notified to the UNCTAD secretariat.** 

#### • Countries which Grant Generalized System of Preferences:

Australia, Belarus, Canada, EU, Iceland, Japan, Kazakhstan, New Zealand, Norway, Russian Federation, Switzerland, Turkey and the United States of America.

In 2019, <u>US terminated India's designation</u> as a beneficiary developing nation under its GSP trade programme. This was done after determining that India has not assured the US that it will provide "equitable and reasonable access" to its markets.

## • Benefits:

#### • Improves Growth:

**Improves Economic growth and development** in the developing world by helping beneficiary countries to increase and diversify their trade with the developed nations.

## • **Provides Employment:**

Moving GSP imports from the docks to consumers, farmers, and manufacturers supports tens of thousands of jobs in the developed nation.

#### • Boosts Company Competitiveness:

It is boosted by the GSP as it reduces costs of imported inputs used by companies to manufacture goods.

#### • Promotes Global Values:

It **promotes Global values by supporting beneficiary countries** in affording worker rights to their people, enforcing intellectual property rights, and supporting the rule of law.

## UNCTAD

- It is a **permanent intergovernmental body** established by the United Nations General Assembly in 1964. It is headquartered at **Geneva in Switzerland**.
- It supports developing countries to access the benefits of a globalized economy more fairly and effectively.
- It has 194 member nations. India is a member.
- Some of the reports published by it are:

## Most Favored Nations (MFN)

- As per the <u>World Trade Organisation's (WTO)</u> General Agreement on Tariffs and Trade MFN principle, each of the WTO member countries should "treat all the other members equally as 'most-favoured' trading partners."
- According to the WTO, though the term 'MFN' "suggests special treatment, it actually means nondiscrimination."

## Source: TH

## **Tulu Language**

## Why in News

The Tulu speakers, mainly in Karnataka and Kerala, have been requesting the governments to give it official language status and include it in the eighth schedule to the Constitution.

In 2020, there was a demand to include Tulu in the new **<u>National Education Policy</u>** (NEP).

## Official Language or Languages of a State

- Part XVII of the Indian Constitution deals with the official language in <u>Articles 343 to</u> <u>351.</u>
- Article 345 of the Constitution says "the Legislature of a State may by law adopt any one or more of the languages in use in the State or Hindi as the language or languages to be used for all or any of the official purposes of that State".

## Eighth Schedule of the Constitution

- The Constitutional provisions relating to the Eighth Schedule occur in Article 344 (1) and 351 of the Constitution.
- The languages listed under Eighth Schedule are:

(1) Assamese, (2) Bengali, (3) Gujarati, (4) Hindi, (5) Kannada, (6) Kashmiri, (7) Konkani, (8) Malayalam, (9) Manipuri, (10) Marathi, (11) Nepali, (12) Oriya, (13) Punjabi, (14) Sanskrit, (15) Sindhi, (16) Tamil, (17) Telugu, (18) Urdu (19) Bodo, (20) Santhali, (21) Maithili and (22) Dogri.

• Languages are added through **Constitutional Amendments**.

## Key Points

- About 'Tulu' Language:
  - Tulu is a Dravidian language spoken mainly in two coastal districts Dakshina
    Kannada and Udupi of Karnataka and Kasaragod district of Kerala.

This region is informally known as **Tulu Nadu.** There has been a demand for separate statehood for Tulu Nadu.

- As per the **2011** <u>Census</u> report, there are 18,46,427 Tulu-speaking people in India.
- The oldest available inscriptions in Tulu are from the period between 14<sup>th</sup> to 15<sup>th</sup> century AD.
- Tulu was **introduced as a language in school by the Karnataka Government** a few years ago.
- Tulu Art and Culture:
  - Tulu has a rich oral literature tradition with folk-song forms like paddana, and traditional folk theatre <u>yakshagana.</u>
  - Tulu also has an active tradition of cinema with around **5 to 7 Tulu language** movies produced a year.

- Case for Recognition:
  - Article 29 of the Constitution: It deals with the "Protection of interests of minorities". It states that any section of the citizens residing in any part of India having a distinct language, script or culture of its own, shall have the right to conserve the same.
  - Yuelu Proclamation:
    - The Yuelu Proclamation was adopted at the first international conference on language resources protection in Changsha, Central China's Hunan province in 2018 by <u>UNESCO</u> (United Nations Educational, Scientific and Cultural Organization).
    - It calls upon the international community, states, governments and nongovernmental organizations, among others, to reach a consensus on the protection and promotion of linguistic diversity in the world.
- Advantages of Recognition under Eighth Schedule:
  - Recognition from the Sahitya Akademi.
    - Sahitya Akademi is also called India's **National Academy of Letters**, which preserves and promotes literature contained in different Indian languages.
  - Translation of Tulu literary works into other languages.
  - Members of Parliament (MP) and Members of the Legislative Assembly (MLA) could speak Tulu in Parliament and State Assemblies, respectively.
  - Option to take competitive exams in Tulu including all-India competitive examinations like the Civil Services exam.
  - **Special funds** from the Central government.
  - Teaching of Tulu in primary and high school.

## Source: IE

# **Revised Subsidy for Electric Vehicles**

## Why in News

Recently, the central government has decided to **increase the subsidy by 50% on electric two-wheelers** under the **FAME-II (Faster Adoption and Manufacturing of Electric Vehicles) scheme** in view of the adoption of eco-friendly vehicles.

#### • New Modification:

- The Centre has made a partial modification of the FAME-II, including increasing the demand incentive for electric two-wheelers to Rs. 15,000 per KWh from an earlier uniform subsidy of Rs 10,000 per KWh for all EVs, including plug-in hybrids and strong hybrids except buses.
- The government has also capped incentives for electric two-wheelers at 40% of the cost of vehicles, up from 20% earlier.

#### • Significance:

- It will bring down the prices of electric two-wheelers nearer to the IC (internal combustion engine) vehicles and remove one of the biggest blocks of the high sticker price of electric two-wheelers.
- Together with the other important factors like **extremely low running cost, low maintenance and zero emission,** such price levels will surely spur a substantial demand for electric two-wheelers.

- FAME-II:
  - Background:
    - FAME India is a part of the <u>National Electric Mobility Mission (NEMM)</u>
      <u>Plan</u>. Main thrust of FAME is to encourage electric vehicles by providing subsidies.

NEMM intends to allow **hybrid and electric vehicles** to become the first choice for the purchasers so that these vehicles can replace the conventional vehicles and thus **reduce liquid fuel consumption** in the country from the **automobile sector**.

- Two Phases of the Scheme:
  - **Phase I:** Started in 2015 and was completed on 31<sup>st</sup> March, 2019
  - Phase II: Started from April, 2019, will be completed by 31<sup>st</sup> March, 2022.
- The scheme covers <u>Hybrid & Electric</u> technologies like Mild Hybrid, Strong Hybrid, Plug in Hybrid & Battery Electric Vehicles.
- Monitoring Authority: Department of Heavy Industries, the Ministry of Heavy Industries and Public Enterprises.
- Fame India Scheme has four focus areas:
  - Technology development
  - Demand Creation
  - Pilot Projects
  - Charging Infrastructure
- Under this scheme, demand incentives will be availed by buyers (end users/consumers) upfront at the point of purchase and the same shall be reimbursed by the manufacturers from Department of Heavy Industries, on a monthly basis.

#### • Salient Features of FAME II:

- Emphasis on electrification of the public transportation that includes shared transport.
- Aims to support, through subsidies, approximately 7000 e-Buses, 5 lakh e-3
  Wheelers, 55000 e-4 Wheeler Passenger Cars and 10 lakh e-2 Wheelers.
- In the 3-Wheel (W) and 4-Wheel (W) segment incentives will be applicable mainly to vehicles used for public transport or registered for commercial purposes.
- In the 2-Wheel (W) segment, the focus will be on the private vehicles.
- To encourage advanced technologies, the benefits of incentives will be extended to only those vehicles which are fitted with advanced batteries like a <u>Lithium Ion battery</u> and other new technology batteries.
- Proposes for the establishment of charging infrastructure, whereby about 2700 charging stations will be established in metros, other million plus cities, smart cities and cities of Hilly states across the country so that there will be availability of at least one charging station in a grid of 3 km x 3 km.
- Establishment of Charging stations are also proposed on major highways connecting major city clusters.
- Concerns:
  - The adoption of electric vehicles depends on several factors, including robust charging infrastructure, easy financing and adequate performance in realworld conditions. These require considerable government intervention and planning, especially with the sector in its nascent stages.
  - E-rickshaw drivers also **depend on unsafe, sometimes illegal, sources of power to charge their vehicles.** Charging is done in unsafe conditions, which poses a danger to both the driver and the commuter.

# Way Forward

- Such initiatives coupled with a mass awareness campaign by the government and easy terms financing by public sector banks will bring us closer to the target of 30% of the two-wheeler market becoming electric in five years.
- The government's continued support to drive adoption of EVs, with a keen focus on locally built electric two-wheelers **will make India the manufacturing hub of EVs**.
- Establishing the right coordination among **three pillars of the EV industry** i.e.,urban planning, transportation and power sectors will assist in systematic adoption of EVs.

## <u>Source: TH</u>

# New Shephard: Taking Tourists to Space

## Why in News

Recently, a company called **Blue Origin** concluded the online auction for the **first seat on New Shephard**, a rocket system meant to take tourists to space.

It takes its first human flight on 20<sup>th</sup> July, 2021, which marks the **52<sup>nd</sup> anniversary of** <u>Neil Armstrong and Buzz Aldrin's moon landing</u>.

## **Key Points**

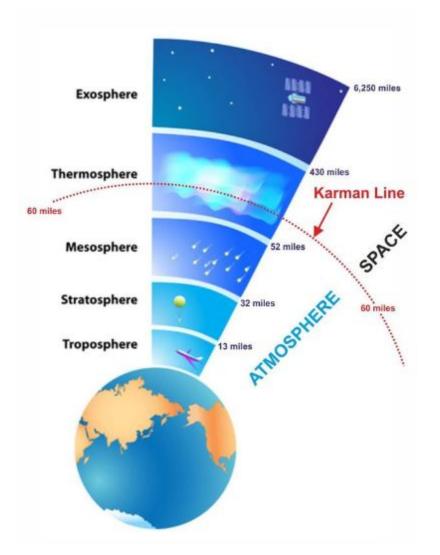
#### New Shephard:

- New Shephard has been named after astronaut Alan Shephard the first American to go to space – and offers flights to space over 100 km above the Earth and accommodation for payloads.
- It is a rocket system that has been designed to take astronauts and research payloads past the Karman line.
- The idea is to provide **easier and more cost-effective access to space** meant for purposes such as academic research, corporate technology development and entrepreneurial ventures among others.
- It will **also allow space tourists to experience microgravity** by taking them 100 km above the Earth.

**Microgravity** is the condition in which people or objects appear to be weightless. The effects of microgravity can be seen when astronauts and objects float in space.

#### Karman Line

The Karman line is the internationally recognized boundary of space.



- The line is named after Theodore von Kármán (1881–1963), a Hungarian American engineer and physicist, who was active primarily in aeronautics and astronautics. He was the first person to calculate the altitude at which the atmosphere becomes too thin to support aeronautical flight and arrived at 83.6 km himself.
- The Fédération Aéronautique Internationale (FAI) defines Karman Line as the altitude of 100 kilometres above Earth's mean sea level.
   FAI is the world governing body for air sports, and also stewards definitions regarding human spaceflight.
- However, other organizations do not use this definition. There is no international law defining the edge of space, and therefore the limit of national airspace.

## Space Tourism

- About:
  - Space tourism is about humans travelling into space for recreational purposes. It seeks to give laypeople the ability to go to space for recreational, leisure or business purposes.
  - It will make space more accessible to those individuals who are not astronauts and want to go to space for non-scientific purposes.
  - Three private companies Blue Origin, Virgin Galactic and SpaceX are now spearheading the human endeavour to explore space.
  - Their progress will decide whether space travel will one day become as accessible as air travel.
- Previous Space Tourists:
  - The first space tourist was US millionaire Dennis Tito, who in 2001 paid USD 20 million to hitch a ride on a <u>Russian Soyuz spacecraft</u> to visit the international space station and spent eight days there.

After Tito, there were **only seven other private citizens who travelled to space until 2009** when the Russian space agency wound up the business of selling tickets to private citizens.

- Space Adventures is the only private company to send paying customers to orbital space so far. In 2004, test pilot Mike Melville became the first private astronaut to fly beyond the Karman Line.
- Significance:
  - Huge Market:

There is an estimated market of 2.4 million people for such flights.

Base for Testing:

It **can provide a base for testing supersonic travel** between different destinations on earth, significantly compressing travel time. Besides, **it heralds the entry of the private sector into this arena.** 

- Concerns:
  - Climate Change: Soot or black carbon that results from rocket emissions accumulated in the stratosphere (approximately 5 to 31 miles above the Earth) cannot be washed away by rain or winds, as it is in the lower atmosphere. As a result, black carbon may linger in the stratosphere for years, causing exponentially more <u>climate change.</u>
  - Health: It can cause health concerns as passengers could also face motion sickness and disorientation, which can affect vision, cognition, balance and motor control.

## Way Forward

• There are **crucial safety, comfort and health factors to consider.** Training, medical screenings and liability waivers will need to be examined before tourists head to space.

- Space tourism will be a small subsector of the industry, but it will bolster the entire New Space industry.
- Once space tourism does become mainstream, it will also positively impact many socioeconomic factors on Earth: creating jobs, educating citizens about space and fostering a new solar-based energy infrastructure.

## Source:IE

# Southern Ocean

## Why in News

Recently, on the occasion of <u>World Ocean Day</u> (8<sup>th</sup> June), the National Geographic magazine has recognised the 'Southern Ocean' as the world's fifth ocean.

- The International Hydrographic Organization too had recognised 'Southern Ocean' as a distinct body of water surrounding Antarctica in 1937 but had repealed the same in 1953.
- Other four Oceans are: Atlantic, Pacific, Indian, and Arctic Oceans.

#### International Hydrographic Organization

- IHO is an intergovernmental consultative and technical organization that was established in 1921 to support the safety of navigation and the protection of the marine environment.
- India is also a member of IHO.

- About:
  - Most of the waters that surround Antarctica out to 60 degrees south latitude, excluding the Drake Passage and Scotia Sea, constitute the newly acknowledged Southern Ocean.
  - The Southern Ocean is the only ocean 'to touch three other oceans (Pacific, Atlantic and Indian Ocean) and to completely embrace a continent rather than being embraced by them'.
  - It is also defined by its **Antarctic Circumpolar Current** that was formed 34 million years ago. The current flows from **west to east** around Antarctica.

- Antarctic Circumpolar Current:
  - ACC is the only current in the global ocean to close upon itself in a circumpolar loop.

This trait makes the ACC the most important current in the **Earth's climate system** because it **links the Atlantic, Pacific and Indian Oceans** and is the **primary means of inter-basin exchange** of heat, carbon dioxide, chemicals, biology and other tracers.

- The ACC is **created by** the combined effects of **strong westerly winds** across the Southern Ocean, and the **big change in surface temperatures** between the Equator and the poles.
- Ocean density increases as water gets colder and as it gets more salty. The warm, salty surface waters of the subtropics are much lighter than the cold, fresher waters close to Antarctica.

The depth of constant density levels slopes up towards Antarctica. The westerly winds make this slope steeper, and the ACC rides eastward along it, faster where the slope is steeper, and weaker where it's flatter.

#### • Significance of Recognition:

- Step towards conservation of World's Oceans, focusing public awareness onto a region in particular needing a conservation spotlight.
- In addition to the rapid warming of the Southern Ocean due to global warming, industrial fishing on species like krill and Patagonian toothfish had been a concern for decades. It hoped to draw attention to these issues.



Source: DTE

# Dagmara Hydro-Electric Project: Bihar

## Why in News

Recently, a Memorandum of Understanding (MoU) has been signed between **National Hydro Power Corporation (NHPC**) Limited and Bihar State Hydroelectric Power Corporation Limited (BSHPC) for Implementation of **Dagmara Hydro-Electric Project**, Supaul, Bihar.

NHPC is a **Category-A** <u>Miniratna</u> **Company** under the **Ministry of Power**, in the field of Hydropower.

It is the **largest organisation for hydropower development in India,** currently, NHPC has 24 operational power stations with a **total installed capacity of 7071 Mega Watt (MW).** 

- About:
  - The project is located near village Dagmara on the right bank and Simri on the left bank, about 22.5 km downstream of Bhimnagar barrage on Kosi river.
  - It is a Run-of-the-River scheme. Run-of-river hydro projects use the natural downward flow of rivers and micro turbine generators to capture the kinetic energy carried by water.

Typically water is taken from the river at a high point and diverted to a channel, pipeline, or pressurised pipeline (or penstock).

- The project will have the **total capacity of generating 130 MW energy,** in which **17 units of 7.65 MW will be installed** for power generation.
- The estimated cost of construction of this project is at Rs. 2478.24 crore.
- Significance:
  - It will be a landmark project in the power sector scenario of Bihar as far as green power is concerned.
  - Apart from generating clean and green power, the execution will boost the socio-economic and infrastructure development in the area and shall also create employment opportunities.

## Kosi River

- The Kosi is a trans-boundary river which flows through Tibet, Nepal and India.
- It has its **source in Tibet that includes the world's highest upland;** it then drains a large part of Nepal before emerging onto the Gangetic plains.
- Its three major tributaries, the **Sun Kosi, Arun and Tamur** meet at one point just upstream of a 10 km gorge cut through the Himalayan foothills.
- The river crosses into northern Bihar, India where it branches into distributaries before joining the Ganges near Kursela in Katihar district.
- Its unstable nature has been attributed to course changes and the heavy silt it carries during the monsoon season, and flooding in India has extreme effects.
  The Kosi carries the maximum amount of silt and sand after the Brahmaputra in India.
- It is also known as the "Sorrow of Bihar" as the annual floods affect about 21,000 km<sup>2</sup> of fertile agricultural lands thereby disturbing the rural economy.



Source: PIB