

## DAILY CURRENT AFFAIRS (DCA)

Time: 45 Min

Date: 02-05-2024

### Table of Content

India's Border Management

Phishing Attacks in India

Why can accused persons in prison contest polls but not vote?

Balanced Fertilisation

#### NEWS IN SHORTS

Blood Minerals

Front Running

Rise in Cocoa Prices

Swachhata Pakhwada

Supersonic Missile-Assisted Release of Torpedo (SMART) system

Booker Prize

Microbes produced most new methane

Red Colobus

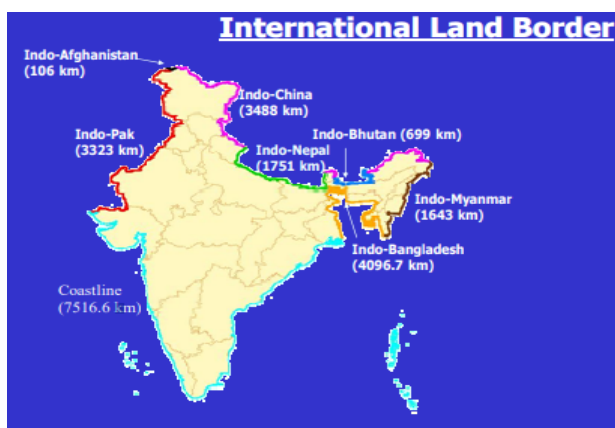
## INDIA'S BORDER MANAGEMENT

### In News

- A huge cache of military grade arms, ammunition and other war-like stores were seized by Assam Rifles in Mon district of Nagaland, close to the Myanmar border.

### About Borders

- India has a land boundary of about 15,200 km and the total length of the coastline of the mainland, including Andaman and Nicobar and Lakshadweep, is 7,516.6 km.



- India shares its land boundaries with **Pakistan, Afghanistan, China, Nepal, Bhutan, Myanmar** and Bangladesh in the east.
- Southern neighbours across the sea consist of the two island countries, namely Sri Lanka and Maldives. Sri Lanka is separated from India by a narrow channel of sea formed by the Palk Strait and the Gulf of Mannar, while Maldives Islands are situated to the south of the Lakshadweep Islands.
- All states except Madhya Pradesh, Chattisgarh, Jharkhand, Delhi and Haryana have an international border or a coast line.

### Challenges

- Indian borders run through plains, hills and mountains, deserts, riverine territories and marshes.
  - ♦ Land borders are not fully demarcated and Border guarding forces are often under resourced and ill equipped.
- Institutional mechanisms for coordinating intelligence gathering, sharing and intelligence coordination are weak.
- Managing such a diverse border is a **complex task** but vital from the point of view of national security

- Several of India's neighbours are **undergoing political and economic instability**.
- India also has **continuing border disputes** with several of its neighbours.
- Uncertain borders not only raise bilateral tensions but also **facilitate cross border infiltration, illegal migration, smuggling and crime**
- Human trafficking is a complex and rampant phenomenon
  - ♦ Females including children are entangled in the vicious circle of forced labour, sexual brutality, and forced matrimony.
- The **Northeast receives drugs, arms** and other contraband through the porous borders.
- The management of **Coastal borders** is a problem of a different scale altogether. The Mumbai terror attacks brought home the need to strengthen coastal surveillance.
  - ♦ Sea routes are used to smuggle people, arms, drugs and other contraband.

### Steps of Government

- India has spent a lot of **resources in building fences and associated infrastructure** over the last three decades.
  - ♦ It has also built the capabilities of border guarding forces to guard and manage the borders. This has had a positive impact on checking infiltrations, reducing smuggling, curbing contrabands etc.
- **MHA has also professionalised the border guarding forces** – BSF, ITBP, SSB, AR, Coast Guard.
- Several initiatives have been undertaken by the **Border Management-I Division**
  - ♦ These include construction of fence, floodlighting, roads, Border Out Posts (BOPs), Company Operating Bases (COBs) and deployment of technological solutions along the India-Pakistan, India-Bangladesh, India-China, India-Nepal, India-Bhutan and India-Myanmar borders.
- **Border Infrastructure and Management (BIM) Scheme:** Border Infrastructure and Management (BIM) Scheme is a **Central Sector Scheme** comprising projects aimed at infrastructure development of India's international borders to enhance the security along the borders of the country.

- **Comprehensive Integrated Border Management System:** To improve situational awareness at different levels of hierarchy to facilitate prompt and quick response to emerging situations along the India-Pakistan Border (IPB) and India-Bangladesh Border (IBB), a Comprehensive Integrated Border Management System (CIBMS) has been conceptualized which is the integration of manpower, sensors, networks, intelligence and command control solutions.
- Government has decided to construct a fence along the entire 1643-kilometre-long Indo-Myanmar border.

### Suggestion

- India is in the process of **evolving a robust and balanced border management** system that balances the cross border flows with national security interests.
- India has the vision of integrating South Asia into an economic whole.
  - ♦ **SAARC, BIMSTEC and BBIN** are efforts in that direction. This will require connectivity and relatively free movements.
  - ♦ The challenge of border management is how to ensure that borders are secure and yet they are accessible.
- The key to border management is to take **people-centric approaches** and make them partners in national security.
  - ♦ **Good cooperation with the neighbours is also essential.**
- We need to study and evolve good border management practices.
- Further, we **should harness space technologies**, IT, and modern methods of infrastructure construction to ensure better border management.
- **Coastal police need to be strengthened.** The problems of island territories require a special focus and approach
- **Border guarding forces** need material and financial resources, training and aptitude for border management.
- Close coordination between central and state agencies is essential.

Source: TOI

## PHISHING ATTACKS IN INDIA

### Context

- According to the 2024 **Data Breach Investigations Report** by Verizon Business, India is one of the key countries affected by phishing attacks.

### Key Findings

- The espionage attacks dominate Asia-Pacific's (APAC) cyber security landscape, including that of India.
- Some **25% of APAC cyberattacks are motivated by espionage**, significantly greater than the **6%** and **4%** in Europe and North America, respectively.
- System intrusion, social engineering, and basic web application attacks represent **95%** of breaches in APAC.
  - ♦ The most common types of data compromised are **credentials (69%)**, **internal (37%)**, and **secrets (24%)**.

### What is a Phishing Attack?

- **Phishing is a type of cyberattack** which attempts to steal sensitive information, typically in the form of usernames, passwords, credit card numbers, bank account information or other important data in order to utilize or sell the stolen information.
- By pretending as a reputable source with an enticing request, an attacker lures in the victim in order to trick them.



### Reasons for phishing attacks

- The report mentioned that In 2023, **15 percent of breaches involve a third party**, including data custodians, third-party software vulnerabilities, and other direct or indirect supply chain issues.
- About **68 percent** of breaches, whether they include a third party or not, involve a **non-malicious human element**, which refers to a person making an error or falling prey to a social engineering attack.



### Steps taken by Government

- **Information Technology Act, 2000:** Section 43, 66, 70, and 74 of the IT Act, 2000 deal with hacking and cyber crimes.
- **Indian Computer Emergency Response Team (CERT-In)** issues alerts and advisories regarding latest cyber threats/vulnerabilities and countermeasures to protect computers and networks on a regular basis.
- **National Cyber Coordination Centre (NCCC)** has been set up to generate necessary situational awareness of existing and potential cyber security threats and enable timely information sharing for proactive, preventive and protective actions by individual entities.
- **Cyber Swachhta Kendra** (Botnet Cleaning and Malware Analysis Centre) has been launched for detection of malicious programs and provides free tools to remove the same.
- **Bharat National Cyber Security Exercise 2023:** Bharat NCX will help strategic leaders to better understand cyber threats, assess readiness, and develop skills for cyber crisis management and cooperation.
- **Chakshu Facility:** It is a newly introduced feature on the Sanchar Saathi portal that encourages citizens to proactively report suspected fraudulent communications received via call, SMS, or WhatsApp.

#### International Measures

- **Budapest Convention:** It is the 1st international treaty to address cybercrime. India is not a signatory to the treaty.
- **Internet Corporation for Assigned Names and Numbers (ICANN):** It is a US-based not-for-profit organization for coordinating & maintenance of several databases.
- **Internet Governance Forum:** It is the United Nations forum for multi-stakeholder policy dialogue on Internet governance issues.

### Concluding Remarks

- India is one of the key countries affected by phishing attacks, where employees often click on malicious links or attachments, often leading to severe financial losses.
- However, there's a silver lining as reporting practices have improved, with 20 percent of users now identifying and reporting phishing during simulation tests.

Source: TH

## WHY CAN ACCUSED PERSONS IN PRISON CONTEST POLLS BUT NOT VOTE?

### Context

- Amritpal Singh, the jailed head of the pro-Khalistan outfit Waris Punjab de, announced his intention to contest the Lok Sabha elections.

### Background

- In **1975**, the Supreme Court in the case of **Indira Gandhi v Raj Narain** recognised that free and fair elections are a part of the 'basic structure' of the Constitution of India.
- However the Supreme Court has held that the rights to elect and be elected do not enjoy the same status.
- In 2006, in the case of **Kuldip Nayar v. Union of India** the supreme court held that the right to vote (or the right to elect) is "pure and simple, a statutory right".
  - ◆ This means that voting is not a fundamental right and can be repealed.
- The same was held for the right to be elected by the Bench, ruling that laws enacted by Parliament could regulate both these statutory rights.

### Bar against contesting elections

- **Section 8 of the Representation of People Act, 1951 (RP Act)** is titled "Disqualification on conviction for certain offenses".
- If a person is convicted of any of the offenses in the exhaustive list provided in the provision, they will be disqualified from contesting elections to Parliament or state legislatures from the date of conviction onwards and face further a **six-year disqualification** from contesting in elections beginning from the date of their release.
- This disqualification only kicks in once a person has been convicted and does not apply if they have only been charged with criminal offenses.

### Exceptions to disqualification

- **The Election Commission of India (ECI)** is empowered under **Section 11** of the RP Act to "**remove**" or "**reduce**" the period of disqualification.
- In 2019 the Supreme Court held that once a conviction is stayed "the disqualification which operates as a consequence of the conviction cannot take or remain in effect".

### Bar against the right to vote

- **Section 62** of the RP Act provides a series of restrictions on the right to vote.
  - ♦ Its **sub-clause (5)** which states in broad terms “No person shall vote at any election if he is confined in a prison, whether under a sentence of imprisonment or transportation or otherwise, or is in the lawful custody of the police”.
- With an exception provided for those in preventive detention, this provision effectively bars every individual who had criminal charges framed against them from casting their vote unless they have been released on bail or have been acquitted.

### Anukul Chandra Pradhan, Advocate, Supreme Court v. Union of India, 1997

- The Supreme Court in this case rejected a challenge to **Section 62(5)** on four grounds that;
  - ♦ The **right to vote was a statutory right** and could be subject to statutory limitations.
  - ♦ There is a “**resource crunch**” as infrastructure would have to be provided and police would have to be deployed.
  - ♦ A person in prison because of their conduct “**cannot claim equal freedom of movement, speech and expression**”.
  - ♦ Restrictions on prisoners’ right to vote are reasonable as it is connected to keeping “**persons with criminal background away from the election scene**”.

Source: IE

## BALANCED FERTILISATION

### Context

- **Balanced fertilisation** is likely to be on the priority list of the government post the Lok Sabha polls.

### About

- **Balanced fertilisation** means supplying these primary (N, phosphorus-P and potassium-K), secondary (sulphur-S, calcium, magnesium) and micro (iron, zinc, copper, manganese, boron, molybdenum) nutrients in the right proportion, **based on soil type and the crop’s own requirement**.
  - ♦ Farmers apply too much urea, di-ammonium phosphate (DAP) or muriate of potash (MOP), which **only have primary nutrients in high concentrations**.

- The fiscal ended March 2024 saw urea consumption hit a record 35.8 million tonnes (mt), **16.9% higher than the 30.6 mt in 2013-14**.

### What is DAP?

- **Di-ammonium Phosphate (DAP)** is a type of fertilizer that contains **phosphorus and nitrogen**, two essential nutrients for plant growth.
- It has the chemical formula **(NH<sub>4</sub>)<sub>2</sub>HPO<sub>4</sub>**.
- DAP is commonly used in agriculture to provide a **quick and readily available source of nutrients to plants**.
- It is the **second most commonly** used fertilizer in India after urea.

### What is Nano DAP?

- It is a unique liquid fertilizer product that contains **nanoparticles of Diammonium Phosphate (DAP)**.
- It is a source of **nitrogen and phosphorus** – 2 key primary nutrients essential for the growth of crops.
- The small size of Nano DAP (< 100 nm) and high surface area drive the easy absorption by plant leaves.
- It is a novel nano-formulation which helps in better crop growth and yield, reduced environmental burden and increased farmer profitability.

### Concerns of Using Urea in High Concentration

- **Environmental Impact:** Excessive use of urea leads to nitrogen runoff into water bodies, causing eutrophication and disrupting aquatic ecosystems.
- **Soil Health:** Overuse of urea leads to soil acidification and depletion of organic matter, reducing soil fertility in the long run.
- **Crop Damage:** Many farmers in fruit producing areas use a lot of urea, resulting in tree death, with very serious consequences.

### Government Initiatives

- **Neem-coated urea:** The government has introduced 100% Neem Coating on all subsidized agricultural grade urea in the country in order to increase the nutrient efficiency, crop yield, soil health and check the diversion of agricultural grade urea for non-agricultural activities.

- **PM PRANAM scheme:** PM Programme for Restoration, Awareness Generation, Nourishment and Amelioration of Mother – Earth (PMPRANAM) was launched to incentivize States/ Union Territories to promote alternate fertilizers and balanced use of chemical fertilizers.
- **Nano Urea:** It is a liquid fertilizer developed by IFFCO. It is an alternative to conventional urea.
- **Nutrient-Based Subsidy (NBS) Policy:** Under the NBS policy, subsidies are provided based on the nutrient content of fertilizers rather than on a per-unit basis.
  - ◆ This encourages farmers to use a balanced mix of fertilizers, including nitrogen, phosphorus, and potassium, thereby reducing the overreliance on urea.
- **Soil Health Card Scheme:** The Soil Health Card Scheme aims to assess the nutrient status of soil and provide customized recommendations for nutrient management to farmers.
- **Promotion of Precision Farming:** Initiatives like the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) promote precision farming techniques, including drip irrigation and fertigation, which enable more efficient use of fertilizers, including urea, by delivering nutrients directly to plants' root zones.

### Way Ahead

- Addressing these concerns requires a holistic approach, including promoting the use of balanced fertilizers, improving soil health through organic farming practices, enhancing nutrient management techniques, and investing in research and development of sustainable agricultural practices.
- Additionally, policies that incentivize the efficient use of fertilizers and promote alternatives to urea can help mitigate these issues.

Source: IE

## NEWS IN SHORT

### BLOOD MINERALS

#### Context

- Recently, the **Democratic Republic of the Congo (DRC)** has accused Apple of using 'blood minerals' (illegally exploited minerals) extracted from the eastern region of the country.

### About the Blood Minerals

- Blood minerals, also known as conflict minerals, refer to **tin, tantalum, tungsten, and gold (collectively known as 3T or 3TG)**, which are mined in conditions of armed conflict and human rights abuses.
- These minerals are **essential components** in the manufacturing of a wide range of products, from **smartphones and laptops to cars and aircraft**.

### Heart of the Issue

- DRC is one of the most **mineral-rich regions** in the world, but it is also one of the **most conflict-ridden**.
  - ◆ The **DRC's eastern region**, home to vast deposits of 3TG minerals, has been plagued by violence for decades.
- The minerals are often extracted under brutal conditions, with local communities suffering from grave human rights violations.
- Women and children are often the most affected, being deprived of their homes, subjected to sexual violence, or forced to work in the mines.

#### Democratic Republic of Congo (DRC)

- It is the **largest country in Sub-Saharan Africa** and endowed with **exceptional natural resources**, including minerals such as cobalt and copper, hydropower potential, significant arable land, immense biodiversity, and the world's second-largest rainforest.



- It is among the **five poorest nations in the world**. An estimated 74.6% of Congolese people lived on less than \$2.15 a day in 2023.
  - ◆ About one out of six people living in **extreme poverty** in Sub-Saharan Africa lives in DRC.
- A long history of conflict, political upheaval and instability, and authoritarian rule have led to a grave, ongoing humanitarian crisis.

Source: DTE

## FRONT RUNNING

### In News

- The Securities and Exchange Board of India has approved amendments to its mutual fund regulations to curb front-running.

### About Front Running

- Front-running refers to trading in a stock or any other financial asset while having insider knowledge of a future transaction.
- This can be done by a broker who knows about a client's upcoming order, or by an investor who is aware of a forthcoming recommendation from their firm.
- This practice is unethical as by buying or selling before the large trade, they can influence the price of the security, potentially harming other investors.

Source: LM

## RISE IN COCOA PRICES

### Context

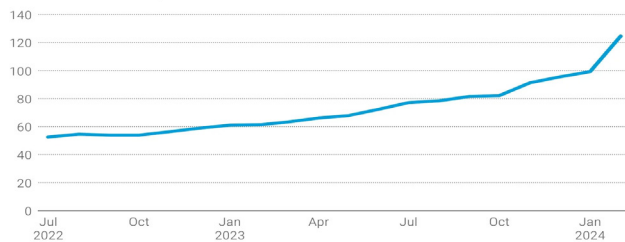
- Recently, it was found that the price of cocoa beans, the most important raw material in chocolates, surged around four times last year's price.

### About the Cocoa Beans



#### Bittersweet climb: The rising cost of cocoa

Cocoa prices, deflated by the US Consumer Price Index, July 2022 – February 2024, Index 2010 = 100



Note: Prices are adjusted for inflation using the US Consumer Price Index to reflect real price changes over time.

Source: UNCTAD calculations

- These are **plantation crops native to the Amazon rainforest**, and now **primarily cultivated in West Africa**, which produces **nearly 81% of the world's crop**.
- These are the dried and fully fermented **seeds of Theobroma Cacao, the Cacao Tree**.
- The global market for chocolate and chocolate products is **growing at over 3% annually**.

### Reasons For Recent Price Surge

- The impact of the **El Niño weather phenomenon** (an abnormal warming of surface waters in the equatorial Pacific Ocean) has caused **drier weather in West Africa**, contributing to problems on farms, such as the **swollen shoot virus disease**.
  - It led to a bad harvest season in West African countries like Ghana and Ivory Coast, where 60% of the world's cocoa beans come from.
- Dry weather in the West African countries created **an ideal ground for the spread of black pod disease**, which causes cocoa pods to rot on the branches of cocoa trees, leading to poor crop yield.

Source: TH

## SWACHHATA PAKHWADA

### In News

- The Ministry of Parliamentary Affairs celebrated Swachhata Pakhwada from 16th to 30th April 2024.

### About Swachhata Pakhwada

- Swachhata Pakhwadas have been organised since April, 2016 with the objective of bringing a fortnight of intense focus on the issues and practices of swachhata in Gol Ministries/Departments.
- The "Swachhata Pakhwada" concept is inspired by Hon'ble Prime Minister's vision to make swachhata "everyone's business" and therefore, involving all Central Government Ministries and Departments in swachhata related activities.
- Over the years, the Swachhata Pakhwada has acquired an extra dimension. Besides undertaking cleaning activities in offices/organisations of the Ministry/Department, the focus now is on ensuring intensive sanitation efforts in the entire ecosystem related to the Ministry/Department's area of work.

Source: PIB

## SUPERSONIC MISSILE-ASSISTED RELEASE OF TORPEDO (SMART) SYSTEM

### Context

- The Defence Research and Development Organisation (DRDO) successfully conducted a flight test of the SMART system from Dr APJ Abdul Kalam Island, situated off the coast of Odisha.



### What is SMART?

- The SMART (Supersonic Missile Assisted Release of Torpedo) is a next-generation missile-based lightweight torpedo delivery system which can be launched from both coasts and warships.
- The system comprises a long-range supersonic missile carrier that can travel up to **643 km**, a lightweight torpedo with a range of **20 km** and a **50 kg** high explosive warhead as the payload.
- It uses a **two-stage solid propulsion system, electromechanical actuators, precision inertial navigation**, and a **datalink** for mid-course updates and terminal homing of the torpedo.

### Significance

- It will enhance the anti-submarine warfare capability of the Indian Navy beyond the conventional range.
- This system can help in countering China's presence in the Indian Ocean region and also enhances India's self-reliance in defense capabilities.

Source: TH

## BOOKER PRIZE

### Context

- The Booker Prize, one of the most prestigious awards in the literary world, has recently come under fire for the historical links to slavery of its original sponsor, Booker Group.

### Booker Prize

- The Booker Prize, is a prestigious literary award conferred each year for the best single work of sustained fiction written in the **English language**, which was published in the United Kingdom and/ or Ireland.
- The Booker Prize was founded in **1969**, initially just for writers from the Commonwealth, but later opened to writers globally.
- **Past Indian recipients:** Arundhati Roy (God of Small Things), Kiran Desai (Inheritance of Loss), Aravind Adiga (White Tiger).

### International Booker Prize

- The International Booker Prize is awarded for a work of fiction translated into English and published in the **United Kingdom or Ireland**.
- It was instituted in **2004**.
- In 2022 Geetanjali Shree for her Hindi novel, **Tomb of Sand** received the prize.

Source: IE

## MICROBES PRODUCED MOST NEW METHANE

### Context

- An intensive modeling study has found methane emissions from fossil fuels declined between 1990 and the 2000s whereas microbes have been producing more methane of late.

### Sources of Methane

- The sources of methane mostly fit in two categories: biogenic and thermogenic.
  - ♦ **Thermogenic methane** is released, when fossil fuels such as natural gas or oil are extracted from deep within the earth's crust,
  - ♦ **Biogenic methane** comes from microbial action.

### Biogenic methane

- The microbes that produce methane are **archaea** — single-celled microorganisms distinct from bacteria and eukaryotes — and are called methanogens.
  - They thrive in oxygen-deficient environments, such as the digestive tracts of animals, wetlands, rice paddies, landfills, and the sediments of lakes and oceans.

### Impact

- Methanogens play a crucial role in the global carbon cycle by converting organic matter into methane.
- While methane is a potent greenhouse gas, its production by methanogens is an essential part of natural ecosystems. But human activities like agriculture, dairy farming, and fossil fuel production have further increased methane emissions.

### Methane Gas

- Methane (CH<sub>4</sub>) is a **colorless, odorless** and **highly flammable** gas.
- Methane is a powerful and **short-lived greenhouse gas**, with a lifetime of about a decade and Global Warming Potential about **80 times greater** than that of carbon dioxide (CO<sub>2</sub>) during the 20 years after it is released into the atmosphere.

Source: TH



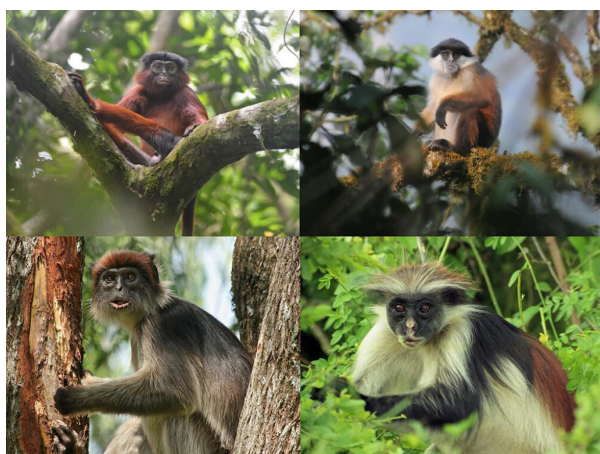
## RED COLOBUS

### In News

- Red colobus monkeys are threatened by poachers in Africa.

### About Red colobus monkeys

- Red colobus monkeys are found only in **sub-Saharan Africa**, ranging from Senegal in the west to the Zanzibar Archipelago in the east



- These monkeys inhabit a **diversity of forests**, including rainforest, riparian forest, or mangrove swamp.
- IUCN Red List assessments indicate that every form of **red colobus monkey is threatened with extinction**, and **14 of the 18 taxa** are listed as **Critically Endangered or Endangered**.
- Importance:** They are primary indicators of biodiversity decline in the continent's tropical forests.
  - Conserving them could hold the keys to protecting these forests.
- Threats** :The primary threats to red colobus are very clear: commercial and subsistence hunting as well as habitat loss, degradation, and fragmentation resulting from numerous factors

Source: DTE

### Coffee Production in India

- India is among the top 10 coffee-producing countries, with about 3% of the global output.
- Types:**
  - Arabica** has higher market value than Robusta coffee due to its mild aromatic flavour.
  - Robusta** is the majorly manufactured coffee with a share of 72% of the total production.

### Agro-Climatic Conditions

#### Factors

Arabica

Robusta

#### Soils

Deep, fertile, rich in organic matter, well drained and slightly acidic (Ph 6.0 – 6.5)

#### Same as Arabica

#### Slopes

Gentle to moderate slopes

Gentle slopes to fairly level fields

#### Elevation

1000 – 1500 m

500 – 1000 m

#### Temperature

15°C – 25°C ; cool, equable

20°C – 30°C; hot, humid

#### Relative Humidity

70-80%

80-90%

#### Annual Rainfall

1600-2500 mm

1000-2000 mm

- Major Producers:** South Indian states like Karnataka, Kerala, Tamil Nadu and Andhra Pradesh contribute 80% of the country's total coffee production.
- Orissa and the northeastern areas also have a smaller proportion of production.

Source: IE

