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DAILY NEWS DIARY

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FOR PRELIMS AND MAINS

Warm Greetings.

- DnD aims to provide every day news analysis in sync with the UPSC pattern.
- It is targeted at UPSC – Prelims & Mains.
- Daily articles are provided in the form of Question and Answers
- To have a bank of mains questions.
- And interesting to read.
- Providing precise information that can be carried straight to the exam, rather than over dumping.

Enjoy reading.

THE HINDU - TH
INDIAN EXPRESS - IE
BUSINESS LINE - BL
ECONOMIC TIMES - ET
TIMES OF INDIA - TOI



INDEX

Essay Paper

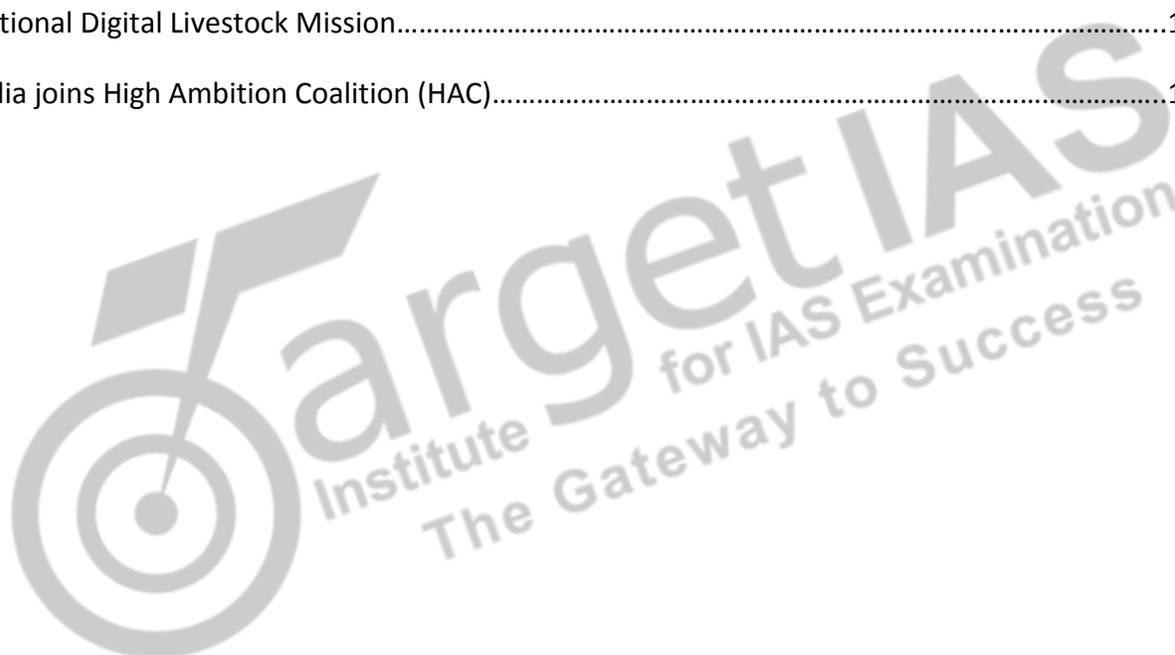
1. Seeding a data revolution in Indian Agriculture.....04
2. Genetic proof for domestication of sheep in Indian subcontinent.....06

GS 2

1. NATO fires Russian Diplomats.....09

GS 3

1. National Digital Livestock Mission.....10
2. India joins High Ambition Coalition (HAC).....12



ESSAY PAPER

Editorial

Q) Assess the reports on IDEA and Indian Agriculture with its impact on Indian agriculture sector.

Background: In June this year, two significant documents relating to the Indian agriculture sector were released.

Reports:

- The first is a consultation paper on the India Digital Ecosystem of Agriculture (IDEA) and the second on Indian Agriculture: Ripe for Disruption from a private organisation, Bain and Company.
- Through their work, these reports have depicted the agriculture reforms announced by the union government as a game-changer in the agriculture sector.

Challenges highlighted:

The major challenges of the agriculture sector are:

1. Food Sufficiency but Nutrition Deficiency
2. High import of edible oil and oilseeds
3. Yield plateaus
4. Degrading soil, Water stress
5. Inadequate market infra/linkages
6. Unpredictable, volatile prices
7. Post-harvest losses, wastages
8. Lack of crop planning due to information asymmetry

Way for doubling farmers income: These reports in short argues that benefiting from the huge investments into the agri-ecosystem, doubling farmers' income targets can be achieved in near future. The Indian agriculture sector in future will encompass farm to fork and pave the way for a single national market with a national platform with better connection between producer and consumers.

The forecast:

- The Bain report is a data-based prediction on agri-business scenarios, anchored to the agricultural set-up at present and predicting its future trajectories in another 20 years.
- It includes targeting the production of alternative proteins, and food cell-based food/ingredients and initiating ocean farming, etc.
- The report has a ‘today forward– future back approach’ and predicts a drastic investment opportunity development by 2025.
- The agriculture sector (currently worth \$370 billion) is estimated to receive an additional \$35 billion investment.

Two enabling conditions:

1. Changes in the regulatory framework, especially recent changes in the Farm Acts and
2. Digital disruption

IDEA of integration:

- **Digital disruption:** The blueprint of “digital agriculture” is like the digital disruption mentioned in the Bain report.
- **Integration:** Eventually, the farmer and the improvement of farmers’ livelihood is the aim of the IDEA concept, and it is proposed to happen through tight integration of agri-tech innovation and the agriculture industry.
- **Enabling conditions:** To be precise, the IDEA concept profounds the creation of second enabling conditions (which is described in the Bain report).
- **Openness of data:** The IDEA principles explicitly talk about openness of data, which means open to businesses and farmers, indicating the kind of integration it aims at.
- **Value-added innovative services:** by agri-tech industries and start-ups are an integral part of the IDEA architecture.
- **Data architecture:** The services listed in the document (to be available on the platform) are equally important data for farmers and businesses.

Issues with these reports:

- The Bain report has not been widely discussed — at least in the public domain.
- The assumptions used by authors especially for its ‘future back approach’, need focusing on widespread food production in controlled environments.

- The emission, energy, and other resource footprints and sustainability issues around these techniques are not adequately studied.

Way ahead: Focus on the farmer:

- A data revolution is inevitable in the agriculture sector, given its socio-political complexities.
- However, we cannot just count on technology fixes and agri-business investments for improving farmers' livelihoods.
- There need to be immense efforts to improve the capacities of the farmers in India – at least until the educated young farmers replace the existing under-educated small and medium farmers.
- This capacity building can be done through a mixed approach through FPOs and other farmers' associations where technical support is available for farmers.

Conclusion: Considering the size of the agriculture sector of the country this is not going to be an easy task but would need a separate program across the country with considerable investment.

Q) Genetic proof for domestication of sheep in Indian subcontinent. Explain.

Background: Researchers at the Central University of Kerala (CUK) have found that domestication of sheep had taken place in the Indian subcontinent, especially in the Indus Valley Civilisation (IVC) regions in the 6th or 7th millennium BC.

Animal domestication in IVC:

A number of domesticated animal species have been found in excavations at the Harappan cities.

- The Indian humped cattle (*Bos indicus*) were most frequently encountered, though whether along with a humpless variety, such as that shown on the seals, is not clearly established.
- The buffalo (*B. bubalis*) is less common and may have been wild.
- Sheep and goats occur, as does the Indian pig (*Sus cristatus*).
- The camel is present, as well as the ass (*Equus asinus*).
- Bones of domestic fowl are not uncommon; these fowl were domesticated from the indigenous jungle fowl.
- Finally, the cat and the dog were both evidently domesticated.
- Present, but not necessarily as a domesticated species, is the elephant.

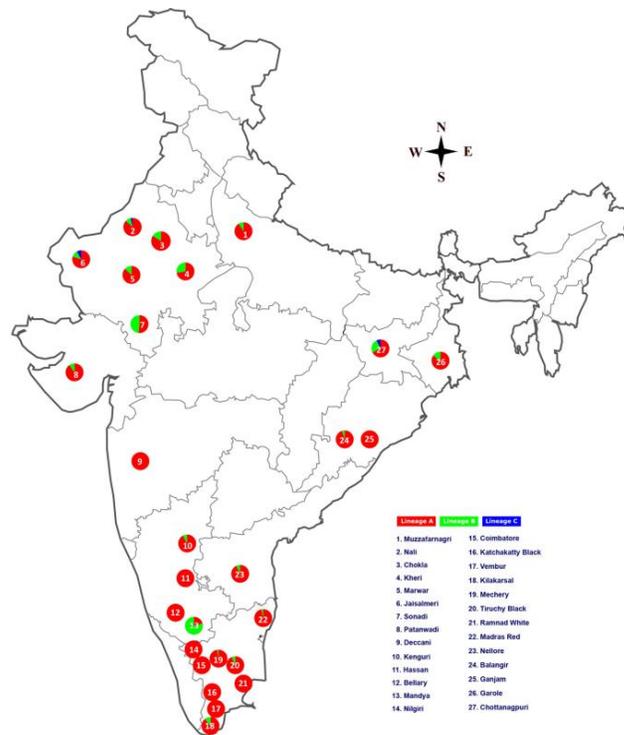
- The horse is possibly present but extremely rare and apparently only present in the last stages of the Harappan Period.

Key findings of the study:

- The study has found genetic evidence that sheep had been domesticated in the region in contrast to the general belief that they were domesticated then in West Asia alone.
- India ranks second in terms of sheep population, represented by as many as 44 well-described breeds in addition to several nondescript species.
- It highlights that genetic diversity and phylogeography of Indian sheep breeds remained poorly understood, particularly the south Indian breed.

Diversity among Indian Sheeps:

- It was found that lineage A was predominant among Indian sheep, whereas lineages B and C were observed at low frequencies.
- Particularly lineage C was restricted to the breeds of northern and eastern India.
- The study examined the south Indian breeds, provided strong genetic evidence that the Indian subcontinent was one of the domestication centres of the lineage A sheep.
- When DNA sequences were compared with other breeds across the world, it was found that the Indian sheep haplotypes were unique and highly diverse.
- The high genetic diversity and statistical analysis suggest that sheep was domesticated in the country.
- The wild Sheep, *O. vignei blanfordi* in Mehrgarh [Pakistan], may be a potential progenitor of domestic sheep lineage.



Breeds studied:

- Among the south Indian breeds, except for Mandya, all others, notably Bellary, Coimbatore, Hassan, Katchaikatty Black, Nilgiri, Ramnad White, and Vembur, were fully encompassed with lineage A.
- However, Kenguri Kilakarsal, Madras Red, Mecheri, and Tiruchy Black breeds, had very low occurrences of lineage B mitochondria.
- In contrast, most individuals of Mandya and Sonadi breeds carried a relatively high frequency of lineage B.
- In terms of the conservation of sheep genetic resources, these two breeds are important with respect to maternal lineages.

GS-2

❖ INTERNATIONAL RELATIONS

Q) Why did NATO withdraw the accreditation of eight Russian officials?

Background: NATO has withdrawn the accreditation of eight Russian officials to the military alliance in response to a rise in malign activities by Moscow.

NATO:

- NATO is a military alliance established by the North Atlantic Treaty (also called the Washington Treaty) of April 4, 1949.
- It sought to create a counterweight to Soviet armies stationed in Central and Eastern Europe after World War II.
- Its original members were Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom, and the United States.
- NATO has spread a web of partners, namely Egypt, Israel, Sweden, Austria, Switzerland, and Finland.

Foundation: Communist sweep in Europe post-WWII and rise of Soviet dominance

- After World War II in 1945, Western Europe was economically exhausted and militarily weak, and newly powerful communist parties had arisen in France and Italy.
- By contrast, the Soviet Union had emerged from the war with its armies dominating all the states of central and Eastern Europe.
- By 1948 communists under Moscow's sponsorship had consolidated their control of the governments of those countries and suppressed all non-communist political activity.
- What became known as the Iron Curtain, a term popularized by Winston Churchill, had descended over central and Eastern Europe.

Ideology of NATO:

- The NATO ensures that the security of its European member countries is inseparably linked to that of its North American member countries.
- It commits the Allies to democracy, individual liberty and the rule of law, as well as to peaceful resolution of disputes.
- It also provides a unique forum for dialogue and cooperation across the Atlantic.

Article 5: The heart of NATO is expressed in Article 5, in which the signatory members agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all.

Present Situation:

- The relationship between NATO and Russia is at its lowest point since the end of the Cold War.
- The NATO (rather US) sees their aggressive actions, not least against Ukraine, but also the significant military build-up and violations of important arms control agreements.
- NATO suspended practical cooperation with Russia in 2014 after it annexed Ukraine's Crimean Peninsula.

GS-3**❖ ECONOMY****Q) Explain the significance of the National Digital Livestock Mission.**

Background: The Union Minister of State Fisheries, Animal Husbandry & Dairying unveiled the National Digital Livestock Mission Blueprint.

National Digital Livestock Mission

- The NDLM would be a digital platform developed by Dept. of Dairy and Animal Husbandry on the foundation of the existing Information Network for Animal Productivity and Health (INAPH).
- It aims to create a farmer-centric, technology-enabled ecosystem where the farmers are able to realize better income through livestock activities with the right information.
- The bedrock of NDLM will be the unique identification of all livestock, which will be the foundation for all the state and national level programmes including domestic and international trade.
- The farmers will be able to effortlessly access the markets, irrespective of their location or holdings through this digital platform as a wide-range of stakeholders will be connected in this ecosystem.
- This system will also include robust animal breeding systems, nutrition, disease surveillance, disease control programmes and a traceability mechanism for animals and animal products.

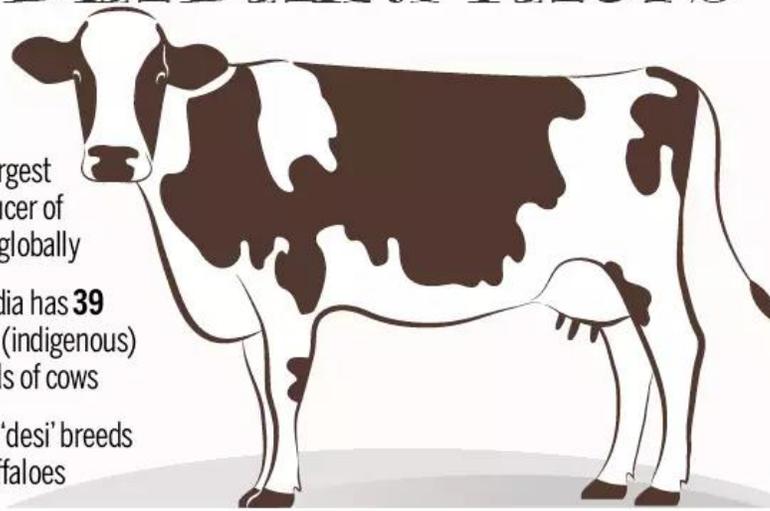
Significance of the mission:

- The livestock sector has a unique combination of being the backbone of rural livelihood.
- The growth would have been a lot better if there were concerted efforts to harmonise programmes across the country in order to create an ecosystem that is conducive for growth of the sector.
- This has been the main idea behind the deployment of NDLM, keeping the welfare of the farmer at the core.

INDIA DAIRY FACTS

INDIA DAIRY FACTS

- ⊕ Largest producer of milk, globally
- ⊕ India has **39** 'desi' (indigenous) breeds of cows
- ⊕ 13 'desi' breeds of buffaloes



Prominent indigenous cow breed: Sahiwal, Gir, Rathi, Red Sindhi, Tharparkar, Dangi and Nagori, among others

WHY INDIGENOUS COWS



Milk demand by 2021-22: Around **200MT***



Expected decline in milk production by 2020: **3MT**



Temperature increase affects productivity of cross-bred cows



Brazil, Australia & US importing indigenous Indian milch animals to develop heat-resistant species

PRODUCTION IN LAST 5 YEARS (MT)

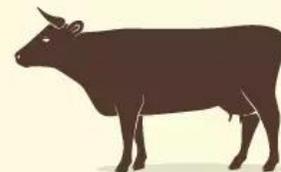


*NDDB

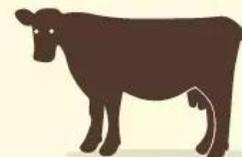
SPECIES-WISE MILK CONTRIBUTION IN 2013-14



51% Buffalo



25% Cow (indigenous)



20% Cow (cross-bred)



4% Goat

SNIPPETS

❖ ENVIRONMENT

Q) What is the importance of High Ambition Coalition (HAC) to India?

Background: India has officially joined the High Ambition Coalition for Nature and People, a group of more than 70 countries encouraging the adoption of the global goal to protect 30×30.

**High Ambition Coalition (HAC)**

Aim: To promote an international agreement to protect at least 30 % of the world's land and ocean by 2030

- The HAC is an informal group of approximately 61 countries within the UN Framework Convention on Climate Change (UNFCCC).
- It is committed to advancing progressive proposals on climate ambition.
- The HAC was founded by the Republic of the Marshall Islands in 2014 with the aim of ensuring the Paris Agreement, adopted in 2015, was as ambitious as possible.
- The Republic of the Marshall Islands serves as the convener and secretariat of the HAC.
- The global 30×30 goal is currently a centerpiece of the treaty.

Members

- HAC members currently include a mix of countries in the global north and south; European, Latin American, Africa and Asia countries are among the members.
- India is the first of the BRICS bloc of major emerging economies (Brazil, Russia, India, China and South Africa) to join the HAC.



Q) The 2021 Nobel prize for Physiology or Medicine was awarded to researchers David Julius and Ardem Patapoutian for their work on how human body perceives temperature and pressure. In their research, they found out that the body's receptor for heat only gets activated at:

- a. Above 40 degrees C
- b. Above 28 degrees C
- c. Above 35 degrees C
- d. Above 45 degrees C



Q) Building 'Kalyana Mandapas' was a notable feature in the temple construction in the kingdom of which of the following rulers:

- a. Chalukya
- b. Chandela
- c. Rashtrakuta
- d. Vijayanagara

Answer: d

Explanation:

The chief characteristics of the Vijayanagara architecture were the constructions of tall Raya Gopurams or gateways, the Kalyana mandapam with carved pillars in the temple premises, the Garbhagriha, and the Amman shrine. Building 'Kalyana Mandapas' was a notable feature in the temple construction of this kingdom.

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