

CURRENT AFFAIRS PROGRAM PRE-CUM-MAINS 2024 OCT 2023: BOOKLET-3

TABLE OF CONTENTS

1.	General Studies-2	2
1)		2
	A) Some Facts useful for Prelims (maldives Geography)	
	B) Political Developments in Maldives	
	C) China's INcreasing Influence in Maldives and India's Concerns	
	D) India-Maldives Relations	5
2.	General Studies-3	9
1)	Economy: Food Security	9
	A) Food Security	
	B) National Food Security Act, 2013	12
2)	S&T: Contribution of Scientists: MS Swaminathan	14
<i>3.</i>	Prelims Facts	17
1)	Art & Culture: Project Udbhav by Indian Army	17
	A) Kautilya's Arthashastra	17
	B) Kamandaka's Nitisara	
	C) Kural (or Tirukkural) by Tiruvalluvar	18
2)	Cricket's gets approval for 2028 LA Olympics	18
3)	Biodiversity: NEW FISH SPECIES: BADIS LIMAAKUMI (SOURCE: DTE)	
4)	Biodiversity: Invasive Exotics: Canocarpus Trees	

1. GENERAL STUDIES-2

1) IR: MALDIVES

A) SOME FACTS USEFUL FOR PRELIMS (MALDIVES GEOGRAPHY)

Officially the Republic of Maldives, is a sovereign island country and archipelago in Indian Ocean. It is

located southwest of India and Sri Lanka in the Laccadive Sea.

- The <u>capital and largest city is Male</u>, traditionally called the "King's Island".
- It is the Smallest Asian country both in terms of <u>land</u> area and <u>population</u> (around 4,00,000). It has recently transitioned from Least Developed Country to Middle income group.
- The island is located <u>atop the Chagos-Maldives-Laccadive Ridge</u>, a vast submarine mountain range in the Indian Ocean.
- It is <u>planet's lowest country</u>, with an <u>average height</u>
 <u>1.5 meters</u> above sea level. Also, the country has the <u>lowest natural high point in the world</u>, at 2.4 meters.
- 8-degree channel separates India (Lakshadweep) and Maldives.
- Note: Maldives is located both in the northern hemisphere and southern hemisphere i.e., Equator passes through it.
- **Independence:** In 1965 from British Empire.

Multilateral Body Membership

- » SAARC founding member.
- » Commonwealth of Nations (left in 2016)
- » The Organization of Islamic Cooperation

B) POLITICAL DEVELOPMENTS IN MALDIVES

- Key Political Parties and leadership
 - » Progressive Party of Maldives PPM main leaders include Abdulla Yameen, Mohammed Muizzu etc.
 - » <u>Maldivian Democratic Party</u> MDP <u>Mohammed Nasheed's (now formed a new Party the Democrats) and Mohammed Solih's</u>.

Background

- » Maumoon Abdul Gayoom (half-brother of Abdulla Yameen Gayoom of Progressive Party of Maldives) ruled as an autocratic <u>President from 1978 to 2008</u>.
- » In 2008, <u>Maldives became a **multiparty democracy** and **Mohammed Nasheed** (Of Maldivian Democratic Party), became the <u>first directly elected President</u>.</u>



2011-12 Crisis

- Mohammed Nasheed (the first democratically elected President), under a brief multiparty democratic system, was President till 2012 when he was controversially ousted.
- Nasheed, later, <u>lost the presidential election in 2013 paving way for Abdulla Yameen</u>
 Gayoom to become President.
 - Anti-democratic measures under Abdullah Yameen:
 - Maldives lost much of the democratic gain; <u>stifling of dissent</u>, <u>imprisonment of opposition</u>, <u>control over institutions like judiciary and police</u> were some common affairs.
 - In 2015, <u>Mohammed Nasheed</u> was <u>jailed for 13 years after being found</u> guilty of terrorism charges.
 - Maldives even announced its <u>leaving of Commonwealth in 2016</u>. This was because the commonwealth had <u>earlier warned Maldives</u> that it <u>risked</u> <u>suspension if it didn't show progress on democracy</u>.
- Abdullah Yameen has been the most-Pro China president so far.
 - Yameen agave opportunities to China to increase its influence in Maldives.
 - One primary reason for it was that <u>Yameen perceived that Nasheed was helped</u> <u>a lot by India</u>.
- Feb 2018 Crisis: the 45 days emergency
 - President Yameen declared emergency and <u>ordered arrest of 2 senior judges</u> who had ordered release and re-instate of 12 lawmakers who were arrested in politically motivated cases.
 - This move was criticized globally as another attempt to suppress any kind of dissent and killing democratic institutions.

SEP 2018 DEMOCRATIC TRANSITION: DEFEAT OF YAMEEN AND IBRAHIM MOHAMMED SOLIH BECAME THE PRESIDENT

Ibrahim Mohammed Solih was a joint candidate of <u>Maldivian Democratic Party</u>, <u>The Jumhooree</u>
 Party and the <u>Adhaalath Party</u>.

– Impact:

- » A moment of joy for democracy lovers
 - Political prisoners were released.
- » Solih made rebuilding strong relations with India a priority.
 - Both countries have tried to <u>align their respective policies of SAGAR</u> (Security and Growth for All in the Region), India's "Neighborhood First" approach and Maldives' "India First" approach.
 - During PM Modi's 2019 Maldives visit, <u>Solih reiterated his government's "India First" approach</u> and "<u>pledged his government's full support towards deepening</u> the multifaceted, mutually beneficial partnership between India and Maldives,

- which has traditionally been characterized by trust, transparency, mutual understanding and sensitivity.
- India has also been involved in <u>Infrastructure and Connectivity Project</u> including the <u>Greater Male Connectivity Project</u> (GMCP)
- India also <u>provided assistance during COVID-19 crisis</u> and helped Maldives during the campaign to move Maldives <u>foreign minister Abdullah Shahid elected</u>
 President of UNGA.

2023 ELECTIONS:

- Mohamed Muizzu was elected President of Maldives as he defeated the incumbent, <u>Ibrahim Mohamed Solih</u>. (Oct 2023)
 - » He was the joint candidate of the opposition coalition (People's National Congress Progressive Party of Maldives).
 - **»** What were the key reasons for defeat of Ibrahim Mohammed Solih:
 - Heavy anti-incumbency sentiment
 - Concerns over the post-Covid-19 economy that is dependent on tourism.
 - The rift within Solih's Party, the MDP, due to a rupture in his old friendship with former President Mohammed Nasheed.
 - With <u>Mr Nasheed</u>, a communicator par excellence gone, the <u>MDP could</u>
 <u>not effectively counter the disinformation campaign launched by the</u>
 <u>opposition alliance</u>, which inserted, unnecessarily, the <u>issue of</u>
 <u>geopolitics in a domestic campaign</u>.
 - Concerns over Sovereignty issues, whipped up by Mr. Muizzu's PPM that is behind an "India Out" campaign to oust Indian military personnel.

– Impact:

- » The latest Presidential election in Maldives showed that <u>democracy is thriving</u>. The holding of yet another <u>free and fair election enhance the country's international</u> Prestige.
- » People's National Congress and Progressive Party of Maldives are known for their <u>pro-</u> China stance.
 - For e.g., after his election, Muizzu has said that he will stick to his campaign promise to remove Indian military personnel stationed in archipelago state.
 - Therefore, it is assumed that **Maldives will soon** have a **pro-China** shift in its foreign policy.
- » At the request of <u>President-elect Muizzu</u>, President Solih agreed to <u>shift former</u> <u>President Yameen from Prison to house arrest</u>. Mr. Yameen is serving <u>long sentence for corruption</u>. He is seen as <u>Mr. Muizzu's mentor</u>.
- Key challenges ahead for Mohamed Muizzu:
 - » How to balance between India and China

» Dealing with challenges of <u>mounting debt</u>, <u>dwindling foreign reserves</u>, and <u>heightening</u> climate risks.

C) CHINA'S INCREASING INFLUENCE IN MALDIVES AND INDIA'S CONCERNS

- Maldives was <u>not always a priority for China's Foreign Policy</u>; Till 2011, Beijing didn't even have an embassy in Male.
- However, since <u>Sep 2014, Xi Jingping's visit</u>, Maldives had increasingly moved into Chinese Orbit especially under Abdulla Yameen's presidency (2013-18)
- Why is China Vying for expanding its influence in Maldives?
 - 1. Maldives' strategic location in the Indian Ocean
 - Maldives is located <u>between India and Diego Garcia</u> making it a <u>preferred destination</u> for operating a military base and maritime surveillance.
 - 2. Presence of several International Sea lines of communications (SLOCs) is an additional imperative.
- During President Abdullah Yameen Gayoom Yameen's Presidency (2013 2018), the increasing influence of China was manifested in the following steps:
 - 1. Maldives entering into an FTA with China: This was the first FTA of Maldives with any country.
 - 2. Maldives also signed an MoU to join Maritime Silk Road (a component of China's ambitious BRI).
 - 3. Maldives under Yameen had also <u>eagerly embraced</u> Chinese Investment and loans for infrastructure development.
 - 4. A <u>constitutional amendment</u> allowing foreign <u>ownership of freehold land</u> was passed in 2015. This is allowed <u>provided minimum investment</u> is \$1 billion and 70% of the land is reclaimed <u>region</u>. This also gave China the opportunity to enhance its military presence on the island nation. China's Naval ships frequently visited Male.
- This had made India worried:
 - » Increased Chinese presence in India's neighborhood had <u>negative implications for India's security</u>.
 - » India is also apprehensive of <u>Maldives falling in China's debt trap</u> as it will make Maldives vulnerable to China's demands and pressures. This could already be seen in the form of <u>2015</u> Constitutional Amendment and increased Chinese Naval Presence in Maldives.
- After election of Muizzu as President in 2023, these worries have re-emerged for India.

D) INDIA-MALDIVES RELATIONS

- Background
 - » Relations between India and Maldives go back several centuries. This relation further grew in decades following Maldives independence from Britain in 1965 and strengthened in 1980s and 1990s with India readily available to help Maldives on all fronts.
 - » India has played a <u>critical role in building Maldives' economy</u> and ensuring political stability <u>the</u>n. Delhi <u>supported authoritarian rule of Abdul Gayoom</u> and enabled him to remain in power

- <u>for three decades</u>. Delhi also helped Maldives to <u>avert a coup attempt</u> to oust Gayoom in 1988 and protect its territorial integrity (<u>Operation Cactus</u>, 1988).
- » India's <u>relations with Maldives continued to grow</u> even under the <u>first democratically elected</u> President **Mohammed Nasheed**.
- » In 2014, when there was a drinking water shortage in Maldives due to disfunction of the only desalination plant there, Indian Navy had rushed the drinking water to Male.
- » Both the countries share strong geographical, cultural and religious bonds.
- » Maldives has also been an important component in India's Maritime strategy.

But during Yameen's Presidency (2013-2018) ties between Delhi and Male had nosedived.

- » The political situation forced PM Modi to cancel his 2015 visit to Male.
- » <u>Maldives annulled the \$500 million contract of GMR Group</u> to develop a modern international airport near Male and gave it to a <u>Chinese company</u>.
- » Relations reached at its lowest point after the <u>Feb 2018 Emergency imposition</u> by Yameen government to curb all kinds of dissent including from judiciary.
- » India's influence reduced in Maldives:
 - Changing Political dynamics of Maldives
 - India was perceived as close to Mohammed Nasheed and thus <u>Abdul Yameen</u> moved away from India.
 - Increasing Chinese Influence in the region
 - Debts, Infra Projects, FTA etc.
 - **Reducing dependence on India:** With its <u>booming tourism sectors</u>, Maldives now is less and less dependent on assistants from India.
 - Increasing role of Pak and Saudi Arabia and growing radicalisation
 - Maldives is a <u>moderate Islamic Country</u>. In recent years, <u>Saudi Arabia has opened</u> many Madarsas to spread Wahabism.
 - Scholarships are being provided for studying in Pak.
 - Religious fundamentalism played an important role in ouster of Nasheed who had a secular ideology and had allowed Israeli tourists to visit Maldives and establishment of Buddha's statue in Male.

But things started changing in 2018 when Solih came to power: India's influence increased:

» Already discussed in the impact section of Political development.

Why Maldives is Significant for India

- i. Strategic Location
 - It is located <u>around 700 km from India's Lakshadweep</u> island chain and around 12,00 km from the Indian mainland.
 - Its <u>proximity to international sea lane</u> through which 2/3rd of the World's oil and half of its container shipment pass also makes Maldives very important for Geo-political reasons.

ii. Countering China's String of Pearls strategy

- Increased Chinese presence in Maldives will negatively impact India's strategic interest.
 To counter China's String of Pearl strategy we have to have good relations in Maldives.
- iii. Securing Sea Lanes

- Maldives can play a significant role in <u>dealing with Piracy</u> and building <u>stability in the</u> Indian Ocean region.
- iv. Protecting Interest of Indian Diaspora
 - More than 2<u>0,000 Indians live in Maldives.</u> They form the second largest expatriate community there.
- v. Preventing further radicalization of youth in Maldives.
- vi. Enhancing the traditional strong relations
- Way Forward: Change in Political Situation in Maldives:
 - » India must engage with new government in Maldives and deepen ties. India's cooperation with Maldives is based on jointly addressing shared challenges and priorities. The assistance and platforms that India's has provided have contributed to areas like people's welfare, humanitarian assistance, disaster relief, and combating illegal maritime activities like Piracy, smuggling etc.
 - Other Steps that can be taken are:
 - Strengthen Colombo Security Conclave:
 - Colombo Security Conclave comprise of India, Sri Lanka, Maldives, Mauritius, Bangladesh and Seychelles. It should be strengthened <u>showing</u> <u>tangible outcomes in maritime security and the development of the Blue</u> Economy.
 - Invite Maldives as observer in BIMSTEC Grouping:
 - This will be a bold-reimagination of post SAARC south Asia.
 - Perennial need of additional Resources to be invested in Maldives.
 - This will provide <u>India's strategic community and media organizations</u> take more interest in the small but vital neighbor, building bridges of mutual understanding and trust.
 - » New Delhi must <u>avoid the impression that it has favorites within the Maldivian Polity</u>. It should be <u>perceived as working for the people of Maldives</u>. This will ensure that no matter which party comes to power in future, India's influence in Maldives wouldn't wane.
 - » India is significant for Maldives and the entire political spectrum (including Progressive Alliance) understand this.
 - Despite political posturing by the Progressive Alliance there is an hard realization in the Maldives that <u>India is the biggest security partner in the region and makes up for</u> <u>Male's scarce maritime capacity and capabilities</u>.
 - It is no coincidence that even <u>Yameen continued defence cooperation with India during the roughest phase of bilateral relations</u>.
 - India is also Maldives' biggest trade partner, a top export destination and a traditional donor.
 - » World has changed since Mr. Yameen's time and China and Pakistan may not be able to have so much influence now.
 - The BRI which Maldives had accepted, is in serious trouble.

- <u>Sri Lankan Financial Crisis</u> showed the impact of China's debt trap and how <u>India's steady</u> help to Sri Lanka was beneficial.
- Islamist constituency in Maldives which is not very friendly with India will also notice the changed equation between India and the gulf states. It is reflected in the waning influence of West Asia in a bankrupt Pakistan, which has long nurtured extremism in Maldives.
- » But India still needs to <u>keep an eye on China's expanding influence in Maldives</u> especially after Muizzu coming to power.

– Conclusion1:

» One is likely to see a continuation of the China-India political competition in Maldives, as it has been in the rest of the Indian neighborhood. The election of Muizzu as President may give China some advantage, but Male surely recognizes that it is also not in Maldives' interest to put all its eggs in Beijing's basket.

– Conclusion2:

» India too is likely to show pragmatism and flexibility with the administration as long as the incoming Maldivian government respects India's sensitivities and security concern.



2. GENERAL STUDIES-3

1) ECONOMY: FOOD SECURITY

A) FOOD SECURITY

– Why in news?

- » World Food Day is celebrated on Oct 16 each year. (Oct 2023)
 - The FAO of UN created this in 1979. It was established to <u>raise awareness of world</u> hunger and encourage action to combat it and recalls the FAO's foundation in 1945.
 - The theme for 2023 is "Safe Food Today for a Healthy Tomorrow."

Practice Questions:

"There is an urgent need for sustainable and resilient food systems to guarantee sustainable diets that are nutritious and aligned with the evolving ecosystem and climate change" Elaborate [15 marks, 250 words]

– What is Food Security?

- » As per the <u>Committee on World Food Security</u>, the <u>food security exists when all people, at all times</u>, have <u>physical</u>, <u>social and economic access to sufficient</u>, <u>safe</u>, <u>and nutritious food that meets their dietary needs and food preferences for an active and healthy life</u>.
- » The **Four Pillars** of food security are <u>availability</u>, <u>access</u>, <u>utilization</u>, <u>and stability</u> (<u>both price and supply</u>).

Situation in India:

» The 'State of Food Security and Nutrition in the World' of the FAO estimates that in 2021 around 74% of the population in India cannot afford a healthy diet. This number may be an overestimation, but still shows that a substantial number of people in India are not able to afford health food.

» Other Reports:

- o In 2022, Global Food Security Index ranked India at 68/113 major countries of the world.
- o As per Global Hunger Index, 2023, India's rank was 111/125 countries.

Key Initiatives to Promote Food Security in India:

- » **National Food Security Act, 2013:** It seeks to provide <u>subsidized food grains to approximately</u> 2/3rd of India's population.
 - Other than this, <u>Mid-Day Meal Scheme</u>, <u>Integrated Child Development Program</u>, and the <u>PDS</u> system are focused on ensuring nutritional security.

» Various initiatives at state level include:

- o 'Indira Canteen' initiative by the state of Karnataka, which serves breakfast, lunch and dinner at very low prices.
- 'Amma Unavagam' (Mother's Canteen) is an initiative by TN.
- » Government also takes several initiatives to control food inflation:
 - Maintaining Buffer stocks

- Controlling Exports in case of scarcity
- Using MSP mechanism to encourage farmers to grow crops which are in shortage.

– Key factors which threaten Food Security:

» Poor Governance and Geo-Strategic Conflicts

- o Inadequate governance structures to ensure <u>institutional stability</u>, <u>transparency</u>, <u>accountability</u> etc. may lead to <u>poor food supply situation</u>.
 - For e.g. Corruption in PDS system leads to <u>diversion of food grains meant for poor people</u>.
- Poor state services in rural areas For e.g., people in remote areas not being able to get PDS services because of lack of documentation.
- War, conflict and lack of security may create food security challenges: E.g., <u>Russia-Ukraine war</u> impacted the supply of food grains and led to <u>higher inflation</u>.

» Economic and Production Factors:

- Poverty, unemployment, inadequate social protection system etc hampers availability of good and nutritious food.
- o Lack of focus on reforms in agriculture sector Less than the actual potential production.
- Insufficient farm income of small and marginal farmers
- High Post harvest losses due to inadequate infrastructure for storage and market access.

» Unsustainable Agriculture Practices:

- o <u>Increased dependency on wheat and rice</u> has led to <u>excess irrigation</u> which has led to water table going down and soil salination.
- <u>Land Fragmentation</u> is also making agriculture unsustainable which may impact food security in long term.
- Deteriorating Soil health:
 - Access use of chemical inputs like fertilizers and pesticides is <u>hampering the soil</u> <u>quality</u>.
 - 2023 Soil Health Survey shows that <u>almost half of the cultivable land in India has</u> become **deficient in organic carbon**, which is an <u>essential indicator of soil health</u>.

» Climate/ Environmental Challenges:

- o Increased cases of <u>droughts</u>, <u>heatwaves</u>, <u>unpredictable rainfall pattern</u> etc. causing damage to food systems.
 - Increase in number of days with extreme temperatures or rain has <u>caused a</u> <u>decline in quality and size of seeds across India</u>.
- Biodiversity Loss for e.g. <u>reduction in population of pollinators</u> also has the potential to impact large majority of food crops.
- Environmental damage in forests is reducing the food supply their causing wild animals to attack human's food system (for e.g. the blue bull trouble in India)

» Demographic and Social Issues:

- Insufficient attention paid to the <u>role and contribution of women</u> and their special vulnerabilities in regard to malnutrition, and many other forms of <u>legal and cultural</u> discrimination they suffer.
- Inadequate social protection system, including safety nets.
- Marginalization and discrimination against vulnerable groups such as internally displaced people, refugees etc.
- o **Poor availability** of safe water, sanitation, maternal and child health facilities.
- Inappropriate consumption and Over consumption of food, often with a lack of essential macronutrients, can cause serious problems to health, including malnutrition and obesity.
- Low level of education and literacy leads to <u>detrimental feeding/ behavioral practices</u> etc.

– Way Forward:

» Good Governance:

 Increasing transparency and accountability through effective implementation of initiatives like social audit, RTI and e-governance.

» Consumers side reforms:

- Demand needs to change towards healthy and sustainable diets.
 - Corporations can <u>mainstream locally grown millets</u> through innovative breakfast products.
- <u>Civil Society and health community</u> can partner with <u>social media influencers</u> who can shape healthier and sustainable consumption for millions.
- Government through initiatives like PDS, mid-day meals, railway catering, urban canteens, and public and institutional procurement, can help improve what at least 70% of Indians are consuming.
- o **Religious institutions** can also influence food habits.
 - E.g. <u>Tirumala Tirupati Devasthanam</u>, which serve <u>nearly 70,000 people daily</u>, has started procuring <u>naturally grown food items</u>.

» Promoting Agricultural Sustainability:

- More R&D on organic farming and natural farming: The National Mission on natural farming is a step in this direction, but the overall funding for sustainable agriculture is less than 1% of the agri budget.
- Shift agri-subsidy from input subsidies to cash transfer: It would promote efficient use
 of inputs, while enabling levelplaying field for agro-ecological practices to thrive.
- Consolidation of landholding for e.g. by <u>bringing farmers under an FPO</u>, or through <u>contract farming etc</u>. is crucial to deal with challenges of land fragmentation.
- **Second Agricultural Revolution** with special focus on east India can be crucial in promoting agri-productivity in India.
- » Shift farm-to-fork value chains towards more sustainable and inclusive ones.
 - o Enable more value addition of agri-produce in rural areas
 - Strengthening FPOs
- » Dealing with Climate Change related challenges:

Working on Paris Climate targets

- Global community needs to work on Paris Climate targets to ensure mitigation of climate change which is emerging us one of the biggest threats to food security.
- Working towards Adaptation in Agriculture sector:
 - Development of drought and flood resistant variety of crops.

» Focus on Demographic and Social Issues

- Gender Equality and Women empowerment is crucial to <u>limit the culture of women</u> eating in the <u>last</u> and <u>prioritizing special food requirement of women</u> specially during pregnancy.
- Special focus on vulnerable groups in rural and remote areas. <u>Prioritize Aadhaar and ONORC initiative</u> for these people so that they are able to enjoy the benefit of all government benefits.

– Conclusion:

» The <u>urgency of addressing the above discussed pressing issues</u> through the transformation of food production and distribution systems that harmonize environmental, social, and economic dimensions is imperative.

B) NATIONAL FOOD SECURITY ACT, 2013

– Why in news?

- NITI Aayog seeks <u>detailed evaluation of the National Food Security Act and LPG Subsidy</u> (Oct 2023)
 - The NITI Aayog has invited bid for a central coordinating agency that can study effectiveness of NFSA and LPG Subsidy Scheme. The agency will hold mandate to suggest ways to better the schemes. It will also suggest whether, and how, these schemes can be rationalized or closed.

Past Year Questions:

- » What are the salient features of the National Food Security Act, 2013? How has the Food Security Bill helped in eliminating hunger and malnutrition in India [Mains 2021, 15 marks, 250 words]
- » Food Security Bill is expected to <u>eliminate hunger and malnutrition in India</u>. Critically discuss various apprehension in its effective implementation along with concerns that it has generated at WTO [Mains 2013, 12.5 marks, 200 words]

Introduction:

» The NFSA, 2013 seeks to provide for food and nutritional security in human lifecycle approach, by ensuring adequate <u>quantity and quality of food</u> at <u>affordable prices</u> to people to live a life with dignity and for matters connected therewith and incidental thereto.

Salient Features of the Act are:

» It gives <u>legal entitlement to **75% rural and 50% of the urban population** (which come to 2/3rd of country's population) for subsidized grains <u>under TPDS</u>.</u>

- » It moves from 'household food entitlement' to 'individual food entitlement'. Every individual is entitled to 5 kg of rice, wheat, or coarse cereals a month at Rs 3, Rs 2 and Rs 1 per kg. The beneficiary is identified by the state government based on the parameters decided by centre.
- » The entitlement for Antyodaya Anna Yojna (AAY) will remain at Rs 35 kg per household.
- » For pregnant and lactating mothers, the act provides for <u>free meal at the local anganwadi</u> (during pregnancy and upto six months after child birth) as well as <u>maternity benefits of Rs 6,000</u> in instalments.

» For Children:

- Below 6 months: <u>'Exclusive breast feeding shall be promoted</u>)
- <u>Six months to six years</u>: The age guarantees an <u>age appropriate meal</u>, <u>free of charge</u>, through the local anganwadis.
- Six years to 14 years: One free mid-day meal, shall be provided everyday (except on school holidays) in all school run by local bodies, government and government aided schools, upto Class VIII.
- » The act also provides for the <u>Creation of State Food Commissions</u> which will <u>monitor and evaluate the implementation of the act</u>, give advice to state governments and will <u>enquire into violations of entitlement</u>.
- » <u>Food Security Allowance</u> in case of <u>non-supply of the entitled quantities of foodgrains or meals</u> to entitled persons under the act.
- » <u>Schedule 3 of the act</u> also lists various <u>provisions for advancing food security</u>, under three broad categories:
 - Revitalization of Agriculture; reforming procurement, storage and movement; other provisions like drinking water, sanitation, health care, adequate pensions for senior citizens, persons with disability and single women.

Progress:

- » NFSA has been implemented in <u>all 36 states/Uts</u> covering <u>more than 80 crore persons</u>.
- » Direct Benefit Transfer: In <u>Chandigarh</u>, <u>Puducherry</u>, <u>and Urban areas</u> of Dadra and Nagar Haveli, the act is being implemented in the cash transfer mode.

How has it contributed to reducing Hunger:

- » The act has led to <u>increases food availability</u> for weaker section. It is visible in <u>increased</u> government food subsidy burden.
- » By continuing with <u>special provisions AAY</u>, the act ensures that the <u>most vulnerable household</u> get special support.
- » By taking a <u>lifecycle approach</u>, it has ensured the right from the time women get pregnant to the death of a person, if the person is vulnerable, she would get <u>food security support</u>.
- » With improved used of technology, like Aadhar based authentication, leakage has reduced.
- » One Nation One Ration Card (ONORC) will also ensure that <u>migrants are able to enjoy the</u> benefits of NFSA.

Challenges:

- » **Fiscal Burden**: Since the <u>introduction of PMGKAY</u>, the <u>subsidy burden on food</u> for government has remained above Rs 2 lakh crores.
- » **Leakages and Siphoning:** Leakages are still unacceptably high in states where <u>PDS reforms are</u> slow.

Steps being taken:

- Doorstep delivery, computerization, effective grievance redressal mechanism etc.
- The leakage trend has been declining from 54% in 2004-05 to 44% in 2007-08 to 35% in 2011-12. It is estimated to have gone down further.
- » **Identification of Beneficiaries:** This is a serious issue as many very vulnerable sections are not enjoying the benefits of NFSA.
- » **Infrastructural issues** like lack of adequate storage, poor transportation infrastructure. This leads to <u>delay, spoilage of food grains</u>, and <u>inefficient distribution</u>.
- » **Aadhar Related Issues**: Use of Aadhar-based authentication for targeting beneficiaries <u>has its</u> own set of challenges. This includes authentication failures, discrepancy in Aadhar data etc.
- » **Social and Cultural Factors**: Factors like <u>caste-based discrimination</u>, low literacy rates etc can impact the implementation of NFSA.

– Way Forward:

- » Reducing Fiscal Burden: TPDS targeting can be made more focused and only the most vulnerable ones should be provided the NFSA benefits. Shanta Kumar committee had also recommended that the coverage should reduce from 67% of the population to 40%.
- » **Better Identification**: Instead of trying to identify the poor, it would be better to adopt an 'exclusion approach' under which the rich are kept out and all the rest are covered.
 - <u>Chhattisgarh Food Security Act (CFSA)</u> which proposes four criteria <u>excluding income</u> tax payees, households owning a pucca house in urban areas that has a carpet area of more than 4 hectares of irrigated land or more than 8 hectares of non-irrigated land.

» Combating Leakages:

Automate procedures; impose strict penalties for corrupt practices etc.

» Improving Infrastructure:

- Attract private <u>investment</u> in agri-infrastructure, including storage facilities.
- Promote decentralized procurement.
- Encourage local farmers and cooperative.

» Address Aadhar Issues:

- Achieve universal Aadhar coverage by a focused approach on most vulnerable groups.
- For the time being establish alternative authentication mechanism.
- Ensure robust data security measures to protect personal information.
- » **Addressing Social and Cultural Factors**: Run a sensitization campaign to <u>raise awareness about</u> the rights and entitlements of marginalized communities.

– Conclusion:

» The NFSA is <u>an important step in meeting the problem</u> of hunger and malnutrition. By implementing the above suggested improvements, and by fostering collaborative efforts among government agencies, Civil Society Organization, and local communities, it is possible to overcome the challenges and strengthen the implementation of NFSA.

2) S&T: CONTRIBUTION OF SCIENTISTS: MS SWAMINATHAN

- Why in news?

» MS Swaminathan, the Doyen of India's Green Revolution passed away on 28th Sep 2023 in his residence in Chennai. He was 98.

– Brief Timeline:

- » Aug 7, 1925: Mankombu Sambasivan Swaminathan was born to M.K. Sambasivan, a surgeon, and Parvati Thangammal in <u>Kumbakonam in the then Madras Presidency</u>.
- * 1940s Education: He pursued <u>higher education in zoology from Maharaja's College in Trivandrum</u>. With a keen interest in Agriculture, farming and moved by the plight of farmers, he later completed a BSc degree in Agriculture Science from University of Madras in 1944.
- » **1947-49**: Swaminathan had witnessed the <u>1943 famine</u> and after that dedicated his life for improving India's farming methods and battling shortage of food. He joined <u>IARI after Independence to focus on plant genetic and breeding.</u>
- » 1949-54: Swaminathan by now had specialized in genus Solanum of the potato and was offered a fellowship by UNESCO to research ways to combat parasite affecting potato crops which were then in high demand. He then moved to University of Cambridge and earned his PhD. After this he spent time in the Laboratory of genetics in the University of Wisconsin to set up a US Government potato research station as part of his post doctorate.
- » 1954: As a scientist at <u>IARI</u> he learned about <u>Dr. Norman Borlaug's newly developed Mexican dwarf wheat variety which could higher <u>yield</u> and <u>develop stronger stalk structures</u> to support the increased biomass.</u>
 - Both scientists worked to produce <u>improved crop varieties in India</u>.
 - He also <u>researched on fertilizers conducive to the Indian Soil for growing wheat, different high yielding wheat varities.</u>
- * 1965-70: Continuing his research with Dr Borlaug on wheat varities, he modified grains in labs to better suit the Indian Soil, giving higher yield and free from infestation. He then convinced farmers mainly in northern rural belt Punjab, Haryana and UP to set up small demonstration and test plots to cultivate these wheat varieties. Working with Union Agriculture Ministers C. Subramaniam and Jagjivan Ram, he pioneered Green Revolution. His work ushered India's golden age in farming technology transforming the nation from a 'begging bowl' to the 'bread basket of the world'.
 - During his tenure at IARI he also contributed to <u>Nuclear Agriculture</u> by setting up <u>Nuclear Research Laboratory</u> and development of mutated varieties.

» 1979-82:

- As the Director General of ICAR, he worked to <u>educate farmers on weather and crop</u> patterns by setting up thousands of ICAR centres across India.
- In 1979-80, he was <u>appointed as Principle Secretary of the Ministry of Agriculture to</u> establish agriculture policies to maintain India's long term food sufficiency.
- 1980-82: he was made in charge of agricultural and rural development in India's Planning Commission.

• In 1982, he became <u>Director General of International Rice Research Institute</u> in the Phillipines - the first Asian to hold the post - and <u>worked to promote the participation of women farmers on rice cultivation.</u>

1987-2000:

- He was awarded the <u>first World Food Prize</u> in 1987. Using the award money he <u>set up</u> MS Swaminathan Research Foundation in 1988 to provide collaborative platforms for global leaders, rural farmers to coordinate research on various issues.
- In 2004, he was made the <u>chairperson of National Commission on Farmers</u> which was constituted to address <u>rising farmer suicide in India</u>.
- 2013 Onwards: In this phase he was part of various initiatives which were focused on nutrition, access to internet in rural India etc.

International Accolades throughout his life:

- The Ramon Magsaysay Award in 1971
- Albert Einstein World Science Award in 1986
- UNEP Sasakawa Environment Prize in 1994
- UNESCO Gandhi Gold Medal in 1999
- Indira Gandhi Prize for Peace, Disarmament and Development in 1999
- He has also been awarded with <u>Padm Shri in 1967, Padma Bhushan in 1972, and Padma Vibhushan in 1989</u>.

3. PRELIMS FACTS

1) ART & CULTURE: PROJECT UDBHAV BY INDIAN ARMY

Details:

- » Project Udbhav is an <u>initiative set in motion by Indian Army</u> to <u>rediscover the profound Indic</u> <u>heritage of statecraft and strategic thoughts derived from ancient Indian texts of statecraft, warcraft, diplomacy and grand strategy.</u>
- » It focuses on <u>broad spectrum</u> including Indigenous Military Systems, Historical texts, Regional Texts and Kingdoms, Thematic studies and intricate Kautilya Studies.
- » The goal is to understand the profound depths of indigenous military systems, their evolution, strategies that have been passed down through the ages, and the strategic thought process that have governed the land for millennia.
- » The aim is not only rediscovery, but also to develop an indigenous strategic vocabulary, which is deeply rooted in India's multifaceted philosophical and cultural tapestry. Overall aim is to integrate age old wisdom with modern military pedagogy.
- » The project seeks to bridge the historical and contemporary.
- Some related work has been going on since 2021, and a book was released under the project which lists 75 aphorisms selected from ancient texts. However, the first scholarly outcome of the initiative is the 2022 publication titled 'Paramparik Bhartiya Darshan... Ranniti aur Netriyta ke Shashwat Niyam" meant to be read by all ranks of the Indian Army. English translation of the title being "Traditional Indian Philosophy... Eternal Rules of Warfare and Leaderships".
- In Sep 2023, an <u>inaugural panel discussion</u> was conducted under the Project Udbhav. The scope of the discussion encompassed discussions on the study of ancient texts from the <u>4th century BCE to the 8th century CE</u>, with the focus on K<u>autilya</u>, <u>Kamandaka</u>, <u>and the Kural</u>. It sparked interest, engagement and further research into India's traditional strategic thought.

A) KAUTILYA'S ARTHASHASTRA

- Arthashastra is a <u>treatise on statecraft</u>. It is a branch of learning that deals with <u>the means of acquisition and protection of earth</u>, which is the source of people's livelihood. Thus, Arthashastra is a science of statecraft.
 - » It consists of 15 books (Adhikarans) the first five deal with internal administration (tantra), the next eight with inter-state relations (avapa), and the last two with miscellaneous topics.

B) KAMANDAKA'S NITISARA

- Nitisara (Essence of Statesmanship) is an Ancient Indian Treatise on Politics and Statecraft.
 - » It was authored by Kamandaka, who was a disciple of Chanakya.
 - » It is <u>traditionally dated to the 4th-3rd Century BCE</u>, though modern scholarship various dates it between the 3rd and 7th century CE between Gupta and Harsha period.

» Structure: It contains <u>20 Sargas</u> (Chapters) and <u>36 Prakarans</u>. It is based on <u>Arthashastra of Kautilya</u> and deals with <u>various social elements</u> such as theories of social order, structure of the state, obligations of the ruler etc.

C) KURAL (OR TIRUKKURAL) BY TIRUVALLUVAR

- It is a <u>classic Tamil language text</u> consisting of 1330 short couplets, or kurals of seven words each. It is considered as <u>one of the greatest works ever written on ethics and morality</u>, and is <u>widely</u> <u>acknowledged for its universal values</u>.
- Tirukkural is divided into three books, each with teachings on Virtue (Dharma), Wealth (Artha) and love
 (Kama)
- Date: The text has been <u>variously dated between 300 BCE to 5th century CE</u>.
- The issue of statecraft, governance, and related topics embedded in the <u>Kural</u> are <u>less known</u>, <u>understudied and not theorized for modern times</u>. Therefore, Focus on Project Udbhav on study and revival of political wisdom and statecraft in the Kural will be an <u>important contribution for contemporary times</u>

2) CRICKET'S GETS APPROVAL FOR 2028 LA OLYMPICS

- <u>Cricket, squash, baseball/softball, lacrosse and flag football</u> have been included as part of 2028 LA Olympics.
- With this <u>Cricket will be returning to Olympics after 128 years</u>.
 - » It will be played in 20-20 format and will be a <u>six-team affair</u>. IOC or the ICC is yet to <u>decide on</u> the qualifier format.
- Lot of Backchannel work was needed.
 - » Cricket's inclusion was made possible by two years of intense backchannel work between the IOC and ICC with Nita Ambani, an IOC member from India since 2016, playing a key role in building a consensus for the sport among the Olympic community.

3) BIODIVERSITY: NEW FISH SPECIES: BADIS LIMAAKUMI (SOURCE: DTE)

Scientists have recently discovered a new fish species <u>from Milak River, Nagaland</u>. It has been named <u>Badis limaakumi</u>, <u>after Limaakun</u>, <u>assistant professor and head of the zoology department at Fazl Ali College</u>, <u>nagaland</u>.

It belongs to <u>family Badidae</u>, a small freshwater fish found in streams with slow or moderate water flow. These are <u>edible fish</u> and are also found in ponds and stagnant water.



The new species differs from other members of the genus due to its <u>larger size</u> and other physical characteristics.

Fish from the Badis family are also known as <u>chameleon fish</u> for their <u>ability to change color</u>. This helps them blend with the surrounding when under stress.

4) BIODIVERSITY: INVASIVE EXOTICS: CANOCARPUS TREES

Concerns over the management of invasive Conocarpus species of trees have recently led to <u>Gujarat</u> (2023) and <u>Telangana</u> (2022) banning their use. Several <u>other states may follow suit</u> - which is likely to <u>discourage horticulturalists and nurseries from multiplying the species</u> and using lakhs of its saplings in afforestation and landscaping projects across the country over the next year.

Problem with Exotic Plants:

- » Many species which were introduced in India for greening or ornamental purposes eventually turned invasive.
- » <u>Native species</u> which were not able to compete for resources were <u>driven to extinction</u> and <u>huge cost was incurred</u> in the management of invasive species.
 - Some popular species include <u>Eucalyptus</u>, <u>Proposis Juliflora</u> (Vilayati Kikkar), <u>Acacia mangium</u>, and <u>Lantana Camara</u>.
- » Further, they are also known for causing <u>pollen allergies</u>. Human immune system coevolve with local pollen calendar and this new type of pollen becomes a problem.

About Canocarpus Trees:

- » There are two species of Canocarpus (buttonwood) trees, with several varieties of hybrids Canocarpus erectus, which is widely used in India (and is native to South America) and Canocarpus lacifolius is native to East Africa.
- » They are easily propagated and multiplied in nurseries through stem cuttings.
- » They have also been known to cause <u>pollen allergies and respiratory problems</u> in the vicinity of plantation.

– Why do urban green initiatives end up deploying them in the first place?

- » Since they are <u>non-native</u> species they face <u>very few or no pests or pathogens</u> in new habitats, which makes their proliferation easy. They often require very little aftercare.
- » Some species like <u>Canocarpus</u> are <u>not browsed by livestock</u> and are thus <u>favored for horticultural</u> and landscaping projects.

– What should be done?

» Landscape manager <u>should choose from amongst the native species pool</u>, species that are <u>ecologically appropriate and also meet aesthetic needs</u>.

» The import and use of horticultural plants need to be monitored by maintaining a watch list of plants that are known to harm native species and ecosystems and raise public health concerns.