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PATNA

NEARBY



CM orders action for poor quality Pongal kits

CHENNAI

Chief Minister M.K. Stalin on Friday asked officials to act against those responsible for the poor quality Pongal gift hampers, regarding which complaints had been received. Severe action would be taken against companies that supplied low-quality items, he said.

TAMIL NADU ▶ PAGE 2

Amar ANALYSIS with War Memorial flame: govt. soon invest in infra projects: Gadkari

Congress and some veterans oppose removal of tribute to 1971 Bangladesh war

DINAKAR PERI
NEW DELHI

The iconic Amar Jawan Jyoti, which was inaugurated after the 1971 Liberation War of Bangladesh by former Prime Minister Indira Gandhi, was removed on Friday, even as Prime Minister Narendra Modi announced the construction of a statue of Subhas Chandra Bose, restruct-



SEBI nod awaited, says Minister

THE HINDU BUREAU
MUMBAI

The Union government is awaiting approval of the Securities and Exchange Board of India (SEBI) for enabling common citizens to invest at least ₹1 lakh in infrastructure projects under a new model for asset mone-



Denied ticket, Utpal Parrikar quits BJP

SPECIAL CORRESPONDENT
PUNE

Utpal Parrikar, son of the late Manohar Parrikar, former Goa Chief Minister and BJP stalwart, resigned from the BJP on Friday and announced that he would contest as an Independent candidate from the Panaji constituency after the party top brass denied him ticket for the seat in the Goa Assembly election.

He told presspersons in Panaji that he had decided

The Hindu News Analysis – 22nd January 2022 – Shankar IAS Academy

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*C – Chennai; B – Bengaluru; D – Delhi; H – Hyderabad; T – Thiruvananthapuram

Researchers find anti-cancer activity in marine seagrass

Ethyl acetate fraction of *Halodule uninervis* has strong anti-cancer activity

S. VIJAY KUMAR
CHENNAI

Researchers have found scientific evidence of a strong anti-cancer activity in the ethyl acetate fraction of *Halodule uninervis*, a species of seagrass found in the coastal region of Mandapam close to Rameswaram in southern Tamil Nadu.



In traditional medicine, seagrass has been frequently used for therapeutic purposes like wound-healing. • SPECIAL ARRANGEMENT

The study, claimed to be the first of its kind, was aimed at evaluating the in-vitro anti-cancer activity of ethyl acetate fraction of this seagrass species against various human cancer cell lines, including malignant melanoma, lung, cervix, carcinoma and colorectal cancers.

The findings, which confirmed the anti-cancer activity in the chemically processed *Halodule uninervis*, which is abundantly available in the Gulf of Mannar, was published in the latest issue of *International Journal of Pharmaceutical Sciences and Drug Research*. The study was done by a team of researchers, comprising Perumal Parthasarathy and Arthanari Umamaheswari, of the Department of Biology and Plant Biotechnology, Presidency College, and Ravichandran Banupriya and Sanniyasi Elumalai of the Department of Biotechnology, University of Madras. Ac-

cording to Dr. Elumalai, cancer was the second largest cause of death globally. Going by World Health Organization (WHO) estimates, the deaths due to cancer were higher in developed countries than in developing countries. In 2050, the number of new cases was estimated to increase by 24 million and the number of cancer-related deaths by 17 million worldwide. While the options available for treatment included surgery, radiation therapy, immunotherapy and chemotherapy, these methods had severe side-effects. As much as 60% of the drugs used for cancer treatment were derived from natural products.

Quoting scientific data and evidence, Dr. Elumalai said marine natural products, including seagrass, micro- and macro-algae, sponges and corals, played a

major role in the discovery of novel biologically active compounds.

"Seagrass is one of the groups of marine angiosperms that often lives entirely submerged and are capable of completing their life cycle in a coastal environment. In traditional medicine, seagrass has frequently been used for a variety of therapeutic purposes such as wound-healing, fever, stomach aches, muscle pains and skin diseases. In addition, they have been used in biomedical applications such as anti-cancer, anti-diabetic, anti-inflammatory, anti-fungal, anti-bacterial and anti-viral activities," he said.

Halodule uninervis could generate phytoconstituents, including phenols, flavonoids, tannins, steroids and alkaloids, which are reported to possess promising biological applications, includ-

ing anti-bacterial and anti-diabetic activities.

Dr. Elumalai said the particular species of seagrass, collected from the Mandapam coastal region, was authenticated by the Botanical Survey of India's Southern Regional Centre, Coimbatore. The collected seagrass was washed well with running water and then by distilled water. It was allowed to be shade-dried and powdered in a grinder. The powder was then fractionated with ethyl acetate by gentle mixing on a shaker for 72 hours. The ethyl acetate fraction of *Halodule uninervis* was put through qualitative phytochemical screening, quantitative phytochemical analysis and in-vitro anti-cancer activity, besides other chemical processes.

"Our present study found that the seagrass contains a wide variety of secondary metabolites that hold a strong anti-cancer activity against the A549 cell line. Further, purification of the specific active phytoconstituents and preclinical studies need to be conducted for the discovery of anti-cancer drugs..." to treat lung cancer and reduced side effects," Dr. Elumalai said. The next step would be to study the impact on animals, followed by clinical trials.

Part A—Preliminary Examination

Paper I - (200 marks)

- General issues on Environmental ecology, Bio-diversity and Climate Change - that do not require subject specialization.

Part B—Main Examination

PAPER-IV

General Studies- III: Technology, Economic Development, Bio diversity, Environment, Security and Disaster Management

- Conservation, environmental pollution and degradation, environmental impact assessment.

Seagrass

- Underwater plants - evolved from land plants.
- Terrestrial plants - leaves, flowers, seeds, roots & connective tissues.
- Food - photosynthesis.
- Submarine pollination - water carried pollen fertilize female flowers or send out rhizome roots to sprout new growth.
- Difference - seagrasses & terrestrial plants
 - ✓ Seagrasses - no strong stems - supported by the water buoyancy.



- Seagrass ecosystem - widespread compared to coral & mangrove ecosystems.
- All coastal areas of the world except the polar regions.

- Indian seagrass habitats

- ✓ Mainly limited to mud flats and sandy regions.
- ✓ Extends from the lower inter tidal zone to a depth of 10-15 m.
- ✓ Open shores & in the lagoons around the islands.
- ✓ Gulf of Manner and Palk Bay harbour the maximum number of species followed by Andaman and Nicobar and Lakshadweep islands.



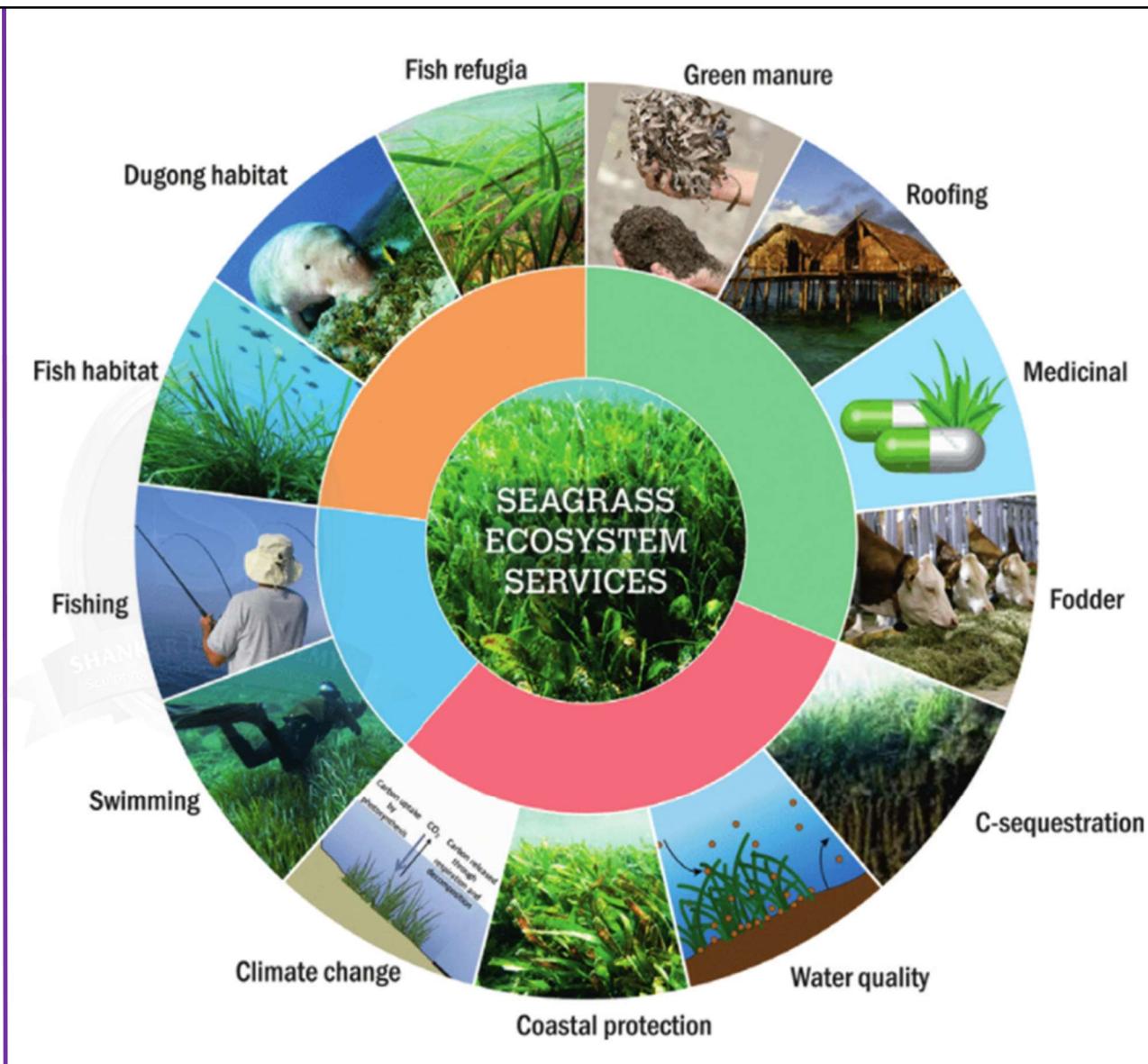
• Importance

- ✓ Help lessen the effects of strong ocean currents.
- Provide a place for eggs and larvae to attach - good nursery area for many fish and invertebrates
- ✓ Produce energy through photosynthesis - very sensitive to water quality.
- An indicator of the overall health of the coastal ecosystems.
- ✓ Provide food for herbivores - sea turtles, dugongs and manatees.
- Dead seagrasses provide food for decomposers - worms, sea cucumbers, crabs & filter feeders.

- ✓ Organisms - plankton, algae, and bacteria grow on the stems of these seagrasses.
- ✓ Improve water quality - trapping sediments, absorbing nutrients & stabilizing sediment with their roots - ecosystem engineers.
- ✓ Carbon sink - capacity to sequester carbon dioxide from the atmosphere.



- ✓ Warriors of ocean acidification – always cause an increase in pH.
- Withdrawal of CO₂ – photosynthesis.
- Protons of carbonic acid – removed.
- Presence reduces ocean's acidic nature.
- ✓ Preparation of medicines and chemicals.



• Major threats

- ✓ Sea-level rise - coastline modification.
- ✓ Global changes - atmospheric CO₂ & water temperature.
- ✓ Erosion, siltation & hydrologic modification - destruction of sand dunes & coastal zones.
- ✓ Eutrophication - excess nutrients or sewage discharge into coastal waters.
- ✓ Destructive fishing, coastal development - ports, navigation channels, ship building yards, anchoring of boats, etc.
- ✓ Increased growth of invasive species - seaweeds.

• India's initiatives

- ✓ Project - community-supported management and conservation strategies for seagrass beds in Palk Bay.
- ✓ Main objective
 - To economically evaluate seagrass.
 - To develop community-based management & conservation strategies
 - To optimise wise-use of seagrass beds.
- ✓ Conference on seagrass conservation - MoEFCC

Previous Year Question – Prelims 2021

- Q. Which one of the following is used in preparing a natural mosquito repellent
- (a) Congress grass
 - (b) Elephant grass
 - (c) Lemon grass
 - (d) Nut grass

Practice Question – Prelims

- Q. With reference to the seagrass species, consider the following statements:
- 1. It evolved from land plants.
 - 2. It is also called seaweeds.
 - 3. It acts as carbon sink.
 - 4. It is an indicator of the overall health of the coastal ecosystems.
 - 5. Its IUCN status is critically endangered

Which of the statements given above is/are incorrect?

- (a) 2 and 5 only
- (b) 2,3 ,4, 5 only
- (c) 1 and 2 only
- (d) 1 only

Practice Question – Mains

GS – III

Q. What is meant by seagrass bed? Write a note on the significance of the seagrass species.

(150 Words, 10 Marks)

Setting sail for a powerful India-German partnership

The Indo-Pacific, with India as its centrepiece, features prominently in Germany's foreign policy outreach



WALTER J. LINDNER

in autumn 2020 and the European Union's Indo-Pacific Strategy published last year. So why did we come up with such guidelines at this particular time?

Germany is determined to contribute to buttressing the rules-based international order at a time when it is exposed to grave challenges. For Europe, just like for India, it is vital that trade routes stay open, that freedom of navigation is upheld and that disputes are resolved peacefully on the basis of international law. India is a maritime powerhouse and a strong advocate for free and inclusive trade – and, therefore, a primary partner on that mission.

The challenges

The Indo-Pacific, with India as its centrepiece, looms large in Germany's and the European Union's foreign policy. Why? The Indo-Pacific region is home to around 65% of the global population and 20 of the world's 33 megacities. The region accounts for 62% of global GDP and 46% of the world's merchandise trade. On the other hand, it is also the source of more than half of all global carbon emissions. This makes the region's countries key partners in tackling global challenges such as climate change and sustainable energy production and consumption.

As much as India, Germany is a



trading nation. More than 20% of German trade is conducted in the Indo-Pacific neighbourhood. This is why Germany and India share a responsibility to maintain and support stability, prosperity and freedom in this part of the world. Europe's key interests are at stake when championing a free and open Indo-Pacific.

The *Bayern*'s seven-month journey in the region is coming full circle in India. Even before its first port call, the Indian Navy "greeted" the *Bayern* on the high seas and our troops undertook a joint passing exercise – a strong and warm Indian welcome for Germany to the region. After having visited Japan, Australia, Vietnam, Singapore and other countries in the region, Mumbai is the last station before the *Bayern* sets course to return to Germany. Our message is one of cooperation and inclusiveness.

But inclusiveness does not mean blind equidistance. We will not stand by when the multilateral order is challenged and when attempts are made to try to place the law of power over the power of law. The *Bayern* participated in the North Atlantic Treaty Organization (NATO) and European Union missions Sea Guardian in the Mediterranean Sea and Operation ATALANTA – formally European Union Naval Force (EU NAVFOR) Somalia – in the Arabian Sea. On her way from Tokyo to Busan, she helped monitor United Nations sanctions against the Democratic People's Republic of Korea.

A chance for coordination

After 16 years of Angela Merkel's chancellorship, Olaf Scholz took the helm of the German government in December 2021. During their inaugural conversation, Prime Minister Narendra Modi and he agreed that as major democracies and strategic partners, India and Germany will step up their cooperation to tackle common challenges, with climate change on top of the agenda.

No global problem can be solved without India's active involvement. This year, Germany will hold the G7 Presidency, and from December 2022, India will assume the same role for the G20. This is an opportunity for joint and coor-

dinated action.

I am particularly confident about one aspect of our relations: Germany cooperates with India to the tune of €1.3 billion a year in development projects, 90% of which serves the purpose of fighting climate change, saving natural resources as well as promoting clean and green energy. No country receives more such support from Germany than India. What world leaders agreed upon at COP26 in Glasgow, Germany and India are putting into practice. Together we work on a sustainable path for India's growth that will benefit both our countries. For example, we have been supporting the construction of a huge solar plant in Maharashtra's Dhule (Sakri). With a capacity of 125 Megawatt, it serves 2,20,000 households and generates annual CO₂ savings of 155,000 tons.

As India celebrates 75 years of independence, this visit sends a signal of friendship and cooperation. We are setting sail for a powerful partnership, in calm waters and heavy seas alike. And hopefully, we will exceed your expectations, every once in a while.

Walter J. Lindner is the Ambassador of The Federal Republic of Germany to India. Prior to this, he was Germany's Foreign Secretary as well as Ambassador to South Africa, Kenya, and Venezuela

Pg: 8 - C, B;

Pg: 6 - D, H, T.

Part A—Preliminary Examination

Paper I - (200 marks)

- Current events of national and international importance.

Part B—Main Examination

PAPER-III

General Studies - II: Governance, Constitution, Polity, Social Justice and International relations.

- India and its neighborhood- relations.
- Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests



Image source : <https://www.defensenews.com/>

Indo - German Relation

- Common democratic principles.
- High degree of trust and mutual respect.
- India amongst the first countries to establish diplomatic ties with Germany after the WW2.

Steps taken so far

- Strategic Partnership since 2001.
- Inter-Governmental Consultations (IGC) at the level of Head of Governments.
 - ✓ Artificial Intelligence
 - ✓ Space
 - ✓ Smart Cities
 - ✓ Urban Green Mobility etc.

- Economic & Commercial Relations.
- Germany - India's largest trading partner in Europe.
- 8th largest trading partner in FY 2019-20.
- Germany - 7th largest FDI source for India.
- More than 1,700 German companies in India.
- German investments in India
 - ✓ Transportation
 - ✓ Electrical equipment
 - ✓ Metallurgical industries
 - ✓ Services sector (particularly insurance)
 - ✓ Construction activity
 - ✓ Trading and automobiles.

Steps taken so far

• Science & Technology

- ✓ More than 150 joint S&T research projects
- ✓ ISRO has launched 11 German satellites since 1999.

• Multilateral Cooperation

- ✓ Supports each other - UNSC expansion within framework of G-4.
- ✓ Germany as chair of NSG - India-specific waiver enable civil nuclear cooperation with India.
- ✓ Germany supports India's candidature for Export Control Regimes
 - Wassenaar Arrangement
 - Australia Group.

✓ Germany voted in favour of Pakistan's inclusion in the Grey List of FATF.

✓ Germany joined the Coalition for Disaster Resilient Infrastructure (CDRI).

✓ Germany joined ISA.

• Indian Diaspora.

✓ Around 1.90 lakh (June 2020) Indian passport holders and Indian-origin people in Germany.

✓ The Indian diaspora mainly consists

- Businessmen/traders
- Nurses and students
- IT professionals
- Banking, finance, etc.

Indo-Pacific Region

- World's political and economic centre of gravity is shifting to the Indo-Pacific region.
- Germany considers India as a key player, strategic partner and long-standing democratic friend.
- India - maritime powerhouse and a strong advocate for free and inclusive trade.
- Indo-Pacific region
 - ✓ 65% of the global population
 - ✓ 62% of global GDP
 - ✓ 46% of the world's merchandise trade.



Image source: <https://www.spmrf.org/>

Significance for India

- Heart of India's economic ties - Indian Ocean.
- Indian Ocean - almost 20 percent of the world's ocean area, touching the shores of 36 countries and connecting three continents.
- Total coastline area of 66,526 km or 40 percent of the global coastline.
- 90,000 commercial shipping vessels form the backbone of international goods trade.
- 40 percent of the world's oil supply travels through strategic choke points into and out of the Indian Ocean.
- East Asia and the Pacific outperforms South Asia, West Asia and Africa.

Significance for Germany

- More than 20% of German trade is conducted in the Indo-Pacific neighbourhood.
- Millions of jobs in Germany depend on these trade and investment relations.
- Security and stability of Indo-Pacific is crucial for both India and Germany.

Way Forward

- Infrastructure
 - ✓ Jointly pursue routes to closer EU-India connectivity.
 - ✓ Clean energy projects.
- 5G
- Pharmaceuticals
- Climate change
 - ✓ Germany - €1.3 billion.
 - ✓ 90% of it serves the purpose of fighting climate change, saving natural resources as well as promoting clean and green energy.

Practice Question – Mains GS-II

Q. Indo – Pacific Region has assumed great geopolitical significance in the present context. Analyse the statement in the light of Indo- German relations.

(250 Words, 15 Marks)

Leave app rolled out for police

Chief Minister unveils the app aimed at making the system more efficient

SPECIAL CORRESPONDENT

CHENNAI

A new android app has been launched for Greater Chennai police personnel to apply for leave and to get it sanctioned immediately.

Chief Minister M.K. Stalin unveiled the app on Friday. Additional Chief Secretary (Home) S.K. Prabakar, Director-General of Police C. Sylendra Babu and Commissioner of Police Shankar Jiwal were present.

Called CLAPP (Complete Leave APP), the app has been designed to eradicate delays, summary rejections or favouritism by the sanctioning authority and is aimed at ensuring transparency in the leave process. The Armed Reserve units of the Greater



New system: Chief Minister M.K. Stalin launching CLAPP for Greater Chennai Police on Friday. ■ SPECIAL ARRANGEMENT

Chennai Police have the largest contingent of 5,800 personnel.

Earlier, personnel from constable up to the rank of special sub-inspector (SSI) had to meet their reporting officers concerned amidst their hectic workload for approval of leave. After getting

the approval, they had to enter it in their dairies in the Armed Reserve Police unit office. CLAPP is aimed at simplifying this procedure.

Mr. Jiwal said: "Now these personnel need not physically wait for any paperwork. By downloading and clicking on CLAPP, the personnel can get

their leave sanctioned without any hassle from the place where they are. As of now, AR police personnel – both women and men from the rank of constable up to special sub-inspector – can start using the app from today. The back-end data is ready. They have to just download the app and can apply for casual leave, earned leave and medical leave, online."

The sanctioning authority must respond within three hours. If there is delay of more than three hours, it will be escalated to the officer above the sanctioning authority.

For those who do not have the internet, they can use advanced CLAPP V2 and apply by sending an SMS.

Part A—Preliminary Examination

Paper I - (200 marks)

- Current events of national and international importance.

Part B—Main Examination

PAPER-III

General Studies - II: Governance, Constitution, Polity, Social Justice and International relations.

- Government policies and interventions for development in various sectors and issues arising out of their design and implementation.
- Important aspects of governance, transparency and accountability, e-governance applications, models, successes, limitations, and potential; citizens charters, transparency & accountability and institutional and other measures.

Issues in the service

1. Overburdened force and vacancies.

a) India - low police strength per lakh population in comparison to international standards.

- Massive burden and extended working hours
- Affects efficiency and performance.

b) Vacancies adds to the burden

- Causes psychological distress.
- Contributes to case pendency.

2. Lack of proper Infrastructure -

a) Weapons - Obsolete.

b) Purchase process - lengthy

c) Impact - police's response time and as a result their effectiveness.

d) Underutilization of modernization money.

3. Relationship between police and the public

- ✓ Effective policing requires a strong focus on police-public relations.
- ✓ People view the police - inefficient, corrupt, and violent.
- ✓ Public mistrust towards police

Recommendations: Padmanabhaiah Committee on Police Reforms - Ministry of Home Affairs - January 2000.

1. Increase number of Sub-Inspectors instead of Constables.
2. Existing constabulary should be retrained to enable them to imbibe right attitudes to work.
3. Every police station should have "investigation kits," and every subdivision should have a mobile forensic science laboratory.

Malimath Committee

- Examining the fundamental principles of criminal law to restore confidence in the criminal justice system.

1. Borrowing features from the other system of investigation.

➤ A judicial magistrate supervises the investigation.

2. Right to silence - modification to Article 20 (3) of the Constitution that protects the accused from being compelled to be a witness against himself/herself.

3. Rights of the accused:

Criminal code should be published in all regional languages - accused is aware of his or her rights.

4. Improve investigation:

- Separate investigation and Law and Order.
- National Security Commission and State Security Commission.
- Police Establishment Board.
- Police custody limit extended.

Directions of the Supreme Court in Prakash Singh vs Union of India, Model Police Act, 2006:

- (i) Constitute a State Security Commission on any of the models recommended by the National Human Right Commission, the Reberio Committee or the Sorabjee Committee.
- (ii) Select the Director General of Police of the State from amongst three senior-most officers of the Department empanelled for promotion to that rank by the Union Public Service Commission and once selected, provide him a minimum tenure of at least two years irrespective of his date of superannuation.
- (iii) Prescribe minimum tenure of two years to the police officers on operational duties.
- (iv) Separate investigating police from law & order police, starting with towns/ urban areas having population of ten lakhs or more, and gradually extend to smaller towns/urban areas also,
- (v) Set up a Police Establishment Board at the state level for inter alia deciding all transfers, postings, promotions and other service related matters of officers of and below the rank of Deputy Superintendent of Police, and
- (vi) Constitute Police Complaints Authorities at the State and District level for looking into complaints against police officers.
- (vii) The Supreme Court also directed the Central Government to set up a National Security Commission at the Union Level to prepare a panel for being placed before the appropriate Appointing Authority, for selection and placement of Chiefs of the Central Police Organisations (CPOs), who should also be given a minimum tenure of two years, with additional mandate to review from time to time measures to upgrade the effectiveness of these forces, improve the service conditions of its personnel, ensure that there is proper coordination between them and that the forces are generally utilized for the purposes they were raised and make recommendations in that behalf.

Practice Question – Mains

GS-III

Q. What are issues faced by the police personnel in India. Mention the steps taken by the government. Suggest some measures to improve the working condition of police personnel.

(250 Words, 15 Marks)

Missions can popularise NSWS: Goyal

SPECIAL CORRESPONDENT
NEW DELHI

The National Single Window System (NSWS) should be taken to the Indian diplomatic missions across the world, said Commerce and Industry Minister Piyush Goyal.

The digital platform of NSWS assists investors 'to identify and apply for approvals,' according to a government press note.

The renewed focus on the NSWS comes days after the digital platform granted its first approval to a vehicle scrappage facility in Gujarat which has the capacity to process 67,000 vehicles. This particular project was processed under NSWS in 63 days. Mr. Goyal also suggested that greater awareness should be created about the NSWS through presentations before large corporations.

Pg: 14 - C, B;

Pg: 12 - D, H, T.

National Single Window System (NSWS)

- Digital platform.
- Guide the investors to identify and to apply for approvals Advisory tool.
- Guidance purpose only.
- Brings together several State Governments, Central Ministries, and Departments.
- One-stop solution to investors.
- Invest India manages NSWS.

Significance

- Single platform - identify and obtain approvals and clearances.
- One-stop-shop for investors for approvals & clearances.
- All the solutions - at one click of the mouse - 'End to End' facilitation.
- Ease of doing business.
- Transparency, Accountability & Responsiveness in the ecosystem.
- Provide strength to other important schemes - Make in India, Startup India, PLI scheme etc.

Know Your Approvals (KYA)

- Connects 32 Central Departments and 14 States.
- Intelligent questionnaire to capture information
- Approvals indicated is based on user input
- Guidance purpose only
- Does not constitute any legal advice.

No	Objective	No	Services
1	To establish a single-window mechanism by integrating the services provided by various Central Ministries, Departments, and State Governments	1	Identification of requisite pre-establishment and pre-operation approvals/ registrations for setting up a business unit in India
2	To provide a one-stop-shop for procuring pre-establishment and pre-operation approvals and permits required to establish a business in India	2	Application of suggested approval/ registration
3	To provide efficient, convenient, transparent, and integrated electronic service to investors, industries, and businesses	3	Digital repository for storing documents related to approvals/ registration
4	To provide a uniform and seamless experience to the business user.	4	Payment of processing fees to issue any approval/ registration
		5	Post application, tracking and status update on applications submitted

Practise Question – Prelims

- Q. With reference to the National Single Window System (NSWS), which of the following is incorrect
- (a) Invest India manages the National Single Window System project
 - (b) NSWS offers a one-stop solution for investors for approvals
 - (c) NSWS will provide strength to other schemes like Make in India, Startup India and PLI scheme.
 - (d) It shall be used for guidance purpose and also constitutes legal advice.

Two States plan to revive Saraswati

SPECIAL CORRESPONDENT
CHANDIGARH

In an attempt to revive the Saraswati river, the Haryana and Himachal Pradesh governments on Friday signed a Memorandum of Understanding (MoU) for the construction of a dam in Himachal Pradesh on 77 acres, near the Adi Badri area of Haryana's Yamuna Nagar district.

The MoU was signed in the presence of Himachal Pradesh Chief Minister Jai Ram Thakur and his Haryana counterpart Manohar Lal for the rejuvenation of the Saraswati river at an estimated cost of ₹215.35 crore. Mr. Thakur said the dam would also help in water conservation in the region.

Pg: 10 - C, B;
Pg: 5 - D;
Pg: 8 - H, T.

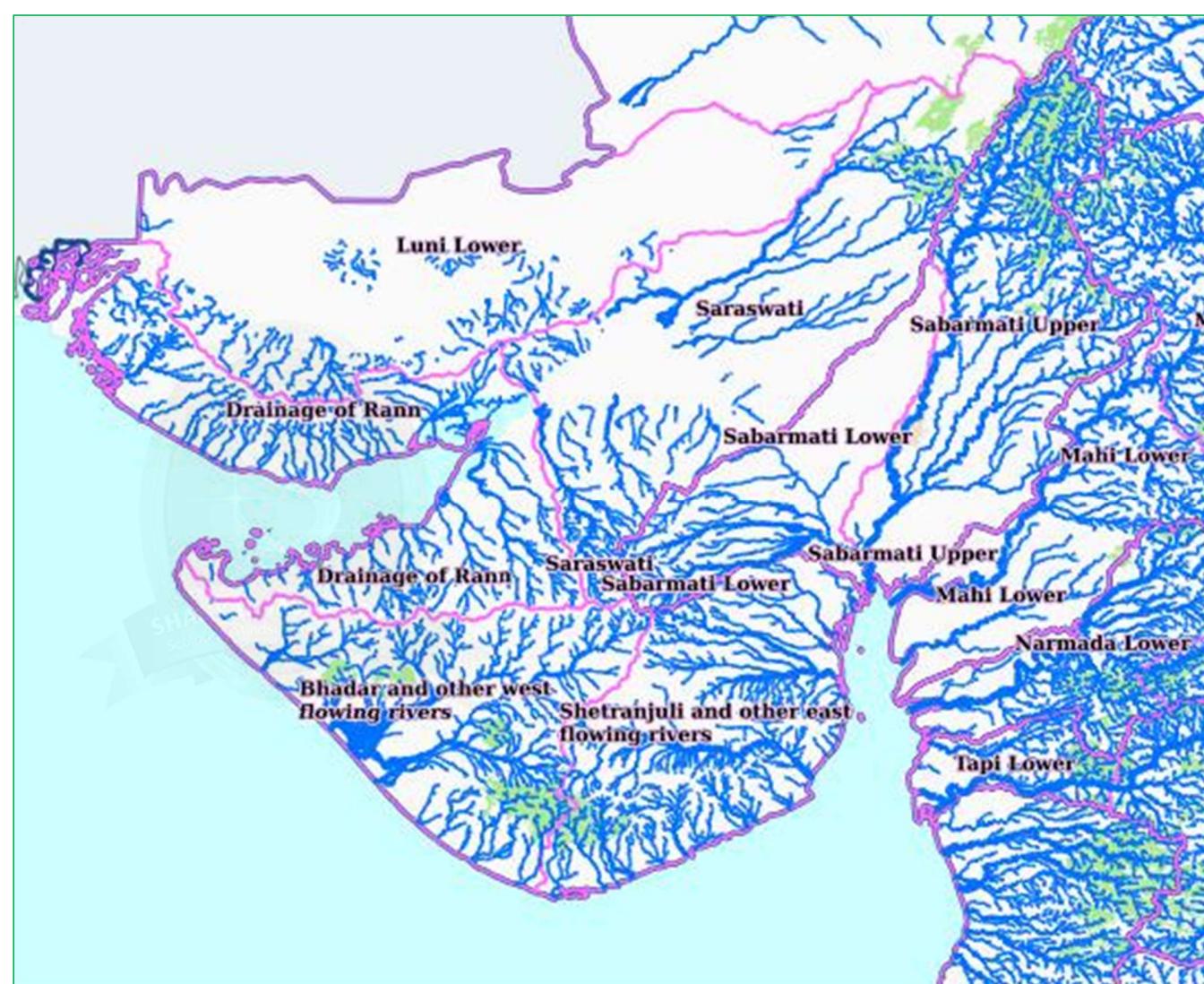


Image source: <https://bhuvan-app1.nrsc.gov.in/>

River Saraswathi

- Location

- ✓ Originate - Kapal tirith in the Himalayas in the west of Kailash.
- ✓ Flowing - southward to Mansarovar.
- ✓ Flowed - Haryana, Rajasthan and North Gujarat.
- ✓ Flowed through Pakistan before meeting Western Sea through Rann of Kutch.
- Disappeared - around 5000 Before Present due to climatic and tectonic changes.



THE SARASWATI MYSTERY

Punjab

Chandigarh

Where did Saraswati river originate from?

It originated from Har-ki-Dun (Valley of Gods) glacier in Garhwal (Uttarakhand).

Bhagwanpura

Banwali

How large was the river when it flowed?

Jhukar

Kalibangan

According to experts who have studied the map of all relevant underground channels, Saraswati was probably 1500 km long, 3-15 km wide and five metres deep.

Mohenjo-daro

Ganweriwala

When did it die out and why?

Chanhudaro

Jaisalmer

Researchers say the mighty river dried up roughly 4000 years ago due to tectonic shifts of the earth. Due to these shifts, supply to the river was cut off and the remaining waters seeped down below the earth from the fissures.

Balakot

Rann of Kutch

How did experts conclude that the water and soil beneath the earth that they researched belonged to the Saraswati river?

Chittodharo

Dholavira

The study was done on elements that were on the track the river is said to have taken when in full flow. Some of the water in parts of Rajasthan was found to be as old as 8000 years; the 'youngest' element was 2500 years old!

Nageshwar

Rangpur

What States did the river cover in its journey?

Rajasthan

Surkotada

It flowed across Uttarakhand, Haryana, Punjab and Rajasthan before emptying itself into the Arabian Sea at Rann of Kutch in Gujarat

Lothal

Gujarati

How did it reach Allahabad, which is said to be a confluence of rivers Ganga, Yamuna and Saraswati?

Gujarat

Rajputana

Experts say the river never flowed independently in Allahabad, but parts of it united with Yamuna which met the Ganga there. That is how all the three are said to have met.

Rojd

Malwa

Nadir

Practice Question – Prelims

Q. Consider the following statements:

1. The Saraswati is a major Rig Vedic river mentioned in the Rig Veda and other Vedic texts.
2. It is part of the Sapta Sindhu rivers mentioned in the Rig Veda.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

PRACTICE QUESTIONS DISCUSSION

Practice Question – Prelims

Q. With reference to the seagrass species, consider the following statements:

1. It evolved from land plants.
2. It is also called seaweeds.
3. It acts as carbon sink.
4. It is an indicator of the overall health of the coastal ecosystems.
5. Its IUCN status is critically endangered

Which of the statements given above is/are incorrect?

- (a) 2 and 5 only
- (b) 2,3 ,4, 5 only
- (c) 1 and 2 only
- (d) 1 only

Previous Year Question – Prelims 2021

Q. Which one of the following is used in preparing a natural mosquito repellent

- (a) Congress grass
- (b) Elephant grass
- (c) Lemon grass
- (d) Nut grass

Practise Question – Prelims

- Q. With reference to the National Single Window System (NSWS), which of the following is incorrect
- (a) Invest India manages the National Single Window System project
 - (b) NSWS offers a one-stop solution for investors for approvals
 - (c) NSWS will provide strength to other schemes like Make in India, Startup India and PLI scheme.
 - (d) It shall be used for guidance purpose and also constitutes legal advice.

Practice Question – Prelims

Q. Consider the following statements:

1. The Saraswati is a major Rig Vedic river mentioned in the Rig Veda and other Vedic texts.
2. It is part of the Sapta Sindhu rivers mentioned in the Rig Veda.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Practice Question – Prelims

Answers

- Q1.** Option (a) - 2 and 5 only
- Q2.** Option (c) - Lemon grass
- Q3.** Option (d) - It shall be used for guidance purpose and also constitutes legal advice.
- Q4.** Option (c) - Both 1 and 2

Practice Question – Mains

GS – III

Q. What is meant by seagrass bed? Write a note on the significance of the seagrass species.

(150 Words, 10 Marks)

Practice Question – Mains

GS-III

Q. What are issues faced by the police personnel in India. Mention the steps taken by the government. Suggest some measures to improve the working condition of police personnel.

(250 Words, 15 Marks)

Practice Question – Mains

GS-II

Q. Indo – Pacific Region has assumed great geopolitical significance in the present context. Analyse the statement in the light of Indo-German relations.

(250 Words, 15 Marks)