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Daily News Discussion (DND)

15th-16th July 2021

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Note -

- The Newspaper clippings pasted in PDF are important from Mains point of view as it contains the fodder material for Mains Answer Writing.
- Also watch DND video lectures everyday @ 4 PM on Sleepy's YouTube channel in order to understand how to get the most out of everyday's Newspaper .

Click [here](#) to watch the following topics on YouTube

1. Environment

1.1. Detergent footprint

- Contamination and pollution of water become serious problems today

Key points

- The per capita detergent consumption in India is around 2.7 kilogram per year.
- It is around 3.7 kg in Philippines and Malaysia and 10 kg in the United States of America.

Impact of detergent

Nonylphenol, a hazardous chemical

- ✓ It is present in detergents, is known to enter water bodies and the food chains.
- ✓ It **bio-accumulates** and can pose serious environmental and health risks.
- ✓ It has been detected in **human breast milk, blood and urine**, and is associated with reproductive and developmental effects in rodents
- The Bureau of Indian Statistics (BIS) has set the standard of phenolic compounds in drinking water {0.001 milligram per litre (mg/L)} and surface water (5.0 mg/L). The detergents contain suspected carcinogens, and ingredients that do not fully biodegrade

Phosphate salts

- Many laundry detergents contain approximately **35 to 75 per cent phosphate salts**.
- Phosphates can cause a variety of water pollution problems. For example, phosphate tends to **inhibit the biodegradation of organic substances**.
- Non-biodegradable substances cannot be eliminated by public or private wastewater treatment
- Some phosphate-based detergents can also cause **eutrophication**.
- Phosphate-enrichment can cause the **water body to become choked** with algae and other plants.
- Eutrophication **deprives the water of available oxygen**, causing the death of other organisms.
- In **Belgium**, phosphates are restricted for use in household detergents since 2003.

Other

- Detergents are capable of **destroying the external mucus layers** that protect the fish from bacteria and parasites, causing severe damage to the gills.
- Mostly **fish die when detergent concentrations are near 15 parts per million (ppm)**; however, detergent concentrations as low as 5 ppm will kill fish eggs
- **Turbidity** also clogs the respiratory system of some species of fishes.
- Detergents also contain **oxygen-reducing substances** (ie, a chemical compound that readily transfer oxygen atoms) that may cause **severe damage to the fishes and other marine animals**.

Standards

- The **Bureau of Indian Statistics (BIS)** has set the standard of phenolic compounds in drinking water {0.001 milligram per litre (mg/L)} and surface water (5.0 mg/L).
- The detergents contain **suspected carcinogens**, and ingredients that do not fully biodegrade

1.2.NTPC Initiative

NTPC (National Thermal Power Corporation Limited) Initiatives		
About NTPC	<ul style="list-style-type: none"> • PSU under Min of power • NTPC REL is a 100% subsidiary of NTPC 	
Initiatives of NTPC REL	India's largest solar park	<ul style="list-style-type: none"> • Will set up a 4.75 gigawatt (GW) renewable energy park at Rann of Kutch in Khavada, Gujarat.
	Green Hydrogen Mobility Project	<ul style="list-style-type: none"> • Setting up a solar plant and a green hydrogen generation unit in Leh • Plan-5 Hydrogen buses • Leh-1st city in India to implement a green hydrogen based mobility project
	India's largest Floating Solar	<ul style="list-style-type: none"> • 10 MW on the reservoir of Simhadri Thermal Power Plant (An P)

1.3.Global Biodiversity Framework

- The United Nations Convention on Biological Diversity (CBD) has demanded an **additional \$200 billion fund** flow to developing countries from various sources to manage nature through 2030.
- It is one of many demands and targets that have been **set through 2030** in the just-released official draft of a new Global Biodiversity Framework.
- This new framework will be the global guiding force to protect nature and to retain its **essential services for humans from 2020 to 2030**.
- **The new frameworks have four goals to achieve by 2050**
- **First**, to halt the extinction and decline of biodiversity with “the rate of extinctions has been reduced at least **tenfold** and the **risk of species extinctions** across all taxonomic and functional groups is **halved** and **genetic diversity** of wild and domesticated species is safeguarded, with at least **90 per cent of genetic diversity within all species maintained**.”
- **The second goal** is to enhance and retain nature’s services to humans by conserving.
- **The third goal** is to ensure fair and equitable benefits to all from use of genetic resources.
- **The fourth goal** aims to close “the gap between available financial and other means of implementation and those necessary to achieve the 2050 Vision”.

2030 Action Targets

IAS reduction

- Aims at 50% greater reduction in the rate of introduction of invasive alien species

Increase protected areas

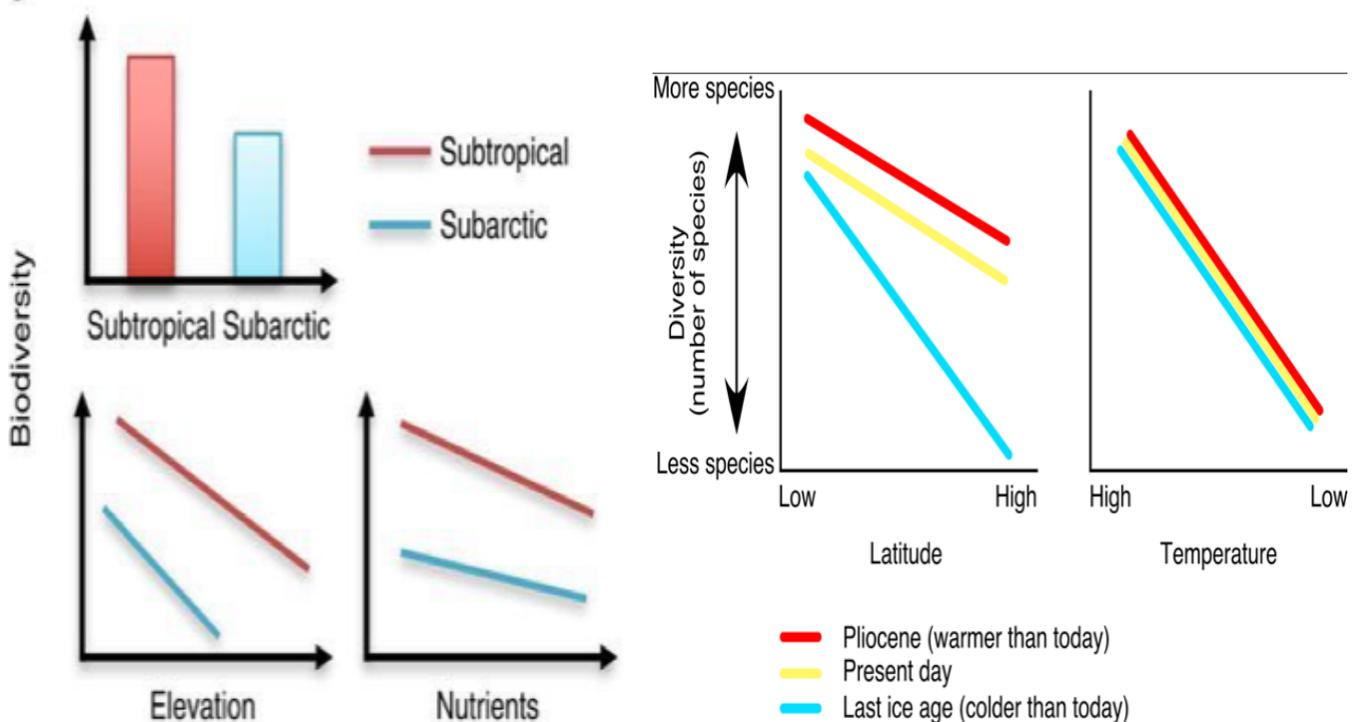
- To bring at least 30% of land and sea under the world's protected areas.

Decrease nutrient loss

- Reducing nutrients lost to the environment by at least half
- Pesticides by at least two thirds
- Eliminating the discharge of plastic waste.
- Climate change mitigation
- Nature-based contributions to global climate change mitigation efforts of at least 10 GtCO₂e (gigatonnes of equivalent carbon dioxide) per year
- Related topics for revision

Factors affecting Biodiversity

- CBD
- Cartagena Protocol
- Nagoaya Protocol
- Aichi Biodiversity targets



1.4. Fit for 55

- The European Commission's plan, "Fit for 55," calls for its 27 member states to cut their output of greenhouse gases by 55% by 2030, compared with 1990 levels

Road map

- Cars with internal combustion engines will **disappear from European showrooms by 2035**.
- Steel producers and cement makers will **pay for every ton of carbon** dioxide their factories emit.
- Cargo ships may **not be able to dock in ports** like Rotterdam, Netherlands, or Hamburg, Germany, **unless they run on cleaner fuels**.
- **Commercial airliners** will be required to fill up with synthetic fuel produced with green energy.

Challenges

- Raising the cost of a wide variety of goods and services, like video monitors imported from China
- Proposals could reshape polluting industries like **steelmaking**, which directly **employs 330,000 people** in the European Union.
- Most **automakers** have announced plans to shift to electric vehicles, but many have **resisted putting an expiration date on the fossil-fuel** powered vehicles, which still generate the most profits
- **Aircraft are major producers of carbon dioxide** emissions but also difficult to convert to emission-free operation.
- The deal singles out companies that **ship cargo** by water, making them **pay more for the emissions** they generate to encourage their transition to cleaner energy. Most ships plying the seas today run on **low-grade oil and are major polluters**
- **Steelmakers** have warned that the proposals could further **erode their competitive advantage over producers in China** and discourage the investment needed to shift to lower emissions
- **Renewables already account for 20%** of the electricity produced in Europe. The goal is to raise the figure to **40% by 2030**

Benefits

- Put Europe at the **forefront of new technologies** like electric car batteries, offshore wind generation or aircraft engines that run on hydrogen.
- The commission's plan also includes some provisions that **benefit the industry**.
- **Public funds will be used to help build charging stations** every 60 kilometers, or 36 miles, on major highways, a move that will encourage sales of electric cars
- Climate change
- Health benefits
- Decrease climate refugee

2. Science & Technology

2.1. UV-C technology

- Union Minister of State for Science and Technology has said that
- Ultraviolet-C or UV-C Disinfection Technology will soon be installed in Parliament for the “mitigation of airborne transmission of SARS-COV-2

UV-C technology

- The UV-C air duct disinfection system was developed by **CSIR-CSIO** (Central Scientific Instruments Organisation)
- The system is designed **to fit into any existing air-ducts** and the virucidal dosages using UV-C intensity and residence time can be optimised according to the existing space.
- The **virus is deactivated** in any aerosol particles by the calibrated levels of UV-C light.
- It can be used in **auditoriums, malls, educational Institutions, AC buses, and in railways.**

What is UV?

- Ultraviolet (UV) is a type of light or radiation naturally emitted by the Sun. It covers a wavelength range of 100-400 nm.
- The human visible light ranges from 380–700 nm.
- UV is divided into three bands: **UV-C (100-280 nm), UV-B (280-315 nm) and UV-A (315-400 nm).**

UV-A/B/C

- UV-A and UV-B rays from the Sun are transmitted through our atmosphere and all **UV-C is filtered by the ozone layer.**
- **UV-A rays** can penetrate the middle layer of your skin or the dermis and can cause aging of skin cells and indirect damage to cells' DNA
- **UV-B rays** can only reach the outer layer of our skin or epidermis and can cause sunburns and are also associated with skin cancer.
- **UV-C** radiation from man-made sources has been known to cause skin burns and eye injuries.

Can UV-C kill coronavirus ?

- **UV-C radiation** (wavelength around 254 nm) has been **used for decades to disinfect the air** in hospitals, laboratories, and also in water treatment.
- But these conventional germicidal treatments are done in unoccupied rooms as they can **cause health problems.**
- **A paper published in June 2020** in Scientific Reports noted that UV-C radiation can destroy the outer protein coating of the SARS-Coronavirus

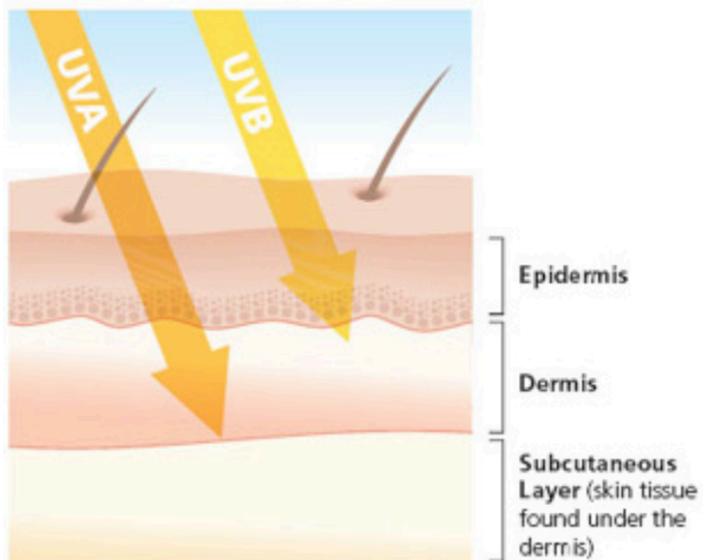
Harmful effects

- Researchers from the Indian Institute of Technology-Kanpur, who developed a portable disinfectant device that used **UV-C radiation (222-254 nm)**, noted that the device was specifically **developed to disinfect non-living things**.
- UV-C radiation used in this device **could be harmful to the skin and eyes of the living beings**, therefore the operator of the device must use spectacles with UV-C radiation protection and use this device safely
- It can take **hours to get sunburn from UV-B**, but with UV-C it takes seconds

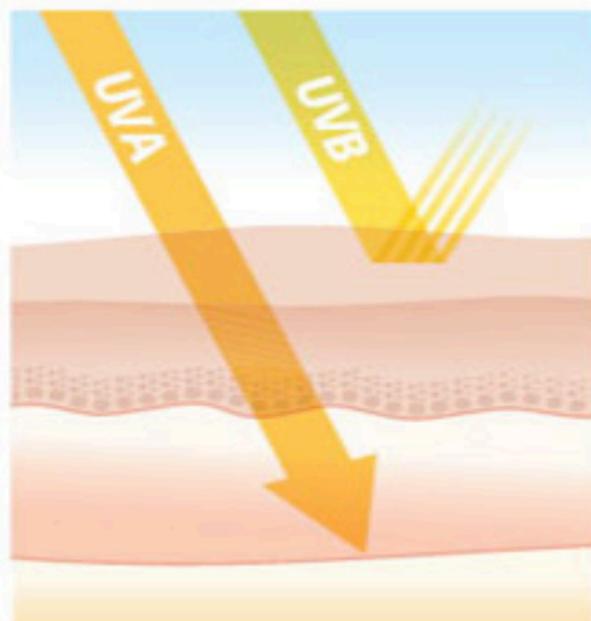
Not harmful

- The release from our Ministry of Science and Technology does not state the wavelength or duration used, but mentioned that the **product was tested for more than 99% disinfection**.
- Few studies have shown that **far-UVC light (207–222 nm)** does not harm mammalian skin.
- Far-UVC light has a very limited range and **cannot penetrate through the outer dead-cell layer of human skin or the tear layer in the eye**, so it's not a human health hazard.
- But because **viruses and bacteria are much smaller than human cells**, far-UVC light can reach their DNA and kill them

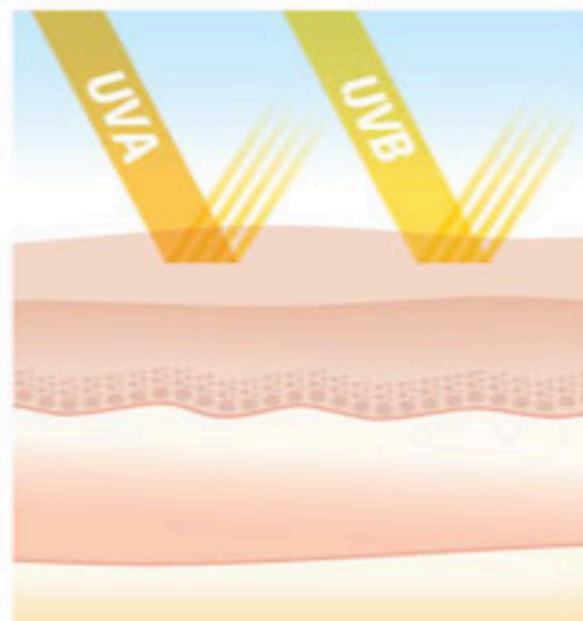
UV Radiation and the Skin



UVB-Screening Sunscreen



Broad-Spectrum Sunscreen



2.2.National AYUSH Mission

- Cabinet approves continuation of centrally sponsored scheme National AYUSH Mission till 2026

National Ayush mission		
About		• Launched 2014 (Dept of Ayush/ MHFW)-----Now Min of Ayush
Aim		• Promote Holistic health through AYUSH (Ayurveda, Yoga, Naturopathy, Unani, Siddha, Sowa-Rigpa and Homoeopathy)
Components	Obligatory	• AYUSH services + AYUSH edu institutes + Medicinal plants +Quality Control of ASU&H (Ayurveda, Siddha and Unani & Homoeopathy) Drugs
	Flexible	• PPP + Wellness centres +IEC (Information, Education and Communication) + Voluntary certification + Tele-medicine

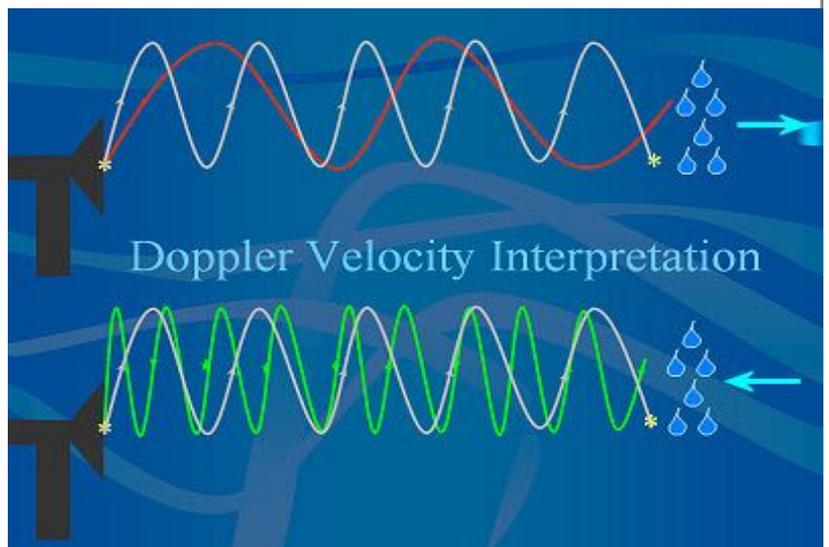
3. Geography

3.1. How Doppler radars help track and forecast weather

- The India Meteorological Department's (IMD) only Doppler radar in Mumbai, which surveys weather patterns and forecast, stopped working recently
- On May 17, a day before Cyclone Tauktae brushed past the city's coastline, the **Doppler Radar had become defunct**

Radar system

- In radars, a **beam of energy**– called **radio waves**– is emitted from an antenna.
- When this beam **strikes an object in the atmosphere**, the energy scatters in all directions, with some reflecting directly back to the radar.
- The **larger the object deflecting the beam**, the **greater is the amount of energy that the radar receives in return**
- It can provide information on both the position of targets as well as their movement.
- It does this by tracking the 'phase' of transmitted radio wave pulses; phase meaning the shape, position, and form of those pulses.
- As computers measure the **shift in phase** between the original pulse and the received echo, the movement of raindrops can be calculated, and it is possible to tell whether the precipitation is moving toward or away from the radar.



Why are they called 'Doppler' radars?

- The phase shift in these radars works on the same lines as the "Doppler effect" observed in sound waves– in which the sound pitch of an object approaching the observer is higher due to compression of sound waves (a change in their phase).
- The India Meteorological Department (IMD) will install seven new doppler radars in Maharashtra, including Mumbai, this year

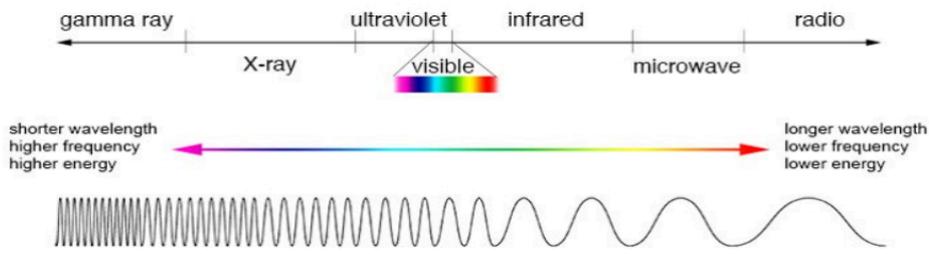


Radar system	
RADAR	<ul style="list-style-type: none"> • Beam of energy, called radio waves, is emitted from an antenna. As they strike objects in the atmosphere, the energy is scattered in all directions with some of the energy reflected directly back to the radar.
Doppler radar	<ul style="list-style-type: none"> • specialized radar that uses the Doppler effect • Doppler effect-effect produced by a moving source of waves in which there is an apparent upward shift in frequency for observers towards whom the source is approaching and an apparent downward shift in frequency for observers from whom the source is receding.
Weather radar principle	<ul style="list-style-type: none"> • Weather detection is based on the reflectivity of water droplets • The weather radar echo returns vary in intensity as a function of the droplet size, composition and quantity. • Measure rainfall intensity, wind shear and velocity and locate a storm centre and the direction of a tornado or gust front.

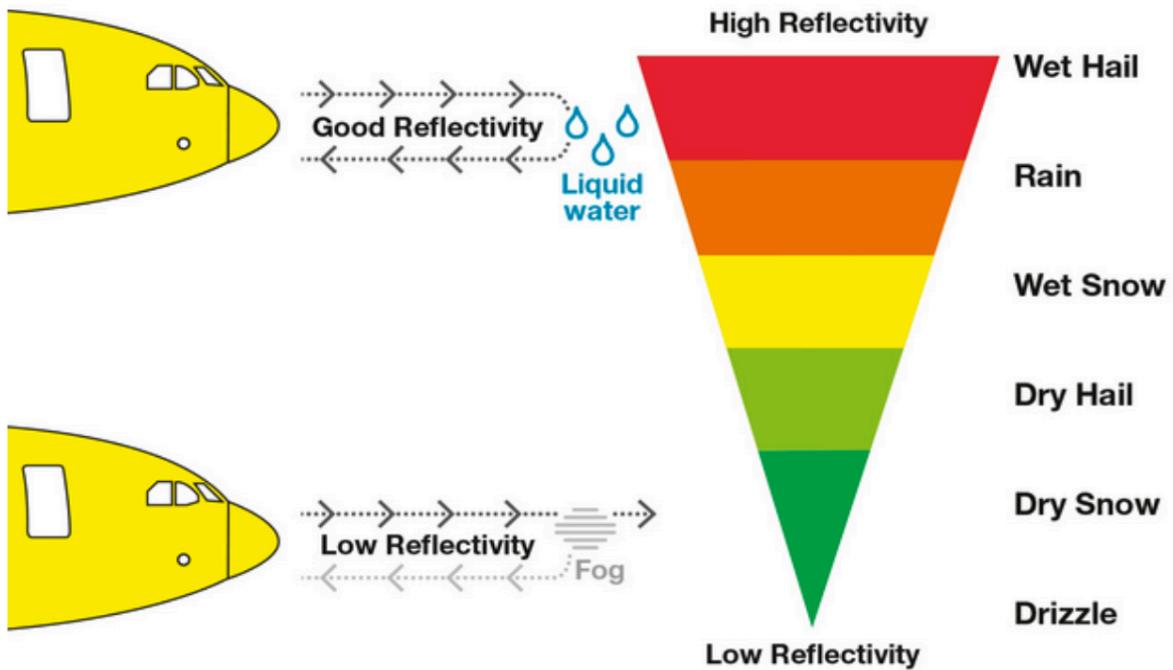
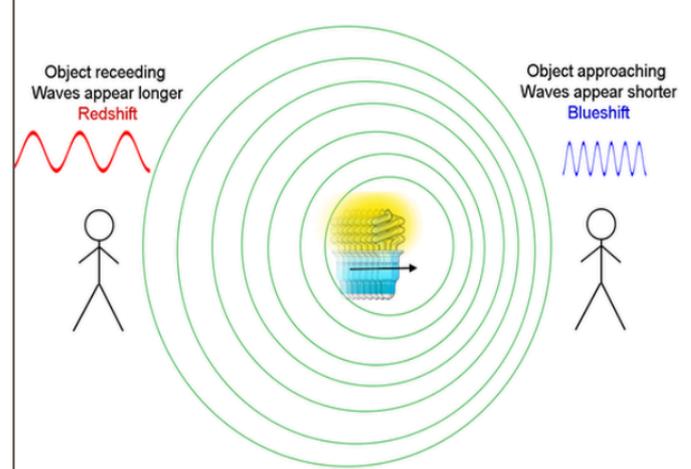
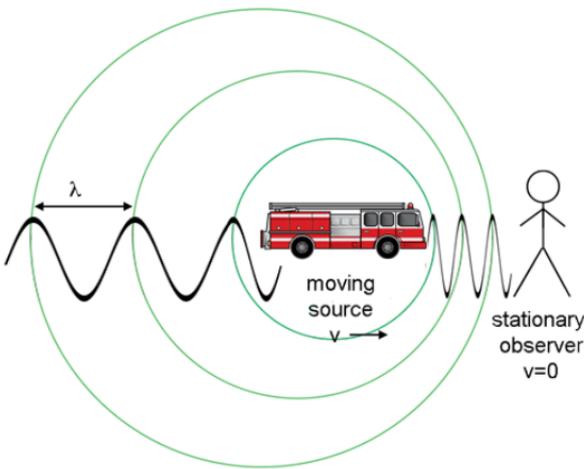
Radar system		
Bands Wavelength • S>c>x Frequency • X>C>S	X band	<ul style="list-style-type: none"> • smaller wavelength, the X band radar is more sensitive and can detect smaller particles. • detect thunderstorms and lightning (Latest version)
	C-band	<ul style="list-style-type: none"> • Cyclone tracking • Short range observation
	S-band	<ul style="list-style-type: none"> • Far range observation

Indian radar system	
About	<ul style="list-style-type: none"> • Doppler radars of varying frequencies – S-band, C-band and X-band – are commonly used by the IMD to detect and track the movement of weather systems, cloud bands and gauge rainfall over its coverage area of about 500 km
Significance	<ul style="list-style-type: none"> • With the radar observations, updated every 10 minutes, forecasters can accordingly predict weather events and their impact. • Guide meteorologists in times of extreme weather events like cyclones and associated heavy rainfall. • The radars can oversee an area of up to 500 km, with effective range of up to 250 km

Indian radar system		
Distribution	west coast	At Thiruvananthapuram, Kochi, Goa and Mumbai
	East coast	At eight locations – Kolkata, Paradip, Gopalpur, Vishakhapatnam, Machilipatanam, Sriharikota, Karaikal and Chennai.
	Other	Srinagar, Patiala, Kufri, Delhi, Mukteshwar, Jaipur, Bhuj, Lucknow, Patna, Mohanbar, Agartala, Sohra, Bhopal, Hyderabad and Nagpur.
Future	The modernisation and upgrade of existing radars are ongoing and the IMD plans to have a network of 55 doppler radars Four X-band and one C-band radar will be deployed over Mumbai. In addition, Ratnagiri will get a new C-band and Vengurla will get an X-band radar	



Color	Wavelength
violet	380–450 nm
blue	450–495 nm
green	495–570 nm
yellow	570–590 nm
orange	590–620 nm
red	620–750 nm



4. Economy

4.1. Livestock schemes to be merged

- The CCEA approved the implementation of the special livestock sector package by revising and realigning the various components of the existing schemes

Special livestock sector package		
Aim	<ul style="list-style-type: none"> • Boost livestock growth + Making animal husbandry more remunerative • Spend Rs. 9,800 crore on livestock development over the next five years 	
Realignment of schemes	Developmental Programmes	<ul style="list-style-type: none"> • Rashtriya gokul mission + National Livestock Mission + National Programme for Dairy Development (NPDD) + Livestock census & integrated survey
	Disease Control Programme	<ul style="list-style-type: none"> • Renamed as Livestock Health and Disease Control (LH & DC) • Present schemes + National animal disease control pgm
	Infrastructure Development Fund	<ul style="list-style-type: none"> • Dairy Infrastructure Development Fund + Animal husbandry infra development fund • Other like scheme for dairy cooperatives + FPOs
Livestock census	<ul style="list-style-type: none"> • By the Ministry of Fisheries, Animal Husbandry and Dairying • Since 1919-20. • Conducted every 5 years 	

CATTLE MARGINALLY UP, GOATS AND SHEEP RISE SHARPLY					
CHART 1: LIVESTOCK POPULATION (MAJOR SPECIES)			CHART 2: CATTLE POPULATION (MAJOR STATES)		
Category	2019 Population (in million)	% Growth	Category	2019 Population (in million)	% Growth
Cattle	192.49	0.83	West Bengal	19.0	15.18
Buffalo	109.85	1.06	Uttar Pradesh	18.8	-3.93
Sheep	742.6	14.13	Madhya Pradesh	18.7	-4.42
Goat	148.88	10.14	Bihar	15.3	25.18
Pig	9.06	-12.03	Maharashtra	13.9	-10.07
Mithun	0.38	26.66	Rajasthan	13.9	4.41
Yak	0.06	-25	Jharkhand	11.2	28.16
Horses & Ponies	0.34	-45.58	Assam	10.9	5.29
Mule	0.08	-57.09	Chhattisgarh	10.0	1.63
Donkey	0.12	-61.23	Odisha	9.9	-15.01
Camel	0.25	-37.05			
Total Livestock	535.78	4.63			
CHART 3: CROSSBRED POPULATION GROWING FAST; INDIGENOUS DECLINING					
Category	2019 Population (in million)		% Growth		
Total Exotic/Crossbred	50.42		26.9		
Total Indigenous/Non-Descript	142.11		-6		

Full year Current Affairs Revision through MCQs

Economy – Day 7

1. Consider the following statements in context to Incremental Capital Output Ratio (ICOR):

1. It indicates the additional unit of capital or investment needed to produce an additional unit of output.
2. Higher ICOR value indicates more efficient production
3. Generally ICOR of developed countries is more than developing countries

Select the correct answer using the code given below:

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. All of the above

2. Consider the following statements :

1. A Co-operative bank is a financial entity which belongs to its members, who are at the same time the owners and the customers of their bank
2. RBI regulate all cooperative and multi-state co-operative banks on the lines of commercial banks.

Select the correct answer using the code given below:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. None of the above

3. Consider the following statements in context to revised definition of MSME:

1. It eliminated the difference between Manufacturing & Service sector.
2. It Increased the Investment Limit
3. It removed the previous criteria of turnover

Select the correct answer using the code given below:

- A. 1 and 2 only
- B. 2 and 3 only

- C. 3 only
- D. All of the above

4. Consider the following statements in context to Consequences of high Fiscal deficit:

1. It can boost a sluggish economy.
2. High Fiscal deficit always leads to inflation
3. It can impact a country's rating

Select the correct answer using the code given below:

- A. 1 and 2 only
- B. 1 and 3 only
- C. 3 only
- D. All of the above

5. Consider the following statements :

1. In last one decade the contribution of indirect tax to GDP ratio is more than direct tax
2. India's direct tax to GDP ratio is consistently increasing since last one decade.

Select the correct answer using the code given below:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. None of the above

5. Polity

5.1.Sankalp Se Siddhi – Mission Van Dhan

- The Union Minister of Tribal Affairs reviewed the progress of various schemes and activities being implemented for the empowerment of tribals by TRIFED recently

Tribal Cooperative Marketing Development Federation of India (TRIFED)-1987	
About TRIFED	<ul style="list-style-type: none"> • Estb under Multistate cooperative societies act 1984 • TRIFED is a national-level apex organisation functioning under the administrative control of the Ministry of Tribal Affairs.
Schemes	Sankalp se sidhi <ul style="list-style-type: none"> • Sustainable livelihood to tribal • Estb- TRIFOOD park , SFURTI Clusters , Van Dhan Vikas kendras etc • Sankalp se Siddhi” - Village and Digital Connect Drive(2021)- To activate Van Dhan Vikas kendras in villages
	Marketing of MFP through MSP <ul style="list-style-type: none"> • Ensure Fair Prices to Tribals
	Van Dhan Vikas Kendras <ul style="list-style-type: none"> • Under the Van Dhan Yojana • Formed by 15 tribal Self-Help Groups with each group consisting of twenty artisans or tribal food gatherers • Help in the up-gradation of the skills and capacity building training of the tribals and setting up of primary processing and value addition facilities
	TRIFOOD <ul style="list-style-type: none"> • Joint initiative of Ministry of Food Processing Industry, Ministry of Tribal Affairs and TRIFED. • Produce processed foods from minor forest produce and also from the food gathered by the tribal people
	Tech for Trbials programme <ul style="list-style-type: none"> • Aims at transforming 5 crore Tribal Entrepreneurs by capacity building and imparting entrepreneurship skills to tribal forest produce gatherers enrolled under the Pradhan Mantri Van Dhan Yojana (PMVDY)

5.2.Scene of crime officers

- Karnataka State Police will now have specialised ‘scene of crime officers’ (SoC officers), who will be responsible for gathering crucial evidence from crime scenes.

About

- The SoC officers will **specialise in forensic science** as well in identification, collection and preservation of evidence at the scene of the crime.
- They have to **identify, record and collect evidence** at the crime scene.
- This is the **first time in the country that dedicated officials** will be deployed for evidence collection, a system that exists in advanced countries.
- In 1961 in **London, the first crime scene officer post** was created. In India, this is a first.

How will SoC officers work?

- Scene of Crime officers will have a rank equivalent to police sub- inspector and will be **part of the Directorate of Forensic Science Laboratories.**
- These officers will be trained investigators, who will undergo training at National Forensic Sciences University in Gandhinagar, Gujarat, and Central Forensic Science Laboratory in Hyderabad.
- So far, the local police are doing this job.

- It is only in major cases that forensic experts from the FSL visit the scene of the crime
- Initially, SoC officers will be assigned for cases of serious nature. Gradually, more officers will be recruited.
- Apart from this, they will also be engaged in other police duties, including maintaining law and order

Current affairs Worksheet (15th - 16th July 2021)

Factual sheet for Quick revision

Topic	Description	Update
Env	Impact of detergent on health and environment	
	India's largest solar park	
	India's largest Floating Solar	
	Green Hydrogen Mobility Project	
	Global Biodiversity Framework	
	Factors affecting Biodiversity	
	CBD	
	Cartagena Protocol	
	Nagoaya Protocol	
	Aichi Biodiversity targets	
Fit for 55		
UV-C technology & impact		
S&T	National AYUSH Mission	
Geog	Doppler radars Application & working	
Economy	Special livestock sector package	
	Livestock census	
Polity	Sankalp Se Siddhi - Mission Van Dhan	
	TRIFED	
	Scene of crime officers	