

GOVERNANCE**World Malaria Report 2020: WHO**

Recently, the World Health Organisation (WHO) has released the World Malaria Report (WMR) 2020. The report provides a comprehensive update on global and regional malaria data and trends including prevention, diagnosis, treatment, elimination and surveillance.

- It indicates that India has made considerable progress in reducing its malaria burden.

Key Points**Global Analysis:**

- Malaria cases globally numbered about 229 million, an annual estimate that has remained virtually unchanged over the last four years.
- In 2019, it claimed about 4,09,000 lives, compared to 4,11,000 in 2018.
- The report noted that the 11 highest-burden countries viz. Burkina Faso, Cameroon, the Democratic Republic of the Congo, Ghana, India, Mali, Mozambique, Niger, Nigeria, Uganda and Tanzania, account for 70% of the global estimated case burden and 71% of global estimated deaths from malaria.
- Countries in South-East Asia made particularly strong progress, with reductions in cases and deaths of 73% and 74%, respectively.

Indian Analysis:

- India is the only high endemic country which has reported a decline of 17.6% in 2019 as compared to 2018.
- The Annual Parasite Incidence (API, the number of new infections per year per 1000 population) reduced by 18.4% in 2019 as compared to 2018.
- India has sustained API less than one since the year 2012.
- India has also contributed to the largest drop in cases region-wide, from approximately 20 million to about 6 million.
- The percentage drop in the malaria cases was 71.8% and deaths were 73.9% between 2000 to 2019.
- India achieved a reduction of 83.34% in malaria morbidity and 92% in malaria mortality between the year 2000 and 2019, thereby achieving Goal 6 of the Millennium Development Goals.
- MDG 6 aimed to combat HIV/AIDS, malaria and other diseases, which have a direct and indirect impact on rural development, agricultural productivity and food and nutrition security.
- The Sustainable Development Goals have replaced the MDGs.
- States of Odisha, Chhattisgarh, Jharkhand, Meghalaya and Madhya Pradesh (high endemic states) disproportionately accounted for nearly 45.47% of malaria cases in 2019.
- 63.64% of malaria deaths were also reported from these states.
- The figures and trends between the last two decades clearly show the drastic decline in malaria, hence the malaria elimination target of 2030 looks achievable.

Initiatives to Curb Malaria:

- In India, malaria elimination efforts were initiated in 2015 and were intensified after the launch of the National Framework for Malaria Elimination (NFME) in 2016 by the Ministry of Health and Family Welfare.
- NFME is in line with WHO's Global Technical Strategy for Malaria, 2016-2030, which guides the WHO Global Malaria Programme (GMP), responsible for coordinating WHO's global efforts to control and eliminate malaria.
- The National Strategic Plan for Malaria Elimination (2017-22) was launched in July 2017 which laid down strategies for the following five years.
- It gives year wise elimination targets in various parts of the country depending upon the endemicity of malaria.
- Implementation of High Burden to High Impact (HBHI) initiative was started in four states (West Bengal, Jharkhand, Chhattisgarh and Madhya Pradesh) in July 2019.
- In 2018, the WHO and the RBM Partnership initiated the HBHI initiative in 11 high malaria burden countries, including India to end malaria.
- It has continued to make impressive gains in India, with 18% reductions in cases and 20% reductions in death, over the last 2 years.

- Due to the efforts made by the Government of India in the provision of microscopes, rapid diagnostics Long Lasting Insecticidal Nets (LLINs) to high burden areas has led to a reduction in endemicity in these otherwise very high endemic states.
- LLINs are nets treated in the factory with an insecticide incorporated into the net fabric which makes the insecticide last at least 20 washes in standard laboratory testing and three years of recommended use under field conditions.
- Use of LLINs has been accepted by the community at large and has been one of the main contributors to the drastic malaria decline in the country.

SCIENCE & TECHNOLOGY

Cannabis Removed from Dangerous Substances: UN

Recently, the United Nations (UN) Commission on Narcotic Drugs (CND), at its 63rd session, has taken a number of decisions, leading to changes in the way cannabis (Marijuana or Hemp) is internationally regulated, including its reclassification out of the most dangerous category of drugs.

Key Points

Background:

- In January 2019, the World Health Organisation (WHO) made six recommendations related to the scheduling of cannabis in UN treaties, including the deletion of cannabis and cannabis resin from Schedule IV of the Single Convention on Narcotic Drugs, 1961.
- Schedule IV is the category of drugs that are considered to have "particularly dangerous properties" in comparison to other drugs.
- The proposals were to be placed before the CND's session in March 2019, but members voted to postpone the vote, requesting more time.

Global Decision:

- Older Status: The CND decision will remove cannabis from Schedule IV, where it was listed alongside deadly, addictive opioids, including heroin.
- Current Status: Now, both cannabis and cannabis resin will remain on Schedule I, which includes the least dangerous category of substances.
- Countries in Favour: 27 of the CND's 53 Member States, including India, the USA and most European nations, voted in favour of the motion.
- Countries not in Favour: 25 countries, including China, Pakistan, and Russia, were not in favour and there was one abstention, Ukraine.

Significance:

- Since the Convention was enforced in 1961, cannabis had been subject to the strictest control schedules, which even discouraged its use for medical purposes.
- The reclassification of cannabis, although significant, would not immediately change its status worldwide as long as individual countries continue with existing regulations.
- However, it will impact this process, as many nations follow the lead of international protocols while legislating in their respective nations.
- With this historic vote, the CND has opened the door to recognizing the medicinal and therapeutic potential of cannabis.
- India's Stand and Regulations:
- India has voted with the majority to remove cannabis and cannabis resin from the list of most dangerous substances in the Convention.
- Under India's Narcotic Drugs and Psychotropic Substances (NDPS) Act 1985, the production, manufacture, possession, sale, purchase, transport, and use of cannabis is a punishable offence.
- The Act was enacted in 1985 which succeeded the Dangerous Drugs Act 1930.
- The Narcotics Control Bureau (NCB) is vested with the power to charge individuals in cases related to the illegal use and supply of narcotics.

Cannabis

- According to the WHO, cannabis is a generic term used to denote the several psychoactive preparations of the plant *Cannabis sativa*.
- According to the WHO, cannabis is by far the most widely cultivated, trafficked and abused illicit drug in the world.
- The major psychoactive constituent in cannabis is Delta9 tetrahydrocannabinol (THC).

- The unpollinated female plants are called hashish. Cannabis oil (hashish oil) is a concentrate of cannabinoids (compounds which are structurally similar to THC) obtained by solvent extraction of the crude plant material or of the resin.
- According to the NDPS Act “cannabis plant” means any plant of the genus cannabis.
- ‘Charas’ is the separated resin extracted from the cannabis plant. The NDPS Act covers separated resin, in whatever form, whether crude or purified, obtained from the cannabis plant and also includes concentrated preparation and resin known as hashish oil or liquid hashish.
- The Act defines ‘ganja’ as the flowering or fruiting tops of the cannabis plant but it clearly excludes the seeds and leaves.
- The Act illegalises any mixture with or without any neutral material, of any of the two forms of cannabis, charas and ganja, or any drink prepared from it.
- The legislature left seeds and leaves of the cannabis plant out of the ambit of the Act, because the serrated leaves of the plant have negligible THC content.
- ‘Bhang’, which is commonly consumed during festivals like Holi, is a paste made out of the leaves of the cannabis plant, and is hence not outlawed.
- Similarly, CBD oil, an acronym for cannabidiol derived from the leaves of the cannabis plant, would not come under the NDPS Act.
- The NDPS Act does not permit the recreational use of cannabis in India.
- While CBD oil manufactured with a licence under the Drugs and Cosmetics Act, 1940 can be legally used, it is not very common.

Commission on Narcotic Drugs

- It is the UN agency mandated to decide on the scope of control of substances by placing them in the schedules of global drug control conventions.
- It was founded in 1946 and is headquartered in Vienna.
- Global attitudes towards cannabis have changed dramatically since the commencement of the 1961 Convention, with many jurisdictions permitting cannabis use for recreation, medication or both.
- Currently, over 50 countries allow medicinal cannabis programmes, and its recreational use has been legalised in Canada, Uruguay and 15 states of the USA.

INDIAN ECONOMY

Minimum Support Price for Crops

One of the major demands of protesting farmers has been that the government guarantee in writing the Minimum Support Price system, which assures them of a fixed price for their crops, 1.5 times of the cost of production.

Farmer Unions are protesting against the newly enacted three farm laws and the Electricity Amendment Bill 2020.

Key Points

Minimum Support Price:

- MSP is a “minimum price” for any crop that the government considers as remunerative for farmers and hence deserving of “support”.
- It is also the price that government agencies pay whenever they procure the particular crop.
- The Union Budget for 2018-19 had announced that MSP would be kept at levels of 1.5 the cost of production.

MSP is given for the following crops:

- The Commission for Agricultural Costs & Prices (CACP) recommends MSPs for 22 mandated crops and fair and remunerative price (FRP) for sugarcane.
- CACP is an attached office of the Ministry of Agriculture and Farmers Welfare, Government of India.
- It came into existence in January 1965.
- It is an advisory body whose recommendations are not binding on the Government.
- The mandated crops include 14 crops of the kharif season, 6 rabi crops and 2 other commercial crops.
- In addition, the MSPs of toria and de-husked coconut are fixed on the basis of the MSPs of rapeseed/mustard and copra, respectively.

The list of crops are as follows:

Cereals (7): Paddy, wheat, barley, jowar, bajra, maize and ragi,

Pulses (5): Gram, arhar/tur, moong, urad and lentil,

Oilseeds (8): Groundnut, rapeseed/mustard, toria, soyabean, sunflower seed, sesamum, safflower seed and niger seed,

Raw cotton, Raw jute, Copra, De-husked coconut, and

Sugarcane (Fair and remunerative price).

The CACP considered various factors while recommending the MSP for a commodity, including cost of cultivation.

It also took into account the supply and demand situation for the commodity, market price trends (domestic and global) and parity vis-à-vis other crops, and implications for consumers (inflation), environment (soil and water use) and terms of trade between agriculture and non-agriculture sectors.

Changes made by the 2018-19 budget:

- Budget for 2018-19 announced that MSPs would henceforth be fixed at 1.5 times of the production costs for crops as a “predetermined principle”.
- CACP’s job is now only to estimate production costs for a season and recommend the MSPs by applying the 1.5-times formula.

Mechanism of arriving at Production Cost:

- The CACP does not do any field-based cost estimates itself.
- It makes projections using state-wise, crop-specific production cost estimates provided by the Directorate of Economics & Statistics in the Agriculture Ministry.
- The latter are, however, generally available with a three-year lag.
- The CACP projects three kinds of production cost for every crop, both at state and all-India average levels.

‘A2’

Covers all paid-out costs directly incurred by the farmer in cash and kind on seeds, fertilisers, pesticides, hired labour, leased-in land, fuel, irrigation, etc.

‘A2+FL’

Includes A2 plus an imputed value of unpaid family labour.

‘C2’

It is a more comprehensive cost that factors in rentals and interest forgone on owned land and fixed capital assets, on top of A2+FL.

Issues with the Pricing:

- In the 2018-19 Budget Speech, the government did not specify the cost on which the 1.5-times formula was to be computed.
- The CACP’s ‘Price Policy for Kharif Crops: The Marketing Season 2018-19’ report stated that its MSP recommendation was based on 1.5 times the A2+FL costs.
- Farm activists demand that the 1.5-times MSP formula originally recommended by the National Commission for Farmers headed by agricultural scientist M S Swaminathan should be applied on the C2 costs.

Government’s Stand:

- CACP considers all costs in a comprehensive manner which is based on the methodology recommended by Expert Committees from time to time.
- CACP considers both A2+FL and C2 costs while recommending MSP.
- CACP reckons only A2+FL cost for return. However, C2 costs are used by CACP primarily as benchmark reference costs.

BIODIVERSITY & ENVIRONMENT

Provisional Report on the State of the Global Climate 2020: WMO

According to the latest State of the Global Climate provisional report by the World Meteorological Organization (WMO), the year 2020 is set to be among the three warmest on record. Also, the decade 2011-2020 would be the warmest ever.

- The final report will be published in March 2021. The State of the Global Climate report is published annually to keep a track of global warming.
- WMO is one of the specialized agencies of the United Nations (UN).

Key Points

Rise in Global Temperature:

- The global mean surface temperature for January-October 2020 was 1.2 degree Celsius higher than the pre-industrial baseline (1850-1900).
- There is at least a one in five chance of it temporarily exceeding 1.5 °C by 2024.
- The Paris Agreement central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.
- 2020 will be one of the three hottest, just behind 2016 and 2019.
- The record heat in 2020 has been despite near-La Niña conditions prevailing in the equatorial Pacific Ocean since August and moderate La Niña conditions prevailing since October.
- The La Niña phase of the El Niño Southern Oscillation (ENSO) phenomenon generally has a cooling effect on many parts of the world.

High Temperature over Ocean Surfaces:

- 80% of ocean areas have experienced at least one marine heat wave (MHW) so far in 2020.
- Heat wave is a period of prolonged abnormally high surface temperatures relative to those normally expected.
- At the time of MHW, the average temperature of the ocean surface (up to a depth of 300 feet or more) rises by 5-7°C above normal.
- MHWs can be caused by locally formed heat fluxes between the atmosphere and the ocean or due to large-scale drivers of the Earth's climate like the ENSO.
- There were also much more strong MHWs (43%) over the oceans in 2020 than moderate ones (28%).
- Global sea-level rise was also similar to 2019 value. This was mainly due to the increased melting of the ice sheets in Greenland and Antarctica.
- Reasons: Scientific evidence indicates increasing temperatures are a direct result of human-led global warming which is an impact of the emission of greenhouse gases (GHG).
- After record GHG levels of 2019, there has been a slight dip this year due to measures taken by many countries to fight the ongoing novel coronavirus disease (Covid-19 pandemic).
- However, data from specific locations, including Mauna Loa (Hawaii) and Cape Grim (Tasmania) indicate that levels of Carbon dioxide (CO₂), Methane (CH₄) and Nitrogen dioxide (N₂O) continued to increase in 2020.

Consequences of Global Warming in 2020:

- Extreme weather events such as tropical cyclones, floods, heavy rainfall and droughts impacted many parts of the world and cases of wildfire have also increased this year.
- Atlantic Hurricane Season: The season witnessed 30 named storms from June to November which is the highest number ever recorded.
- Heavy Rains: There was heavy rainfall and flooding in many parts of Asia and Africa.
- Droughts: South America experienced severe droughts with northern Argentina, Paraguay and western areas of Brazil being some of the worst affected.
- Sea-level rise: Melting of ice resulted in sea level rise which is an existential concern for the small island nations.
- A significant sea-level rise by the end of the century will mean that these countries will drown in the oceans and their respective populations will be homeless.

Loss to Humanity:

- Population Movements: The climate and weather events have triggered significant population movements and have severely affected vulnerable people on the move, including in the Pacific region and Central America.
- Agricultural Losses: Brazil alone recorded agricultural losses of 3 billion American dollars.
- Loss of Human lives, Property and Livelihoods: The most affected were the Sahel and Greater Horn regions of Africa and China, India, Korea and Japan regions of Asia.

Way Forward

- Environmental ethics should take precedence over other issues like national and strategic interest or economic interest.

- Oil, gas and coal production must fall six percent a year in order to limit catastrophic global warming, as per the UN's annual Production Gap assessment, which measures the difference between the Paris goals and countries' fossil fuel production plans.
- There needs an enhanced commitment from nations more than their pledged INDCs (Intended Nationally Determined Contributions) under the Paris Agreement. However, it must not be used to pressurize developing countries to ramp up their global warming mitigation targets.

IMPORTANT FACTS FOR PRELIM**Cyclone Burevi**

Recently cyclone Burevi has made a landfall on Sri Lanka's Northern and Eastern provinces, before heading towards south India.

This comes days after Cyclone Nivar hit the Puducherry coast.

Key Points**Named by:**

Maldives

Burevi vs Nivar:

- Cyclone Burevi would not strengthen beyond the intensity of a cyclonic storm because of upwelling caused by Nivar.
- Upwelling is the process in which cooler waters from lower ocean surfaces are pushed towards upper ocean surfaces.
- In the absence of warm sea surface conditions, any cyclone, in this case Burevi, will not get enough fuel to intensify further while at sea.
- Further, interaction with land mass has slowed its movement and intensity.

Tropical Cyclone

- A tropical cyclone is an intense circular storm that originates over warm tropical oceans and is characterized by low atmospheric pressure, high winds, and heavy rain.
- A characteristic feature of tropical cyclones is the eye, a central region of clear skies, warm temperatures, and low atmospheric pressure.
- Storms of this type are called hurricanes in the North Atlantic and eastern Pacific and typhoons in SouthEast Asia and China. They are called tropical cyclones in the southwest Pacific and Indian Ocean region and Willy-willies in north-western Australia.
- Storms rotate counterclockwise in the northern hemisphere and clockwise in the southern hemisphere.

The conditions favourable for the formation and intensification of tropical storms are:

- Large sea surface with temperature higher than 27°C.
- Presence of the Coriolis force.
- Small variations in the vertical wind speed.
- A pre-existing weak low- pressure area or low-level-cyclonic circulation.
- Upper divergence above the sea level system.

DAILY ANSWER WRITING PRACTICE

Qns What is the rationale of Participatory Irrigation Management. Explain its utility in irrigation management in India. (150 words)

Ans:

The term participatory irrigation management (PIM) refers to the participation of irrigation users, i.e., farmers, in the management of irrigation systems. It is done by creating local water regulatory bodies like Pani Panchayat or Water Users' Associations (WUAs).

Objectives of PIM

- Creating a sense of ownership of water resources and the irrigation system among the users, so as to promote the economy in water use and preservation of the system.
- Improving service deliveries through better operation and maintenance of the irrigation systems.
- Achieving optimum utilization of available resources, precisely as per crop needs.
- Striving for equity in water distribution.
- Increasing production per unit of water, where water is scarce and to increase production per unit of land where water is adequate.

Necessity of PIM

Need to increase Agricultural Production: The human as well as the bovine population has been increasing all over the world and more so in India.

- It is, hence, imperative to increase agricultural production to keep pace with the requirement.
- Irrigation being the lifeline of agriculture, its development and meticulous management is the necessity of the day.

Problem of Fiscal Availability: As there is severe budgetary competition at the government level under different sectors, the ratio of financial outlay for the irrigation sector to the total outlay is coming down year after year.

- Under such circumstances, the investment of more money by the Government on operation and maintenance of the old system appears difficult.
- Thus, farmers have to take up this responsibility themselves in order to avoid overburdening of the Government exchequer and to become self-dependent.

High Maintenance Cost and Low Recovery of Irrigation charges: Often the cost of recovery of water charges by the Government is more than the amount recovered.

- This is causing severe budget constraints to the Government and consequently, maintenance of irrigation systems could not be properly carried out resulting in system deficiency and unreliability of irrigation water to farmers.
- Thus, the Water Users Associations could play this role in a better way.

Constraints in Implementation of PIM

Lack of legal backup and policy changes: In many States, there is no or very little legal back up and clear-cut policy decisions at the Government level to take up PIM.

System deficiency: There are many problems like deterioration of old control and measuring structure, leakages and seepage at various places, erosion of banks and beds. These problems hinder farmers from taking over irrigation management.

Uncertainty of Water Availability: Farmers are reluctant to take on the responsibility for managing the system unless deliveries of water are made reliable, flexible, practical and responsive to need.

Fear of financial viability: Farmers are apprehensive to take irrigation management, due to the absence of surety of finance, it would be difficult for them to fulfil the requirement of funds for operation and maintenance.

Demographic Diversity: Due to variation in economic, ethnic, education levels etc. diversity of farmers, PIM is taking much time in India.

Way Forward

Rationalisation of Water Rates: There is a dire need for rationalization of water rates so as to meet the expenditure on account of Maintenance of the irrigation system.

Women's Role in PIM: Considering the importance of women in terms of their numerical strength and the significant contribution they make to the agriculture labour force, there is a need for women to play an important role in the PIM.

Need For A Legal Framework: A model act can be framed by the parliament, which will ensure the systemic involvement of beneficiaries in the management of the irrigation system at various levels.

- Also, a provision for adequate financial support needs to be incorporated under the act.
- Need For Monitoring: Regular monitoring and evaluation of the performance of the WUAs is necessary for the development of the PIM programme in the country.
- The experience shows that wherever farmers have been actively engaged, the overall management of the irrigation system and the water use efficiency have significantly improved. Thus, in light of the increasing vulnerability of Indian agriculture, PIM should be actively pursued at all levels.

DAILY QUIZ

1. Consider the following statements:

1. The National Commission of Safai Karamcharis is a non-statutory body under the Ministry of Social Justice and Empowerment.
2. The Ministry of Housing and Urban Affairs has launched the Safaimitra Suraksha Challenge to eliminate manual scavenging.

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

2. mCessation Programme was recently in the news. It is-
- Mobile portal to register any cyber fraud or harassment.
 - Scheme to build shelter homes to withstand against the high speed tropical cyclone winds in coastal areas.
 - Using mobile technology to discourage tobacco consumption.**
 - Programme for testing Covid-19 infection and stopping its spread.
3. Which of the following statements is/are correct regarding the 'Protection of Regional Languages'?
- The Namath Basai initiative is launched by the Ministry of Education to teach tribal children in the vernacular languages.
 - The United Nations General Assembly had proclaimed 2019 as the International Year of Indigenous Languages (IYIL).
 - The Yuelu Proclamation of UNESCO is aimed at protecting linguistic resources and diversity.

Choose the correct answer using code given below:

- 1 only
 - 2 and 3 only**
 - 1 and 3 only
 - 1, 2 and 3
4. Nuclear Magnetic Resonance (NMR) test has been in the news. It is related to?
- Measuring distance between celestial objects
 - Discovery of gravitational waves
 - Ascertain the composition of a product at the molecular level**
 - Search for magnetic monopoles at the center of black hole
5. With reference to Chief justice of India (CJI), consider the following statements:
- Till date there have been only two female Chief Justices of India.
 - The judges other than CJI are appointed by the President after obligatory consultation with the CJI.

Which of the statements given above is/are correct?

- 1 only
- 2 only**
- Both 1 and 2
- Neither 1 nor 2