

SOCIAL ISSUE

Antimalarial Drug Resistance

In recent years there is increasing evidence of the Antimalarial Drugs Resistance (AMR) against Malaria. It has been noticed while treating with the Drugs (Artemisinin or Chloroquine), either alone or with partner drugs.

Key Points

Drug Resistance:

- It is simply defined as the ability of disease-causing germs (e.g., bacteria or viruses) to continue multiplying despite the presence of drugs that usually kill them.
- Drug resistance is the reduction in effectiveness of a medication to cure a disease or condition. For example: With HIV (Human immunodeficiency virus), drug resistance is caused by mutations in the virus's genetic structure. These mutations lead to changes in certain HIV proteins and enzymes (e.g., protease enzyme) which helps HIV to replicate.

Factors Causing AMR:

• **Mutations:**

1. The mutations in the malarial parasite have been responsible for artemisinin partial resistance.
2. As many as 1,044 studies conducted globally from 2010-2019 confirmed the PfK13 mutation.

• **Inadequate Coverage:**

1. Imperfect coverage of antimalarial drugs, improper diagnosis, misuse of drugs and not-so-good mosquito control programmes were cited by the report as major contributory factors causing resistance against these drugs.
2. These failures lead to increased exposure of the malaria parasites to drugs, increasing the risk of drug resistance

• **Concern:**

1. Chloroquine (CQ) is the most commonly prescribed drug for P Vivax parasite. A World Health Organisation (WHO) report said P vivax resistance to chloroquine had been reported from all WHO regions. Twenty-eight countries, including India, showed the CQ resistance.
2. A widespread resistance scenario could result in a yearly excess of 22 million treatment failures, 116,000 deaths and costs including an estimated USD 130 million to change treatment policy.

Way Forward

Malaria killed 405,000 people in 2018 and affected 218 million people. However, the fight against this killer is becoming difficult due to the growing resistance against malarial drugs. Up-to-date, quality data are needed on the efficacy of the recommended treatments, to ensure that patients receive efficacious treatment.

The time has come to carry out Molecular Malaria Surveillance to find out the drug-resistant variants so that corrective measures can be undertaken in time to avert any consequences.

GOVERNANCE

Public Interest Litigation

The Supreme Court (SC) scolded a petitioner for filing a Public Interest Litigation (PIL) without adequate research.

Key Points

About:

- Public Interest Litigation (PIL) is the use of the law to advance human rights and equality, or raise issues of broad public concern.
- The concept of "Public Interest Litigation" has been borrowed from the American Jurisprudence.
- In Indian law, PIL means litigation for the protection of Public Interest. It is Litigation introduced in a court of Law, not by the aggrieved party but by the court itself or by any other private party. It is the power given to the public by courts through Judicial activism.
- It can be filed only in the Supreme Court or the High Court.

- It is different from Writ Petition, which is filed by individuals or institutions for their own benefit, whereas PIL is filed for the benefit of the general public.
- The concept of PIL is suited to the Principles enshrined in Article 39 A of the Constitution of India to protect and deliver prompt Social Justice with the help of Law.
- Areas where PIL can be filed: Pollution, Terrorism, Road safety, Constructional hazards etc.

Significance:

- PIL is an important instrument of social change and for maintaining the Rule of law and accelerating the balance between law and justice.
- The original purpose of PILs have been to make justice accessible to the poor and the marginalised. It democratises the access of justice to all.
- It helps in judicial monitoring of state institutions like prisons, asylums, protective homes, etc.
- It is an important tool for implementing the concept of judicial review.

Issues:

Misuse:

The number of cases pending in courts is already high, and the misuse of PILs is increasing.

In 2010, the SC had expressed considerable displeasure over PILs involving personal or irrelevant cases and issued certain guidelines to the courts for accepting PILs.

Conundrum of Competing Rights:

1. PIL actions may sometimes give rise to the problem of competing rights.
2. For instance, when a court orders the closure of a polluting industry, the interests of the workmen and their families who are deprived of their livelihood may not be taken into account by the court.

Procrastination:

1. PIL matters concerning the exploited and disadvantaged groups are pending for many years.
2. Inordinate delays in the disposal of PIL cases may render many leading judgments merely of academic value.

- **Judicial Overreach:** Cases of Judicial Overreach by the Judiciary in the process of solving socio-economic or environmental problems can take place through the PILs.

Way Forward

Former Attorney General Soli Sorabji opinions 3 basic rules for regulating abuse of PIL:

1. Reject dubious PIL at the threshold and in appropriate cases with exemplary costs.
2. In cases where important project or socio economic regulations are challenged after gross delay, such petitions should be thrown out the very threshold on the ground of laches. Just because a petition is termed as PIL does not mean that ordinary principles applicable to litigation will not apply.
3. PIL petitioners should be in strict terms such as providing indemnity or giving an adequate undertaking to the court to make good the damage, if PIL is ultimately dismissed.

2. Jal Jeevan Mission App

Recently, the Prime Minister launched the Jal Jeevan Mission (JJM) mobile application on the occasion of Gandhi Jayanti (2nd October). The PM also released the progress report of the JJM and a manual for the utilisation of the 15th Finance Commission grant for rural local bodies.

Key Points

About:

- The mobile application will provide details of water infrastructure, an Aadhaar-verified data set of beneficiaries, and water quality and contamination-related information for each village.
- The application aims to improve awareness among stakeholders and for greater transparency and accountability of schemes under the Jal Jeevan mission.
- The Jal Shakti ministry has been maintaining a JJM dashboard to show the coverage of tap water connections across states. The water quality management information system

provides details of water samples received and tested across labs and states. The mobile app will bring all this data under one umbrella.

Jal Jeevan Mission:

About:

- Launched in 2019, it envisages supply of 55 litres of water per person per day to every rural household through Functional Household Tap Connections (FHTC) by 2024.
- JJM looks to create a jan andolan for water, thereby making it everyone's priority.
- It comes under Jal Shakti Ministry.

Aims:

- The mission ensures functionality of existing water supply systems and water connections; water quality monitoring and testing as well as sustainable agriculture.
- It also ensures conjunctive use of conserved water; drinking water source augmentation, drinking water supply system, grey water treatment and its reuse.

Features:

- JJM focuses on integrated demand and supply-side management of water at the local level.
- Creation of local infrastructure for source sustainability measures as mandatory elements, like rainwater harvesting, groundwater recharge and management of household wastewater for reuse, is undertaken in convergence with other government programmes/schemes.
- The Mission is based on a community approach to water and includes extensive Information, Education and Communication as a key component of the mission.

Implementation:

- Paani Samitis plan, implement, manage, operate and maintain village water supply systems. These consist of 10-15 members, with at least 50% women members and other members from Self-Help Groups, Accredited Social and Health Workers, Anganwadi teachers, etc.
- The committees prepare a one-time village action plan, merging all available village resources. The plan is approved in a Gram Sabha before implementation.

Funding Pattern:

- The fund sharing pattern between the Centre and states is 90:10 for Himalayan and North-Eastern States, 50:50 for other states, and 100% for Union Territories.

Progress So Far:

- When the mission was launched, only 17% (32.3 million) of the country's rural households had a tap water supply.
- Today, 7.80 Crore (41.14%) households have tap water supply. Goa, Telangana, Andaman & Nicobar Islands and Puducherry have achieved 100% household connection in rural areas and have become 'Har Ghar Jal'. To complement the Jal Jeevan Mission (Rural), Jal Jeevan Mission (Urban) was announced in the Budget 2021-22.

HISTORY

Gandhi Jayanti

2nd October, 2021 marked the 152nd birth anniversary of Mahatma Gandhi. India also pays tribute to Lal Bahadur Shastri on the same day every year.

Key Points

Birth: 2nd October 1869 in Porbandar (Gujarat)

Brief Profile: Lawyer, politician, social activist, and writer who became the leader of the nationalist movement against the British rule of India.

Satyagrah: In South Africa (1893-1915), he had successfully fought the racist regime with a novel method of mass agitation, which he called satyagraha.

1. The idea of satyagraha emphasised the power of truth and the need to search for truth with non-violence.
2. The International Day of Non-Violence is observed on 2nd October, the birthday of Mahatma Gandhi.
3. Gandhi Peace Prize is given for social, economic and political transformation through non-violence and other Gandhian methods.

Return to India: He returned to India from South Africa on 9th January 1915. Pravasi Bharatiya Divas (PBD) is celebrated on 9th January every year to mark the contribution of the Overseas Indian community in the development of India.

Satyagraha Movements in India: Mahatma Gandhi believed that the dharma of non-violence could unite all Indians.

1. In 1916 he travelled to Champaran in Bihar to inspire the peasants to struggle against the oppressive plantation system.
2. In 1917, he organised a satyagraha to support the peasants of the Kheda district of Gujarat. Affected by crop failure and a plague epidemic, the peasants of Kheda could not pay the revenue, and were demanding that revenue collection be relaxed.
3. In 1918, he went to Ahmedabad to organise a satyagraha movement amongst cotton mill workers.
4. In 1919, he decided to launch a nationwide satyagraha against the proposed Rowlatt Act (1919).
 - ✓ The Act gave the government enormous powers to repress political activities, and allowed detention of political prisoners without trial for two years.
 - ✓ On 13th April, 1919 the infamous Jallianwalla Bagh incident took place. Seeing violence spread, Mahatma Gandhi called off the movement (18th April, 1919).

Non-Cooperation Movement (1920-22): At the Calcutta session of the Congress in September 1920, he convinced other leaders of the need to start a non-cooperation movement in support of Khilafat as well as for swaraj.

1. At the Congress session at Nagpur in December 1920, the Non-Cooperation programme was adopted.
2. In February 1922, Mahatma Gandhi decided to withdraw the Non-Cooperation Movement after the Chauri-Chaura incident.

The Salt March: In 1930, Gandhiji declared that he would lead a march to break the salt law.

1. He marched from Gandhi's ashram in Sabarmati to the Gujarati coastal town of Dandi, where they broke the government law by gathering natural salt found on the seashore, and boiling sea water to produce salt.
2. This marked the beginning of the Civil Disobedience Movement.

Civil Disobedience Movement:

1. In 1931, Gandhi accepted a truce (the Gandhi-Irwin Pact), called off civil disobedience, and agreed to attend the Second Round Table Conference in London as the sole representative of the Indian National Congress.
2. After returning from London, Mahatma Gandhi relaunched the Civil Disobedience Movement. For over a year, the movement continued, but by 1934 it lost its momentum.

Quit India Movement:

1. With the outbreak of World War II (1939-45), the nationalist struggle in India entered its last crucial phase.
2. The failure of the mission of Stafford Cripps, a British cabinet minister who went to India in March 1942 with an offer that Gandhi found unacceptable, the British equivocation on the transfer of power to Indian hands, and the encouragement given by high British officials to conservative and communal forces promoting discord between Muslims and Hindus impelled Gandhi to demand in the summer of 1942 an immediate British withdrawal from India—what became known as the Quit India Movement.

Social Work:

- He worked for the upliftment of untouchables and gave them a new name 'Harijan' meaning the children of God. In September 1932, B.R. Ambedkar negotiated the Poona Pact with Mahatma Gandhi.
- His symbol of self-reliance - the spinning wheel - became a popular symbol of the Indian Independence Movement.
- He played a key role in pacifying people and averting the Hindu-Muslim riots as tensions rose before and during the partition of the country. He founded the Hindustani Prachar

Sabha in 1942 at Wardha in Maharashtra. The aim of the organisation was to promote Hindustani, a link language between Hindi and Urdu.

Books Written: Hind Swaraj, My Experiments with Truth (Autobiography)

Death: He was shot dead by Nathuram Godse on 30th January, 1948.

30th January is observed as Martyrs' Day.

ENVIRONMENT & BIODIVERSITY

Hara Bhara: Aerial Seeding Campaign

Recently, Hara Bhara, India's first aerial seeding campaign in Telangana using the Seedcopter drone was launched. Earlier, in August 2015, Andhra Pradesh government had launched the aerial seeding programme using Indian Navy helicopters.

Key Points

Hara Bhara Campaign:

- The idea of the campaign is to accelerate the mission of reforestation by planting one billion trees using drones by 2030 in the country.
- The project uses drones to disperse seed balls over thin, barren, and empty forest lands to turn them into lush green abodes of trees.
- The 'seedcopter' which is a drone developed by Marut Drones is an aerial seeding solution for rapid and scalable reforestation.

Aerial Seeding:

- It is a plantation technique wherein seed balls — seeds covered with a mixture of clay, compost, char and other components — are sprayed using aerial devices, including planes, helicopters or drones.
- The plant species which are native to the area and hardy, with seeds that are of an appropriate size for preparing seedballs are usually used for aerial seeding, with a higher survival percentage.
- Seeds balls/pellets are dispersed in a targeted area by low-flying drones, with the coating providing the required weight for seeds to airdrop on a predetermined location rather than getting deterred by the wind.
- These pellets sprout when there is enough rain, with nutrients present within them helping in initial growth.

Advantages of Aerial Seeding:

- **Access to Inaccessible Areas:** Areas that are inaccessible, having steep slopes or no forest routes, can be targeted using this method.
- **No Extra Attention Requires:** The process of the seed's germination and growth is such that it requires no attention after it is dispersed and thus seed pellets are known as the "fire and forget" way of planting.
- **Eliminate Need of Ploughing:** They eliminate any need for ploughing and do not need to be planted since they are already surrounded by soil, nutrients, and microorganisms. The clay shell also protects them from birds, ants and rats.
- **Prevents Soil Runoff:** Aerial application does not cause soil compaction, hence prevents soil runoff. This type of seeding technique will be most useful for tropical forests because they absorb carbon much faster than other forest types and also support much higher biodiversity.

Challenge:

- Drones may reduce costs, but one cannot rule out the possibility of seeds falling on the wrong spot.
- Even when they reach the ground many variables can hinder the emergence of seedlings, such as soil composition, animal predation and weed competition.

Related Indian Initiatives:

1. National Mission for a Green India
2. National Afforestation Programme (NAP)
3. Compensatory Afforestation Fund Management and Planning Authority, (CAMPA Funds)
4. National Action Programme to Combat Desertification

IMPORTANT FACTS FOR PRELIM

Most Promising Astronomical Site: Hanle

According to a recent study, the Indian Astronomical Observatory (IAO) located at Hanle near Leh in Ladakh is becoming one of the promising observatory sites globally. The Indian Astronomical Observatory has one of the world's highest sites for optical, infrared and gamma-ray telescopes.

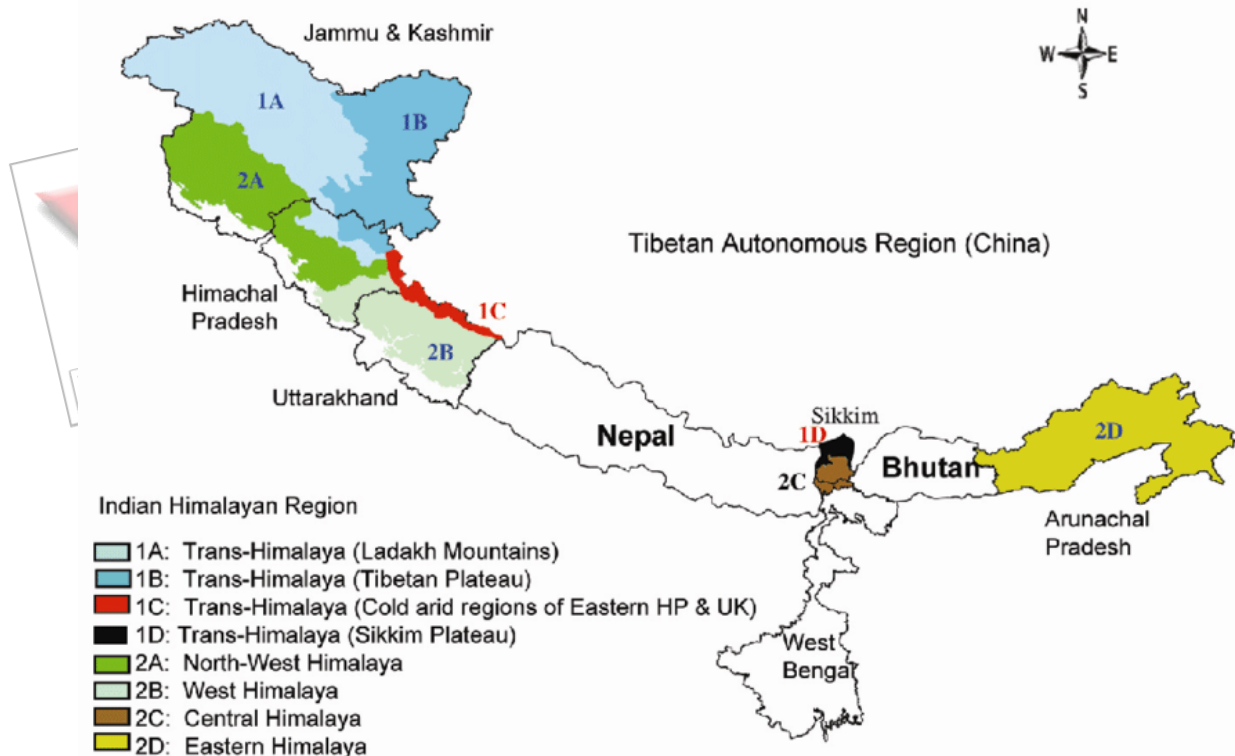
Key Points

About:

- Hanle site is as dry as the Atacama Desert in Chile and much drier than Devasthal (Uttarakhand) and has around 270 clear nights in a year and is also one of the emerging sites for infrared and sub-mm optical astronomy. This is because water vapour absorbs electromagnetic signals and reduces their strength.
- It has advantages of more clear nights, minimal light pollution, background aerosol concentration, extremely dry atmospheric conditions, and uninterrupted monsoon.
- Such conditions are considered crucial for astronomers to build huge telescopes and plan for future observatories and predict how they will vary with time.

Other Promising Sites:

1. Merak observatories in Ladakh.
2. Devasthal in Nainital, Ali Observatory in the Tibet Autonomous Region in China.
3. South African Large Telescope in South Africa.
4. University of Tokyo Atacama Observatory and Paranal in Chile.
5. Mexico's National Astronomical Observatory.



Trans- Himalayan Region:

- The Trans-Himalayas Mountain Region or Tibet Himalayan Region is located to the north of the Great Himalayas which consists of Karakoram, Ladakh, Zaskar and Kailash mountain ranges. It is also called the Tibet Himalayan Region because most of the part of these ranges lies in Tibet.
- They are the eastward continuation of the most northerly ranges of the Himalayas.
- It consists of an ill-defined mountain area about 600 miles long and 140 miles wide in the centre, narrowing to a 20-mile width at the eastern and western ends.
- It is mainly composed of granites and volcanic rocks of the Neogene and Paleogene age.

DAILY ANSWER WRITING PRACTICE

Qns. The lack of transparency remains a major impediment in utilisation of public funds, which in turns affects our developmental goals. Justify. (150 words)

Ans:

Introduction

‘Public money ought to be touched with the most scrupulous conscientiousness of honor. It is not the produce of riches only, but of the hard earnings of labour and poverty.’ – Thomas Paine.

Efficient utilisation of public funds is necessary for judicious use of financial resources to satisfy the needs of the present society in such a way that it doesn't compromise the capability of societies of future generations to meet their own needs.

Body:

Lack of transparency remains a major impediment in utilization of public funds due to

- **Corruption**

1. The large sum of money earmarked for public activities are taken away by officials as well as politicians in form of bribes. This results in funds not able to contribute towards development.
2. As our former Prime Minister had remarked, “only 15 paisa for every rupee spent on public welfare actually reaches to the masses”, thereby highlighting the gravity of ineffective utilization of funds in our country
3. Ex: Money allocated for construction of houses for poor is consumed by corrupt officials.

- **Political rivalry**

1. Sometimes political class indulges in act of vendetta where they do not cooperate in allocation or release of funds to their opposition. They hope to reap the anger against their opponents for their political gains.
2. Ex: Government in power not allocating developmental funds to opposition MLAs.

- **Diversification**

1. The funds allocated to one activity is diverted to another in order to meet strict control over finances.
2. Ex: Funds allocated to road repair is diverted to giving freebies.

- **Red-tapism** Colonial bureaucratic attitude sometimes acts as hinderance in carrying out developmental activities. They complicate the process due to which funds are not properly utilized.

Measures to enhance of transparency and accountability:

- It is vital to uphold the ‘social contract’. Citizens must be confident that they are protected by the law and that public institutions and servants will act in accordance with it.
- Public institutions with operational independence from political control are more likely to be trusted to act in the public interest.
- A well-informed population is far more likely to be confident about investing for the future. This means both providing appropriate information in ways that are accessible and easy to understand, and educating citizens as well as inviting them to participate in decision making.
- Effective public financial management requires that decision-makers, citizens and other stakeholders, are able to ‘follow the money’ to see how taxes were raised, why decisions to spend it were made, how the money was actually spent and what was bought.
- Where government plans and activities are measured against expected outputs and outcomes, citizens and other stakeholders will be able to judge the performance of government. This, in turn, provides the basis for feedback and continuous improvement mechanisms.
- For the public to believe that public officials will do the right thing, a range of controls to promote integrity and ethical behaviour and to tackle fraud and corruption are required.
- Most importantly, the public must believe that individuals will be held responsible for their actions, no matter who they are.

- A climate for investment is created when investors believe a state is stable, well run and that political and fiscal risks will be managed effectively.

Conclusion:

It is important for citizens to trust that the government will act in their interest, if they are to invest their own private resources and so create economic activity and employment. Efficient utilisation of public funds requires a number of reforms for good governance such as decentralisation of power, plugging legislative loopholes, strengthening the public Institutions like CVC and RTI, enhancing administrative accountability and making society more democratic. These reforms could make society more sustainable in the long run.

DAILY QUIZ

Q1. Technical textiles are:

- the high-tenacity fibres which are lightest and toughest fabrics mainly used in automobile and aerospace industries**
- the toughest fabrics which are much heavier than polyester and used in power industries
- the toughest fabrics having rigidity mainly used in polyhouse construction
- the high-tenacity fabrics having fire resistance property

Q2. The Shekatkar Committee was in news recently, is related to which of the following?

- Privatization of public sector banks
- National geospatial policy
- Finance sector reforms
- Enhancing combat capability of the armed forces**

Q3. The famous Shreya Singhal case was in news recently, is related to which of the following?

- Capital punishment
- Disqualification of legislators
- Model code of conduct
- None of the above**

Q4. With reference to Mekedatu Project, which was in news recently, consider the following statements:

- The project aims to provide safe drinking water to the drought prone areas of North Karnataka.
- The dam project has become a bone of contention between Goa and Karnataka.

Which of the statements given above is/are correct?

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

Q5. Landsat 9 was recently launched by

- China National Space Administration (CNSA)
- European Space Agency (ESA)
- Indian Space Research Organisation (ISRO)
- National Aeronautics and Space Administration (NASA)**