MARCH
→ 2020 ISSUE → 2

PERFECT

Weekly Current Affairs

Coronautus:

A New Initiative of Dhyeya IAS





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DHYEYA IAS

AN INTRODUCTION



Vinay Kumar Singh CEO and Founder DHYEYA IAS

he guiding philosophy of the institute, throughout, has been creation of knowledge base. Dhyeya IAS inculcates human

values and professional ethics in the students, which help them make decisions and create path that are good not only for them, but also for the society, for the nation, and for the world as whole. To fulfill its mission in new and powerful ways, each student is motivated to strive towards achieving excellence in every endeavor. It is done by making continuous improvements in curricula and pedagogical tools.

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hyeya IAS is an institution that aims at the complete development of the student. Our faculty are handpicked and highly qualified to

ensure that the students are given every possible support in all their academic endeavors. It is a multi-disciplinary institution which ensures that the students have ready access to a wide range of academic material.

Our brand of education has broad horizons as we believe in exposure. Our students are encouraged to widen their knowledge base and study beyond the confinements of the syllabus. We aim to lend a gentle guiding hand to make our students recognize their inner potential and grow on their own accord into stalwarts of tomorrow's society.

With the new and colourful edition of Perfect 7, Dhyeya IAS wishes you a jouous and colourful holi.



Perfect 7

AN INTRODUCTION



(Ex Editor- Rajya Sabha TV)

I ith immense pleasure I would like to inform you that the new version of 'Perfect-7', from the Dhyeya IAS, is coming with more information in a

very attractive manner. Heartily congratulations to the editorial team. The **'Perfect-7'** invites a wider readership in the Institute. The name and fame of an institute depends on the caliber and achievements of the students and teachers. The role of the teacher is to nurture the skills and talents of the students as a facilitator. This magazine is going to showcase the strength of our Institute. Let this be a forum to exhibit the potential of faculties, eminent writers, authors and students with their literary skills and innovative ideas.

Please do visit our website www.dhyeyaias.com and our youtube channel for regular and updated information on current affairs.



Ashutosh Singh Managing Editor DHYEYA IAS



e have not only given the name '**Perfect 7'** to our magazine, but also left no stone unturned to keep it 'near to perfect'. We all know that beginning of a task is most challenging as well

as most important thing. So we met the same fate. Publishing 'Perfect 7' provided us various challenges because from the beginning itself we kept our bar too high to ensure the quality. Right from the very first issue we had a daunting task to save aspirants from the 'overdose of information'. Focusing on civil services exams 'Perfect 7' embodies in itself rightful friend and guide in your preparation. This weapon is built to be precise yet comprehensive. It is not about bombardment of mindless facts rather an analysis of various facets of the issues, selected in a systematic manner. We adopted the 'Multi Filter' and 'Six Sigma' approach, in which a subject or an issue is selected after diligent discussion on various levels so that the questions in the examination could be covered with high probability.

Being a weekly magazine there is a constant challenge to provide qualitative study material in a time bound approach. It is our humble achievement that we feel proud to make delivered our promise of quality consistently without missing any issue since its inception.

Your suggetions and popular demands have inspired us to come up with a coloured edition of **'Perfect 7'** on this pious festival of colours. May this version of **'Perfect 7'** install a new energy and a new spirit in you- We wish that the bend of affection between you and Dhyeya is reaches a new height.

PREFACE





Certificate of Excellence

Certificate awarded to

Dhyeya IAS

represented by Mr. Vinay Singh

for their contribution in the field of education by

Shri Ram Naik Hou'ble Governor of Uttar Pradesh on 27th June, 2015 at Lucknow

n the joyous occasion of Holi, Dhyeya family has decided to bring a new colourful and vibrant version of **'Perfect 7'** – a panacea for current affairs. Just like vividness of colours,

newer version of **'Perfect 7'** will add positive and dynamic energy in your preparation.

'Perfect7' is an outstanding compilation of current affairs topics as per the new pattern of Civil Service examination (CSE). It presents weekly analysis of information and issues (national and international) in the form of articles, news analysis, brain boosters, PIB highlights and graphical information, which helps to understand and retain the information comprehensively. Hence,'Perfect 7' will build in-depth understanding of various issues in different facets.

'Perfect7' is our genuine effort to provide correct, concise and concrete information, which helps students to crack the civil service examination. This magazine is the result of the efforts of the eminent scholars and the experts from different fields. 'Perfect 7' is surely a force multiplier in your effort and plugs the loopholes in the preparation.

We believe in environment of continuous improvement and learning. Your constructive suggestions and comments are always welcome, which could guide us in further revision of this magazine.

Omveer Singh Chaudhary

Editor Dhyeya IAS



s a proud jewel of Dhyeya IAS, **'Perfect 7'** now comes in a new coloured avatar. **'Perfect 7'** is a quintessential part of your preparation strategy for Civil Services

Examination. A regular and manageable dose of current affairs will now reach you in new format, making it more reader friendly. Our humble attempt to serve you is surely rewarded by your appreciations. It encourages us to innovate and provide the best as per our ability.

A dedicated team of experts at Dhyeya IAS under wise and expert guidance toils night and day to make your dream of Civil Services come true. I heartily thank and express my gratitude to the esteemed readers and all the people involved in making this magazine a shining star in the galaxy of Dhyeya IAS.

Rajat Jhingan

Editor Dhyeya IAS



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IMPORTANT ISSUES



Coronavirus : A Global Menace

Why in News?

Coronavirus is a zoonotic disease which affected more than 70 countries around the world with over 3000 deaths reported worldwide.

Introduction

The novel coronavirus disease that emerged in Wuhan, China, in 2019, is now in at least 70 countries around the world, spanning every continent except Antarctica. More than 88,000 people have been infected, and over 3000 are dead. The World Health Organisation (WHO) and other health authorities have so far been referring only to a COVID-19 "outbreak", which WHO on January 30 declared was a "Public Health Emergency of International Concern". Further, WHO has increased the assessment of the risk of spread and risk of the impact of the coronavirus from "high" to "very high" at the global level. WHO gave an official name 'COVID-19' to the disease caused by the novel coronavirus. The "CO" stands for coronavirus, "VI" for virus and "D" for disease. The coronavirus itself is called "nCoV-2019".



While an outbreak is understood to be a sudden rise in the cases of a disease in a particular place, and an epidemic as a large outbreak among a particular population or region (such as the current situation in China), a pandemic.



Till now, China has reported over 78,000 cases with roughly 2,800 deaths. At 329 new cases, China recorded its lowest cases in a month, a development that is welcomed by WHO. After China, South Korea has reported the most number of cases at 2337, followed by Italy, at 650. As of now, countries outside China account for about three-quarters of the new infections with Iran reporting the most number of deaths at 34.

What is Coronavirus?

Coronaviruses are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). A novel coronavirus (nCoV) is a new strain that has not been previously identified in humans.

In humans, the viruses cause respiratory infections which are typically mild including the common cold but can lead to serious illness like pneumonia. In cows

Types of Coronavirus

There are seven strains of human coronaviruses

- 1. Human coronavirus 229E (HCoV-229E)
- 2. Human coronavirus OC43 (HCoV-OC43)
- 3. SARS-CoV
- 4. Human coronavirus NL63 (HCoV-NL63, New Haven coronavirus)
- 5. Human coronavirus HKU1
- Middle East respiratory syndrome coronavirus (MERS-CoV), previously known as novel coronavirus 2012 and HCoV-EMC
- Novel coronavirus (2019-nCoV), also known as Wuhan pneumonia or Wuhan coronavirus.

and pigs they may cause diarrhea, while in chickens they can cause an upper respiratory disease. There are no vaccines or antiviral drugs that are approved for prevention or treatment.

Coronaviruses are zoonotic, meaning they are transmitted between animals and people. According to WHO more than 300 zoonotic diseases have been observed over the 70 years. It causes about 60% of all human diseases and 75% of all emerging infectious diseases. Animal flu, Bird flu, Dengue, Encephalitis

Malaria, Plague, Rabies, Ebola, Nipah, Kyasanur Forest disease, etc. are the examples of zoonotic disease.

Common signs of infection include respiratory symptoms, fever, cough, runny nose, soar throat, weakening of immune system, shortness of breath and breathing



difficulties. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death.

Impact of Coronavirus

As the world grapples with the coronavirus, the economic impact is mounting- with the Organisation for Economic Co-operation and Development (OECD) warning the virus presents the biggest danger to the global economy since the financial crisis. Businesses are dealing with lost revenue and disrupted supply chains due to China's factory shutdowns, tens of millions of people remaining in lockdown in dozens of cities and other countries extending travel restrictions. With many companies and countries depending on the health of China's economy, here are a few ways the outbreak is sending ripples around the world.

On Chinese Economy

It was a bruising year for China. A trade war with the United States (US) left its economy expanding at the slowest pace in 30 years. And economists estimate 4 million jobs may have been lost in 2019. This year is already being defined by the outbreak of the coronavirus which has killed thousands and has infected thousands more, putting the brakes on China's economy.

According to the Economists, China's growth rate to slump to 4.5% in the first quarter of this year from 6% in the previous quarter. That would be the slowest pace since the financial crisis. Further, with much of the country in lockdown, the virus could affect up to 42% of China's economy.

On Global Financial Markets

Global financial markets saw some of the sharpest falls in years after a rise in coronavirus cases renewed fears about economic slowdown. Recent weeks saw major stock markets suffer their worst performance since the 2008 financial crisis, with \$1.5 trillion being wiped off the value of global shares.

Prior, the impact on markets seemed to have a local component as Asian markets close to China suffered more than others. But this changed recently. Even geographically distant markets, which had remained shielded from the virusrelated negative sentiment until now, are reacting; and many of them are reacting violently.

India also saw a streak of negative sentiment around the same period. Indian stock market index fell sharply after two fresh coronavirus cases were reported in the country. The Sensex ended 153 points lower at 38,144 while Nifty settled 0.6% lower at 11,132. The rupee also extended losses against the US dollar.

On Travel Industry

It's one of the largest industries in the world, with \$5.7 trillion in revenue. It is responsible for an estimated 319 million jobs, or roughly one in 10 people working on the planet. And no sector is more at risk from the novel coronavirus.

The travel industry has already taken a huge hit due to travel restrictions and canceled trips for both business and pleasure, but that's just the beginning.

It could be the worst crisis for the industry since the September 11 terrorist attacks on the United States, according to some experts.

The hit to the travel industry has the potential to become a major drag on the global economy if the coronavirus continues to spread around the world.

There has been a sharp drop in travel across the Pacific, not just to and from China, the epicenter of the outbreak, but also to other Asian countries. As per United Airlines, it had seen a near total drop in demand to China and about a 75% decline in near-term demand on the rest of its trans-Pacific routes. Chinese nationals have become the most frequent global travelers in the world, with 180 million holding passports, compared to the 147 million Americans who have passports. And travel by the Chinese has been virtually halted due to the crisis.

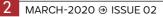
Impact on India

In India, the number of coronavirus cases rose to five after two new infections were detected — one in Delhi and the other in Hyderabad. The new cases mark the first instance in the country of the virus being reported from outside Kerala, were found to have been infected. Therefore, government of India has decided to expand the universal screening of passengers.

India's economy continues to decelerate, presenting challenges to policymakers tasked with reviving growth as the coronavirus outbreak disrupts global supply chains and saps business and investor confidence around the world. As per National Statistics Office (NSO) data, India's economy grew an anaemic 4.7% on an annualised basis in the final three months of 2019- marking a slowdown from the same period a year earlier, as well as from the previous guarter's revised growth rate of 5.1%. The government of India has tried to stem the slowdown with a host of measures, including tax cuts and cash injections for the banking and automobile sectors. But, Coronavirus outbreak could cause

According to the report titled "India: Growth and inflation targeting review", the Monetary Policy Committee (MPC) of the Reserve Bank of India is also considering the developments around COVID-19, which has resulted in supply chain disruptions from China as well as regional players,

who in turn are net importers from China.



a dent to the recovery of the Indian economy amid supply chain disruptions and inflationary pressures. The virus has so far affected India's manufacturing and exports sectors — notably medicines, electronics, textiles and chemicals. The government is taking all necessary steps to protect Indian industry from the threat, especially in the area of intermediate goods where \$30 billion worth of bilateral trade happens every year.

Government of India's Measures

- The Drug Controller General of India has granted approval to the Indian Council of Medical Research to use a combination of lopinavir and ritonavir in the event of the coronavirus disease in India turns into a public health emergency.
- Passengers from 12 countries are being screened, including those from Kathmandu, Indonesia, Vietnam and Malaysia.
- India has imposed "some restrictions" on export of certain medical equipment to China in view of their shortage of supply in the country, and the precautions taken are in accordance with World Health Organisation's (WHO) advisory for the coronavirus outbreak.
- Sixteen Indians have tested positive for coronavirus test aboard the cruise liner Diamond Princess. The last batch of healthy passengers disembarked and returned to India after the quarantine period ended. A total of 138 Indians, including 132 crew and 6 passengers, were among the 3,711 people on board the ship.
- India has issued a fresh travel advisory to avoid non-essential travel to Korea, Iran and Italy, in addition to China.
- People coming from Republic of Korea, Iran and Italy or having such travel history since 10 February may be quarantined for 14 days on arrival to India, along with anyone with a history of travel to China since January 15,

2020.

- India announced cancellation of existing visas issued to all foreign nationals travelling from China, and advised Indians to avoid travelling to China.
- Thermal screening has been installed at 21 airports including those in Delhi, Mumbai, Kolkata, Chennai, Bengaluru, Hyderabad, and Cochin to check for coronavirus in India.
- Universal screening has been mandated for flights from China, Hong Kong, Singapore and Thailand at the aerobridges ear-marked for the purpose.

India's Preparedness towards Future Outbreak

India is ill-prepared to cope with the mysterious coronavirus, should it turn into an epidemic, because of a creaky and overburdened health infrastructure. Health infrastructure is the basic support for the delivery of public health activities, but current facilities in the country paint a dismal picture of the delivery system.

The World Health Organization (WHO)'s Global Health Security Index found that no country is adequately prepared. It assesses 195 countries across six categories — prevention, early detection, rapid response, health system quality, standards, and the risk environment. India is ranked 57th. That the country scores around the global average is no comfort, because the global average is a low 40.2 out of 100, and India's score is 46.5.

Further, India's health status is being worsened by climate shocks. An HSBC study of 67 countries ranks India as the most climate-vulnerable one because of the impact of severe temperature increases and declines in rainfalls. The effects of such occurrences are magnified by the high density of the country's population, the sheer number of people in harm's way, and the high incidence of poverty. Research is increasingly connecting global warming to vectorborne viruses. While, India's laboratory network has improved after the H1N1 scare, much needs to be done to improve the community facing primary health services and risk communication to the public. In general, hospital services can quickly gear up to treat severe cases in urban areas but rural healthcare needs a step up. Kerala's success in responding swiftly and smartly to the Nipah outbreak should be a role model to other states.

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Way Forward

As of now, we do not see evidence that the virus is spreading freely. As long as that's the case, we still have a chance of containing it. WHO is working closely with global experts, governments and partners to rapidly expand scientific knowledge on this new virus, to track the spread and virulence of the virus, and to provide advice to countries and individuals on measures to protect health and prevent the spread of this outbreak. However, swift and robust action must be taken to detect cases early.

As far as India is concerned, the spread of the virus poses a threat of rapid dissemination but it can still be contained with an efficient response that combines effective public health, microbiological, clinical and communication responses. Central and state health agencies must act in tandem. The media, too, must help in increasing awareness without triggering panic.

General Studies Paper- II

Topic: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.





Community Radio : Empowering Local Communities

Context

The Ministry of Information & Broadcasting, Government of India is committed to develop a vibrant Community Radio movement through participation, involvement and ownership of the local community for greater information dissemination and further empowerment of people.

Community Radio in India

Community Radio provides an opportunity to the community to speak about issues concerning their lives. In December 2002, the government released a policy that allowed well- established educational institutions to set up community radio stations. In order to promote development and social change, the government in November 2006 implemented new community radio guidelines permitting non-profit organisations to own and operate community radio stations. With the new policy in place, it opened doors for community radio as a platform for development, social change, and voice of the community in concern.

At present, 276 functional community radio stations are operating in India. Out of these 276 stations, 129 are run by educational institutions, 132 by community-based organisations, and 15 by Krishi Vigyan Kendra/State Agriculture Institutions. At present there are 78 coastal districts in the country. However, all coastal districts do not have operational community radio stations. There are 51 operational community radio stations in 26 districts. Community radios are also prominently being used in Nepal, Bangladesh, and Philippines for rural development. They are equally popular in Canada, America, Australia, and South Africa.



Community Radio is useful in:

- Speaking to communities in local languages using terms and phrases that are easily and locally understood;
- Providing two-way interactive social learning through listening clubs, call-in shows, and other forms of exchange;
- Communicating local knowledge, needs, and demands beyond the community to inform policy, research, and other communities;
- Providing the only media available to communities that have little or no access to other methods of conveying information and knowledge;
- Bringing together people stakeholder groups such as livelihoods, community leaders, organisations and governance.

Community Radio and Disaster Management

The presence of community radio in every phase of a disaster--disaster mitigation, preparation, early warning, response, recovery and revitalisation, is essential for the exchange and sharing of information and dialogue among residents as well as the enhancement of the community's capability and of selfgovernance ability. Stories about climate and environmental change appear in the form of documentaries, interactive talk shows, drama and music, etc. helping communities to learn more about these impacts and share their experiences of responding to them.

Most initiatives linking community radio and climate change are currently focusing on delivering information and messages to listeners about short- and mediumterm forecasts for farmers, alerts for extreme weather events, and messaging to discourage practices which degrades environmental assets. While these remain important messages for communicating local climate change adaptation, community radio has the potential to do much more by strengthening community voices and providing an accessible space for knowledge sharing between communities. Thus, the sense of empowerment that people and communities can feel by engaging in this way can help to build local, institutional, and organisational capacity.

Scope

Community radio can play a crucial role in disaster management via assisting the community in three stages:





Pre-Disaster

In the pre-disaster stage, community radio stations can provide guidance regarding its preparedness. Information regarding gathering locations and safety shelters can be disseminated. Programmes regarding sanitation measures and first aid practices can be broadcast. Also, safety drills can be organised, educating people about emergency plans and responses. Another important task is broadcasting warning signals in case there is a calamity foreseen or likely to occur. Community radio holds such potential since it can reach areas and people that cannot be reached by other forms of communication. It breaks the barriers of literacy and economic status in bringing people together in times of disaster.

While television networks break down almost instantly in face of natural disasters, radio carries with it the potential for continued functioning in such times. It can foster community's awareness on the current situation in other places hit by disaster; announce forecast, and warnings issued by the meteorological department and provide updates on the status of relief and rehabilitation operations.

Community radio specialises in providing local information to the local people. Thus, it can play an important role in disaster risk reduction, especially in predisaster preparedness and mitigation through awareness raising that targets different community groups.

During Disaster

At the time of a disaster, most forms of communication are disrupted barring radio signals. Community radio can help the community link with the relief agencies and Government control room. Two prime advantages of community radio are that they focus to the affected communities and the content is delivered in the local language. This can help in disseminating rescue operation information by location-specific stations. Also, since the information is in the local language/dialect it helps avoid any miscommunication. Information and announcements regarding vulnerable areas which require immediate evacuation can be broadcasted and the community members can be guided to safety shelters where they can access aid and rescue facilities. Locals can call in and provide first hand information regarding the on goings in the affected areas.

Post Disaster

This is a very crucial phase as during rehabilitation the community requires maximum support. Having a medium of communication in their own language or dialect can help in the strengthening the morale of the community. Posttrauma counselling and updates on relief and aid can be a part of the content being broadcasted. Guidelines regarding disposal of wastage, restoration of safe water supply and basic sanitation can be provided. Community radio provides an indigenous solution to a problem that is being faced at a large scale in the country these days. It can be an important component of rescue, relief, and rehabilitation efforts. The need is to build the capacity of operating personnel of community radio and equip them to handle and disseminate disaster-related information in an optimal manner. In this manner, the local community itself can be enabled through infrastructure and training to make use of community radio approach.

Training Community Radio Staff for Disaster Management

For effective utilisation of community radio in disaster management, it is essential that the staff members should be trained in a specific and well-defined manner on disaster prevention, mitigation, and management communication. Several Government departments/Ministries at central and state level working on climate change and disaster management can join hands together to use this platform.

Conclusion

Rural areas are constantly faced with natural calamities given the environmental change. During forest fires in summer, landslides in monsoon, etc. these communities constantly struggle and their isolated situation doesn't help the cause. Community radio has the power to organise and provide information and connect these communities to the much needed aid and relief. Also since the content is in the local dialect it can help curb miscommunication and misinformation in times of panic. Several initiatives and innovations are happening in the community radio front but they can serve their purpose best if integrated together.

Therefore, in the light of increasing frequency of disasters, the role of community radio is central for making people aware and coordinate various tasks related to disaster management. The ease of access to radio signals and availability in local languages furthur empharises, its importance.

General Studies Paper- II

Topic: Development processes and the development industry- the role of NGOs, SHGs, various groups and associations, donors, charities, institutional and other stakeholders.





A Future for the World's Children? : An Overview

Why in News?

Recently, a report titled, "A future for the world's children?" was released by a Commission of World Health Organization (WHO), UNICEF and The Lancet. From the climate crisis to obesity and harmful commercial marketing, children around the world are having to contend with threats that were unimaginable just a few generations ago. As the future of the humanity, the report is an alarm for the nations to prioritise childrens' welfare at the earliest.

Introduction

The health and wellbeing of children now and in the future depends on overcoming new challenges that are escalating at such speed as to threaten the progress and successes of the past two decades in child health. The climate emergency is rapidly undermining the future survival of all species, and the likelihood of a world in which all children enjoy their right to health appears increasingly out of reach. A second existential threat that is more insidious has emerged: predatory commercial exploitation that is encouraging harmful and addictive activities that are extremely deleterious to young people's health.

The WHO–UNICEF–Lancet Commission lays the foundations for a new global movement for child health that addresses these two crises and presents high-level recommendations that position children at the centre of the Sustainable Development Goals (SDGs). The landmark report released by a Commission of over 40 child and adolescent health experts from around the world found that no single country is adequately protecting children's health,



their environment and their futures. The report includes a new global index of 180 countries, comparing performance on child flourishing (Flourishing Index), including measures of child survival and well-being, such as health, education, and nutrition; sustainability (Sustainability Index), with a proxy for greenhouse gas emissions, and equity, or income gaps.

Rights and Entitlements of Children

Placing the SDGs in the service of children involves building on a legacy of commitments to human rights, beginning with the Universal Declaration on Human Rights, adopted by the United Nations General Assembly ((UNGA)) more than 70 years ago, that outline the inalienable entitlements of all people, at all times and in all places, as a foundation for freedom, justice, and peace in the world. The United Nations Convention on the Rights of the Child (CRC), which recognises and affirms children's rights specifically, turned 30 years old in November, 2019. In many ways the CRC was a precursor of the SDG

framework.

The CRC is comprehensive, and not only states children's rights to preventive, promotive, and curative health care, but also to a right to grow and develop to their full potential. The CRC further declares that all children (aged 0–18 years) are entitled to survival, protection, development, and participation.

Every UN member state (except for the USA) is party to the CRC, which provides the foundation for the rights of children. As a convention it is legally binding; as a result, it goes beyond the voluntary SDG framework.

Violations of children's rights are common across many domains, such as poverty; inadequate nutrition; violence and war; gender bias and discrimination against sexual minorities; poor access to clean water, shelter, education, and health services; and climate degradation and unsustainable use of planetary resources.

The Convention is a legal document that commits governments to fulfil the rights of all children living within their country. The entitlements are organised across five over-arching rights and





presented according to a continuum of children's ages (many of the rights apply to all children aged 0–18 years). Because the entitlements are based on rights, granting them is not optional, although countries might use different policies or interventions to deliver them. The five over-arching entitlements are:

- 1. Be protected
- 2. Be educated
- 3. Be healthy
- 4. Be treated fairly
- 5. Be heard

Findings of the Report

- Despite improvements in child and adolescent health over the past 20 years, progress has stalled and is set to reverse.
- It has been estimated that around 250 million children under the age of five in low and middle income countries are at risk of not reaching their developmental potential, based on proxy measures of stunting and poverty.
- Every child worldwide currently faces existential threats from climate change and commercial pressures.
- Excessive carbon emissions disproportionately emitted from wealthier countries — threaten the future of all children.
- According to the report, which includes an index of 180 countries, the poorest nations need to do more to support their children's ability to live healthier lives.
- If global warming exceeds 4 degree Celsius by the year 2100 (in line with current projections), it would lead to devastating health consequences for children due to rising ocean levels, heatwaves, proliferation of diseases like malaria and dengue, and malnutrition.
- Children in certain countries saw as many as 30,000 advertisements on television in a single year. Moreover, exposure of young adults to vaping

advertisements increased by more than 250% in the USA over two years.

- Commercial marketing of junk food and sugary beverages, it added, is associated with the purchase of unhealthy foods and a higher risk of obesity in children.
- World-wide number of obese children and adolescents has increased from 11 million in 1975 to 124 million in 2016 — an 11-fold increase, with dire individual and societal costs.
- Norway, South Korea, the Netherlands, France and Ireland are found to be the best countries for a child to flourish in his or her early years. The Central African Republic, Chad, Somalia, Niger, and Mali are the bottom five in the list, based on the same ranking.
- But when performance is compared taking per capita carbon emissions into account, Burundi, Chad and Somalia are best performers, while the USA, Australia and Saudi Arabia are among the bottom 10 countries.
- When authors took per capita CO2 emissions into account, the top countries (on the child flourishing ranking) trail behind: Norway ranked 156, the Republic of Korea 166, and the Netherlands 160. Each of the three emits 210% more CO2 per capita than their 2030 target.
- The only countries on track to beat CO2 emission per capita targets by 2030, while also performing fairly (within the top 70) on child flourishing measures are: Albania, Armenia, Grenada, Jordan, Moldova, Sri Lanka, Tunisia, Uruguay and Vietnam.

Recommendations of the Commission

The Commission reported on urgent and actionable agendas for children's future.

- 1. Make the case for putting child wellbeing at the centre of SDG policies.
- 2. Describe what needs to be done:

the package of entitlements that governments and other stakeholders should ensure each child receives, and the equityfocused investments and social mobilisation required to make it happen.

- 3. Describe how global, national, and sub-national governance must be reconfigured to provide strong multi-sectoral solutions.
- Address the enormous challenge of commercial regulation in keeping our children safe and healthy, and suggest new approaches to protect them.
- 5. Review how countries can build accountability through childcentred SDG measurements, and the immediate top-down and bottom-up action required to track progress.
- 6. Finally, 10 key recommendations to build a new global movement for the health and wellbeing of children and adolescents. Which is meant to place children at the centre of the SDGs :
 - Heads of state should create a high-level mechanism or assign one overarching department to coordinate work with and for children across sectors, create an enabling environment to enact child-friendly policies, and assess the effect of all policies on children.
 - (ii) Heads of state and governments should create or designate a monitoring system to track budget allocations to child wellbeing, using this process to mobilise domestic resources, by means of fiscal instruments that benefit the poorest in society, for additional investment.
 - (iii) Government officials at the relevant ministry, national academics, and research

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institutions should develop strategies to improve data reporting for SDG indicators measuring child wellbeing, equity, and carbon emissions, using country information systems and citizen-led data and accountability.

- (iv) Local government leaders should establish a cross-cutting team to mobilise action for child health and wellbeing, involving civil society, children themselves, and other stakeholders as appropriate.
- (v) UNICEF child-health ambassadors and other global children's advocates should mobilise governments and communities to adopt child-friendly wellbeing and sustainability policies, and advocate for rapid reductions in carbon emissions to preserve the planet for the next generation.
- (vi) Leaders in children's health, rights, and sustainability should reframe their understanding of the SDGs as being for and about children, and the threat to their future from greenhouse gas emissions, mainly by highincome countries.
- (vii) Children should be given highlevel platforms to share their concerns and ideas and to claim their rights to a healthy future and planet.
- (viii) Country leaders on child health and child rights should push for the adoption of new protocols by the UN Convention on the Rights of the Child to protect children from harmful commercial practices.
- (ix) Country representatives to the UN should work together to create a simplified, effectively multi-sectoral UN architecture

to reduce fragmentation and siloes, and to put action for children at the centre of the SDGs.

(x) WHO and UNICEF leadership should meet with heads of other UN agencies to plan coordinated action to support countries to enact focused, effective policies to achieve the SDGs, and work with regional bodies to help countries

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to share progress and best practices.

Aligning Governance towards Childrens' Welfare

The task of achieving the SDGs should galvanise governments to deliver the rights and entitlements of children and young people, but child advocates and governments must generate the political priority and build fiscal and administrative capacities to do so.

Some of the Initiatives in India

- Umbrella Integrated Child Development Scheme (ICDS), an umbrella scheme which covers:
 - Anganwadi Services Scheme: Programme for early childhood care and development.
 - Pradhan Mantri Matru Vandana Yojana: Incentives of pregnant women and lactating mothers.
 - National Creche Scheme: Day care facilities to children of age group of 6 months to 6 years of working women.
 - POSHAN Abhiyaan (National Nutrition Mission): It targets to reduce the level of stunting, under-nutrition, anemia and low birth weight babies.
 - Scheme for Adolescent Girls: It aims at out of school girls in the age group 11-14, to empower and improve their social status through nutrition, life skills and home skills.
 - Child Protection Scheme: It aims to contribute to the improvement and the well-being of children in difficult circumstances, as well as, reduction of vulnerabilities to situation and actions that leads to abuse, neglect, exploitation, abandonment and separation of children from parents.
- 'The Eat Right India' Movement, built on two broad pillars of 'Eat Healthy' and 'Eat Safe', aims to engage, excite and enable citizens to improve their health and well being. It was launched by Food Safety and Standards Authority of India (FSSAI).
- Ministry of Health and Family Welfare has launched Network for Scientific Co-operation for Food Safety and Applied Nutrition (NetSCoFAN), a network of research & academic institutions working in the area of food & nutrition.
- National Action Plan for Children, 2016 (NPAC) was launched by Ministry of Women and Child Development. The Action Plan has four key priority areas; survival, health and nutrition; education and development; protection and participation.
- Other Schemes
 - Kishori Shakti Yojana
 - Family Counselling Centre Scheme
 - Rashtriya Bal Kosh (National Childrens Fund)
 - General Grant-in-Aid Scheme in the field of Women and Child Development

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In the SDG era three leadership and governance challenges stand out: first, how to move interest in child health beyond the health sector to develop holistic, integrated national policies for children, with augmented governmental capacity to carry them out; second, how to empower subnational and local governments to take multisectoral action; and third, how to reform and integrate the global governance architecture and develop new global agreements pertaining to children to support such multisectoral action.

Getting Governance Right for Children—Key Messages

- National governments are the lynchpin of efforts to deliver children's entitlements.
- A powerful new framing of children at the centre of the SDGs can help build national political priority and raise domestic financing.
- Deliberate design choices are required to ensure different sectors act jointly for children.
- Local governments link national governments to families and communities, but require support, finance, and devolved power.
- Fragmented global governance could be ameliorated by a powerful new framing around child rights and the SDGs.

India's Performance

- India stands 77th (sustainability index) and is at 131st on a ranking that measures the best chance at survival and well-being for children (flourishing index).
- India has improved in health and sanitation but has to increase its spending on health.
- India has been ranked at 102nd place among 117 economies in the Global Hunger Index (GHI) 2019.
- Recently Niti Aayog released SDG Index 2.0, where India improved its composite score from 57 (2018) to 60 (2019).
- According to UNICEF's report, 'Adolescents, Diets and Nutrition: Growing Well in a Changing World', over 80 per cent adolescents in India suffer from "hidden hunger", a form of under-nutrition, and less than 10 per cent of boys and girls consume fruits and eggs daily.
- The infant mortality rate for India in 2019 was 30.924 deaths per 1000 live births, a 3.36% decline from 2018.
- In higher education, India's school enrolment rate stands at 23%, as against about 87% in the USA, 57% in the UK and 39% in China.
- Of an initial enrolment of 100 students, on an average, only 70 finish school in India. While the

number of students in the elementary education level is high (94), many drop out during the secondary level (with 75 left).

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Way Forward

Children and adolescents must be placed at the centre of countries' efforts to achieve sustainable development, with the implementation of new policies and investment in all sectors to work towards child health and rights.

The world leaders need to tighten national regulation of harmful commercial marketing, supported by a new Optional Protocol to the UN Convention on the Rights of the Child. It is time for a rethink on child health, one which places children at the top of every government's development agenda and puts their well-being above all considerations. The report highlighted that the world's decision makers are, too often, failing today's children and youth: failing to protect their health, failing to protect their rights and failing to protect their planet. This must be a wakeup call for countries to invest in child health and development, ensure their voices are heard, protect their rights, and build a future that is fit for children.

General Studies Paper- II

Topic: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.





The Status of Urban Infrastructure in India : An Analysis

Context

Urbanization is an integral part of the process of economic growth. As in most countries, India's towns and cities make a major contribution to the country's economy. With less than 1/3 of India's people, its urban areas generate over 2/3 of the country's gross domestic product (GDP) and account for 90% of government revenues.

Introduction

Nearly 31% of India's current population lives in urban areas contributing to 63% of India's GDP (Census 2011) and with increasing urbanisation, urban areas are expected to house 40% of India's population and contribute to 75% of India's GDP by 2030. India's urban growth is largely concentrated in large cities with a population of 100,000 or more, the number of cities with a population exceeding 1 million has increased from 35 in 2001 to 53 in 2011, accounting for 43% of India's urban population, and is expected to be 87 by 2030.

With an aim to improve the quality of life and attract investments to the city, setting in motion a virtuous cycle of growth and development; during the decade of 2011-2020, a string of programmes and schemes were launched and implemented for urban India. Whereas the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) that had been rolled out earlier entered its closing phase, six new missions were launched by Government of India. These were the Atal Mission for Rejuvenation and Urban Transformation (AMRUT); Pradhan Mantri Awas Yojana (PMAY) - Housing for all (Urban), Smart Cities Mission (SCM), Swachh



Bharat Mission (SBM), Heritage City Development and Augmentation Yojana (HRIDAY) and Deen Dayal Antyodaya Yojana – National Urban Livelihoods Mission (DAY-NULM). These were complemented by schemes to improve urban mobility. As a cluster, the missions aimed at improving the quality of life in urban areas and enhancing the delivery of urban services are explored here.

Assessment of the Programmes/ Missions

National Heritage City Development and Augmentation Yojana (HRIDAY)

The National Heritage City Development and Augmentation Yojana (HRIDAY), launched on 21st January, 2015, is being implemented in 12 cities, namely, Ajmer, Amaravati, Amritsar, Badami, Dwaraka, Gaya, Kancheepuram, Mathura, Puri, Varanasi, Velankanni and Warangal.

In 2018, 20 projects amounting to Rs. 140.14 Crores have been completed in the cities of Ajmer, Amaravati, Amritsar, Badami, Dwaraka, Puri and Varanasi. In order to enhance the experience of religious tourists visiting prominent heritage sites in the HRIDAY Cities, upgradation of 59 roads leading to various heritage sites in the city of Varanasi, Ajmer, Amritsar and Amaravati have been completed.

Atal Mission for Rejuvenation & Urban Transformation (AMRUT)

The Ministry of Housing & Urban Affairs has embarked upon one of the most ambitious programmes undertaken in the world for Urban renaissance for rejuvenating and transforming Indian cities through a number of initiatives including infusion of more than Rs. 6,85,758 crore for ensuring citizen friendly urban areas. The transformation has been undertaken by way of implementing key urban reforms, projects for urban rejuvenation, provision of water, sewerage and sanitation under the Mission AMRUT by sanctioning projects worth Rs.77,640 crore.

The scheme based on Public Private Partnership (PPP) model will be integrated with Housing for All by 2022. The purpose of AMRUT is to:

- Ensure that every household has access to a tap with assured supply of water and a sewerage connection.
- Increase the amenity value of cities by developing greenery and well maintained open spaces (e.g. parks).
- Reduce pollution by switching to public transport or constructing facilities for non-motorized transport (e.g. walking and cycling).

Smart Cities Mission (SCM)

In the imagination of any city dweller in India, the picture of a smart city contains a wish list of infrastructure and services that describes his or her level of aspiration. To provide for the aspirations and needs of the citizens, urban planners ideally aim at developing the entire



urban eco-system, which is represented by the four pillars of comprehensive development-institutional. physical. social and economic infrastructure.

Smart Cities Mission Progress – Projects Grounded/Completed

Most of the projects are innovative and/or are happening in our country for the very first time. For example, 16 Command and Control Centres have been established and 55 would get operational by end of this year. Most cities are actively working on areas like urban spaces, solar energy, safety, public transport, complete streets, and improved citizen services and so on. Some of these key projects being developed are as follows:

- Smart Roads in 25 cities have been completed and are operational, while it is under development in 60 cities.
- Smart Solar in 15 cities has been completed and is operational, while it is under development in 37 cities.
- Smart Wastewater in 10 cities has been completed and is operational, while it is under development in 50 cities.
- Smart Water projects in 24 cities have been completed and are operational, while it is under development in 56 cities.

Smart City Mission is just not about projects. The Mission addresses a number of systemic issues relating to the processes and outcomes of urban development-local government empowerment is one them, as envisioned in the 74th Amendment Act.

Swachh Bharat Mission (SBM)

Swachh Bharat Mission launched in October 2014 by the Honourable Prime Minister has completed five years of its journey. Swachh Bharat Mission-Urban (SBM-U) has achieved its target of creating Urban India ODF. Urban areas of 35 states / UTs have become ODF. In all, 4,320 cities (out of 4,372) have declared themselves ODF. of which 4,167 cities have been certified through third party verification. This has been achieved by the construction of nearly 65.81 lakh Individual Household Toilets against Mission target of 59 lakhs and 5.89 lakh seats of community / public toilets against Mission target of 5.08 lakh seats under the Mission.

PMAY (Urban)

Sanctioning of more than 81 lakh houses at a total investment of Rs.4.83 lakh crore under Pradhan Mantri Awas Yojana -Urban has helped meet the objectives of providing a roof to a large section of poor urban population in the country. Out of these, around 48 lakh houses are at various stages of construction. 26 lakh houses have already been completed and handed over. Mission targets for providing Housing for all by 2022 is way ahead of the timeliness and targets. Over 13 lakh houses are being built using new technologies. As a measure towards women empowerment, houses under PMAY (Urban) are provided in the name of the woman or joint ownership. Under the Credit Linked Subsidy Scheme

(CLSS) of the PMAY, the middle-income group families with income upto 18 lakh per annum are being funded for houses for the first time. The carpet area of the house has been increased upto 200 sg.m. More than 6.32 lakh persons have taken the benefit under the CLSS during 2005-19.

Deendayal Antyodaya Yojana-National Urban Livelihoods Mission (DAY-NULM)

To reduce poverty and vulnerability of the urban poor households by enabling them to access gainful self employment and skilled wage employment opportunities, resulting in an appreciable improvement in their livelihoods on a sustainable basis,

through building strong grassroots level institutions of the poor. The mission aims at providing shelters equipped with essential services to the urban homeless in a phased manner. In addition, the mission also addresses livelihood concerns of the urban street vendors by facilitating access to suitable spaces, institutional credit, social security and skills to the urban street vendors for accessing emerging market opportunities.

Challenges of Urban Infrastructure

Most urban bodies do not generate the revenues needed to renew infrastructure, nor do they have the creditworthiness to access capital markets for funds. Urban transport planning needs to be more holistic there is a focus on moving vehicles rather than meeting the needs of the large numbers of people who walk or ride bicycles in India's towns and cities.

Planning: Many urban governments lack a modern planning framework. The multiplicity of local bodies obstructs efficient planning and land use. Rigid master plans and restrictive zoning regulations limit the land available for building, constricting cities' abilities to grow in accordance with changing needs.

The paucity of funding for capacity building is a huge deficit. If we leave the large municipal corporations aside, the urban local bodies (ULBs) are scarcely in a position to set aside adequate money for the purposes of training.

Housing and Finance: Building regulations that limit urban density - such as floor space indexes - reduce the number of houses available, thereby pushing up property prices. Outdated rent control regulations reduce the number of houses available on rent – a critical option for the poor. Poor access to micro finance and mortgage finance





limit the ability of low income groups to buy or improve their homes. Policy, planning, and regulation deficiencies lead to a proliferation of slums. Weak finances of urban local bodies and service providers leave them unable to expand the trunk infrastructure that housing developers need to develop new sites.

Service Delivery: Most services are delivered by city governments with unclear lines of accountability. There is a strong bias towards adding physical infrastructure rather than providing financially and environmentally sustainable services. Service providers are unable to recover operations and maintenance costs and depend on the government for finance. Independent regulatory authorities that set tariffs, decide on subsidies, and enforce service quality are generally absent.

environment is taking a toll on people's health and productivity and diminishing their quality of life. The case of air quality in Delhi is on point in this regard.

Way Forward

The development of India's infrastructure is a huge task as well as huge opportunity. Building good quality infrastructure is integral to the development of a competitive Indian economy that is expected to play a larger role in the world economy.

The government of India, the State, CSR (corporate social responsibility), other funding agencies and the larger ULBs themselves must tap all possible ways of identifying resources. The question has to be viewed in the light of the scenario staring in our face that the ULBs would house the majority of people. Operating with inefficient ULBs would result in inefficient economies, poor living conditions and a nation with unrealised potential.

Therefore, there is a need for Public Private Partnership (PPP); it becomes difficult for the government alone to bring the desired investment and efficiency in development projects. **GGG**

Paper- I

Topic: Role of women and women's organizations, **Population and associated** issues, Poverty and developmental issues, Urbanization, their problems and their remedies.

Environment: The deteriorating urban

India - US Relations : Setting Up of a New Normal

Why in News?

The first official visit of the United States (US) President Donald Trump to India has been a resounding success. The two sides have agreed to elevate relations to a Comprehensive Global Strategic Partnership. The addition of the word "comprehensive" acquires new salience in a time of flux, particularly in the Indo-Pacific. The two sides have agreed to work together on defence, technology, terrorism and homeland security, energy, trade, checking narco-terrorism and organised crime, connectivity and people-to-people ties.

Brief Background

Between 1947 and 2000, the first 53 years of India-US ties, there were only three visits by US Presidents to India — Dwight Eisenhower in 1959,



Richard Nixon in 1969 and Jimmy Carter in 1978. In the 20 years since 2000, there have been four visits by three US Presidents — Bill Clinton in 2000, George W Bush in 2006, and Obama in 2010 and 2015. While only three of the nine US Presidents during 1947-2000 visited India, every President in the last two

decades has visited India at least once. Many reasons could be ascribed to the higher frequency of visits — a shift in global geo-politics in the post-Cold War era, India's economic ascent, rise of an assertive China, and New Delhi's place on the global high table.

In 2003-04, the first seeds of the Next Steps of Strategic Partnership were sown during the Atal Bihari Vajpayee regime. The relationship peaked with the Indo-US nuclear deal in 2008, which was negotiated during 2005-08 between the Manmohan Singh government and the Bush administration, and is considered the game-changer.

The Obama administration carried forward the relationship, and during his visit in 2010 hosted by Manmohan Singh, the US promised support to India for a United Nation Security Council (UNSC)





membership.

When Narendra Modi became PM in 2014, Obama navigated the transition and visited again in 2015, when he was the chief guest for the Republic Day celebrations.

After Trump came to power in 2016, there was a shift in the US political landscape as his unpredictability defined his presidency. The Indian government moved fast, and Modi visited the White House in June 2017. This was be President Trump's fifth meeting with Prime Minister Modi in eight months (after Osaka, Biarritz, Houston, New York), reflecting the renewed intensity of high-level bilateral engagement since the NDA government returned to power.

Outcomes of the Visit

On a substantive level, India and the US issued a comprehensive joint statement, inked three memorandums of understanding, including one in the energy sector, and agreed to initiate talks on a major trade deal. The two leaders decided to raise India-US ties to the level of a "comprehensive global strategic partnership". Security and defence ties got a boost, with the two deciding to work more closely on homeland security and combating global terrorism. There was also an ambitious effort to make defence manufacturers part of each other's supply chains. Two arms deals worth over \$3.5 billion for six Apache attack helicopters and 24 Seahawk/Romeo anti-submarine warfare helicopters have been signed, with a \$1.9 billion deal for a missile defence system also in the pipeline.

The Indo-Pacific remains a special focus, with the US president underlining the need to revitalize the Quadrilateral Security Dialogue initiative involving the US, India, Australia and Japan on counterterrorism and maritime security. Despite initial differences in their respective definitions of the zone, convergence has grown with the Trump administration expanding the scope of its definition in line with India's, to include the region from the west coast of India to the east coast of Africa. The two nations have similar concerns about China's Belt and Road Initiative and, so, there is now a push for greater collaboration on regional infrastructure projects, including the Blue Dot Network, with the aim of supporting projects which are "open and inclusive, transparent, economically viable, financially, environmentally and socially sustainable, and compliant with international standards, laws, and regulations".

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While there is a distinct continuity in how successive governments have taken the relationship forward over the last three decades, Modi and Trump have managed to give it a strategic coherence that was missing. From signing foundational military agreements to changing the energy and military contours of the engagement, the two have made it possible to imagine a relationship bereft of past baggage. Also, Modi has managed the Trump phenomenon better than even some of America's closest allies. The argument that Trump's visit was all optics and lacked substance is bogus.

Sticky Points in the Relationship

India's relationship with the US is at an interesting juncture. Despite plenty of positive momentum, many sticky issues in trade cast a shadow on Indo-US relations. Trade relations between the two democracies have been turbulent in the past as well but got exacerbated in 2018 when Washington imposed tariffs on steel and aluminium exported from India under Section 232 of the Trade Expansion Act of 1962 on the grounds of national security.

It started with the US raising the import duty on Indian steel and aluminium products-- as 'national security measures' against a country that's supposed to be its 'strategic partner'. India retaliated by dragging the US to the dispute settlement mechanism of the World Trade Organisation (WTO) and increased duties on import of 29 products from the US, including almonds, walnuts, and pulses.

A series of protective measures against India led to a tit-for-tat response from New Delhi, which imposed tariffs of \$235 million on US goods worth \$1.4 billion, prompting speculation about growing Indo-US tensions with trade as the focal point. India had unfortunately failed to anticipate the adverse outcome of a protectionist Trump who ran his 2016 election campaign on the two main planks of 'making America great again' and to 'bring back the jobs'. Acting on his election promise to reform the H-1B visa system, Trump signed an executive order for tightening the programme and granting visas only to "the most skilled and highest-paid applicants", and not to replace Americans.

India and the US have had differences on



World Trade Organisation (WTO) issues and bilateral trade, investment and IPR issues under previous administrations. With Trump's emphasis on America First, US trade, investment and Intellectual Property Rights (IPR) policy under him have become more contentious. USTRs have always been negative towards India, and the present incumbent, Robert Lighthizer, has long argued in favour of protectionism and is a proponent of hard trade policies. Trump has been quite vocal about his stand with respect to Indian markets and has constantly bashed the country as the 'tariffs king'. As far back as March 2017 – two months after taking office - in his first address to the US Congress, Trump singled India out for charging 100 per cent tariffs on Harley-Davidson motorcycles.

To ratchet up the pressure, from June 2019, the US suspended India's special status under the Generalised System of Preferences (GSP) that provided dutyfree access to \$5.6 billion worth of Indian exports. Admittedly, the concession was revoked in response to the 'failure of the Indian government to provide equitable and reasonable access to its markets in numerous sectors'. In keeping with his reputation as transactional leader, just before embarking on his India sojourn, Trump has classified India as a 'developed nation' to eliminate the concessional treatment to India in countervailing duty investigations against its exports.

Trump government demands easy access for its dairy and agriculture products to 1.3 billion Indian consumers. It is opposed to the Indian measures to make healthcare affordable -- price caps on drugs and medical devices like cardiac stents and knee implants. Differences also abound over rules for data localisation and e-commerce.

Points of Convergence

A trade deal with the US will send out a positive signal to foreign investors who have become wary of the Indian markets

over the last few years as evidenced in foreign investment as a percentage of GDP falling to a decade low of 1.1 per cent in 2018-19.

American firms are moving out of China and looking for options to manufacture in other developing countries, the Indian economy has a unique opportunity to benefit from the shift that might not come in the near future again. In case India establishes robust trade relationships with the US, it might act as a timely catalyst in attracting such firms towards India.

As India is choosing to stay away from multilateral efforts in Asia like China's Belt Road Initiative and the Regional Comprehensive Economic Partnership (RCEP), exclusive trade deals with developed economies might give it a much-needed shot in the arm. Thus, a possible trade deal will be a win-win for both nations.

India is generating Big Data – the proverbial 'new oil' - in super abundance. The country is witnessing unparalleled growth in mobile data fueled by low-cost connectivity enjoyed by 800 million users. Several US tech giants, like Facebook and Google, are already earning substantial profits using Indian data. In the coming years, a much larger number of US firms will need access to Indian data to create jobs and wealth in their country in activities such as artificial intelligence (AI), robotics, Internet of Things (IoT), cloud computing, data analytics, and nanotechnology. Potential gains from cooperation are many.

Areas of Cooperation

India conducts more bilateral exercises with the US than with any other country. And, under Trump, the announcement of India's elevation to Tier I of the Strategic Trade Authorization licence exception has opened up US defence technologies from the time when India faced a technologydenial regime.

The other area where the relationship has grown in recent years is energy. The bilateral Strategic Energy Partnership was launched in April 2018; India has started importing crude and LNG from the US from 2017 and 2018 respectively. The total imports are estimated at \$6.7 billion - having grown from zero. The US is also India's sixth largest source of crude oil imports, with hydrocarbon imports rising to \$7 billion in the last two years.

What has differentiated Trump's engagement with India vis-a-vis US' allies and strategic allies is that there has been more strategic alignment with New Delhi than with some of Washington's closest partners. From Indo-Pacific to China, from Maldives to Bangladesh, the two countries are somewhat on the same page.

On Afghanistan, there have been differences in the process. But the situation, South Block insiders feel, is different now since India is much more in the US' calculus than in 1990. There is a sense of cautious optimism that Washington will not hurt India's interests in the long term; this premise will be tested.

The strong strategic partnership is also based on an idea of "shared values" of democracy, rule of law, religious freedom and protection of minorities. The revocation of Article 370 and the new citizenship law and the NRC is testing this "shared values" principle. India's position that these matters are "internal to India" has so far meant the Trump administration has not criticised India openly and sharply. But criticism from the US Congress and some parts of US civil society is pushing the US administration to tell India to bring Kashmir to normalcy and not go ahead with the new citizenship law followed by the NRC, which many see as aiming to exclude minorities.

This intense engagement has helped achieve robust support from the US against terrorism. This was evident after the Pulwama attack last year, leading to designation of Jaish-e-Mohammed chief Masood Azhar as a global terrorist under





UN Security Council Resolution 1267, and the placing of Pakistan on the grey-list of the Financial Action Task Force.

While Trump was once very critical on Pakistan, he has nuanced his position on Pakistan in the last seven months. And now, after the deal between the US and the Taliban, his approach towards Pakistan, long-time benefactor of the Taliban, will be tested in the months to come.

Way Forward

The positive momentum of the visit should be looked at as an opportunity for pursuing broader strategic and political objectives by both the countries. Considering geopolitical challenges to their strategic interests in the region, both India and the US should focus on areas of strategic convergence and this should continue to remain at the centre of discussions at the highest levels. It is time that the two countries also move beyond trade issues with a microscopic focus on agriculture, dairy and poultry, and build upon mutual strengths in other economic domains for a reliable and substantial partnership. The two countries should move beyond trade issues with a microscopic focus on agriculture, dairy and poultry, and build upon mutual strengths in other economic domains for a reliable and substantial partnership. The need of the hour is to look at the big picture. **GGG**

General Studies Paper- II

Topic: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.



13th COP of the CMS : An Overview

Why in News?

The Thirteenth Meeting of the Conference of the Parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS COP13) concluded in Gandhinagar (Gujarat), India (15 to 22 February 2020) with the adoption of a number of significant resolutions and decisions to address the conservation needs and threats facing migratory species around the globe.

Convention on the Conservation of Migratory Species of Wild Animals

As an environmental treaty of the UN, CMS provides a global platform for the conservation and sustainable use of migratory animals and their habitats. CMS brings together the States through which migratory animals pass, the Range States, and lays the legal foundation for internationally coordinated conservation measures throughout a migratory range. As the only global convention specializing in the conservation of migratory species,



their habitats and migration routes, CMS complements and co-operates with a number of other international organizations, NGOs and partners in the media as well as in the corporate sector. CMS works under United Nations Environment Programme (UNEP) of UN.

Migratory species threatened with extinction are listed on Appendix I of the Convention. CMS Parties strive towards strictly protecting these animals, conserving or restoring the places where they live, mitigating obstacles to migration and controlling other factors that might endanger them. Besides establishing obligations for each State joining the Convention, CMS promotes concerted action among the Range States of many of these species.

Migratory species that need or would significantly benefit from international co-operation are listed in Appendix II of the Convention. For this reason, the Convention encourages the Range States to conclude global or regional agreements. In this respect, CMS acts as a framework Convention. The agreements may range from legally binding treaties (called Agreements) to less formal instruments, such as Memorandam of Understanding. and can be adapted to the requirements of particular regions. The development of models tailored according to the conservation needs throughout the migratory range is a unique capacity to CMS.

The COP is the main decision-making body of the Convention. The COP meets



approximately once every three years. The last COP (COP12) took place in Manila, Philippines in 2017.

About CMS COP13

CMS COP13 was the largest ever in the history of the Convention, with 2,550 people attending including 263 delegates representing 82 Parties, 11 delegates from 5 non-Party countries, 50 representatives from United Nations agencies, 70 representatives of international NGOs, 127 representatives of national NGOs and over 100 members of both national and international media.

Key Highlights

India assumed presidency of UN body on Migratory Species (CMS) for the next three years.

 Ten new species were added to CMS Appendices at COP13. Seven species were added to Appendix I, which provides the strictest protection: the

> The theme of CMS COP13 was, "Migratory species connect the planet and we welcome them home. The CMS COP 13 logo is inspired by 'Kolam', a traditional art form from southern India. In the logo of CMS COP-13, Kolam art form is used to depict key migratory species in India like Amur falcon, humpback whale and marine turtles.

CMS COP13 was the first of a series of international nature-related meetings in 2020, which will culminate in the United Nations (UN) Biodiversity Conference at the end of this year, when a new global biodiversity strategy for the next decade will be adopted - the Post-2020 Global Biodiversity Framework. Asian Elephant, Jaguar, Great Indian Bustard, Bengal Florican, Little Bustard, Antipodean Albatross and the Oceanic White-tip Shark. From the above mentioned species, Asian Elephant, Great Indian Bustard and Bengal Florican were the suggestions from Indian side during this CoP.

- The Urial, Smooth Hammerhead Shark and the Tope Shark were listed for protection under Appendix II, which covers migratory species that have an unfavourable conservation status and would benefit from enhanced international cooperation and conservation actions.
- New and extended Concerted Actions with targeted conservation plans were agreed for 14 species. CMS COP13 also adopted the 'Gandhinagar Declaration', which will send a message to the first negotiating session of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework convening in Rome next week. The Declaration calls for migratory species and the concept of 'ecological connectivity' to be integrated and prioritized in the new Framework, which is expected to be adopted at the UN Biodiversity Conference in October.
- The first ever report on the Status of Migratory Species, presented to CMS COP13, shows that despite some success stories, the populations of most migratory species covered by CMS are declining. COP13 agreed that a more comprehensive review should be undertaken to better understand the status of individual species and the main threats they face.

The COP also agreed on a number of crosscutting policy measures to address threats to migratory species:

- Integrate biodiversity and migratory species considerations into national energy and climate policy and promote wildlife-friendly renewable energy;
- Strengthen initiatives to combat the illegal killing, taking and trade of

migratory birds;

- Mitigate the impacts of linear infrastructure such as roads and railways on migratory species;
- Address the unsustainable use of aquatic wild meat;
- Undertake a review of bycatch levels of sharks and rays, and further implement bycatch mitigation measures for marine mammals in national fishing operations;
- Deepen our understanding of the importance of animal culture and social complexity for the conservation of endangered species;
- To investigate possible trade in CMS Appendix I species and the implications for their conservation status.

Apart from the above, the following events also took place at COP 13:

- Three CMS Ambassadors for terrestrial, avian, and aquatic species

 were named at the re-launch of the CMS Ambassadors Programme: the internationally renowned conservationist Ian Redmond OBE (for terrestrial), award-winning explorer and environmentalist Sacha Dench (for avian), and Indian actor and environmental activist Randeep Hooda (for aquatic). They will help raise awareness about the important work of CMS and the plight of migratory species.
- Seven Migratory Species Champions were recognized during a special highlevel event on the eve of the conference. Under the Champion Programme, Germany, India, Italy, Monaco, Norway, the European Commission, and the Environment Agency – Abu Dhabi were acknowledged for their generous contributions to CMS initiatives. These range from wildlife conservation in Africa to the implementation of measures to preserve marine life.
- Ethiopia joined the CMS Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptors MOU). Ethiopia is a strategically important country for the

conservation of migratory birds of prey given its location across the East African flyway, a significant migration route for millions of birds of prey.

During the opening ceremony, the Government of India issued a special stamp edition featuring the 'Gibi'- Great Indian Bustard- the mascot of COP13.

India with CMS

India is very rich in floral and faunal diversity. India hosts several migratory species which crosses transboundary for their biological needs. India has taken several conservation measures to protect and conserve the species and their habitats. Hence, CMS is the best platform to enhance the conservation measures with other nations as CMS provides a global platform for the conservation and sustainable use of migratory animals and their habitats. India is a signatory to the CMS since 1983. India has also signed non legally binding MOU with CMS on the conservation and management of Siberian Cranes (1998), Marine Turtles (2007), Dugongs (2008) and Raptors (2016).

India is temporary home to several migratory animals and birds. The important among these include Amur Falcons, Bar headed Geese, Black necked cranes, Marine turtles, Dugongs, Humpbacked Whales, etc. The Indian sub-continent is also part of the major bird flyway network, i.e, the Central Asian Flyway (CAF) that covers areas between the Arctic and Indian Oceans, and covers at least 279 populations of 182 migratory water bird species, including 29 globally threatened species. India has also launched the National Action Plan for conservation of migratory species under the Central Asian Flyway.

Further, India has developed and is implementing the 'National Conservation Action Plans of Dugongs, Great Indian Bustard, Sea Turtles and Amur Falcons'. A total of 868 protected areas have been established in India as on 1 March, 2019, including 104 national parks, 550 wildlife



MoEFCC

The Ministry of Environment, Forest and Climate Change (MoEFCC) is the nodal agency in the administrative structure of the Central Government for the planning, promotion, co-ordination and overseeing the implementation of India's environmental and forestry policies and programmes.

The primary concerns of the Ministry are implementation of policies and programmes relating to conservation of the country's natural resources including its lakes and rivers, its biodiversity, forests and wildlife, ensuring the welfare of animals, and the prevention and abatement of pollution. While implementing these policies and programmes, the Ministry is guided by the principle of sustainable development and enhancement of human well-being.

The Ministry also serves as the nodal agency in the country for the United Nations Environment Programme (UNEP), South Asia Co-operative Environment Programme (SACEP), International Centre for Integrated Mountain Development (ICIMOD) and for the follow-up of the United Nations Conference on Environment and Development (UNCED). The Ministry is also entrusted with issues relating to multilateral bodies such as the Commission on Sustainable Development (CSD), Global Environment Facility (GEF) and of regional bodies like Economic and Social Council for Asia and Pacific (ESCAP) and South Asian.

sanctuaries, 87 conservation reserves and 127 community reserves. Besides, 37 wetlands have been designated as Ramsar sites which give maximum protection for wildlife including several migratory species.

In the area of capacity building, Ministry of Environment, Forest and Climate Change, (MoEFCC) supports several programmes to conserve migratory species and their habitats. National Biodiversity Strategy and Action Plan of India has addressed various issues in this context. India has been monitoring the birds and mammals of Antarctica and Southern Indian Ocean through its 'Antarctica Programme'. Most migratory birds of India have been listed under various Schedules of the Wild Life (Protection) Act, 1972 thereby according them protection against hunting and trade. The Government of India has been taking necessary actions to protect and conserve migratory marine species. Seven species, that include Dugong, Whale Shark, Marine Turtle (two species), have been identified for preparation of Conservation and Recovery Action Plan. In pursuance to the decision taken by the National Board

for Wildlife to protect Tiger and other Asian big cats under the Chairmanship of the Prime Minister, a Task Force was constituted for identifying Transboundary Protected Area for better cooperation between India and neighbouring countries. The Task Force could identify and prioritize 12 Trans-boundary Protected Areas (TBPAs) in India and these TBPAs would be managed for peace and co-operation as per the guidelines prescribed by the IUCN-World Commission on Protected Areas.

The MoEFCC has chosen seven threatened marine species and prepared their recovery plans at the National Level. On priority, the species recovery plans of the Dugong, the Whale Shark and Marine Turtles have already been under implementation with help of concerned State Governments, WII, NGOs, etc. Further, the MoEFCC has already chosen the threatened dugong, marine turtles, coral reefs and mangroves under its 'Integrated Development of Wildlife Habitats' programme on a priority basis. Necessary conservation actions in this regard have already been initiated. Recently, MoEFCC is implementing the





'Recovery Programme of Dugong' with support from State Governments of Tamil Nadu and Guiarat and Union Territory of Andaman and Nicobar Islands in collaboration with the Indian Navy and the Indian Coast Guard and other National/ State Level institutions.

India has signed non-legally binding MOU with CMS on the conservation and management of Siberian Cranes (1998), Marine Turtles (2007), Dugongs (2008) and Raptors (2016).

Way Forward

This was the first CMS COP to be inaugurated by a host-country's Head of Government. In his opening address, Indian Prime Minister Narendra Modi

noted that the conservation of wildlife and habitats has long been part of the cultural ethos of India. India, as COP13 host, will assume the role of COP Presidency for the next three years. Prime Minister Modi pledged to focus on the conservation of migratory birds along the Central Asian Flyway, and announced the establishment of an institutional facility for undertaking research and assessment of the conservation of migratory birds, the conservation of marine turtles, reduction of pollution from micro-plastic and singleuse plastic, trans-boundary protected areas, and sustainable infrastructure development. He also highlighted some of the country's efforts in wildlife conservation including for the emblematic Tiger, Lion, Asian Elephant, Snow Leopard, Greater One-horned Rhinoceros, and the Great Indian Bustard.

General Studies Paper- II

Topic: Important International institutions, agencies and fora- their structure, mandate.

General Studies Paper- III

Topic: Conservation, environmental pollution and degradation, environ-mental impact assessment.



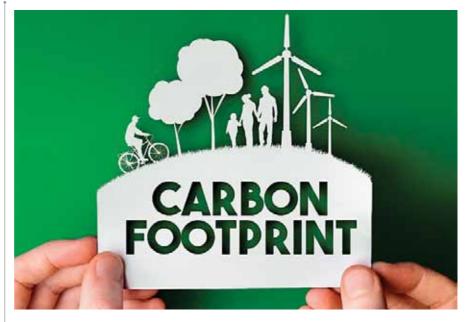
Carbon Footprint and Its Impact on Environment

Context

The study, 'Carbon Sequestration Potential of the Forest Ecosystems in the Western Ghats: a Global Biodiversity Hotspot' has found large-scale land cover shaved off, leading to deforestation with degradation, causing 20-25% of anthropogenic (humanrelated) carbon emissions, resulting in regional impact on climate patterns. The loss of forest cover has also modified the local rainfall pattern.

What is Carbon Footprint?

Carbon footprint, amount of carbon dioxide (CO2) emissions associated with all the activities of a person or other entity (e.g., building, corporation, country, etc.). It includes direct emissions, such as those that result from fossilfuel combustion in manufacturing, heating, and transportation, as well as emissions required to produce the electricity associated with goods and services consumed. In addition, the carbon



footprint concept also often includes the emissions of other greenhouse gases (GHG), such as methane, nitrous oxide, or chlorofluorocarbons (CFCs).

The concept and name of the carbon footprint derives from the ecological footprint concept, which was developed by William E. Rees and Mathis Wackernagel



in the 1990s. An ecological footprint is the total area of land required to sustain an activity or population. It includes environmental impacts, such as water use and the amount of land used for food production. In contrast, a carbon footprint is usually expressed as a measure of weight, as in tons of CO2 or CO2 equivalent per year.

Anthropogenic activities such as burning fossil fuel, power generation, agriculture, industry, polluting water bodies, and urban. Activities are responsible for increasing GHG footprint of which 72% constitute CO2. GHG footprint needs to be in balance with sequestration of carbon to sustain ecosystem functions. Forests are the major carbon sinks (about 45%) that aid in mitigating global warning.

The land use land cover (LULC) dynamics leading to deforestation and land degradation is the prime driver of global warming due to the loss of carbon sequestration potential as well as emissions.

In India, Carbon footprint is contributed by emissions from the energy sector (68%), agriculture (19.6%), industrial processes (6%), land use change (3.8%) and forestry (1.9%), respectively in India with CO2 emissions of about 3.1 MGg (2017) and the per capita CO2 emissions of 2.56 metric tonnes. Carbon emissions from major metropolitan cities of India is about 1.3 MGg contributed by major cities such as Delhi (38633.20 Gg), Greater Mumbai (22783.08 Gg), Chennai (22090.55 Gg), Bengaluru (19796.6 Gg), Kolkata (14812.1 Gg), Hyderabad (13734.59 Gg), and Ahmedabad (6580.4 Gg) from energy, transportation, industrial sector, agriculture, livestock management and waste sectors per year.

Climate Change Threat Assessment

Coal power plants, rice paddies and cattle are major sources of emissions, which continue to rise steeply, although percapita emissions remain well below the global average.

India is also very vulnerable to climate change, notably due to the melting of the Himalayan glaciers and changes to the monsoon. The Himalaya mountains, which form the most important concentration of snow outside the poles, are one particularly vulnerable part of India and the wider South Asia region. The glaciers are a critical water source for 250 million people who live in the region. A further 1.65 billion people in India and seven other countries rely on the major rivers that flow from it.

India is also vulnerable to increases in vector-borne diseases, such as malaria and dengue, which could both see increases due to climate change.

Heatwaves are also expected to be an issue, with 600 million people currently in locations that could become moderate or severe hotspots by 2050, according to the World Bank.

India could see significant sea level rise, affecting the river water systems that hundreds of millions rely on for food. Its 1,238 islands are also at risk.

The country's disaster management act came into force in 2005. This made no explicit mention of climate change, but aimed to move from a "response and relief" approach to "preventionmitigation and preparedness". In 2016, India launched a disaster management plan, which integrates the principles of the Paris Agreement alongside other global disaster risk reduction frameworks. Recently, government also launched National Disaster Management Plan, 2019. India has dedicated one of its eight National Action Plan on Climate Change (NAPCC) missions to protecting the Himalayan ecosystem. Another two missions focus on water and research and development.

India's Paris Pledge

India is part of four negotiating blocs at international climate talks. These are BASIC, a coalition of the four major emerging economies with Brazil, South Africa and China; the like-minded developing countries (LMDC); the G77 + China; and the Coalition for Rainforest Nations (CfRN).

India ratified the Paris Agreement on 2 October 2016, almost exactly a year after it submitted its climate pledge, or "nationally determined contribution" (NDC), for the Paris climate talks.

The pledge is for a 33-35% reduction in emissions associated with each unit of economic output ("emissions intensity") by 2030, compared to 2005 levels. Carbon Brief analysis at the time found India's emissions could increase 90% between 2014 and 2030, even if the pledge is met.

India also aims for 40% of its installed electricity capacity to be renewable or nuclear by 2030.

It further outlines plans to increase tree cover to create an additional cumulative carbon sink of 2,500-3,000Mt CO2 by 2030 – roughly on a par with its total emissions across one year.

The pledge says India's goals represent the "utmost ambitious action in the current state of development" and criticises the "tepid and inadequate" response of developed countries to global warming. "India, even though not a part of the problem, has been an active and constructive participant in the search for solutions," it says.

India is clear that implementation of its pledge will depend heavily on climate finance, technology transfer and capacity building support from developed countries. In total, it estimates it will need at least \$2.5tn up to 2030, from both domestic and international funds.

The Indian government is considering long-term growth strategies for 2030-2045, which would "decouple" carbon emissions from economic growth. Government has indicated its willingness to increase its climate pledge in 2020. However, it has not yet translated the Paris Agreement goals into domestic law.

India's Action Plans and Achievements So Far

• India has reduced emissions intensity of



gross domestic product (GDP) by 21% and is on track to achieve the goal of 35% emissions reduction as promised in Paris.

- Prime Minister Modi announced 175 . Giga Watts targets for renewables under Paris Agreement. India has already achieved 83 Giga Watts. Prime Minister has subsequently increased the target to 450 Giga Watts at the recent UN Climate Action Summit. We are simultaneously progressing on solar, biomass and wind energy.
- There is a carbon tax on coal production at the rate of Dollars 6 per tonne.
- There was a successful commercial flight which was operated on 100 percent biofuel and India aims targeting blending of 20% ethanol in petrol by 2030.
- India has leapfrogged from Bharat Standard IV to Bharat Standard VI for vehicle emission norms and from 1 April, 2020, vehicles will be BS VI compliant.
- 360 million LED bulbs have been fitted in homes, and 10 million conventional streetlights have been replaced with LED lights.
- There is also a strong push for use of e-vehicles by introducing multiple policy interventions and incentives.
- Government has provided 80 million LPG gas connections replacing conventional firewood cooking stoves. Cooling action plan and adaptation plan are working well and will achieve our targets.
- As government promised creation of additional carbon sinks of 2.5 to 3 billion tonnes of carbon equivalent through increasing green cover. In last five years, the green cover has increased by 15,000 sq. km. Additionally government is promoting special projects like urban forests, school nursery, agroforestry, water and fodder augmentation in the forest area.
- India will be investing about 50 million dollars in water conservation.
- India has taken up a target for

restoration of 26 million of degraded land by 2030 during the 14% COP of UN Convention to Combat Desertification in Delhi. This is one of the largest programs in the world to ensure carbon sink in land resources.

- 100% neem coating of urea fertilizer is appreciated by the world and 170 million soil health cards are taking care of the soil health, thus creating more carbon sinks.
- India has launched the Coalition for Disaster Resilient Infrastructure which is a partnership to support countries through knowledge exchange and provide — technical support on developing disaster and climate resilient infrastructure.
- India has already achieved a 21% reduction in emission intensity of GDP in 2014 compared to 2005 levels, thereby achieving its pre-2020 voluntary target.

Role of Western Ghats and Emerging Threats

Ecologically fragile Western Ghats (WG) has been playing the pivotal role of mitigating carbon footprint with the potential to sequester carbon emission of all southern Indian cities and 1.62% of the foul CO2 emissions from India. The total emissions from WG states accounted to be 352922.3 Gg and forests of WG have the ability to sequester 11% of the emissions, which highlights vital carbon mitigation role and in moderating climate. The carbon trading has demonstrated the potential in monetary values across the globe of Indian forests in capturing carbon and the forest ecosystems in the WG are worth Rs. 100 billion (\$1.4 billion) at \$30 per tonne.

The WG, are one among 36 global biodiversity hotspots and forests in this region sequestering atmospheric carbon, which aid in moderating the global climate. It is considered as a water tower of India due to numerous streams originating and draining millions of hectares. The rivers of WG ensure water and food security of 245+ million people in the peninsular Indian States. The region has tropical evergreen forests, moist deciduous forests, scrub jungles, sholas, and savannas including the high rainfall savannas of which 10% of the forest area is under legal protection.

The large scale changes of agriculture and built-up cover are noticed in the eastern Kerala, Tamil Nadu, and Maharashtra States of WG. The evergreen forest cover will only be 10% of the WG by 2031, which would threaten the sustenance of water and other natural resources, affecting the food security and livelihood of people in the peninsular India.

The carbon sequestration potential of WG has been quantified, which confirms that the forests of WG are incredible reservoirs of biomass and carbon stock, highlighting the critical role of forests in lowering atmospheric carbon (emitted due to anthropogenic activities) and mitigation of global warming.

Way Forward

Hence, ecologically fragile regions such as WG needs to be conserved on priority to Sustain the agriculture and horticulture in peninsular India and support th e eonomy to realise the status of developing country with the healthy citizen and \$5 trillion economy by 2025. Lopsided developmental approaches driven by land, wood, and water mafia will only drain the nation's economy with the recurring instances of floods and droughts.

General Studies Paper- III

Topic: Conservation, environmental pollution and degradation, environmental impact assessment.



SUBJECTIVE QUESTIONS WITH MODEL ANSWERS



Coronavirus : A Global Menace

Q. What is Coronavirus? Discuss its impact on global economy as will as on Indian economy.

Hints:

- Coronaviruses are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). A novel coronavirus (nCoV) is a new strain that has not been previously identified in humans.
- As the world grapples with the coronavirus, the economic impact is mounting- with the Organisation for Economic Co-operation and Development (OECD) warning the virus presents the biggest danger to the global economy since the financial crisis. Businesses are dealing with lost revenue and disrupted supply chains due to China's factory shutdowns, tens of millions of people remaining in lockdown in dozens of cities and other countries extending travel restrictions
- The virus has so far affected India's manufacturing and exports sectors notably medicines, electronics, textiles and chemicals. The government is taking all necessary steps to protect Indian industry from the threat, especially in the area of intermediate goods where \$30 billion worth of bilateral trade happens every year.
- As of now, we do not see evidence that the virus is spreading freely. As long as that's the case, we still have a chance of containing it. WHO is working closely with global experts, governments and partners to rapidly expand scientific knowledge on this new virus, to track the spread and virulence of the virus, and to provide advice to countries and individuals on measures to protect health and prevent the spread of this outbreak. However, swift and robust action must be taken to detect cases early.

02

Community Radio : Empowering Local Communities

Q. Discuss the role of community radio in disaster management and climate change communication.

Hints:

The presence of community radio in every phase of a

disaster--disaster mitigation, preparation, early warning, response, recovery and revitalisation, is essential for the exchange and sharing of information and dialogue among residents as well as the enhancement of the community's capability and of self-governance ability.

- Most initiatives linking community radio and climate change are currently focusing on delivering information and messages to listeners about short- and mediumterm forecasts for farmers, alerts for extreme weather events, and messaging to discourage practices which degrades environmental assets. While these remain important messages for communicating local climate change adaptation, community radio has the potential to do much more by strengthening community voices and providing an accessible space for knowledge sharing between communities.
- Community radio has the power to organise and provide information and connect these communities to the much needed aid and relief. Also since the content is in the local dialect it can help curb miscommunication and misinformation in times of panic.
- Therefore, in the light of increasing frequency of disasters, the role of community radio is central for making people aware and coordinate various tasks related to disaster management. The ease of access to radio signals and availability in local languages furthur empharises, its importance.

03

A Future for the World's Children? : Priortising Their Welfare

Q. Children and adolescents must be placed at the centre of countries' efforts to achieve sustainable development. Elaborate.

Hints:

The health and wellbeing of children now and in the future depends on overcoming new challenges that are escalating at such speed as to threaten the progress and successes of the past two decades in child health. The climate emergency is rapidly undermining the future survival of all species, and the likelihood of a world in which all children enjoy their right to health appears increasingly out of reach. A second existential threat that is more insidious has emerged: predatory commercial exploitation that



is encouraging harmful and addictive activities that are extremely deleterious to young people's health.

- The task of achieving the SDGs should galvanise governments to deliver the rights and entitlements of children and young people, but child advocates and governments must generate the political priority and build fiscal and administrative capacities to do so. In the SDG era three leadership and governance challenges stand out: first, how to move interest in child health beyond the health sector to develop holistic, integrated national policies for children, with augmented governmental capacity to carry them out; second, how to empower subnational and local governments to take multisectoral action; and third, how to reform and integrate the global governance architecture and develop new global agreements pertaining to children to support such multisectoral action.
- Children and adolescents must be placed at the centre of countries' efforts to achieve sustainable development, with the implementation of new policies and investment in all sectors to work towards child health and rights. It is time for a rethink on child health, one which places children at the top of every government's development agenda and puts their well-being above all considerations.



The Status of Urban Infrastructure in India : An Analysis

Urbanization is an integral part of the process of economic growth. Discuss the statement in the light of India's performance in this regard.

Hints:

- Urbanization is an integral part of the process of economic growth. As in most countries, India's towns and cities make a major contribution to the country's economy. With less than 1/3 of India's people, its urban areas generate over 2/3 of the country's gross domestic product (GDP) and account for 90% of government revenues.
- Nearly 31% of India's current population lives in urban areas contributing to 63% of India's GDP (Census 2011) and with increasing urbanisation, urban areas are expected to house 40% of India's population and contribute to 75% of India's GDP by 2030. India's urban growth is largely concentrated in large cities with a population of 100,000 or more, the number of cities with a population exceeding 1 million has increased from 35 in 2001 to 53 in 2011, accounting for 43% of India's urban population, and is expected to be 87 by 2030.
- With an aim to improve the quality of life and attract investments to the city, setting in motion a virtuous cycle of

growth and development; during the decade of 2011-2020, a string of programmes and schemes were launched and implemented for urban India.

Six new missions were launched by Government of India. These were the Atal Mission for Rejuvenation and Urban Transformation (AMRUT); Pradhan Mantri Awas Yojana (PMAY)- Housing for all (Urban), Smart Cities Mission (SCM), Swachh Bharat Mission (SBM), Heritage City Development and Augmentation Yojana (HRIDAY) and Deen Dayal Antyodaya Yojana – National Urban Livelihoods Mission (DAY-NULM). These were complemented by schemes to improve urban mobility. As a cluster, the missions aimed at improving the quality of life in urban areas and enhancing the delivery of urban services are explored here. **GGG**



India - US Relations : Setting Up of a New Normal

Despite plenty of positive momentum, many sticky Q. issues cast a shadow on Indo-US relations. Discuss. Hints:

- The first official visit of the United States (US) President Donald Trump to India has been a resounding success. The two sides have agreed to elevate relations to a Comprehensive Global Strategic Partnership. The addition of the word "comprehensive" acquires new salience in a time of flux, particularly in the Indo-Pacific. The two sides have agreed to work together on defence, technology, terrorism and homeland security, energy, trade, checking narco-terrorism and organised crime, connectivity and people-to-people ties.
- India's relationship with the US is at an interesting juncture. Despite plenty of positive momentum, many sticky issues in trade cast a shadow on Indo-US relations. Trade relations between the two democracies have been turbulent in the past as well but got exacerbated in 2018 when Washington imposed tariffs on steel and aluminium exported from India under Section 232 of the Trade Expansion Act of 1962 on the grounds of national security.
- To ratchet up the pressure, from June 2019, the US suspended India's special status under the Generalised System of Preferences (GSP) that provided duty-free access to \$5.6 billion worth of Indian exports. In keeping with his reputation as transactional leader, just before embarking on his India sojourn, Trump has classified India as a 'developed nation' to eliminate the concessional treatment to India in countervailing duty investigations against its exports.







Considering geopolitical challenges to their strategic interests in the region, both India and the US should focus on areas of strategic convergence and this should continue to remain at the centre of discussions at the highest levels. It is time that the two countries also move beyond trade issues with a microscopic focus on agriculture, dairy and poultry, and build upon mutual strengths in other economic domains for a reliable and substantial partnership.



13th COP of the CMS : An Overview

Discuss the key highlights of the 13th COP to the Q. **Convention on the Conservation of Migratory species of** Wild Animals.

Hints:

- CMS COP13 was the first of a series of international nature-related meetings in 2020, which will culminate in the United Nations (UN) Biodiversity Conference at the end of this year, when a new global biodiversity strategy for the next decade will be adopted - the Post-2020 Global Biodiversity Framework.
- Ten new species were added to CMS Appendices at COP13. Seven species were added to Appendix I, which provides the strictest protection: the Asian Elephant, Jaguar, Great Indian Bustard, Bengal Florican, Little Bustard, Antipodean Albatross and the Oceanic White-tip Shark. From the above mentioned species, Asian Elephant, Great Indian Bustard and Bengal Florican were the suggestions from Indian side during this CoP.
- The Urial, Smooth Hammerhead Shark and the Tope Shark were listed for protection under Appendix II, which covers migratory species that have an unfavourable conservation

status and would benefit from enhanced international cooperation and conservation actions.

'Gandhinagar Declaration', which will send a message to the first negotiating session of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework convening in Rome next week. The Declaration calls for migratory species and the concept of 'ecological connectivity' to be integrated and prioritized in the new Framework, which is expected to be adopted at the UN Biodiversity Conference in October. **GGG**



Carbon Footprint and Its Impact on Environment

What do you understand by 'Carbon footprint'? Discuss Ο. the role of Western Ghats in mitigation of Carbon footprint.

Hints:

- Carbon footprint, amount of carbon dioxide (CO2) emissions associated with all the activities of a person or other entity (e.g., building, corporation, country, etc.). It includes direct emissions, such as those that result from fossil-fuel combustion in manufacturing, heating, and transportation, as well as emissions required to produce the electricity associated with goods and services consumed.
- Ecologically fragile Western Ghats (WG) has been playing the pivotal role of mitigating carbon footprint with the potential to sequester carbon emission of all southern Indian cities and 1.62% of the foul CO2 emissions from India. The total emissions from WG states accounted to be 352922.3 Gg and forests of WG have the ability to sequester 11% of the emissions, which highlights vital carbon mitigation role and in moderating climate.
- The WG, are one among 36 global biodiversity hotspots and forests in this region sequestering atmospheric carbon, which aid in moderating the global climate. It is considered as a water tower of India due to numerous streams originating and draining millions of hectares. The region has tropical evergreen forests, moist deciduous forests, scrub jungles, sholas, and savannas including the high rainfall savannas of which 10% of the forest area is under legal protection.
- The carbon sequestration potential of WG has been quantified, which confirms that the forests of WG are incredible reservoirs of biomass and carbon stock, highlighting the critical role of forests in lowering atmospheric carbon (emitted due to anthropogenic activities) and mitigation of global warming. \bigcirc





Why in News?

11 The pollution tracker IQAir and Greenpeace has released 'World Air Quality Report 2019'

Global Performance

3.1

Air pollution constitutes the most pressing environ-mental health risk for global population

3.2

It is estimated to contribute toward 7 million premature deaths a year, while 92% of the world's population is estimated to breathe toxic air quality (WHO, 2016)

3.3

As a result, air pollution is the main cause of death for children under the age of 15, killing 600,000 every year (WHO, 2018)

34

In financial terms, premature deaths due to air pollution cost about \$5 trillion in welfare losses world-wide (The World Bank, 2016)

35

Regionally, South Asia, South-east Asia, and the Western Asia carry the highest burden of fine particulatematter (PM2.5) pollution

36

Using a weighted population average, Bangladesh emerges as the most polluted country for PM2.5 exposure

3.6.1 Pakistan, Mongolia, Afghanistan and India follow behind respectively, deviating from one another by less than 10%

World Air **Quality Report** 2019

4.1

According to country-wise data, India ranked

fifth in the world's most polluted countries with

21 of the 30 most polluted cities in the world

42

While cities in India, on average, exceed the

WHO target for annual PM2.5 exposure by

500%, national air pollution decreased by 20%

from 2018 to 2019, with 98% of cities

experiencing improvements

3.8

Bahamas

ranked

the cleanest

city

4.3

2019 marked the launch of

India's first National Clean Air

Programme (NCAP), marking a

shift in India's commit-

ment to tackling air pollution

India's

Performance

37

Bosnia and

Herzegovina

is the highest

ranking country

in Europe

for PM2.5

pollution,

featuring as

the 14th most

polluted country

globally

Introduction

This report focuses on PM 2.5 concentrations, as this is the pollutant widely regarded as most harmful to human health

2.1.2

Its microscopic size

allows the particles

to enter the blood

stream via the

respiratory

system and travel

throughout the body,

causing far-reaching

health effects, including

asthma, lung cancer and

heart disease

2.1

2.1.1 PM2.5 is defined

as ambient airborne particles measuring up to 2.5 microns in size

Challenges

5.1 Despite improvements, India still faces serious air pollution challenges. India again heads this report's ranking of annual PM2.5 levels by city with half of the 50 most polluted cities being in India

5.2

No Indian cities included in this report met the WHO target for annual pollution exposure (10ug/m3) during 2019

5.2

No Indian cities included in this report met the WHO target for annual pollution exposure (10ug/m3) during 2019

53

Additionally, the country still has a relatively limited air quality monitoring network given its population size, with many communities and highly populated cities without access to real-time information

4.3.1

The NCAP aims to reduce PM2.5 and PM10 air pollution in 102 cities by 20-30% by 2024 compared to 2017 levels

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3.5.1

Of the

world's top

30 most

polluted

cities during

2019, 27 in

South Asia.

and all the

top 30 cities

are within

greater Asia



Introduction Introduction of better understanding about coastal disaster risks and effective collaborative actions, by implementing Prime Minister's 10-point agenda and Sendai Framework for Disaster Risk Reduction

2.1

2.2

It also emphasised on dissemination ofinformation related to national and local strategies for coastal disaster risk reduction and resilience as well as to develop a network mode roadmap for addressing the gaps by engaging with the institutions, researchers

and experts

About Sendai Framework for Disaster Risk Reduction

4.1

It was adopted at the Third UN World Conference on Disaster Risk Reduction in Sendai, Japan, on March 18, 2015

4.2

It is the successor instrument to the Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters

4.3

It outlines seven clear targets and four priorities for action to prevent new and reduce existing disaster risks

4.4

These are Understanding disaster risk; Strengthening disaster risk governance to manage disaster risk; Investing in disaster reduction for resilience and; Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction

Why in News?

The 1st National Conference on Coastal Disaster Risk Reduction and Resilience (CDRR&R) – 2020' was organisedby the National Institute of Disaster Management (NIDM)

1.1

Prime Minister's 10-point Agenda on DRR

3.1

The Prime Minister had listed the agenda during his inaugural speech at the Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR) 2016

3.2 It includes:

3.2.1

All development sectors must imbibe the principles of disaster risk management

3.2.2

 Work towards risk coverage
 for all-starting from poor households to SMEs to multi-national corporations to nation states

3.2.3

 Encourage greater
 involvement and leadership of women in disaster risk management

3.2.4

Invest in risk mapping globally. For mapping risks related to hazards like earthquakes we have accepted standards and parameters

3.2.5

Leverage technology to enhance the efficiency of ourdisaster risk management efforts 1st National Conference on Coastal Disaster Risk Reduction and Resilience

3.2.6

Develop a network of universities to work on disaster issues

3.2.7

Utilise the opportunities provided by social media and mobile technologies

3.2.8 ■ Build on local capacity and initiative

3.2.9

Opportunity to learn from a disaster must not be wasted. After every disaster there are papers on lessons that are rarely applied

3.2.10

Bring about greater cohesion in international response to disasters

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Why in News?

1.1

The government of India has launched programmes like "Programme for Capacity Building of Scheduled Tribe Representatives in Local Self Governments"; "1000 Spring Initiatives" and an online portal on GIS-based Spring Atlas

About **GIS-based Spring** Atlas

31

The online portal on GIS-based Spring Atlas has been developed to make data related to hydrological and chemical properties of the springs easily accessible from an online platform

3.2

Presently, data of more than 170 springs have been uploaded on the Spring Atlas

4.1

The programme is aimed at empowering tribal Panchayati Raj Institutions (PRI) representatives by enhancing their decision making capabilities at local government level

4.2

Among other issues concerning tribal development, it also focuses on constitutional and legal provisions that protect and promote the rights and welfare of the tribal population

15

This will help in effective and better implementation of various developmental and welfare programmes and substantially improves the expected outcomes

New **Initiatives for Tribal** Community

About Capacity Building Initiative

4.3

It will ensure greater

participation of ST PRIs

representatives in planning,

execution and monitoring

of government policies and

programmes

4.4

2.3.1

However, in the central

and eastern Indian

belt with more than

75% tribal population.

it remains largely

unrecognized and

under-utilized

About

1000 Spring

Initiatives

The capacity building of PRI representatives, who directly participate in the development initiatives at local government level, can be of great help in bridging the development gaps among communities and regions

4.6

The module for capacity building programme has been developed in conjunction with United Nations **Development Programme**

2.1

It aims at improving access to safe and adequate water for the tribal communities living in difficult and inaccessible part of rural areas in the country

2.2

It includes provision of infrastructure for piped water supply for drinking; provision of water for irrigation; community-led total sanitation initiatives; and provision for water for backyard nutrition gardens, generating sustainable livelihood opportunities for the tribal people

2.3

Springs are natural sources of groundwater discharge and have been used extensively in the mountainous regions across the world, including India

2.4

The initiative will help in harnessing the potential of perennial springs' water to address natural scarcity of water in tribal areas

2.5

Under this initiative, more than 70 young tribal youths have been trained as barefoot hydro geologists by combining traditional and scientific knowledge for identification and mapping of springs, and undertaking rejuvenation and protection measures in their habitations



DHYEYA IAS most trusted since 2003

Why in News?

The Cabinet Committee on Economic Affairs has given its approval to set up a National Technical Textiles Mission with a view to position the country as a global leader in Technical Textiles

1.1

1.2

The Mission would have a four year implementation period from FY 2020-21 to 2023-24

Four Components of Mission

31

Component-I: Research, Innovation and Development

3.1.1

This component will promote both fundamental researches at fibre level aiming at path breaking technological products in Carbon Fibre, Aramid Fibre, Nylon Fibre, and Composites

3.1.2

And application based research in geotextiles, agro-textiles, medical textiles, mobile textiles and sports textiles and development of biodegradable technical textiles

3.2.2

The penetration level of technical textiles is low in India varying between 5-10% against the level of 30-70% in developed countries

3.2.3

3.2

Component-II

: Promotion

and Market

Development

3.2.1

Indian Technical

Textiles segment

is estimated at

USD 16 Billion

which is

approximately

6% of the 250

Billion USD

global technical

textiles market

The Mission will aim at average growth rate of 15-20% per annum taking the level of domestic market size to 40-50 Billion USD by the year 2024; through market development, market promotion, international technical collaborations, investment promotions and 'Make in India' initiatives

What are Technical **Textiles**?

National Technical Textiles Mission

3.3 **Component- III : Export Promotion**

3.3.1

The component aims at export promotion of technical textiles enhancing from the current annual value of approximately Rs.14000 Crore to Rs. 20000 Crore by 2021-22 and ensuring 10% average growth in exports per year upto 2023-24

3.3.2

An Export Promotion Council for Technical Textiles will be set up for effective coordination and promotional activities in the segment

2.1

Technical textiles are textiles materials and products manufactured primarily for technical performance and functional properties rather than aesthetic characteristics

2.2

Technical Textiles products are divided into 12 broad categories (Agrotech, Buildtech, Clothtech, Geotech, Hometech, Indutech, Mobiltech, Meditech, Protech, Sportstech, Oekotech, Packtech) depending upon their application areas

2.3

Technical Textiles are used for various applications ranging from agriculture, roads, railway tracks, sportswear, health on one end to bullet proof jacket, fire proof jackets, high altitude combat gear and space applications on other end of spectrum

Significance

4.1

The use of mission in various strategic sectors, flagship missions and programmes like agriculture, dairy, JalJivan Mission, Swachch Bharat Mission, Ayushman Bharat, etc. will bring an overall improvement in cost economy, water and soil conservation, better agricultural productivity and higher income to farmers

3.4 Component- IV : Education, Training, Skill Development

4.2

The use of geo-textiles in highways, railways and ports will result in robust infrastructure, reduced maintenance cost and higher life cycle of the infrastructure assets

3.4.1

Education, skill development and adequacy of human resources in the country is not adequate to meet the tech- nologically challenging and fast growing technical textiles segment

3.4.2

The Mission will promote technical education at higher engineering and technology levels related to technical textiles and its application across several areas

3.4.3

Skill development will be promoted and adequate pool of highly skilled manpower resources will be created for meeting the need of relatively sophisticated technical textiles manufacturing units

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Why in News?

NITI Aayog's, Atal Innovation Mission (AIM) in collaboration with the National Association of Software and Services Companies (NASSCOM) has launched an Artificial Intelligence (AI) based Module for students in Indian schools

1.1

3.1

The objective of the Module is to leverage the full potential of AIM's Atal Tinkering Lab (ATL) and further empowers them to innovate and create valuable solutions benefiting societies at large

3.2

It will be implemented across 5,000 ATLs, empowering 2.5 million students

3.3

The module contains activities, videos and experiments that enable students to work through and learn the various concepts of Al

3.4

This is the first ever industrygovernment- academia initiative on such a scale to keep the school students abreast of latest technologies

4.2

It has been estimated that by 2030, the global market in Al is likely to be in the range of 15 to 15.5 trillion dollars, out of which India's share will be close to \$1 trillion

4.3

Learning AI will create the right foundations for students to get onboard future technologies and prepare them fully for the digital and AI era

4.2.1

Thus, AI has become a strategic lever for economic growth across nations and will continue to be one of the most crucial technologies of the future

Artificial Intelligence Modules in Indian Schools

Introduction

4.1 Technology innovation over the last decade was breathtakingly fast as industries got intertwined with emerging technologies like never before

Need

About

AI Module

6.2

About AIM

6.1

AIM housed at NITI Aavog is

the Government of India's

flagship initiative to promote

a culture of innovation and

entrepreneurship

At the school level, AIM is establishing ATLs in all districts across India

inference engines or undertake actions in the physical world

2.1

AI is a constellation of technologies

that enable machines to act with higher levels of intelligence and emulate the human capabilities

of sense, comprehend and act

2.2

An AI system can also take action through

technologies such as expert systems and

2.2.1

These human capabilities are augmented by the ability to learn from experience and keep adapting over time

Significance

AI module is so critical, in the sense that it will start teaching young children from a very young age then Indians will become major players in AI

5.1

5.2.1 If we are able to

find solutions to these challenges for the 1.3 billion people of India, we can find solutions for the 7.5 billion people of the world too

5.2

With the help of the module, we can find solutions to the challenges of a shared connected zero emission world, improving learning outcomes, disease like tuberculosis, cancer, etc.

5.3

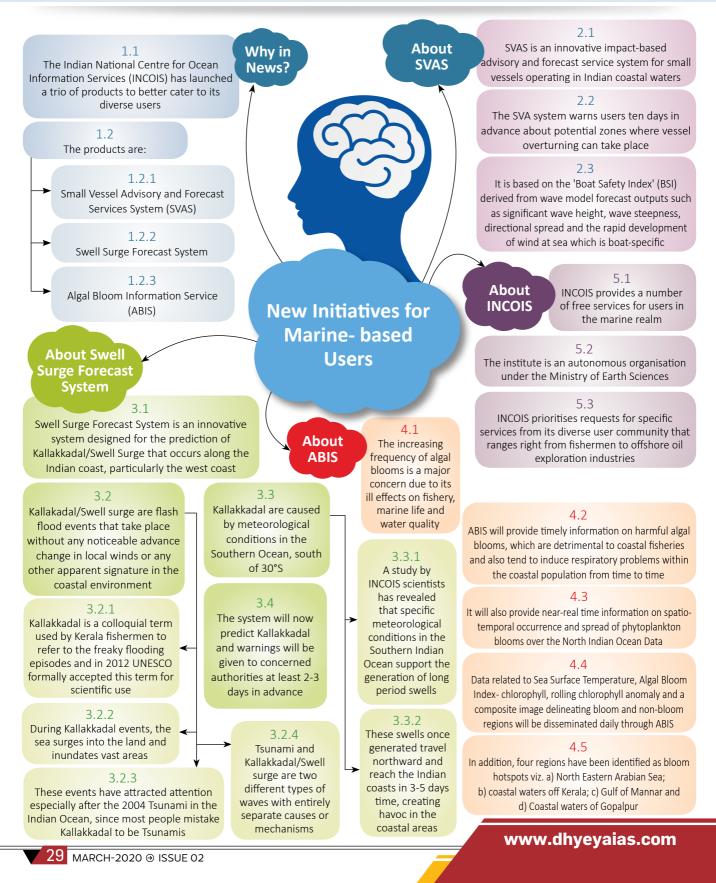
Further, India can add 1.3% to its GDP on an annual basis through the use of machine learning and AI

6.2.1

As of today, AIM has selected a total of 14,916 schools across the country spread across 33 different states and union territories, for the establishment of ATLs









Why in News?

Researchers at the International Centre for Genetic Engineering and Biotechnology (ICGEB) are developing a method to improve the growth rate and sugar content of a marine microorganism called Synechococcus sp. PCC 7002

1 1

31 Biofuel is fuel derived from biomass

What is **Biofuel?**

3.2

They contain no

sulfur and produce

low carbon

monoxide and toxic

emissions

¥

3.2.1

Hence, they can

be blended with

existing fuels as

an effective way

of reducing CO2

emissions in

the transport

sector

4.2

The sugars typically

come from plants

4.2.1

Plants utilize light

energy through

the process of photosynthesis

to convert carbon

dioxide in the

atmosphere

into biological

components such as

sugars, proteins and

lipids

3.1.1

Biomass is defined as 'organic matter- especially plant matter- that can be converted to fuel and is regarded as potential energy source

3.1.1

The sources of biomass are classified into trees, energy crops, agriculture residue and food and waste residue

3.3

Biofuels can reduce greenhouse gas emissions and increase energy security by providing an alternative to fossil fuels

3.4

By 2050, biofuels could reduce our greenhouse gas emissions by 1.7 billion tons per yearequivalent to more than 80% of current transportationrelated emissions

Biofuel from

Microorganisms

What are

Microorganisms?

Why Micro-organisms?

4.1

Most biotechnological processes, including biofuel production, are dependent on the availability of lowcost and sustainable supply of sugars and a nitrogen source

43

However, some bacteria, such as the cyano-bacteria (also known as blue-green algae), too can perform photosynthesis and produce sugar by fixing the carbon dioxide in the

atmosphere

4.3.1

The yield of sugars from cyanobacteria could potentially be much higher than that of land-based crops

2.1

Microorganisms, commonly known as microbes, are often illustrated using single-celled or unicellular organisms

2.2

Microscopic organisms are found all around us and even inside our bodies

2.3

The category 'Microbes' includes a massive range of organisms including bacteria, fungi (yeasts and molds), viruses, algae, archaea and protozoa

What are Cvanobacteria?

5.1 Cyanobacteria are found in both fresh and marine waters

5.2

Using marine cyanobacteria could be better as freshwater is increasingly getting scarce

5.3

However, there is a need to significantly improve their growth rates and sugar content in order to improve the economic feasibility of marine cyano- bacteria-based sugar production

4.4

Further, unlike plant- based sugars, cyanobacterial biomass provides a nitrogen source in the form of proteins

MCQ's WITH EXPLANATORY ANSWERS (Based on Brain Boosters)



World Air Quality Report 2019

Q. With reference to the "World Air Quality Report 2019', consider the following statements:

- 1. It has been released by World Health Organisation.
- 2. According to country-wise data, India ranked fifth in the world's most polluted countries.
- 3. Bangladesh was the most polluted country in 2019. Which of the statements given above is/are correct?
- a) 1 only b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Answer: (d)

Explanation: Statement 1 is incorrect. The pollution tracker IQAir and Greenpeace has released 'World Air Quality Report 2019'.

Statement 2 and 3 are correct. Using a weighted population average, Bangladesh emerges as the most polluted country for PM2.5 exposure. Pakistan, Mongolia, Afghanistan and India follow behind respectively, deviating from one another by less than 10%.

According to country-wise data, India ranked fifth in the world's most polluted countries with 21 of the 30 most polluted cities in the world. \bigcirc



1st National Conference on Coastal Disaster Risk Reduction and Resilience

Q. Consider the following statements:

- 1. The Prime Minister of India's 10 point agenda on disaster risk reduction had adopted by UN World Conference on Disaster Risk Reduction in 2016.
- Sendai Framework is the successor instrument to the Hyogo Framework for Action (HFA) 2005-2015.
 Which of the statements given above is/are correct?
- a) 1 only
- b)
- c) Both 1 and 2
- b) 2 onlyd) Neither 1 nor 2

Answer: (b)

Explanation: Statement 1 is incorrect. The Prime Minister of India had listed the agenda during his inaugural speech at the Asian Ministerial Conference on Disaster Risk Reduction

(AMCDRR) 2016.

Statement 2 is correct. Sendai Framework was adopted at the Third UN World Conference on Disaster Risk Reduction in Sendai, Japan, on March 18, 2015. It is the successor instrument to the Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters.

3 New Initiatives for Tribal Community

Q. Consider the following statements:

- 1. 1000 Spring Initiatives has been launched to identify 1000 springs in Himalayan region for conservation.
- 2. Under this initiative, more than 70 young local youthshavebeentrained as barefoothydrogeologists for identification and mapping of springs.

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

Answer: (d)

Explanation: Both statements are incorrect. The government of India has launched programmes like "Programme for Capacity Building of Scheduled Tribe Representatives in Local Self Governments", "1000 Spring Initiatives" and an online portal on GIS-based Spring Atlas.

About 1000 Spring Initiatives aims at improving access to safe and adequate water for the tribal communities living in difficult and inaccessible part of rural areas in the country. Under this initiative, more than 70 young tribal youths have been trained as barefoot hydro geologists by combining traditional and scientific knowledge for identification and mapping of springs and undertaking rejuvenation and protection measures in their habitations.



Q. With reference to the 'National Technical Textiles Mission', consider the following statements:

1. NITI Aayog has proposed a national mission for the





promotion of technical textile.

- 2. Technical textiles are textiles materials manufactured primarily for technical performance rather than aesthetic characteristics.
- 3. India is the second largest producer of technical textiles in the world.

Which of the statements given above is/are correct?

- a) 1 and 2 only b) 2 only
- c) 3 only d) 2 and 3 only

Answer: (b)

Explanation: Statement 1 is incorrect. The Cabinet Committee on Economic Affairs has given its approval to set up a National Technical Textiles Mission for the period of four years, with a view to position the country as a global leader in 'Technical Textiles'.

Statement 2 is correct. Technical textiles are textile materials and products manufactured primarily for technical performance and functional properties rather than aesthetic characteristics.

Statement 3 is incorrect. Indian Technical Textiles segment is estimated at USD 16 Billion which is approximately 6% of the 250 Billion USD global technical textiles market. The penetration level of technical textiles is low in India varving between 5-10% against the level of 30-70% in developed countries. **GGG**



National Technical Textiles Mission

Consider the following statements: Q.

- 1. NITI Aayog, NASSCOM and Ministry of Electronics and Information Technologyhas launched an Artificial Intelligence based Module for students in Indian schools.
- 2. It will be implemented across 5,000 Atal Tinkering Lab (ATLs).

Which of the statements given above is/are correct?

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

Answer: (b)

Explanation: Statement 1 is incorrect. NITI Aayog, AIM in collaboration with the National Association of Software and Services Companies (NASSCOM) has launched an AI based Module for students in Indian schools.

Statement 2 is correct. It will be implemented across 5,000 Atal Tinkering Lab (ATLs)



New Initiatives for Marinebased Users

Q. Consider the following statements:

- 1. Kallakkadalis a colloquial term used for swell surge by Kerala fishermen to refer to the freaky flooding episodes.
- 2. UNESCO formally accepted the term 'Kallakadal/ Swell'for scientific use.

Which of the statements given above is/are correct?

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

Answer: (c)

Explanation: Both statements are correct. Kallakadal/Swell surge are flash-flood events that take place without any noticeable advance change in local winds or any other apparent signature in the coastal environment.

Kallakkadal is a colloquial term used by Kerala fishermen to refer to the freaky flooding episodes and in 2012 UNESCO formally accepted this term for scientific use.

Biofuel from Microorganisms

Consider the following statements: **Q**.

- 1. Bacteria, such as the cyanobacteriacan perform photosynthesis and produce sugar by fixing the carbon dioxide in the atmosphere.
- 2. Biofuels, which are derived from Cyanobacteria are more efficient than conventional biofuels.

Which of the statements given above is/are correct?

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

Answer: (a)

a) 1 only

Explanation: Statement 1 is correct. Some bacteria, such as the cyanobacteria (also known as blue-green algae), too can perform photosynthesis and produce sugar by fixing the carbon dioxide in the atmosphere.

Statement 2 is incorrect. The yield of sugars from cyanobacteria could potentially be much higher than that of land-based crops. Further, unlike plant-based sugars, cyanobacterial biomass provides a nitrogen source in the form of proteins.



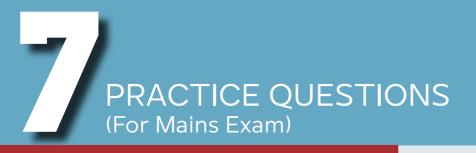






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"To ensure good health by 2023, there should be enhanced focus on agriculture, sanitation, women education." Discuss the statement in the light of India's performance in this regard.



Recently, the US and Taliban have signed an agreement for "Bringing Peace to Afghanistan". However, India, not being an US ally, is not covered under this pact. Discuss its impact on India.



"The reservation of seats for women in the institutions of local self- government has had a limited impact on the patriarchal character of the Indian political process." Comment.



What is 'red snow in Antarctica'? Why it happens? What are the concerns over red snow.



Do you agree with the view that reforms in agriculture, steady GDP growth and increase in the ease of business will help India to reach the \$5 trillion mark by 2024. Give reasons in support of your arguments.



How far is 'Zero Budget Natural Farming' helpful in sustaining agricultural production?



It is argued that the strategy of inclusive growth is intended to meet the objectives of inclusiveness and sustainability together. Comment on this statement.

IMPORTANT NEWS



ICoSDiTAUS-2020

ICoSDiTAUS-2020, the two-day International Conference on Standardisation of Diagnosis and Terminologies in Ayurveda, Unani and Siddha Systems of Medicine was concluded with adopting the 'New Delhi Declaration on Collection and Classification of Traditional Medicine (TM) Diagnostic Data'. The sixteen countries which came together for the cause of traditional medicine at this conference were Sri Lanka, Mauritius, Serbia, Curacao, Cuba, Myanmar, Equatorial Guinea, Qatar, Ghana, Bhutan, Uzbekistan, India, Switzerland, Iran, Jamaica and Japan. It was the biggest ever international event dedicated to standardisation of Diagnosis and Terminologies of Traditional Medicine in terms of the broad level of participation covering virtually all the continents.

Key Highlights

The conference succeeded in taking forward the objective of expanding the International Classification of Diseases (ICD) into the realm of TM systems at a conceptual level with all the countries endorsing the same. There was also a consensus that work on the second module of the TM Chapter of International Classification of Diseases (ICD) should be expedited, and collaborative efforts of stakeholding countries are needed for this. The suitability of Ayurveda, Unani and Siddha systems for inclusion in the TM Chapter of ICD was also pointed out.

The 'New Delhi Declaration' emphasised the commitment of the countries to TM as a significant area of health care. It further sought the opportunity for including traditional systems of medicine like Ayurveda, Unani and Siddha in the ICD of WHO which is the standard diagnostic tool for health management across the world.



4000 Year-old Crafts Village in Varanasi

A nearly 4,000-year-old urban settlement has been unearthed in Varanasi by a team of surveyors from the Banaras Hindu University (BHU), which experts say, could be one of the craft villages mentioned in ancient texts.

Key Highlights

The Department of Ancient Indian History, Culture and Archaeology, did the preliminary survey of the site in Babhaniyav village, 13 kilometres away from Varanasi. It found remnants of one of the settlements mentioned in ancient literature about the holy city.

Researchers have found a temple dating back to the 5th Century AD through 8th Century AD, potteries which are 4000-year-old and walls which are 2000-year-old. According to the experts, on the basis of the surface materials at the site, the structure is anywhere between 3500 to 4000-year-old. It gains significance because of its proximity to Varanasi, which according to legend was founded by the Hindu deity Lord Shiva 5,000 years ago, though modern scholars believe it to be around 3,000 years old.

The latest findings in Babhaniyav village is significant as it could have been a satellite settlement and feeding centre of the Varanasi-Sarnath region.

While such crafts villages have been earlier unearthed in Sarnath, Tilmapur, Ramnagar and other areas, Babhaniyav is an addition. They have also found a pillar with a two line text in Kushan Brahmi script which makes the findings at least 3500-4000 year old.

03 US-Taliban Agreement

A long-awaited historic US-Taliban Peace Deal has signed by US envoy Zalmay Khalilzad and Taliban deputy leader Mullah Abdul Ghani Baradar on February 29, 2020.

Key Highlights

The US will draw down to 8,600 troops in 135 days and the North Atlantic Treaty Organization (NATO) or coalition troop numbers will also be brought down, proportionately and simultaneously. And all troops will be out within 14





India has welcomed the agreement between the US and the Taliban. The government noted that the agreement had received the support of all sections of Afghanistan.

months — "all" would include "non-diplomatic civilian personnel" (could be interpreted to mean "intelligence" personnel).

The main counter-terrorism commitment by the Taliban is that "Taliban will not allow any of its members, other individuals or groups, including al-Qaeda, to use the soil of Afghanistan to threaten the security of the United States and its allies". While the reference to al-Qaeda is important, the pact is silent on other terrorist groups — such as anti-India groups Lashkar-e-Toiba or Jaish-e-Mohammed.

India-Taliban Relations

India has welcomed the agreement between the US and the Taliban. The government noted that the agreement had received the support of all sections of Afghanistan. However, India, not being an US ally, is not covered under this pact.

Challenges

The Afghan government has been completely sidelined during the talks between the US and Taliban. The future for the people of Afghanistan is uncertain, and will depend on how Taliban honours its commitments and whether it goes back to the mediaeval practices of its 1996-2001 regime.



Strawberry Finch

The Strawberry Finch, a beautiful sparrow-sized bird, has been spotted in the vicinity of Akkulam in south Kerala. More than 30 of these birds were spotted, raising the possibility of Akkulam being a natural habitat for these birds.

About Strawberry Finch

It is locally known as Red Avadavat or Red Munia or Kumkumakuruvi. It belongs to the family Estrildidae. In fact, the very species name Amandava and the common name avadavat have been derived out of the pet trade.

They are resident birds of Africa and South Asia (India, Bangladesh, and Sri Lanka). Along with red munia, other finches found in Rajasthan are Indian silver bells, Green munia, Blackheaded munia and Tricoloured munia.

Threats

The spotting of the Strawberry Finch, highlights the urgent need for conservation and protection of Akkulam Lake. Threat Uncontrolled urbanisation in the area and pollution have been posing a huge threat to the lake.



G20 Finance Ministers & Central Bank Governors Meeting

Recently, G20 Finance Ministers & Central Bank Governors Meeting was held in Riyad, Saudi Arabia. The theme of the Summit was "Realising Opportunities of the 21st Century for All".

Key Highlights

The G20 nations have agreed to collectively sound the alarm over the threat to the financial system posed by the climate emergency.

After signs of stabilization at the end of 2019, global economic growth is expected to pick up modestly in 2020 and 2021. The recovery is supported by the continuation of accommodative financial conditions and some signs of easing trade tensions. However, global economic growth remains slow and downside risks to the outlook persist, including those arising from geopolitical and remaining trade tensions, and policy uncertainty. The G20 nations will enhance global risk monitoring, including of the recent outbreak of COVID-19.



The IMF projects a 'V-shaped, rapid recovery' for the global economy, but given the uncertainty around the spread of the coronavirus. 'V-shaped recovery' is a type of economic recession and recovery that resembles a 'V' shape in charting. A 'V-shaped recovery' involves a sharp decline followed by a sharp rise back to its previous peak.

Financial leaders also discussed ways to achieve consensus on a global taxation system for the digital era by the end of 2020. The Organisation for Economic Cooperation and Development (OECD) is developing global rules to make digital companies pay tax where they do business, rather than where they register subsidiaries. The OECD says this could boost national tax revenues by a total of \$100 billion (roughly Rs. 7,10,000 crores) a year.

India and G20 Meet

Finance Minister Nirmala Sitharaman had emphasised on the need to enhance global risk monitoring and explore the scope for policy co-ordination to deal with risks.

She also called for closer collaboration between international revenue agencies to investigate tax affairs of offenders who cross borders for escaping tax investigation.



Henneguya Salminicola

Scientist have discovered the first non-oxygen breathing animal, Henneguya Salminicola. The organism a fewer-than-10-celled microscopic parasite that lives in salmon muscle. According to the researchers, as the organism evolved, it gave up breathing and stopped the consumption of oxygen for the production of energy - which means it relies on anaerobic respiration (through which cells extract energy without using oxygen).

Other organisms such as fungi and amoebas that are found in anaerobic environments lost the ability to breathe over time. The new study shows that the same can happen in the case of animals, too.

According to the researchers, Henneguya Salminicola did not have a mitochondrial genome. Mitochondria is the "powerhouse" of the cell, which captures oxygen to make energy. Its absence in the Henneguya salminicola genome indicates that the parasite does not breathe oxygen.

However, It is still unclear how Henneguya Salminicola generates energy but the researchers assume that the animal is drawing it from the surrounding fish cells, or it may have a different type of respiration such as oxygenfree breathing.

About Aerobic Respiration

Aerobic respiration is one such chemical reaction through which organisms take in oxygen and release carbon dioxide into the atmosphere. Through this mechanism, energy is transferred to cells, which can use it for multiple purposes - for instance, to burn food. **GGG**



Kerala High Court's Decision on Agitations

The Kerala High Court has banned all forms of agitations by student groups in school and college campuses in the state that disrupt functioning of educational



institutions. Banning various forms agitations like gherao and sit-in in the campuses, the High Court also said no one can be persuaded to participate in such protests.

The judgement was delivered on a batch of petitions filed by various college and school managements over the past three years, some of them seeking police protection from agitators and others seeking orders to implement the court's earlier order banning campus politics.

Key Highlights of the Judgement

The Court observed that educational institutions are meant for academic- related activities and not protests and no one has the right to violate fundamental rights of other students. Educational institutions can be made a venue for peaceful discussions.

The court also observed that students should not be asked to boycott classes. Further, it said agitations are not permissible on the campus of a school or college. Right to education is a fundamental right and nobody has the right to violate that right. Campuses are venues for constructive debates and there should not be any form of agitation that affects the academic atmosphere on campuses.





IMPORTANT HIGHLIGHTS (FROM PIB)

Foundation Stone for the Bundelkhand Expressway

To supplement the nodes of the Uttar Pradesh Defence Industrial Corridor, the Prime Minister of India has laid the foundation stone for the 296-kilometres long Bundelkhand Expressway at Chitrakoot. To be built at a cost of Rs 14,849 crore, the Expressway is expected to benefit Chitrakoot, Banda, Mahoba, Hamirpur, Jalaun, Auraiya and Etawah districts. It will link the Bundelkhand region, considered one of the most backward areas of the country, to Delhi through the Agra-Lucknow Expressway and the Yamuna Expressway.

Referring to the huge defence equipment requirements spanning from land systems, ships and submarines to fighter aircraft, helicopters, weapons and sensors, the government of India has announced Rs. 3700 crore for the UP Defence Corridor in this year's budget.

Significance

Bundelkhand Expressway, Purvanchal Expressway or the proposed Ganga Expressway, will not only increase connectivity in UP, but also create many employment opportunities and will also connect the people with the facilities available in big cities.

Defence Corridor in UP

The government of India had announced setting up of two Defence Industrial Corridors in the country in 2018 Union Budget. In pursuance to the said announcement, it was decided to set up two Defence Industrial Corridors in the country, one in Uttar Pradesh and other in Tamil Nadu. Subsequently, six nodes have been identified for Uttar Pradesh Defence Corridor viz. Agra, Aligarh, Chitrakoot, Jhansi, Kanpur and Lucknow.



Companies (Auditor's Report) Order, 2020

The Ministry of Corporate Affairs (MCA) has notified the Companies (Auditor's Report) Order, 2020 (CARO, 2020) to strengthen the corporate governance framework under the Companies Act, 2013 to attain the national objective of becoming a \$ 5 Trillion economy. The CARO, 2020 is applicable for audit of financial statements of eligible companies for the financial years commencing on or after the 1st April, 2019.

Key Features of CARO, 2020

The CARO, 2020 includes certain additional clauses, as compared to CARO, 2016, and the existing clauses of CARO, 2016 have been re-drafted to elicit detailed comments from the auditors.

A specific format has been provided for reporting the details of such immovable properties whose title deeds are not held in the name of the company but are disclosed in the financial statements.

Disclosure of details of proceedings against the company for holding Benami Property and whether the company has disclosed the details in its financial statements.

The auditor is required to report about the company if it is a declared wilful defaulter by any bank/ financial institution/ other lender.

Significance

The CARO, 2020 is expected to significantly improve the overall quality of reporting by the Auditors on the financial statements of the companies and thereby lead to greater transparency and faith in the financial affairs of the companies. This is automatically expected to greater inflow of investment by and in Indian companies.



Asymptomatic Malaria

A joint team of scientists from Department of Biotechnology's Bhubaneswar-based Institute of Life Sciences (ILS) and Bengaluru-based Jigsaw Bio Solutions, has developed a method that promises to overcome the problem of inadequate identification of asymptomatic carriers of the disease.

Light microscopy and protein immunoassay-based rapid diagnostic tests (RDTs) are used in the diagnosis of Malaria, in mass screening and treatment programs for the diseases, and in surveillance of malaria control measures. They, however,



miss out about 30-50% of low-density infections, which typically have less than two parasites/microlitre and are frequently observed in asymptomatic carriers who serve as "silent" reservoirs of the infection capable of transmitting the disease through mosquitoes. Identification of asymptomatic carriers in the endemic areas is recognized as a major hurdle in malaria eradication programmes. New diagnostic methods with higher sensitivity are needed.

In a new study, researchers used a new concept of genome mining that identifies identical multi-repeat sequences (IMRS) distributed throughout the malaria parasite genome and successfully targeted them to develop what is called a "ultra-sensitive" quantitative real-time chain reaction (qPCR) assay for malaria diagnosis.

Significance

New study could lead to the development of highly sensitive, point-of-care molecular diagnostics that can be explored in miniaturized, isothermal, microfluidic platforms and lab-on-achip devices. The Intelligent Magnetic Resonance Stimulation (IMRS) approach can serve as a platform technology for the diagnosis of other infectious diseases as well.

Background

India has developed a National Framework for eliminating malaria by 2030 and to achieve this goal, identifying the asymptomatic carriers in the endemic areas and clearing their infections are very much important. The new finding could help in this.



Health of Children and Pregnant Women

The government of India has inaugurated a special community outreach programme on Intensified Mission Indradhanush (IMI 2.0).

Key Highlights

IMI was launched in 2017 and immunization has been given a strong push in the Gram Swaraj Abhiyaan and Extended Gram Swaraj Abhiyaan. A more expansive version, IMI 2.0, is being carried out in 272 districts across 27 States/UTs and 650 blocks of Bihar and Uttar Pradesh across 109 districts since December 2019. With the launch of IMI 2.0, India has the opportunity to achieve further reductions in deaths among children under five years of age, and achieve the Sustainable Development Goal of ending preventable child deaths by 2030. Currently, the government is providing vaccines against 12 vaccines preventable diseases, nationally against 10 diseases (Diphtheria, Pertussis, Tetanus, Polio, Measles, Rubella, severe form of Childhood Tuberculosis, Rotavirus diarrhea, Hepatitis B and Meningitis & Pneumonia caused by Hemophilus Influenza type Band) and sub-nationally against two diseases (Pneumococcal Pneumonia and Japanese Encephalitis); of which Pneumococcal Conjugate vaccine is in the process of expansion while JE vaccine is provided only in the endemic districts.

Three rounds of IMI 2.0 have already been conducted from December 2019 and February 2020, wherein 29.74 lakh children and 5.90 lakh pregnant women have been vaccinated. One more round of IMI 2.0 is planned to be conducted in March 2020.



Pigmentary Disorder

Indian professor has got Wellcome Trust-DBT Alliance grant to study to understand the problem of pigmentary disorders. The award consists of a grant of Rs 3.60 crore for a period of five years.

The research project to be taken up under the award would seek to identify novel targetable molecular players that critically regulate pigmentation process. Further, the researchers would try to repurpose commercially available drugs for treatment of pigmentary disorders. In long run, this project is expected to have a two pronged benefits for society - protection from UV-induced skin cancers and potential treatment options for pigmentary disorders.

So far, the focus in the pigmentation biology field has been to understand the enzymes regulating melanin synthesis and on the melanosome proteins involved in their biogenesis and maturation. However, melanosome biogenesis and melanin synthesis are complex phenomenon and other cellular organelle could potentially regulate this process.

Earlier studies on differentially pigmented melanocytes have indicated that Endoplasmic Reticulum (ER) and Mitochondria are critical regulators of pigmentation. The aim of the new project is to delineate the role of Endoplasmic Reticulum and Mitochondria signaling pathways in pigmentation and to identify the key Endoplasmic Reticulum and Mitochondrial proteins that regulate pigmentation. They would then target these signaling cascades with FDA approved drugs to know



whether any known drugs could be repurposed for alleviating pigmentary disorders too.

About Physiological Pigmentation

Physiological pigmentation is a critical defense mechanism by which skin is protected against harmful UV radiations. Inefficient pigmentation predisposes to skin cancers, which are one of the leading causes of cancer-associated deaths worldwide. Further, pigmentary disorders (both hypo and hyper pigmentary) are considered a social stigma and therefore they impart long-term psychological trauma and tremendously hamper mental well-being of patients. The current therapeutic strategies are not efficient in alleviating pigmentary disorders. **GGG**

Pradhan Mantri Kisan Sampada Yojana

The government of India has sanctioned total of 32 projects under the 'Unit' scheme of Pradhan Mantri Kisan Sampada Yojana (PMKSY) of Ministry of Food Processing Industries. The projects are spread across almost 17 States, leveraging an investment worth 406 Crore rupees.

Key Highlights

These projects envisage the creation of direct and indirect employment for approximately fifteen thousand persons along with employment opportunities in rural areas to be the focus area.

The introduction of modern processing techniques for food results in improved shelf-life of the agricultural produce and ensure steady revenue to farmers. Food processing has an important role to play in linking Indian farmers to consumers in the domestic and international markets. The food processing industry can work as link between farmers, government and unemployed youth for better contribution towards economy.

The government of India through the Ministry of Food Processing Industries is making all efforts to encourage investments in the business. It has approved proposals for joint ventures, foreign collaborations, industrial licenses, and 100% export oriented units.

About PMKSY

The main objective of PMKSY is creation of processing and preservation capacities and modernisation/ expansion of existing food processing units with a view to increasing the level of processing, value addition leading to reduction of wastage. The processing activities undertaken by the individual units covers a wide range of post-harvest processes resulting in value addition and/or enhancing shelf life with specialized facilities required for preservation of perishables.

Public Finance Management System

On the occasion of the 44th Civil Accounts Day, the Finance Minister of India Nirmala Sitharaman has highlighted the performance of Public Finance Management System (PFMS). She said that, till now, PFMS has saved Rs. 1 lakh crore for the country. It has now come to be recognized as a distinct brand in the field of public finance management at various multilateral and global fora.

PFMS has evolved into a useful financial management tool for the government. The service would constantly strive to achieve new heights in the field of payments, receipts, accounting and internal audit by effective use of digital technologies, and improve fiscal reporting protocol as part of Government Integrated Financial Management System (GIFMIS) for more effective fiscal management.

About PFMS

The Scheme aims at promoting transparency and bringing about tangible improvements in the overall Central Government Financial Management as well as implementation of various Central Government Schemes across the country. The ambit of PFMS coverage includes Central Sector and Centrally Sponsored Schemes as well as other expenditures including the Finance Commission Grants.

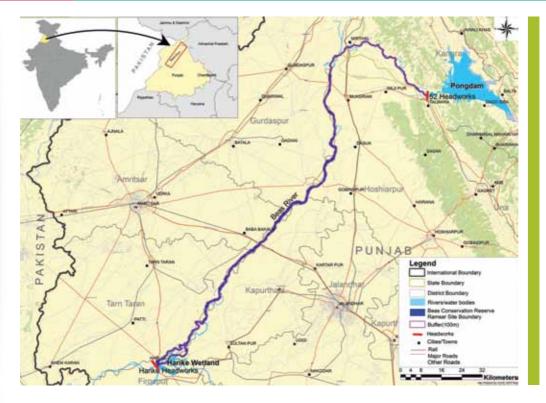
The Government has positioned the PFMS as a key decision support system not only for tracking of flow of funds to the last beneficiary or implementation level but also to ensure just -in -time release of funds through an effective management of fund float. The government is looking at PFMS for facilitating effective monitoring and control of unspent balances or parking of funds to check blockade of government money. In fact, PFMS is now being used as the core IT platform for regular activities of CGA, such as payments, receipts, accounting, expenditure control, management of provident fund and pensions etc.



IMPORTANT CONCEPTS (Through Graphics)

Ramsar Sites in India

Beas Conservation Reserve



he Convention on Wetlands, signed in 1971 in the Iranian city of Ramsar. It aims to develop a global network of wetlands for conservation of biological diversity and for sustaining human life.

The convention entered into force in India on 1 February 1982. India currently has 37 sites designated as Wetlands of International Importance (Ramsar Sites).

The Beas Conservation Reserve is a 185-kilometre stretch of the Beas River located primarily in the north-west of the State of Punjab.

More than 500 species of birds are documented along this stretch, along with more than 90 fish species.

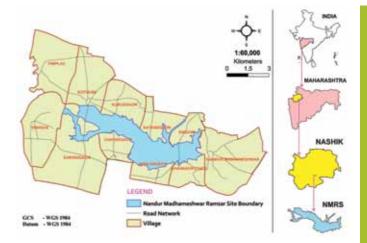
The Reserve also hosts the only known population in India of the endangered Indus river dolphin (Platanista gangetica minor). Further threatened species include the endangered masheer (Tor putitora) and hog deer (Axis porcinus) as well as the vulnerable smooth-coated otter (Lutrogale perspicillata).

In 2017, a programme was initiated to re-introduce the critically endangered gharial (Gavialis gangeticus) with 47 individuals released into the River 30 years after their disappearance. Major threats include urban and domestic pollution as well as impacts of agriculture along most of the River's course.



Nandur Madhameshwar

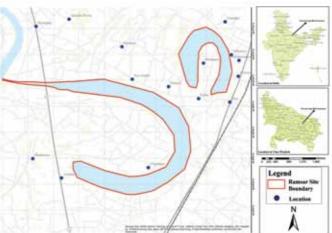
- The Site is a mosaic of lakes, marshes and riparian forest on the Deccan Plateau.
- Construction of the Nandur Madhameshwar Weir at the confluence of the Godavari and Kadwa Rivers helped create a thriving wetland: originally designed to overcome water shortages in the surrounding area, the Site now also serves as a buffer against floodwaters and as a biodiversity hotspot.
- With 536 species recorded, its diverse habitats contrast with the surrounding semiarid conditions caused by the rain shadow of the Western Ghats mountain range.
- The Site hosts some of India's most iconic species, such as the leopard and Indian sandalwood (Santalum album). It also provides



sanctuary to critically endangered species including Deolali minnow (Parapsilorhynchus prateri), Indian vulture (Gyps indicus) and white-rumped vulture (Gyps bengalensis). Invasive species including common water hyacinth (Eichhornia crassipes) threaten the Site, along with the effects of urban development and water abstraction.

Parvati Arga Bird Sanctuary

- Parvati Arga Bird Sanctuary is a permanent freshwater environment consisting of two oxbow lakes. These wetlands are characteristic of Uttar Pradesh and offer exceptional habitats for waterbirds, providing both roosting and breeding sites with over 100,000 birds documented in annual counts.
- The Sanctuary is a refuge for some of India's threatened vulture species: the critically endangered white-rumped vulture (Gyps bengalensis) and Indian vulture (Gyps indicus), and the endangered Egyptian vulture (Neophron percnopterus) have all been recorded.



It is also critical in the maintenance of hydrological regimes, ensuring groundwater recharge and discharge. Meanwhile ancient temples around the lakes provide religious significance and encourage tourism.

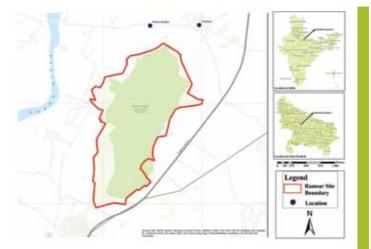
Invasive species such as the common water hyacinth (Eichhornia crassipes) along with the development of roads and railways present significant threats.





Sandi Bird Sanctuary

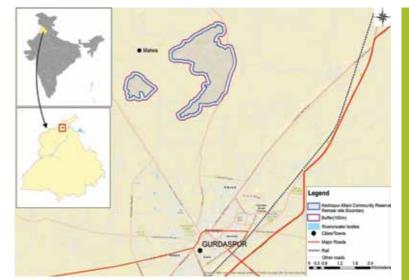
- The Sanctuary is located in the Bilgram tehsil of Hardoi district in state of Uttar Pradesh.
- The wetland is typical of the Indo-Gangetic plains and receives most of its water from monsoon rains. Rich in aquatic plants, the Site provides a productive habitat for waterfowl with over 40,000 individuals counted in 2018.
- It is home to over 1% of the South Asian populations of common teal (Anas crecca), red-crested pochard (Netta rufina) and ferruginous duck (Aythya nyroca), while the vulnerable sarus crane (Grus antigone) has a population of 200 individuals within the Sanctuary. These figures justify its designation as an Important Bird Area by BirdLife International.



• The wetland is a popular recreational and tourism destination and supports surrounding farmers as a source of livestock fodder. Drought presents a threat; the Sanctuary dried out leading to a subsequent collapse in waterbird populations from 2014 to 2015.

Keshopur-Miani Community Reserve

- The Keshopur-Miani Community Reserve is located in the State of Punjab. The Reserve is a mosaic of natural marshes, aquaculture ponds and agricultural wetlands maintained by the annual rainfall runoff.
- It is heavily human-influenced, and includes a series of managed fishponds and cultivated crops such lotus and chestnut. This management helps support a variety of flora, with 344 species of plants recorded in the area. In this way, the Site is an example of wise use of a community-managed wetland, which provides food for people and supports local biodiversity.

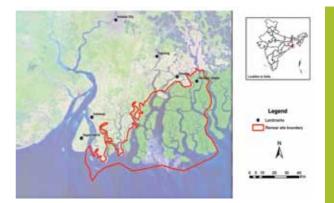


• Threatened species present include the vulnerable common pochard (Aythya ferina) and the endangered spotted pond turtle (Geoclemys hamiltonii).



Sundarban Wetland

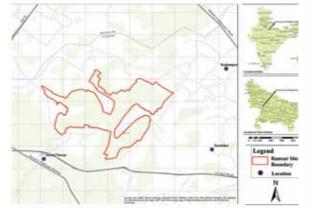
- Sundarban Wetland is located within the largest mangrove forest in the world, the Sundarbans, that encompasses hundreds of islands and a maze of rivers, rivulets and creeks, in the delta of the Rivers Ganges and Brahmaputra on the Bay of Bengal in India and Bangladesh.
- The Indian Sundarban, covering the southwesternmost part of the delta, constitutes over 60% of the country's total mangrove forest area and includes 90% of Indian mangrove species.
- The mangrove forests protect the hinterland from storms, cyclones, tidal surges, and the seepage and intrusion of saltwater inland and into waterways.



- They serve as nurseries to shellfish and finfish and sustain the fisheries of the entire eastern coast.
 The Sundarban Tiger Reserve is situated within the Site and part of it has been declared a "critical tiger habitat"
- under national law and also a "Tiger Conservation Landscape" of global importance.
- The Site is also home to a large number of rare and globally threatened species such as the critically endangered northern river terrapin (Batagur baska), the endangered Irrawaddy dolphin (Orcaella brevirostris), and the vulnerable fishing cat (Prionailurus viverrinus). Two of the world's four horseshoe crab species, and eight of India's 12 species of kingfisher are also found here.

Sarsai Nawar Jheel

- Sarsai Nawar Jheel is a permanent marsh in the Etawah district of Uttar Pradesh.
- This typical wetland of the Indo-Gangetic floodplain is fed by precipitation run-off from the South West monsoon rains. It is an example of co-habitation of humans and wildlife: farming practices across most of the Site play important roles in sustaining the waterbird habitats.
- A particular beneficiary is the vulnerable sarus crane (Grus antigone), with a population of 400 individuals making up the largest flock in the region. The Site's name is derived from this large non-migratory crane.
- Other threatened species present include the critically endangered white-rumped vulture (Gyps bangalancis) and and angered weally packed stark (Circ



- bengalensis) and endangered woolly-necked stork (Ciconia episcopus).
- Droughts along with drainage have the potential to threaten the Site's ecological character. It is recognized by Birdlife International as an Important Bird Area.





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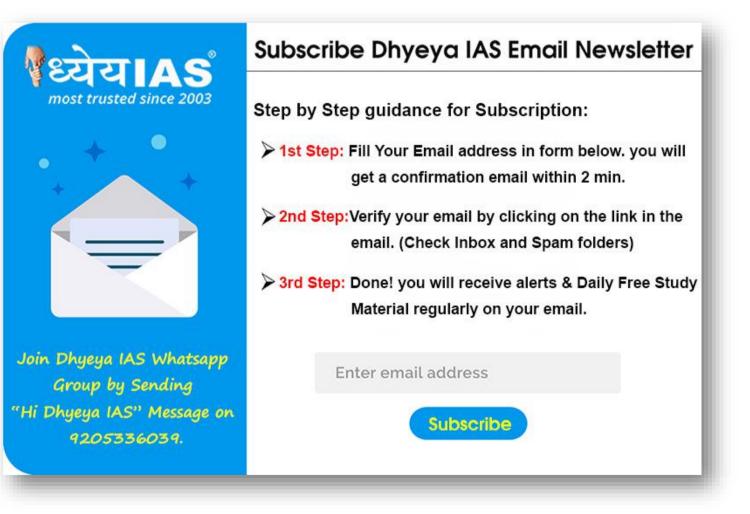


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