

**CURRENT EVENTS  
AND  
ANALYSIS  
(October 2020)  
PART-2**

**Editor  
R.C. Reddy**

**R.C. REDDY IAS STUDY CIRCLE**

**H.No. 3-6-275, Opp. Telangana Tourism Development Corporation,  
Near Telugu Academy, Himayatnagar, Hyderabad - 500 029.  
Phone No. : 040-23228513; 040-27668513; 040-27612673;  
9346882593; 9573462587  
Email : rcreddyiasstudycircle1989@gmail.com**

# CURRENT EVENTS AND ANALYSIS

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## **NATIONAL POLITY**

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### **Fundamental Rights:**

#### **Supreme Court Judgement on Shaheen Bagh Protests Against CAA**

- The Supreme Court delivered its judgement on Shaheen Bagh protests in October 2020.
- A women led protest began in December 2019 against the Citizenship Amendment Act (CAA) passed by the Parliament which provides for giving citizenship for Hindu, Sikh, Buddhist, Jain, Parsi, and Christian religious minorities who fled from the neighbouring Muslim majority countries of Pakistan, Bangladesh and Afghanistan before December 2014 due to religious persecution. Muslims were excluded as they are majority in these countries.
- But protests began against Citizenship Amendment Act (CAA) as this was seen as discriminatory against Muslims. Moreover, the Union Government also announced to update National Register of Citizens (NRC) to identify and deport illegal migrants from India.
- While undocumented (illegal) migrants from other communities (Hindu, Sikh, Buddhist, Jain, Parsi, and Christian religious minorities) got immunity due to Citizenship Amendment Act (CAA), Muslim migrants were discriminated.
- So protests began for revoking the Citizenship Amendment Act (CAA) and against the proposed National Register of Citizens (NRC) as they feared that they would be asked to show proofs of their citizenship through a family lineage and ownership of assets like in the National Register of Citizens (NRC) exercise conducted in Assam to identify illegal migrants from Bangladesh.
- Shaheen Bagh, located in South Delhi, was one such place of peaceful protests which was led by women. Women began indefinite protests against CAA and the proposed NRC.
- But, they occupied a part of road in Shaheen Bagh which connects Delhi with Noida. This caused inconvenience to commuters as it occupied public thoroughfares. The Police did not evict them even though inconvenience is being caused to the public.

### **Public Interest Litigation:**

- A Public Interest Litigation (PIL) was filed in the Supreme Court in February 2020 by advocate Amit Sahni seeking directions to the police to take action to ensure smooth traffic movement on the Kalindi Kunj-Shaheen Bagh stretch, as the public at large are suffering.
- The PIL pleaded that **no one can be permitted to occupy a public road for any reason whatsoever under the pretext of peaceful protest and that too for an indefinite period to make others suffer**
- While the Supreme Court observed that protests could not be carried on indefinitely in a common area, it refused to issue any interim directions and
- After more than 100 days of protests, the police intervened and cleared the protestors due to COVID pandemic in March 2020.
- The judgement of the Supreme Court was delivered in October 2020.

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## **Highlights of the Supreme Court Judgement:**

### **1) Protests cannot be Held in Public Places Indefinitely:**

Judgment upheld the right to peaceful protest against a law but made it unequivocally clear that public ways and public spaces cannot be occupied, and that too indefinitely.

The court said the protest, considered an iconic dissent mounted by mothers, children and senior citizens of Shaheen Bagh against the Citizenship (Amendment) Act (CAA), became inconvenient to commuters.

The Supreme Court stated that **democracy and dissent go hand in hand, but then the demonstrations expressing dissent have to be in designated places alone**. The present case was not even one of protests taking place in an undesignated area, but was a blockage of a public way which caused grave inconvenience to commuters.

### **2) Responsibility of Administration to Prevent Encroachments in Public Spaces:**

The court held it was entirely the responsibility of the administration to prevent encroachments in public spaces. They should do so without waiting for courts to pass suitable orders.

### **3) Peaceful Protest Subject to Reasonable Restrictions:**

The Supreme Court stated that in a democracy, the rights of free speech and peaceful protest were indeed "treasured". They were to be encouraged and respected.

But these rights were also subject to reasonable restrictions imposed in the interest of sovereignty, integrity and public order.

### **4) Fundamental Rights Do Not Operate in Isolation:**

The Supreme Court stated fundamental rights do not live in isolation. The right of the protester has to be balanced with the right of the commuter. They have to co-exist in mutual respect.

### **5) On the Role of Social Media in Protests:**

The Supreme Court noted that Shaheen Bagh seemed typical of the many digitally-fuelled "leaderless" dissent seen in modern times. It noted that technology and social media could both empower and weaken mass movements.

The ability to scale up protests quickly using digital infrastructure has empowered movements to embrace their often-leaderless aspirations and evade the usual restrictions of censorship. (If movements are led by leaders, police can better control the protests by imposing restrictions and taking preventive measures).

The Supreme Court noted that, however, the flip side is that social media channels (facebook, twitter, Instagram, etc used to mobilise protestors) are often fraught with danger and can lead to the creation of highly polarised environments. These can lead no constructive outcome.

It stated that factors like the absence of leadership and many "influencers" and groups working at cross-purposes saw the movement slip out of the hands of the women of Shaheen Bagh.

It stated that the Shaheen Bagh protest perhaps no longer remained the sole and empowering voice of women and they also appeared to no longer have the ability to

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**call off the protest themselves.** It referred to reports about how women were ensconced inside a tent while a "huge periphery" of "**male protesters, volunteers and bystanders**", **who wanted the blockade to continue**, milled around.

## SOCIAL ISSUES

### **Women:**

#### **World's Women 2020: Trends and Statistics Report**

- The '**World's Women 2020: Trends and Statistics**' which provides a snapshot of the state of gender equality worldwide was released in October 2020.
- The World's Women reports are prepared by the Statistics Division of the UN Department for Economic and Social Affairs (UN DESA) at five-year intervals, starting in 1990. Seven reports have been published as part of the '**The World's Women**' series (1990, 1995, 2000, 2005, 2010, 2015, and 2020).
- The 2020 report analyses gender equality in six critical areas:
  - 1) Population and families;
  - 2) Health;
  - 3) Education;
  - 4) Economic empowerment and asset ownership;
  - 5) Power and decision-making; and
  - 6) Violence against women and the girl child.

### **DETAILS:**

#### **WOMEN IN POWER AND DECISION MAKING**

- Progress in achieving gender parity in all spheres of **political and public life remains slow**.
- Women need to have a more prominent role in power and decision-making, a highly visible area where access has been traditionally restricted and progress has been slow.
- As per the 2020 report, women's participation in political and public life has steadily increased:
- **Representation in Parliament:**
- **Women's representation in parliament has more than doubled globally**, reaching 25% of parliamentary seats in 2020, mainly as a result of the adoption of gender quotas and milestones achieved in countries in Latin America and the Caribbean.
- **Despite the steady increase in the proportion of parliamentary seats** held by women, as of 2020, women held at least 50% of seats in **only four national parliaments**.
- Overall, **few women held key positions in the higher echelons of parliamentary hierarchies**, particularly at the top levels, as **president or speaker of the house**.
- As of 2020, **women held only 20.5% of high-level legislative positions**, which is still **too low** a percentage to have an effective influence on policymaking.

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### **Executive Power:**

- In terms of executive power, as of 2020, gender parity among cabinet ministers had been reached or surpassed in only 14 countries; female ministers continued to be concentrated in ministries related to the family and social issues.
- **Only 20 countries had a female Head of State or Government.** However, this is an improvement over the 12 countries with a female Heads of State in 1995.

### **Representation in Cabinets:**

- Women's representation among cabinet ministers has quadrupled over the last 25 years, and in 2020, on average, one in five ministers (22%) was a woman.

### **In Judiciary:**

- In the judiciary, 40% of judges were women in 2017, an increase over the proportion of 35% reported in 2008.

### **Representation in Private Sector:**

- Although higher representation of women in decision-making roles in the private sector has been proven to have a positive effect on corporate profitability, the proportion of women in managerial positions remains low.
- **Globally, women held only 28% of managerial positions in 2019** - almost the same proportion as in 1995.
- The underrepresentation of women in management positions is even more visible at higher levels of decision-making: in 2020, only 18% of enterprises surveyed had a female Chief Executive Officer, and among Fortune 500 corporations only 7.4%, or 37 out of 500 Chief Executive Officers, were women (compared to 1 out of 500 in 1998).
- Overall, **female representation on corporate boards has been slowly growing**, particularly in developed countries, thanks in large part to the adoption of legislative quotas. At the current pace, the goal of 30% of women's representation on corporate boards will not be reached until 2029, and 30% is not the 50/50 gender parity aimed for by women's groups worldwide.

### **Local Government Positions:**

- Gender quotas have also contributed to women's access to **local government positions**, a necessary condition for ensuring the inclusion of women's interests and perspectives in local decision-making.
- **Worldwide, women held 36% of elected seats in local deliberative bodies**, 10 percentage points higher than their level of representation in national parliaments.

## **WOMEN AND EDUCATION**

- **Women's participation in education is on the rise worldwide:**
- Worldwide, **substantial progress** has been made in the achievement of **universal primary education**, and girls and boys around the world participate equally in primary education in most regions.
- While the progress in achieving gender equality in secondary education is encouraging, it lags behind levels reported in primary education, and gender disparities are wider and occur in more countries at the secondary than at the primary level.

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- Among positive global trends, evidence shows that, girls - once they have access to schooling tend to do **better than boys in terms of academic achievement at the primary and secondary levels and beyond**. In tertiary education, enrolment is increasing faster for women than for men.
  - However, **gender disparities persist** in the fields of study chosen by women and men.
  - **Women continue to be underrepresented among graduates in the fields of science, technology, engineering and mathematics (STEM studies)**, constituting slightly more than a third (35%) of the world's STEM graduates.
  - **Women are also a minority in scientific research and development, making up less than a third (30%) of the world's researchers.**
  - Moreover, women scientists and researchers are more likely to find work in academia or in the public sector while men are more likely to work in the private sector, which offers higher salaries and wider opportunities.

## **WOMEN AND ECONOMIC EMPOWERMENT**

- **The unequal distribution of unpaid domestic and care work restrains women's economic potential.**
- As of 2020, only **less than 50% of women of working age participated in the labour market**, compared to **around 75% of men**, resulting in a gender gap of 27 percentage points globally, similar to the gap observed in 1995.
- In Southern Asia, Northern Africa and Western Asia, women's participation in the labour market is particularly low, **below 30%**, and there are significant gender differences, of around 50 percentage points, in participation.
- The **most significant gender gap in labour market participation**, which has remained relatively unchanged at above 30 percentage points since 1995, is observed during the **prime working ages (25-54)**. **Reason is family responsibilities and the unequal distribution of unpaid domestic and care work in the household impede the ability of women to join the labour force.**
- **Household composition** is a major factor in explaining the large gender gaps in labour market participation observed in countries worldwide: on average, 82% of women of prime working age living alone are in the labour market, compared to 64% of women living with a partner and 48% of women living with a partner and children. **Women's participation rates show a gradual recovery as children grow older, family responsibilities are reduced and mothers have the time and energy to enter or re-enter the labour force.**

### **Working Conditions (Part Time and Informal Jobs):**

- Women's working conditions differ from men's.
- According to available data, **women are more likely than men to work part-time in almost all countries (95%), to have informal jobs in a majority of countries (56%)** and to be engaged as contributing family workers to a much greater extent than men (18% of women versus 7% of men). While **these jobs offer more flexibility in terms of working hours, they provide lower pay, reduced job security, fewer training and promotion opportunities and limited access to social protections.**

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#### **Hindrances to Participation in Labour Market:**

- **Family responsibilities** and the **unequal distribution of unpaid domestic and care work between women and men add to women's daily work and may prevent them from participating in the labour market.**
- **On an average day, women spend about three times as many hours on unpaid domestic and care work as men (4.2 hours compared to 1.7).**
- **Gender inequalities in the amount of time spent on unpaid domestic and care work is lowest in developed regions** (where women spend twice as much time as men) and highest in Northern Africa and Western Asia (where women spend more than seven times as much time as men on these activities).

#### **Asset ownership by Gender:**

- Asset ownership is beneficial for both women and men, protecting them and their families from economic shocks, yet **gender differentials in asset ownership and ownership rights are substantial.**
- **Women continue to have less access to formal financial services (65%) than men (72%),** particularly in Western Asia and Northern Africa, and are thus less likely to be able to carry on businesses or fulfil their potential as entrepreneurs.

### **VIOLENCE AGAINST WOMEN AND THE GIRL CHILD**

- **Violence against women and the girl child remains a global issue.**
- **Women throughout the world are subjected to physical, sexual, psychological and economic violence, regardless of their income, age or education,** oftentimes leading to long-term physical, mental and emotional health problems. Around one third of women worldwide have experienced physical and/or sexual violence by an intimate partner (the term intimate partners refers to current or former spouses and also dating partners).
- **Laws to address domestic violence are not yet universally available** (153 countries have such laws); gaps are the largest in Northern Africa, Western Asia and sub-Saharan Africa, where less than 50% of countries have passed such laws.
- **Fewer countries have laws on sexual harassment (103 countries)** and fewer still have laws directly covering marital rape (43 countries).
- **At least 200 million girls and women alive today have been subjected to female genital mutilation** in countries across Africa and the Middle East where this specific form of violence against women and girls is concentrated. Despite recent progress in some countries, the prevalence of the practice remains extremely high in parts of Northern Africa, Eastern Africa and West Africa. In six countries, at least 75% of adolescent girls aged 15-19 have undergone female genital mutilation.
- Female genital mutilations are performed for socio cultural reasons on the grounds of ensuring premarital virginity and marital fidelity. Though no religious scripts prescribe the practice, practitioners often believe the practice has religious support. But female genital mutilations leads to health complications like severe pain, excessive bleeding (haemorrhage), genital tissue swelling, infections, etc.

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## **WOMEN AND HEALTH**

- **Health outcomes for women and men are affected by gender inequalities and norms.**
- **The risk of maternal death has been reduced globally by 38%** between 2000 and 2017, with the greatest reduction achieved in Southern Asia (reduction of 59%).
- However, despite a 40% reduction in maternal mortality in countries in sub-Saharan Africa since 2000, the region accounted for roughly two-thirds of global maternal deaths in 2017.
- **Gender inequalities, norms and expectations are determining factors in the health outcomes of women and men.**
- **For women, early marriage, together with poor access to information and education and lack of decision-making power within the family or in a couple relationship,** increase the exposure of adolescent girls and adult women to sexually transmitted infections, including HIV, which is still a major concern, particularly in sub-Saharan Africa, where 58% of all new HIV infections are reported among women.
- Gender norms and expectations also contribute to early pregnancy and high fertility, increasing the likelihood of maternal death, which is still the leading global cause of death among young women 8 (15-29), particularly in sub-Saharan Africa, accounting for over two-thirds of all maternal deaths in 2017.

## **WOMEN POPULATION PATTERNS**

- **Population patterns and changes in family composition affect the lives of women and men throughout the world.**
- As of 2020, there are around **65 million fewer women than men in the world**.
- There are about 3.8 billion women to 3.9 billion men.
- The **ratio of males to females varies by age**, however, and **while males outnumber females at birth**, with around 107 to 108 male babies for every 100 female births, **women outnumber men in older ages** due to the **inherent biological advantage of women over men**.

### **Marriage Age:**

- Worldwide, the **age at which women and men first marry or enter into a union** has risen over the past two decades. It is **23 for women and 26.5 for men**. This is mainly due to
  - increased education,
  - formal employment opportunities, and
  - women's greater economic independence.
- **Marriage before age 18**, a violation of children's rights that may also compromise their education and career prospects, lead to social isolation and the risk of early pregnancy, **still exists** in many regions, especially for girls, although it has slowly declined over the last two decades, from 26% to 20%.
- In Southern Asia, where **child marriage** has declined by 23 percentage points since 2004, there is still a 29% prevalence of child marriage, while in sub-Saharan Africa, with a proportion of child marriage of 34.5%, has recorded only a minor 2% decrease.

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- In tandem with the decline in child marriage, **motherhood among adolescent girls** aged 15 - 19 has declined globally from 56 to 41 births per 1,000 women in the period 2000-2020, although it **remains high in sub-Saharan Africa, at 101 births per 1,000 women.**
  - **Pregnancies and childbirth among adolescent girls are linked to wide range of negative long-term consequences** for both mothers and their babies, including **risks to their health**, as well as poverty as a result of discontinued schooling and **fewer job opportunities.**

#### **Background Information:**

- **Gender equality** is a **basic human right.**
- Article 1 of the **Universal Declaration of Human Rights**, adopted by the UN General Assembly on 10 December **1948**, stated that "**All human beings are born free and equal in dignity and rights**" and Article 2 stated that "everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, birth or other status."
- Thirty one years after the creation of the Universal Declaration of Human Rights, the **Convention on the Elimination of All Forms of Discrimination against Women** was adopted by the UN General Assembly on 18 December 1979.
- This was followed 16 years later by the **Beijing Declaration and Platform for Action**, adopted in **1995** at the Fourth World Conference on Women in Beijing. The Beijing conference was preceded by three conferences on women and gender equality. These took place in Mexico City in 1975, Copenhagen in 1980, and Nairobi in 1985. The 1995 Beijing Conference is **being followed by a series of five-year reviews.**

#### **Significance of World Conference on Women in Beijing:**

- The **1995 Fourth World Conference on Women in Beijing** marked a **significant turning point for the global agenda for gender equality.**
- The **Beijing Declaration and the Platform for Action** was adopted unanimously by 189 countries.
- It is an **agenda for women's empowerment** and **considered the key global policy document on gender equality.**
- It **sets strategic objectives and actions for the advancement of women** and the achievement of gender equality in **12 critical areas of concern:**
  1. **Women and poverty** (increasing burden of poverty on women)
  2. **Education and training of women** (unequal access to education and training)
  3. Women and health (unequal access to health care and related services)
  4. **Violence against women**
  5. Women and armed conflict (The effects of armed or other kinds of conflict on women, including those living under foreign occupation)
  6. **Women and the economy** (Inequality in economic structures and policies, in all forms of productive activities and in access to resources)
  7. **Women in power and decision-making** (Inequality between men and women in the sharing of power and decision-making at all levels)

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8. **Institutional mechanism for the advancement of women** (Insufficient mechanisms at all levels to promote the advancement of women)
  9. **Human rights of women** (lack of respect for and inadequate promotion and protection of the human rights of women)
  10. **Women and the media** (Stereotyping of women and inequality in women's access to and participation in all communication systems, especially in the media)
  11. **Women and the environment** (Gender inequalities in the management of natural resources and in the safeguarding of the environment)
  12. **The girl-child** (persistent discrimination against and violation of the rights of the girl child).

**Progress:**

- Year 2020 is the 25th anniversary of the adoption of the Beijing Declaration and Platform for Action
- Nearly 25 years after the adoption of the Platform for Action, no country has achieved equality for women and girls and significant levels of inequality between women and men persist.
- Critical areas of where **sufficient progress has not been made** include
  1. access to decent work and closing the gender pay gap;
  2. rebalancing of the care workload;
  3. ending violence against women;
  4. reducing maternal mortality and
  5. realizing sexual and reproductive health and rights; and
  6. participation in power and decision-making at all levels.

**Additional Information:**

The following information deals with some of the issues concerning women and how they impact them:

**Women and Poverty:**

- While poverty affects households as a whole, because of the gender division of labour and responsibilities for household welfare, **women bear a disproportionate burden**, attempting to manage household consumption and production under conditions of increasing scarcity. **Poverty is particularly acute for women living in rural households.**
- **Women's poverty is directly related to the absence of** economic opportunities and autonomy, lack of access to economic resources, including credit, land ownership and inheritance, lack of access to education and support services and their minimal participation in the decision-making process. Poverty can also force women into situations in which they are vulnerable to sexual exploitation.

**Women and Education:**

- **Education is a human right and an essential tool for achieving the goals of equality, development and peace.**

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- **Non-discriminatory education benefits both** girls and boys and thus ultimately contributes to more equal relationships between women and men.
  - Equality of access to and attainment of educational qualifications is necessary if more women are to become agents of change. **Literacy of women is an important key to improving health, nutrition and education in the family and to empowering women to participate in decision-making in society.**
  - **Discrimination in girls' access to education persists in many areas**, owing to customary attitudes, early marriages and pregnancies, inadequate and gender-biased teaching and educational materials, sexual harassment and lack of adequate and physically and otherwise accessible schooling facilities. **Girls undertake heavy domestic work at a very early age.** Girls and young women are **expected to manage both educational and domestic responsibilities, often resulting in poor scholastic performance and early drop-out from the educational system.** This has long-lasting consequences for all aspects of women's lives.

#### **Women and Health:**

- Women have the right to the enjoyment of the highest attainable standard of physical and mental health. The enjoyment of this right is vital to their life and well-being and their ability to participate in all areas of public and private life.
- Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. **Women's health involves their emotional, social and physical well-being and is determined by the social, political and economic context of their lives, as well as by biology.**
- However, **health and well-being elude the majority of women. A major barrier for women to the achievement of the highest attainable standard of health is inequality.**
- In many countries, especially developing countries, in particular the least developed countries, a decrease in public health spending and, in some cases, due to structural adjustment, contribute to the deterioration of public health systems.
- In addition, **privatization of healthcare systems** without appropriate guarantees of universal access to affordable health care further reduces health-care availability. This situation not only **directly affects the health of girls and women, but also places disproportionate responsibilities on women**, whose multiple roles, including their roles within the family and the community, are often not acknowledged. Hence they do not receive the necessary social, psychological and economic support.

#### **Violence against Women:**

- **Violence against women is an obstacle to the achievement of the objectives of equality, development and peace.**
- Violence against **women both violates and impairs or nullifies the enjoyment by women of their human rights and fundamental freedoms.** The long-standing failure to protect and promote those rights and freedoms in the case of violence against women is a matter of concern to all States and should be addressed.

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- In all societies, to a greater or lesser degree, women and girls are subjected to physical, sexual and psychological abuse that cuts across lines of income, class and culture. The low social and economic status of women can be both a cause and a consequence of violence against women.
  - (The term "violence against women" means any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life).

#### **Reasons for Violence against Women:**

- **Violence against women is a manifestation of the historically unequal power relations between men and women, which have led to domination over and discrimination against women by men and to the prevention of women's full advancement.** Violence against women throughout the life cycle derives essentially from certain traditional or customary practices.
- Violence against women is **exacerbated by women's lack of access** to legal information, aid or protection; the **lack of laws that effectively prohibit violence against women; failure to reform existing laws; inadequate efforts on the part of public authorities to promote awareness of and enforce existing laws;** and the absence of educational and other means to address the causes and consequences of violence.

#### **Women and Economy:**

- There are **considerable differences in women's and men's access to and opportunities to exert power over economic structures in their societies.**
- In most parts of the world, **women are virtually absent from or are poorly represented in** economic decision-making, including the formulation of financial, monetary, commercial and other economic policies, as well as tax systems and rules governing pay.

#### **Women in power and decision-making:**

- The Universal Declaration of Human Rights states that everyone has the right to take part in the Government of his/her country.
- **But, the power relations that prevent women from leading fulfilling lives operate at many levels of society, from the most personal to the highly public.**
- Equal participation of women and men in decision-making is needed to **strengthen democracy and promote its proper functioning.**
- Equality in political decision-making performs **contributes to real integration of the equality dimension in government policy-making is feasible.**
- **Without the active participation of women and the incorporation of women's perspective** at all levels of decision-making, the **goals of equality, development and peace cannot be achieved.**
- The **unequal division of labour and responsibilities within households based on unequal power relations also limits women's potential to find the time and develop the skills required for participation in decision-making in wider public forums.**

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- **A more equal sharing of those responsibilities between women and men** not only provides a better quality of life for women and their daughters but also **enhances their opportunities to shape and design public policy** so that their interests may be recognized and addressed.

#### **Girl Child:**

- In many countries **girl child is discriminated against from the earliest stages of life, through her childhood and into adulthood.**
- Girls are often **treated as inferior and are socialized to put themselves last**, thus **undermining their self-esteem.**
- **Discrimination and neglect in childhood** can initiate a lifelong downward spiral of deprivation and exclusion from the social mainstream.

#### **Global Institutional Mechanisms for Women:**

##### **THE COMMISSION ON THE STATUS OF WOMEN:**

- **The Commission on the Status of Women (CSW) is the principal global intergovernmental body exclusively dedicated to the promotion of gender equality and the empowerment of women.**
- It was **established in 1946** by Economic and Social Council (ECOSOC), one of the six main organs of United Nations.
- The Commission on the Status of Women (CSW) is instrumental in promoting women's rights, documenting the reality of women's lives throughout the world, and shaping global standards on gender equality and the empowerment of women.
- In 1996, ECOSOC expanded the Commission's mandate and decided that it should take a leading role in monitoring and reviewing progress and problems in the implementation of the Beijing Declaration and Platform for Action, and in mainstreaming a gender perspective in UN activities.

#### **UN WOMEN**

- The United Nations faced challenges for many years in its efforts to promote gender equality globally, including **inadequate funding** and **no single recognized driver to direct UN activities** on gender equality issues.
- To remedy this, in July 2010, the United Nations General Assembly created **UN Women**, the United Nations Entity for Gender Equality and the Empowerment of Women.
- **UN Women supports** all aspects of the work of the Commission on the Status of Women (CSW) and facilitates the participation of civil society representatives.

#### **Hunger:**

#### **RC REDDY IAS STUDY CIRCLE**

##### **India Ranked 94 in the Global Hunger Index 2020**

- India was ranked 94 out of 107 countries in the Global Hunger Index 2020 released in October 2020.
- High-income countries and those with very low populations were excluded from evaluation.

#### **About Global Hunger Index (GHI):**

- The Global Hunger Index (GHI) tracks and measures hunger at global, regional, and national levels.

GHI scores are based on the values of four component indicators:

- 
1. **undernourishment** (share of the population with insufficient caloric intake),
  2. **child wasting** (share of children under age five who have **low weight for their height**, reflecting acute undernutrition),
  3. **child stunting** (share of children under age five who have **low height for their age**, reflecting chronic undernutrition), and
  4. **child mortality (mortality rate of children under age five)**, partly reflecting the fatal mix of inadequate nutrition and unhealthy environments)
- Based on the values of the four indicators, the GHI determines hunger on a 100-point scale where 0 is the best possible score (no hunger) and 100 is the worst. In practice, neither of these extremes is possible.
  - Each country's GHI score is classified by severity, from low to extremely alarming.

#### **GHI Severity Scale (0 to 100)**

Low	$\leq 9.9$
Moderate	10.0-19.9
Serious	20.0-34.9
Alarming	35.0-49.9
Extremely alarming	$\geq 50.0$

- Each country's GHI score is classified by severity, from low to extremely alarming.
- **With a score of 27.2, India has a level of hunger that is serious.**

#### **Major Facts in Global Hunger Index Report 2020:**

- **Hunger worldwide**, represented by a GHI score of 18.2, is at a **moderate level**, down from a 2000 GHI score of 28.2, classified as serious.
- Globally, far too many individuals are suffering from hunger:
- nearly 690 million people are undernourished;
- 144 million children suffer from stunting, a sign of chronic undernutrition;
- 47 million children suffer from wasting, a sign of acute undernutrition; and
- 5.3 million children died before their fifth birthdays, in many cases as a result of undernutrition.
- In both Africa South of the Sahara and South Asia, hunger is classified as serious, owing partly to large shares of people who are undernourished and high rates of child stunting. Moreover, Africa
- South of the Sahara has the world's highest child mortality rate, while South Asia has the world's highest child wasting rate.
- In contrast, hunger levels in Europe and Central Asia, Latin America and the Caribbean, East and Southeast Asia, and West Asia and North Africa are characterized as low or moderate, although hunger is high among certain groups within countries in these regions.
- 3 countries have alarming levels of hunger - **Chad, Timor-Leste, and Madagascar.**

- 
- **The world is not on track to achieve the second Sustainable Development Goal-known as Zero Hunger for short - by 2030.**
  - At the current pace, approximately 37 countries will fail even to reach low hunger, as defined by the GHI Severity Scale, by 2030.

#### **Ranking of India and Its Neighbours:**

<b>Country</b>	<b>Rank</b>
Sri Lanka	64
Nepal	73
Bangladesh	75
Myanmar	78
Pakistan	88
<b>India</b>	<b>94</b>

#### **Countries at the Bottom of the Rankings:**

<b>Country</b>	<b>Rank</b>
Mozambique	103
Haiti	104
Madagascar	105
Timor-Leste	106
Chad	107

#### ***Additional information:***

##### **Definitions:**

###### **1. Hunger:**

- The problem of hunger is complex, and different terms are used to describe its various forms.
- Hunger is usually understood to refer to the distress associated with a lack of sufficient calories.
- The Food and Agriculture Organization of the United Nations (FAO) defines food deprivation, or undernourishment, as the consumption of too few calories to provide the minimum amount of dietary energy that each individual requires to live a healthy and productive life, given that person's sex, age, stature, and physical activity level.

###### **2. Undernutrition:**

- Undernutrition goes beyond calories and signifies deficiencies in any or all of the following: energy, protein, and/ or essential vitamins and minerals.
- Undernutrition is the result of **inadequate intake of food in terms of either quantity or quality, poor utilization of nutrients** due to infections or other illnesses, or a combination of these factors.

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- These, in turn, are caused by a range of factors, including household food insecurity; inadequate maternal health or childcare practices; or inadequate access to health services, safe water, and sanitation.

### **3. Malnutrition:**

- **Malnutrition** refers more broadly to both undernutrition (problems caused by deficiencies) and over nutrition (problems caused by unbalanced diets, such as consuming too many calories in relation to requirements with or without low intake of micronutrient-rich foods).

#### **About Publishers of Global Hunger Index:**

- The Global Hunger Index is jointly published by Concern Worldwide and Welthungerhilfe.
- **Concern Worldwide** is an international humanitarian organisation dedicated to tackling extreme poverty and suffering in the world's poorest countries.
- **Welthungerhilfe** is one of the largest private aid organisations in Germany established in 1962, as the German section of the "Freedom from Hunger Campaign".

#### **Objective of GHI:**

The objective of GHI is to

- a) raise awareness and understanding of the struggle against hunger,
- b) provide a comparative picture of hunger between countries and regions, and
- c) call attention to those areas of the world where hunger levels are highest and where the need for additional efforts to eliminate hunger is greatest.

#### **Senior Citizens:**

#### **Decade of Healthy Ageing 2020-30 Launched**

- The World Health Assembly, decision-making body of WHO (World Health Organisation) which consists of all the members of WHO, adopted a proposal for 'Decade of Health Ageing 2020-30' in August 2020.
- The 'Decade of Health Ageing 2020-30' was officially launched on October 1, 2020 on the occasion of the International Day for Older Persons.

#### **Need for 'Decade of Health Ageing 2020-30':**

#### **Increasing Old Age population:**

- The number and proportion of people aged 60 years and older in the population is increasing.
- The ageing of the population will continue to **affect all aspects of society**, like demand for goods and services, such as housing, health, long-term care, social protection, transport, as well as family structures.
- The number of people aged 60 years and older is 1 billion in 2019. It will increase to 1.4 billion by 2030.
- By 2050, the global population of older people will be **2.1 billion**.

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### **More Older People than Children under 5:**

- There are more older people than children under 5 years. In 2020, for the first time in history, people aged 60 years or over will outnumber children under 5 years.
- By 2050, there will be more than twice as many people above 60 as children under 5. By 2050, people aged 60 years or over will outnumber adolescents and young people aged 15-24 years

### **Good Health Adds Life to Years :**

- Good health adds life to years of old people. The opportunities that arise from increasing longevity depend strongly on Healthy Ageing. People who experience these extra years of life in good health and continue to participate and be an integral part of families and communities will strengthen societies; however, if the added years are dominated by poor health, social isolation or dependency on care, the implications for older people and for society are much more negative.

### **Definition of Healthy Ageing:**

- Healthy Ageing has been defined as developing and maintaining the functional ability that enables well-being in older age.
- Functional ability is determined by
- intrinsic capacity of an individual (i.e. the combination of all the individual's physical and mental capacities),
- environment in which he or she lives (understood in the broadest sense and including physical, social and policy environments) and interactions among them.

### **Areas of Action in the Decade:**

- To foster healthy ageing and improve the lives of older people and their families and communities, fundamental shifts will be required not only in the actions we take but in how we think about age and ageing.
- The Decade will address four areas for action:
  - change how we think, feel and act towards age and ageing;
  - ensure that communities foster the abilities of older people;
  - deliver person-centred integrated care and primary health services responsive to older people; and
  - provide access to long-term care for older people who need it.

### **'Longitudinal Aging Study of India':**

- In order to generate comprehensive data on social, economic and health conditions of the elderly, the Government undertook '**Longitudinal Aging Study of India**'.
- It is the first nationwide study and world's largest study on older adults which will provide evidence base for national and state level programs and policies for elderly population.
- Findings of LASI are being finalised by the Ministry and will be released in the coming months.

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***Good Samaritans:*****Good Samaritan Rules Notified**

- The Union Government notified the Good Samaritan rules on September 29, 2020.

**Who is a Good Samaritan?**

- Good Samaritan is a compassionate person who helps people in difficulty or distress.
- The phrase is an ancient one and originated in the Bible, from the parables of Jesus.
- **In the context of road accidents**, "Good Samaritan" is a person, who in good faith, renders emergency assistance to road accident victims.
- But, these Good Samaritans face legal and procedural hassles at the hands of the police, hospitals and legal entities.
- All road accident cases are investigated by the police for fixing the criminal responsibility. These are called medico legal cases.
- Good Samaritans, though they are not offenders of the crime, are forced to disclose personal details and also frequently summoned during the investigation and court proceedings as witness.
- These hassles discourage willing citizens to render emergency assistance.

**Rules to facilitate Good Samaritans:**

- Hence, the Union Government issued guidelines to protect Good Samaritans who help an injured person on the road, from legal and procedural hassles at the hands of the police, hospitals and legal entities.
- A bystander or an eyewitness to an accident who takes the injured to the hospital **may leave immediately and no questions will be asked to him**.
- Similarly, the **police cannot force the person informing about the accident to reveal his name, address and other personal details**.
- However, Good Samaritan may voluntarily choose to disclose the same and become a witness.
- For the examination of Good Samaritan, if he has voluntarily agreed to become a witness in the case, he shall be **examined at a time and place of his convenience and the investigating officer shall be dressed in plainclothes**.
- In case he wants to give evidence, **an affidavit filed by him shall be treated as a complete statement**.
- **Video conferencing shall be used extensively** during examination of Good Samaritans who choose to be eye-witnesses, in order to prevent harassment and inconvenience to such Good Samaritans
- **Every public and private hospital shall publish a charter** in Hindi, English and vernacular language, at the entrance or other conspicuous location, and on their website, stating the rights of Good Samaritans.

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## **SOCIAL SECTOR**

### ***Education:***

#### **World Bank Aided STARS Project Approved for Improving School Education**

- In October 2020, the Union Government approved World Bank aided project for improving school in 6 States in India namely Himachal Pradesh, Rajasthan, Maharashtra, Madhya Pradesh, Kerala and Odisha.
- Strengthening Teaching-Learning and Results for States (STARS) project has a total project cost of **Rs 5718 crore**.
- World Bank would extend US \$ 500 million (approximately Rs. 3700 crore) to this project.

### **Focus areas of STARS Project:**

- Strengthening Early Childhood Education and Foundational Learning
- Improving Learning Assessment Systems
- Strengthening classroom instruction and remediation through teacher development, and
- Strengthening Vocational education in schools through mainstreaming, career guidance and counselling, internships and coverage of out of school children.

## **STATES**

### ***Himachal Pradesh:***

#### **Atal Tunnel Inaugurated in Himachal Pradesh**

- On October 2, 2020, Prime Minister Narendra Modi inaugurated Atal Tunnel.

### **Significant features of the Tunnel:**

- It is the world's longest high altitude tunnel in the world.
- It connects Manali to Lahaul-Spiti valley in Himachal Pradesh.
- It cuts through **Pir Panjal mountain ranges**.
- Total length: 9.02 Km.
- It is located at around 1000 feet (3000 metres) above the mean sea level.
- The South Portal (SP) of Atal Tunnel is located at a distance of 25 km from Manali at an altitude of 3,060 metres.
- The North Portal (NP) of the tunnel is located near village Teling, Sissu, in Lahaul Valley at an altitude of 3,071 Metres.
- Atal Tunnel has been designed for traffic density of 3000 cars per day and 1,500 trucks per day with max speed of 80 km/hr.

### **Significance of the Tunnel:**

#### **1) All weather connectivity:**

Before the tunnel construction, the Lahaul-Spiti Valley used to remain closed for vehicular movement for nearly six months in a year due to bad weather conditions. The region is usually cut off for vehicle movement as it is snow-bound between November and April.

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Now, the Atal tunnel will provide **round-the-year all-weather road connectivity** to Lahaul-Spiti valley and further with Union Territory of Ladakh.

**2) Reduced travel distance and time:**

The tunnel reduces the distance by 46 km between Manali and Leh.

Travel time is reduced by about 4 to 5 hours.

**3) Strategically important for defence:**

The tunnel is also significant from the military logistics viewpoint.

It will provide better connectivity (safe, speedy and round the year movement) to the armed forces in reaching Ladakh.

**4) Trade and Commerce:**

It also facilitates **trade and tourism**.

It is expected to **boost tourism** and winter sports in the region.

Tourism will boost **employment opportunities** for locals in the Lahaul-Spiti valley.

- The tunnel opens up new opportunities for **farmers, people associated with horticulture and animal rearing, students, businessmen etc.**
- Himachal Pradesh is also **one of the biggest producers of fruits** (like apples, Mangoes, Litchis, Strawberries, Apricots, Peaches, Cherries, Pears, etc.) in the country. **Tomatoes, potatoes and mushrooms** of Himachal meet the needs of several cities.
- The tunnel will prevent the farm produce of the region from getting ruined, by enabling it to reach markets quickly. Herbal medicinal plants and spices grown in Lahaul-Spiti will reach new markets.
- It will also now become easier for people all over the world to access **Tabo Monastery in Spiti Valley.**
- **Increased tourism will also open up several employment opportunities for the youth,**

**Safety Features in the Atal Tunnel:**

- The Atal Tunnel has many safety features like
- telephone connections at every 150 metres for emergency communication,
- fire hydrant mechanisms at every 60 Metres,
- auto incident detection system with CCTV cameras at every 250 metres,
- air quality monitoring at every one Km,
- evacuation lighting/exit signs, and
- broadcasting system throughout the tunnel among others.

**- Prime Minister Stresses Importance of Timely Completion of Projects:**

- Prime Minister stated that delay in completion of key infrastructure-related projects such as the 'Atal Tunnel' causes **financial losses** and **deprives people of economic and social benefits.**

- Delay extends inconvenience to people.
- Country also has to bear the loss on economic front due to increased project cost and lost trade opportunities.
- In 2005, the estimated cost of this tunnel was projected at Rs. 950 crore.
- But due to continuous delay, the tunnel has now been completed after spending over Rs. 3,200 crore

### Why was the Tunnel Named as Atal Tunnel?

- The historic decision to construct a strategic tunnel was taken in 2000 when Atal Bihari Vajpayee was the Prime Minister.
- The actual construction began in 2010.
- It took 10 years for the Border Roads Organisation (BRO) to complete the tunnel.
- Initially the tunnel was named Rohtang Tunnel named after the Rohtang pass in the region.
- In 2019, the Union Cabinet decided to name the Rohtang Tunnel as Atal Tunnel to honour the contribution made by Atal Bihari Vajpayee to the Nation.



### Jammu & Kashmir:

#### Amendments to Jammu and Kashmir Land Laws

- In October 2020, the Union Government amended and notified land laws for the Union Territory of Jammu and Kashmir.
- It omitted the protection earlier available to its 'permanent residents' and allowed outsiders to buy lands in Jammu and Kashmir.

#### Background:

- Jammu and Kashmir enjoyed special status under Article 370 and Article 35A of the Indian Constitution. One of the advantages of the Special Status was only Permanent Residents can purchase land in Jammu and Kashmir.

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- Permanent Residents of Jammu and Kashmir are those who state subjects as on 14 May 1954 or who had been a resident of state for 10 years at that time and acquired an immovable property in the state.
  - But the provisions of the Article which gave special status to Jammu and Kashmir were nullified in August 2019.
  - Now various land laws applicable to the State have been amended to drop the word 'Permanent Resident' and allow outsiders to purchase land.
  - Key amendments were made to four major state laws that governed ownership, sale, and purchase of land in the erstwhile state. These are The J&K Development Act, 1970, The J&K Land Revenue Act, 1996, The Agrarian Reforms Act, 1976 and The J&K Land Grants Act, 1960.

#### **Amendments Made:**

- The amended laws
- opened up urban or non-agricultural land for purchase by outsiders,
- permit contract farming on agricultural lands,
- provide for setting up of an industrial development corporation,
- There are no restrictions on purchase of farm land by non-J&K agriculturists.
- They also do not impose limits on the quantum of area for building a residence or a shop, as it exists in certain hilly states like Himachal Pradesh and erstwhile Jammu and Kashmir.
- Land acquired by the government for industrial or commercial purposes can now be allowed to be disposed of or sold to anyone.

#### **Conversion of Agricultural Land for Non Agriculture Purposes:**

- The Centre has also diluted restrictions on conversion of agricultural land to non-agricultural land. Earlier such conversion could only be done only with the permission of the Revenue Minister. It can **now be done with the permission of the District Collector.**
- Agricultural land can be transferred to following non agriculture purposes.
- Public purposes,
- Charitable purposes,
- Setting up of healthcare infrastructure,
- Setting up of institutes for senior secondary or higher or specialised education,
- Industrial and commercial development.
- Land acquired by the government for industrial or commercial purposes can now be allowed to be disposed of or sold to anyone. Earlier, only 'permanent residents' of Jammu and Kashmir could purchase such land

#### **Why were the amendments made?**

- To attract investors and seek private sector investments,
- expand industrial base in the state, and
- increase employment opportunities.

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- Due to lack of employment opportunities in Jammu and Kashmir, many educated unemployed youth are migrating to other States for employment opportunities.
  - The Union Government wants **industries to come to Jammu and Kashmir (J&K) like other parts of the country** so that development can take place and youth can get employment.
  - The Union Government also stated that the **old laws served the purpose of agrarian economy** and these **had to be changed to set up industries and create employment opportunities.**

#### Criticism on the amendments:

- The Union Territory of Jammu and Kashmir is a Muslim majority region in the country.
- There are apprehensions that allowing outsiders to buy land and allowing them to settle down in the region would **fundamentally alter the demographic character of the region.**
- Political parties in the Jammu and Kashmir like National Conference (NC) and the Peoples Democratic Party (PDP) opposed the amendment of land laws.
- They stated that the real objective of repealing the basic land laws and carrying out amendments to the other laws was to **effect demographic change**, and disempower the people of Jammu and Kashmir.

## FOREIGN RELATIONS

### **QUAD Dialogue:**

#### **Second QUAD Strategic Dialogue Held in Tokyo**

- The second meeting of the **Australia-India-Japan-United States** Quadrilateral Strategic Dialogue (more commonly called QUAD) attended by Foreign Ministers was held in Tokyo in October 2020.

### **About QUAD:**

- The idea of QUAD evolved after the 2004 tsunami in the Indian Ocean which led to the death of around 2.3 lakh people.
- (A tsunami is a series of giant waves which travel at great speed which destroy buildings and lead to deaths of people. These are caused by earthquakes or undersea volcanic eruptions).
- Tamil Nadu and Andaman & Nicobar were severely affected by the 2004 Tsunami.
- India, apart from carrying out rescue and relief work in Tamil Nadu and Andaman & Nicobar, also carried out humanitarian and disaster relief missions in maritime neighbouring countries: Sri Lanka, Maldives, and Indonesia.
- In all, about 32 Indian ships and 5,500 troops participated in India's international efforts.
- This humanitarian and disaster relief effort was coordinated in the next few weeks with three other naval powers engaged in the rescue effort: the **U.S., Australia and Japan**
- This relief effort led to the idea of QUAD among the four countries i.e. **(India, U.S. Australia and Japan).**
- The QUAD concept was further promoted by Shinzo Abe, the then Japan Prime Minister who called for strategic coordination in the 'confluence of two seas'. In 2007, Japan, Australia and Singapore participated in the Malabar naval exercises conducted in Vishakhapatnam.

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- However, there was no forward movement for more than a decade after 2007 largely due to reservations expressed by China on QUAD. China termed QUAD as an '**Asian NATO**'.
  - (NATO is a political and military alliance of 30 countries from North America and Europe. NATO's fundamental goal is to safeguard the Allies' freedom and security by political and military means).
  - Subsequently, Australia pulled out of the naval exercises to not antagonise China as it has strong trade ties with it. USA also needed support of China in the six party talks with North Korea. Hence, there was no forward movement on QUAD for almost a decade.

#### **Revival of QUAD:**

- There is a renewed push towards QUAD from 2017.
- China's aggressiveness and assertiveness in the Indo-pacific region in the recent times is the major reason for this renewed push.
- China has expanded its commercial, strategic and military interests in the region.
- It has set up a military base in Djibouti which it calls as a logistics base.
- China has also taken up 'One Belt One Road' under which it is taking up a series of infrastructure projects in more than 70 countries across different continents i.e. Asia, Europe, Africa.
- The U.S.A is also opposed China's expansive territorial claims on the South China Sea.
- (China claims 90% of the potentially energy-rich South China Sea. But Brunei, Malaysia, the Philippines, Taiwan and Vietnam also lay claim to parts of it. About \$3 trillion of trade passes each year through South China Sea. Beijing has built bases atop atolls in the region but says its intentions are peaceful).
- Beijing routinely outlines the scope of its claims with reference to the nine-dashed line that encompasses about nine-tenths of the 3.5-million-square-kilometer South China Sea on Chinese maps).
- Hence, USA also revised its assessment of China in the recent times. Now, USA sees China as a threat to its global hegemony.

#### **USA's Stand:**

- USA wants to check Chinese aggression in the Indo-pacific Ocean.
- Hence, it is considering of converting QUAD into a military alliance to check China.
- U.S. Secretary of State Mike Pompeo
- Stated that USA wants to direct the Quad towards building a coalition to counter Beijing's aggression in the region and their partnership was not "multilateralism for the sake of it".
- He called on the entire Quad member s to "collaborate to protect" the region from what he called the China's exploitation and coercion, pointing to the Line of Actual Control (LAC) standoff of China with India, as well as Chinese aggression in the South and East China Seas.

#### **India's Approach:**

- India is **more cautious in its approach** towards QUAD.

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- It does not want to be part of any military alliance and wants to preserve its strategic autonomy and exercise independence in foreign policy.
  - QUAD also contradicts with other alliances India is party to like Shanghai Cooperation Organisation (SCO), BRICS (Brazil, Russia, India, China and South Africa), RIC (Russia, India, China) of which India and China are members.
  - Prime Minister Narendra Modi said in 2018 that India sees the Indo-Pacific as a "geographical concept", not a "strategy or a club of limited members".

#### **Conclusion:**

- QUAD as a grouping is yet to evolve in its objectives.
- Discussions are taking place at an informal level. No joint statements are issued.
- Issues like connectivity, sustainable development, counter-terrorism, non-proliferation and maritime and cyber security are being discussed with a view to promoting peace, stability and prosperity in Indo-Pacific region.
- Its informal charter says that QUAD is coalition of democracies committed to a free and open Indo-Pacific.

#### ***Indo-USA:***

##### **India USA 2+2 Ministerial Dialogue**

- India USA 2+2 Ministerial Dialogue was held in October 2020 in New Delhi.
- It was attended by U.S. Secretary of State Michael R. Pompeo, Secretary of Defense Dr. Mark T. Esper and India's Defence Minister Rajnath Singh and Minister of External Affairs Dr. S. Jaishankar.

#### **Outcome:**

##### **Basic Exchange and Cooperation Agreement (BECA):**

- Both the countries signed **Basic Exchange and Cooperation Agreement (BECA)**.
- It facilitates geo-spatial intelligence, sharing information on maps and satellite images for defence purposes between armed forces of India and USA.

#### **Benefits to India:**

- BECA will help India get **real-time** access to **American geospatial intelligence**. This will enhance the accuracy of automated systems and weapons like **missiles and armed drones**.
- It also gives access to topographical and aeronautical data and advanced products which will aid navigation and targeting.
- India can buy advanced products that will aid in navigation and targeting.
- The cooperation also includes sharing of high-end satellite images, telephone intercepts, and data exchange on Chinese troops and weapons deployment along the 3,488-km India-China Line of Actual Control (LAC).
- Geospatial intelligence is also critical to the response to natural disasters.

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### **Defence Agreements Signed Between India and USA:**

- Beginning 2016, India has signed three foundational agreements with USA:
- Logistics Exchange Memorandum of Agreement (LEMOA) in 2016,
- Communications Compatibility and Security Agreement (COMCASA) in 2018,
- Industrial Security Annex (ISA) in 2018 which is an extension to the General Security of Military Information Agreement (GSOMIA) signed in 2002.
- Basic Exchange and Cooperation Agreement (BECA) is the fourth agreement between India and USA in defence sector.

### **Details about the Defence Agreements:**

#### **1. Logistics Exchange Memorandum of Agreement (LEMOA):**

- It was signed in 2016.
- LEMOA allows the militaries of the US and India to replenish from each other's bases, and access supplies, spare parts and services from each other's land facilities, air bases, and ports, which can then be reimbursed.
- It can be used by either side exclusively during authorised port visits, joint exercises, joint training, humanitarian assistance and disaster relief efforts.

#### **2. Communications Compatibility and Security Agreement (COMCASA):**

- COMCASA was signed in September 2018.
- The pact allows the US to provide India with its encrypted communications equipment and systems.
- It can be used by the Indian and US military commanders, and the aircraft and to **communicate through secure networks** during times of both peace and war.
- The signing of COMCASA also paved the way for the **transfer of communication security equipment from the US to India to facilitate "interoperability" between their forces** and potentially with other militaries that use US-origin systems for secure data links.

#### **3. An Industrial Security Annex (ISA):**

- Industrial Security Annex (ISA) signed in 2018 is an Annexure to the General Security of Military Information Agreement (GSOMIA) between the two countries.
- It enables the US government and US defence companies to **share classified information with Indian private defence manufacturers.**

#### **4. General Security of Military Information Agreement (GSOMIA):**

- India and the US had signed the GSOMIA in 2002.
- It allows sharing of classified information from the US government and American defence manufacturers with **Indian government and government-owned defence firms but not with Indian private companies.**

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### **Major Defence Partner Status:**

- In a major move in 2016, the US had designated India a "**Major Defence Partner**" intending to **elevate defence trade and technology sharing to a level commensurate with that of its closest allies and partners.**

### **Indo-Palestine:**

#### **India Provides US \$ 1 Million Assistance for Palestinian Refugees**

- In October 2020, India contributed US \$ one million to the 'United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA)' to support Palestinian refugees who have been facing extreme challenges due to the COVID-19 pandemic.
- UNRWA has been facing a huge budgetary deficit.
- An overwhelming majority of the 5.6 million refugees are living under poverty line.
- The ongoing pandemic has broken the backbone of the basic infrastructure in the area they live.

### **About United Nations Relief and Works Agency for Palestine Refugees (UNRWA):**

- It was established by the United Nations General Assembly in 1949 after the first Israeli-Arab war which resulted in large number of Palestinian refugees.
- Its mission is to improve the **socio economic conditions of Palestine refugees in Jordan, Lebanon, Syria, West Bank, including East Jerusalem and the Gaza Strip** pending a just and lasting solution to their plight.

### **Services:**

- **The services rendered by UNRWA includes education, health care, relief and social services, camp infrastructure and improvement, microfinance and emergency assistance,** including in times of armed conflict.

### **Funding:**

- It is funded almost entirely by voluntary contributions from UN Member States.
- UNRWA also receives some funding from the Regular Budget of the United Nations, which is used mostly for international staffing costs.

### **Number of Refugees Assisted by UNRWA:**

- When the UNRWA was established in 1949, there were 7.5 lakh refugees.
- At present, the total number of refugees is 56 lakhs.
- In the absence of a solution to the Palestine refugee problem, the General Assembly has **repeatedly renewed UNRWA's mandate.**
- Most recently, the mandate of UNRWA was extended **until 30 June 2023.**
- UNRWA has contributed to the welfare and human development of **four generations of Palestine refugees.**
- (Palestine refugees are defined as "persons whose normal place of residence was Palestine during the period 1 June 1946 to 15 May 1948, and who lost both home and means of livelihood as a result of the 1948 conflict).

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- The **descendants of Palestine refugee males**, including legally adopted children, are also eligible for registration as refugees for availing services of UNRWA.

#### **India-Palestine Development Partnership:**

- Under an India-Palestine development partnership, India is currently funding eight on-going developmental projects worth 59 million US dollars, including building a 215 Bed Super Specialty Hospital in Bethlehem, Information Technology Park, National Printing Press, Turath-i-Women Empowerment Project, Diplomatic Training Institute and three schools in various Palestinian Territories.
- During an Extraordinary Virtual Ministerial Pledging Conference for UNRWA held on June 23 2020, Minister of State for External Affairs, V. Muraleedharan, had announced that India will contribute USD 10 million US to UNRWA over the next two years.
- India has also sent medicines and other supplies to the Palestinian National Authority to help in dealing with the COVID-19 situation.

### **INTERNATIONAL POLITY**

#### **Nuclear Weapons:**

##### **Treaty on Prohibition of Nuclear Weapons to Enter into Force**

- The "historic" international treaty banning nuclear weapons (**Treaty on the Prohibition of Nuclear Weapons**) passed an important threshold and is all set to enter into force after 90 days.
- On October 25, 2020, United Nations announced that Honduras became the 50th nation to ratify the treaty.
- The 75th anniversary of the nuclear attacks on Nagasaki and Hiroshima marked in August 2020 saw a wave of countries ratify the treaty.
- It will now enter into force on January 22, 2021.

#### **Background:**

- The **Treaty on the Prohibition of Nuclear Weapons** was adopted by the UN General Assembly in July 2017 with the approval of 122 countries.
- It bans the use, development, production, testing, stationing, stockpiling and threat of use of such weapons.
- As per the provisions of the treaty, it comes into force 60 days after the ratification of 50th country.

#### **Limitations of the Treaty:**

- While nuclear powers have not signed up to the treaty.
- Hence, it is only a symbolic treaty.

#### **UN Secretary-General on Treaty:**

- UN Secretary-General Antonio Guterres called it the **culmination of a worldwide movement to draw attention to the catastrophic humanitarian consequences of use of nuclear weapons.**

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- Total elimination of nuclear weapons remains the highest disarmament priority of the United Nations.
  - Activists who pushed for its enactment hope that it will have a gradual deterrent effect on nuclear powers (countries which have nuclear weapons are called nuclear powers).

### **Why Nuclear Weapons Should Be Banned?**

- 1) Nuclear weapons are the **most inhumane and indiscriminate weapons** ever created.
- 2) They have catastrophic **humanitarian and environmental consequences** that **span decades and cross generations**.
- 3) A single nuclear bomb detonated over a large city could kill millions of people.
- 4) The use of tens or hundreds of nuclear bombs would **disrupt the global climate**, causing **widespread famine**.
- 5) **Nuclear weapons produce ionizing radiation**, which kills or sickens those exposed, contaminates the environment, and has long-term health consequences, including **cancer** and **genetic damage**.
- 6) Even a single nuclear detonation in a modern city would **strain existing disaster relief resources to the breaking point**.

A nuclear war would **overwhelm any relief system we could build in advance**.

- 7) **Displaced populations** from a nuclear war will produce a refugee crisis that is orders of magnitude larger than any we have ever experienced.
- 8) The **high cost of their production, maintenance and modernisation** diverts public funds from **health care, education, disaster relief and other vital services**.

### **Nuclear Powers and Stockpile of Weapons:**

- A single nuclear warhead could kill hundreds of thousands of people.
- It leads to lasting and devastating humanitarian and environmental consequences.
- Russia, the United States, the United Kingdom, France, China, India, Pakistan, Israel and North Korea possess an estimated total of nearly 14,000 nuclear weapons.
- Most of which are many times more powerful than the nuclear weapon dropped on Hiroshima.

### **Stockpile:**

- According to the 2020 report of Federation of American Scientists, the following is the stockpile of nuclear weapons of various countries.

#### **Country    Number of Weapons**

Russia	6375
United States	5800
China	320
France	290
United Kingdom	215

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Pakistan	160
India	150
Israel	90
North Korea	30 - 40

- In addition, 5 other countries i.e. Belgium, Germany, Italy, the Netherlands and Turkey host U.S. nuclear weapons in their countries.
- The United States maintains operational control of these weapons.

### **Why Nuclear Powers are Maintaining Stockpile?**

- Nuclear-armed states argue their arsenals **serve as a deterrent**.
- They, however, say that they remain committed to the **nuclear Non-Proliferation Treaty**, which seeks to prevent the spread of nuclear weapons.

### ***Additional Information:***

#### **Role of International Campaign to Abolish Nuclear Weapons (ICAN):**

- The **International Campaign to Abolish Nuclear Weapons (ICAN)**, a coalition of non-governmental organizations in one hundred countries, **mobilised civil society around the world and campaigned for the prohibiting and eliminating nuclear weapons**
- At a review of the Non-Proliferation Treaty in 2010, **all nations expressed their deep concern at the "catastrophic humanitarian consequences"** of any use of nuclear weapons. This led to the convening of three major conferences in 2013 and 2014 focusing on the humanitarian impacts of nuclear detonations.
- ICAN served as the civil society coordinator for each of the conferences, which brought together most of the world's governments, along with international organizations and academic institutions.
- Building on the outcomes of the humanitarian conferences, ICAN campaigned for the establishment of a special UN working group to examine specific proposals for advancing nuclear disarmament. This body met in Geneva in February, May and August 2016, and issued a report recommending the negotiation of a nuclear ban treaty.
- Its campaign then successfully lobbied for the UN General Assembly to adopt a landmark resolution in December 2016 to launch negotiations on "a legally binding instrument to prohibit nuclear weapons" - heralding an end to two decades of paralysis in multilateral nuclear disarmament efforts.
- Finally, '**Treaty on the Prohibition of Nuclear Weapons**' was adopted in New York on 7 July 2017.

#### **Nobel Prize for ICAN:**

- ICAN received the Nobel Peace Prize in 2017 for its campaign which focussed on drawing attention to the catastrophic humanitarian consequences of any use of nuclear weapons and advocating prohibition of nuclear weapons.
- ICAN's headquarters is in Geneva, Switzerland.

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### **International Aid:**

#### **Oxfam Report '50 Years of Broken Promises' on International Aid**

- 2020 year marks an historic chapter in the story of international aid.
- October 24, 2020 marked **50 years since high-income countries committed to spending 0.7% of their gross national income (GNI) on aid to low- and middle-income countries.**
- On this occasion, **Oxfam**, a confederation of 20 independent charitable organizations focusing on the alleviation of global poverty, published a report '**50 Years of Broken Promises'**

### **Background:**

- In 1970, developed countries **committed to spending 0.7% of their gross national income (GNI) on aid to low- and middle-income countries.**
- **This aid includes grants and concessional loans.**
- Grants are given freely. Receiving countries need not repay either loan or interest on grants.
- Concessional loans are given at low interest rates than that would be charged by commercial banks.

### **Findings of the Report:**

- The developed countries **did not fulfil commitment to spending 0.7% of their gross national income (GNI) on aid to low- and middle-income countries.**
- Wealthy nations spent **just 0.3 percent of their Gross National Income on international aid in 2019.**
- only five countries - Luxembourg, Norway, Sweden, Denmark, and the United Kingdom - met or exceeded the 0.7% target in 2019.
- **Most wealthy governments have been systematically not honouring their aid commitments for decades.**
- **Poor countries have lost out on \$5.7 trillion in aid over the last 50 years** - equivalent to **\$114 billion a year** - because rich countries have reneged on their "solemn promise" to deliver 0.7 percent of their national income in international aid.

### **Importance of Aid:**

- International aid is a **critical tool in the fight against poverty and inequality.**
- Aid is also **a form of redistribution** between countries.
- This **redistribution** is a moral imperative in a world where **global inequality** has reached extreme levels.
- Aid is also one of the **only ways to channel additional financing to the budgets** of low- and middle-income countries.
- This aid is used for **boosting investment in public goods and social spending.**

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## **How the Aid benefitted so far:**

### **Health:**

- International aid has been crucial in the fight against killer diseases in the low- and middle-income countries.
- For example, health programmes supported by the **Global Fund to Fight AIDS, Tuberculosis and Malaria** have saved more than 27 million lives since its creation, and between 2000 and 2017, the number of new HIV infections declined by 43% in the countries it supported.
- Malaria: It has also funded malaria treatment for **6 million pregnant women**.
- Polio: The near eradication of polio is another aid success story. The **Global Polio Eradication Initiative** has galvanized funding to vaccinate hundreds of millions of children in the world's low- and middle-income countries every year and has prevented an estimated 18 million people from being paralyzed. In August 2020 Africa was certified as free of wild poliovirus, and today there are just a handful of cases in two countries, compared with **350,000 cases across 125 countries in 1988**

### **Education:**

- International aid has played a decisive role in strengthening education systems in low- and middle-income countries.
- In the 15 years following the 2000 Dakar World Education Forum, an estimated **34 million additional children got the chance to go to school** thanks to aid committed at that time.
- Multilateral aid funding through the Global Partnership for Education (GPE) has also supported a significant and rapid scaling up of teacher training, which is crucial to improving education quality.
- For example, GPE funding helped more than 100,000 primary teachers in Ethiopia upgrade their teaching qualifications and enabled Afghanistan to invest in support for female teachers.
- Aid has also contributed to countries' making significant strides in getting more girls into school.
- Education is one of the most powerful weapons in the fight against poverty and inequality. It boosts the income of the people living in extreme poverty and enables them to claim their rights.
- Sending girls to school improves girls' own lives and also changes and saves the lives of people in their families and communities. Evidence shows that educating girls helps reduce child malnutrition and it is estimated that between 1970 and 2010 it averted the deaths of 30 million children under age 5 and 100 million adults aged 15 to 60.

### **Social Protection:**

- Seven countries in sub-Saharan Africa fund their social protection programmes entirely through international aid.

### **Impact of Shortfall in Aid:**

- Despite the progress achieved, there is much to be achieved.
- If high-income countries had kept their 0.7% promise, **international aid could have achieved far more**.

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- Due to inadequate aid, at present
  - 260 million children are out of school,
  - half of humanity that lacks access to essential health services, and
  - 2 billion people do not have enough food to eat.

#### **Problems in Aid Flows:**

- A significant proportion of aid fails to meet internationally recognized standards on aid effectiveness. For example, aid is often **used to support the national or commercial interests of donor countries**.
- In 2016, donors awarded 51 percent of the aid contracts to their own domestic companies, and just 7 percent to suppliers in the low-and middle-income countries.
- The **wealth of the world's richest man** (Jeff Bezos of Amazon at US \$185.6 billion in October 2020) is greater than the sum of all international aid budgets (\$152.8 billion in 2019).
- **Governments spend more than twice as much subsidizing fossil fuels** (\$320 billion in 2019) than they do on aid.

#### **Impact of COVID-19 on International Aid:**

- Economic fallout of COVID-19 will increase the need for aid **but will further undermine aid spending**, and make it **harder for poor countries to mobilize revenue from other sources**.
- The pandemic could push as many as 200 - 500 million more people into poverty. Yet, just 28 percent of the \$10.19 billion the United Nations requested to help poor countries tackle the crisis has been pledged to date.

#### **Recommendations:**

- **International aid is not charity.**
- It is **an investment in a fairer, more prosperous, and safer world for us all.**
- Oxfam called for **renewed political commitment to international aid and a move from a charity-based system to one based on justice.**
- If wealthy nations delivered on their aid commitments it would go a long way towards providing the additional \$4.8 trillion needed between 2019-2030 to meet all 17 **UN Sustainable Development Goals in the world's 59 lowest-income countries.**

#### **Additional information:**

##### **About Oxfam:**

- The name 'Oxfam' comes from the Oxford Committee for Famine Relief, founded in Britain in 1942
- The group campaigned for food supplies to be sent to **starving women and children in Greece during the Second World War.**
- **Oxfam International was formed in 1995** by a group of independent non-governmental organizations.
- They joined together as a confederation to maximize efficiency and achieve greater impact to reduce global poverty and injustice.

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- At present, there are **19 member organizations of the Oxfam International confederation**. They are based in Australia, Belgium, Brazil, Canada, Denmark, France, Germany, Great Britain, Hong Kong, Ireland, India, Italy, Mexico, The Netherlands, New Zealand, Quebec, South Africa, Spain and the United States.
  - The Oxfam International Secretariat is based in Nairobi, Kenya.

#### **FAO:**

#### **75 Years of Food and Agriculture Organisation (FAO)**

- The Food and Agricultural Organisation was founded on October 16, 1945.
- World Food Day is celebrated every year on October 16 to mark the foundation day of Food and Agriculture Organisation. The World Food Day aims to galvanize and accelerate action towards ending hunger and malnutrition in all its forms.
- October 16, 2020 marked the **75<sup>th</sup> anniversary of the Food and Agriculture Organisation**.
- Food and Agriculture organisation (FAO) stated that 'World Food Day 2020' is being observed at a time when the global hunger rose for the fifth consecutive year.
- It stated that nearly 700 million people still go hungry, and the pandemic could push another 132 million people into hunger by the end of 2020.

#### **About FAO:**

- The Food and Agriculture Organization (FAO) is a specialized agency of the United Nations.
- It was set up in 1945.
- It leads international efforts to defeat hunger.
- It has 194 member states.
- Headquarters: Rome, Italy.
- At present, FAO works in over 130 countries worldwide.

#### **Mandate:**

- Its main goal is to achieve **food security for all and make sure that people have regular access to enough high-quality food to lead active, healthy lives**.
- Broader mandate is to **improve nutrition, increase agricultural productivity, raise the standard of living in rural populations and contribute to global economic growth**

#### **Prime Ministers Lauds Contribution of FAO:**

- Prime Minister Narendra Modi stated that FAO over the years is working to increase food production and eradicate hunger in the world
- He released a commemorative coin of ₹75 to mark the 75th anniversary of the Food and Agriculture Organization.
- Prime Minister also thanked FAO for supporting India's proposal to declare 2023 as the **International Year of Millets**.
- This measure will

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- a) encourage intake of millets which is a nutritious food,
  - b) increase their production and availability further and
  - c) benefit small farmers a lot.
- Millets are grown by small and medium farmers in areas with scant rainfall and in soils which are not fertile.

#### **Examples of Millets:**

- Millets are coarse grain cereals.
- The most common millets available are
- Jowar (Sorghum), Bajra (Pearl Millet), Ragi (Finger Millet), Korra (Foxtail millet), Sama (Little millet) and Variga (Proso millet)

#### **Health Benefits of Millets:**

- There are myriad health benefits of millets.

##### **1) Diabetics:**

Millets are **low in carbohydrate** and **take longer to digest**.

Since they take longer time to digest, breakdown of glucose is slower.

It takes longer for glucose to enter bloodstream and hence blood sugar levels are stable.

This is beneficial for diabetics who have to control rapid rise and decline of glucose in blood.

**Weight Control:** Millets are **high on fibre** and **satisfy hunger quickly preventing from overeating**.

##### **2) Rich in Minerals:**

Millets are rich in several beneficial nutrients such as Iron, phosphorus, calcium, magnesium, copper, manganese, Zinc, Folic acid, etc.

##### **3) Women:**

Regular consumption of millets is beneficial for postmenopausal women suffering from signs of heart ailments, high blood pressure and high cholesterol. They also help women to combat occurrence of gallstones because they are rich in fibre.

##### **4) Type 2 Diabetes Reduction:**

They also reduce the risk of type 2 diabetes because millets are rich in magnesium, which regulates secretion of glucose and insulin.

#### **Impact of Green Revolution on Millets:**

- Consuming millets as part of daily diet was popular among the population of central and southern India. Millets were consumed regularly as a staple food.
- But, Green Revolution made rice and wheat more accessible. Millets became sidelined as a staple food grain in India due to the government's lack of recognition. The government

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proactively pushed rice and wheat in the subsidised public distribution system, deincentivising farmers from cultivating millets.

### **Changing Preferences:**

- Off late, due to health benefits of millets, middle class and rich people are including millets as part of their diet.
- Research on rice, especially polished rice, also found that it is linked to diabetes and weight gain. Polished rice have high glycemic index which means it can cause sudden spike in blood sugar levels.
- Inclusion of millets in the Public Distribution System and mid-day meal scheme, and promotion of millet cropping system among the farming community can further contribute to the widespread adoption of millets. It could also address the problem of malnutrition among the poor.

### **Additional Information:**

#### **Difference between Type 1 and Type 2 Diabetes:**

##### **Type 1 Diabetes:**

- Type 1 Diabetes is an autoimmune disease.
- It occurs suddenly. Mostly at young age. Reasons are not known clearly. But genetics might be having a role.
- People with Type 1 Diabetes do not produce insulin.
- This is why everyday insulin injections is necessary for survival.
- Insulin is a hormone produced by pancreas. It controls blood sugar (glucose) level in the body. When the amount of glucose in the blood rises to a certain level, the pancreas will release more insulin to push more glucose into the fat, muscle, body and various other tissues of the body and stores them. This causes the glucose levels in the blood (blood glucose levels) to drop. High glucose levels damage nerve and blood vessels, leading to heart disease, stroke, blindness, kidney disease, and gum infections.
- In people with Type 1 diabetes, the immune system mistakes the insulin-producing cells in the pancreas as "invaders" and attacks them. Once this happens, the cells can no longer produce insulin and a person is, therefore, insulin-dependent for life in order to stay alive.

##### **Type 2 Diabetes:**

- Type 2 Diabetes is a metabolic condition.
- It's when the body **does not produce enough insulin or becomes resistant to it.**
- Causes: Genetics, ageing, physical inactivity, obesity, etc.
- Cure:
- Insulin is normally still produced by people with Type 2 Diabetes though not in sufficient quantity.
- In order to regain sensitivity to insulin, proper diet and exercise or a drug to enhance sensitivity to the body's insulin production is recommended.

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**EU:**

### **European Union Strikes a Deal on Climate Law**

- On October 23, 2020, European Union environment ministers struck a deal to tackle climate change at a meeting held in Luxembourg.
- They agreed to make the 27 member European Union '**2050 net zero emissions target legally binding**'.

#### **What is Net Zero Emission?**

- 'Net zero emission' means that any emissions are balanced by absorbing an equivalent amount from the atmosphere.
- It means essentially restructuring the energy system for all energy use: power, transportation, manufacturing and industrial operations, residential and commercial buildings.
- The European Union estimates it will require an investment of 2.8% of GDP to achieve net zero by 2050.

#### **Details:**

- The landmark EU climate change law will form the basis for European Union's plan to slash greenhouse gas emissions.
- It will reshape all sectors, from **transport to heavy industry**.
- The law will define the rules for reviewing progress towards climate targets.
- The law will give European Commission the legal possibility to act when those who make promises do not deliver on the promises.
- The law wants to **make the target binding on each country**.
- However, the Ministers agreed to make the 2050 net-zero emissions target an EU-wide goal, rather than a requirement for individual countries. This **potentially allows some EU countries to have higher emissions if others make deeper cuts**.
- The European Parliament and EU countries must agree the final law.

#### **EU countries:**

- The 27 EU countries are: Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden.

## **SCIENCE & TECHNOLOGY**

### **ENVIRONMENT:**

#### ***Commission on Air Quality:***

### **Commission for Air Quality Management in National Capital Region and Adjoining Areas Setup**

- On October 28, 2020, the President of India Ram Nath Kovind promulgated an ordinance to set up a permanent commission for tackling the pollution problem in Delhi and its surrounding areas.

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- The ordinance is called 'The Commission for Air Quality Management in National Capital Region and Adjoining Areas Ordinance, 2020'.

#### **Need for the Commission:**

- Air pollution is not a localised phenomenon. Its effect is felt in areas far away from its source.
- Pollution in Delhi and its surrounding areas is increasing at alarming levels and remains a major cause of concern.
- At present, there is **no effective statutory institutional mechanism** to address the problem holistically.
- Due to absence of effective mechanism, the **Supreme Court has been monitoring, supervising and guiding the problem of air pollution** in the National Capital Territory Region through its judgement under MC Mehta Vs Union of India case (1985).
- The Supreme Court has been devoting its precious time and constituting various ad hoc bodies.
- Two such bodies are Environment Pollution (Prevention and Control) Authority (EPCA) and Justice Madan B Lokur to monitor stubble burning in Punjab, Haryana and Uttar Pradesh.

#### **Environment Pollution (Prevention and Control) Authority (EPCA):**

- In compliance with the directions of the Supreme Court, the Union Government set up Environment Pollution (Prevention and Control) Authority (EPCA) for the National Capital Territory Region in 1998.

#### **EPCA limitations:**

- It is a temporary body. Its tenure was only for two years, but, was being extended from time to time.
- The powers and functions of EPCA were limited section 5 of the Environment Protection Act, 1986 (closure of polluting industries or stoppage of supply of electricity and water to such industries).
- Its powers were also limited to State of Delhi.
- It cannot collaborate with any other States (Punjab, Haryana, Uttar Pradesh) which are contributing to pollution of Delhi. This limited its efficacy.

#### **Justice Madan B Lokur to Monitor Stubble Burning in Punjab, Haryana and Uttar Pradesh:**

- The most recent one was set up by the Supreme Court on October 16, 2020. It appointed retired judge Justice Madan B Lokur to monitor stubble burning in Punjab, Haryana and Uttar Pradesh - a key source of the pollution every winter. (This decision was put on hold after the Union Government issues ordinance and assured the Supreme Court that the new permanent body would look into stubble burning issue).
- The Union Government realised that the pollution problem in Delhi and its surrounding areas cannot be tackled through temporary or ad hoc measures.
- There is need for regional level initiatives through interstate, intercity coordination in addition to multi sectoral approach.

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- Hence, it decided to evolve and implement a consolidated approach to monitoring, tackling and eliminating the causes of air pollution.

#### **Major Highlights of the Ordinance:**

##### **Commission for Air Quality Management:**

- **Commission for Air Quality Management in National Capital Region and Adjoining Areas** would be set up. It would be permanent body.
- Adjoining areas means areas in Punjab, Haryana, Rajasthan, Uttar Pradesh adjoining the National Capital Region of Delhi.
- It would **replace Environmental Pollution (Prevention and Control) Authority (EPCA)** and numerous committees, commissions formed so far addressed air pollution in Delhi.

##### **Composition:**

- The commission will comprise nearly 20 members and be headed by a chairperson who is or has been a secretary of the Centre or the chief secretary of a state. The commission will be headquartered in the NCR and will also include a representative from the environment ministry and five ex-officio members - chief secretaries or secretaries in charge of the environment protection in Delhi, Punjab, Haryana, Rajasthan and Uttar Pradesh.

##### **Sub Committees under the Commission:**

- The Commission for Air Quality Management will have the following three sub committees.
- Sub Committee on Monitoring and Identification,
- Sub Committee on Safeguarding and Enforcement, and
- Sub Committee on Research and Development.

##### **Functions of the Commission:**

- It would work to control pollution arising due to
- Stubble burning,
- Vehicles movement,
- Industrial emissions,
- Road dust
- Construction waste,
- Biomass burning, etc.

##### **Other Details:**

The commission has the following powers and functions:

- power to take all measures, issue directions, entertain complaints as it deems necessary to protect the quality of air in National Capital Region (NCR)
- coordinate with the governments of Punjab, Haryana, Rajasthan, Delhi and Uttar Pradesh; officers and authorities,
- plan and execute a programme for the prevention, control and abatement of air pollution
- lay down air quality parameters

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- lay down parameters for emissions or discharge of pollutants
  - restrict areas in which industries, operations or processes affect the air quality of the region
  - inspect any premises, plant, equipment, machinery etc
  - collect and disseminate information on air pollution
  - prepare manuals, codes and guides for controlling air pollution
  - issue directions, including the closure, prohibition or regulation of any industry
  - issue directions in writing to any individual, authority, officer who will be bound to comply
  - take up matters suo-moto or on the basis of complaints
  - provide a mechanism to implement the national clean air programme, and
  - carry out investigations and research related to air pollution

**Penal provision:**

- Non-compliance order or directions made by the Commission will be punishable with imprisonment for a term of up to **five years or with a fine which may extend up to Rs 1 crore or with both.**

**Additional information:**

**Measures Taken So Far for Tackling Pollution Problem in Delhi:**

- Over the years, the Supreme Court of India and Environment Pollution (Prevention and Control) Authority (EPCA) suggested the following measures to tackle pollution problem in Delhi.

**1) Introduction of CNG Buses:**

In 1998, the Supreme Court directed conversion of all buses, taxis and three wheelers to CNG (Compressed Natural Gas) to curb air pollution. There are more than 5000 CNG buses in Delhi for public transportation.

**2) Construction of Regional Rapid Transport System for Inter City Travel:**

The EPCA recommended this plan and the Supreme Court directed the construction of these corridors. These are **high speed rail corridors** and reduce the need for road travel. Meerut-Delhi RRTS corridor is under construction.

**3) Restriction of heavy Duty Trucks:**

Truck traffic was a major contributor to pollution in Delhi.

EPAC suggested restriction of heavy duty trucks into Delhi if Delhi is not final destination. Trucks pass through Delhi to reach neighbouring states. It suggested imposition of Environmental Compensation Cess to deter entry of such trucks and take alternate routes. As a result, the number of trucks passing through Delhi reduced from around 40,000 trucks per night to 4000 per night.

In 2019, there were 95 reductions in total particulate matter and nitrous oxides from trucks segment as compared to 2015.

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**4) Eastern and Western Peripheral Expressways:**

In 2004, EPAC recommended construction of Eastern and Western Expressways with the twin objectives of decongesting and de-polluting the national capital by diverting traffic not destined for Delhi. These were commissioned in 2019.

**5) Early introduction of BS VI (Bharat Stage IV) Fuel and Emission Norms:**

EPAC recommended leapfrogging from BSIV to BSVI Fuel and Emission norms to improve air quality in Delhi.

It also called for early introduction of BS VI Fuel and Emission Norms from April 1, 2020.

BSVI fuel reduces the Nitrogen Oxides (NOx) emission by 70% in diesel cars, by 25% in petrol cars and reduces particulate matter (PM) in vehicles by 80%.

**6) Graded Response Action Plan (GRAP):**

EPCA has recommended Graded Response Action Plan (GRAP). Under this, EPCA provide an emergency action plan for the critically polluted months of winter in Delhi. The air quality situation in NCT of Delhi in winter deteriorates mainly due to adverse meteorological conditions such as low wind speed and low mixing height; and crop burning.

(Mixing refers to the height above the surface throughout which a pollutant such as smoke can be dispersed. During times of surface temperature inversions (typically nighttime with clear skies), the mixing height goes to zero and smoke dispersion is minimal. Surface temperature inversion refers to the phenomenon when the air at the ground level becomes cooler than higher air. Unlike warm air that rises, cool air is dense and remains at the surface).

GRAP identifies graded measures and implementing agencies for response to four AQI categories: Moderate to Poor, Very Poor, Severe and Severe + or Emergency

***Elephant Corridors:*****Supreme Court Upholds Madras High Court on Nilgiris Elephant Corridor**

- On October 14, 2020, a three Judge bench of the Supreme Court led by Chief Justice S A Bobde upheld the Tamil Nadu government's order of January 1, 2010, directed eviction of 39 resorts in the Sigur Plateau falling in the elephant corridor.
- The Sigur Plateau has the Nilgiri Hills on its south-western side and the Moyar River Valley on its north-eastern side.

**Background:**

- 39 resorts were operating illegally Sigur Plateau in Mudumalai reserve forest area connecting the forests in the Western and Eastern Ghats
- 27 of them had obtained approvals only for residential purposes and 12 had not obtained any approval at all.
- These resorts were bounded by electric fencing and barbed wires.
- These resorts severely restricted the movement of elephants and caused an increase in incidents of human-elephant conflict.

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- In 2010, the Madras High Court declared that these resorts were illegal and had to be evicted to provide a safe passage to the elephants.
  - The judgement of the Madras High Court was challenged in the Supreme Court on the grounds that the passage was not a natural one but artificially created.

#### **Supreme Court Judgement:**

- The Supreme Court upheld the Madras High Court order on eviction. It supported eviction on the following grounds.
- The elephants are a keystone species because their nomadic behaviour is immensely important to the environment. Keystone species play an important role in maintaining the biodiversity of the ecosystems in which they live.
- Herds of roaming elephants facilitate seed dispersal, provide nutrition to plants and animals, are part of the forest food chain, and they have an umbrella effect.
- **(Seed Dispersal:** The dispersal of seeds far away from the parent tree maintains the high numbers of tree species in tropical forests. Trees depend on their fruit-eaters for seed dispersal like elephants. The seeds of fruits they consume pass through their guts, come out undigested with dung and germinate when conditions are right.
- **Umbrella species** are usually keystone species that have a large species range and need a large habitat, and thus, their conservation covers the protection of a wide range of habitats and indirectly helps the ecology of the habitat).
- Also, elephants are **genetically programmed by nature to never inbreed within their birth family** and thus **need to move around between gene pools to reproduce**.
- The corridors are narrow and linear patches of forest which establish and facilitate connectivity across habitats.
- **Habitat fragmentation** has become increasingly common in recent times. In this scenario, **corridors play a crucial role in sustaining wildlife by reducing the impact of habitat isolations**. In their absence, elephants would be unable to move freely, which would in turn affect many other species and the ecosystem balance of several wild habitats would be unalterably upset.
- Any hindrance to such corridors would eventually lead to local extinction of elephants.
- Hence, to secure wild elephants' future, it is essential to ensure their uninterrupted movement between different forest habitats. For this, elephant corridors must be protected.

#### **Stockholm Convention:**

##### **Ban of Seven Persistent Organic Pollutants Listed Under Stockholm Convention.**

- On October 7, 2020, the Union Cabinet approved the Ratification of seven (7) chemicals listed under Stockholm Convention on Persistent Organic Pollutants (POPs).

#### **About Stockholm Convention:**

- The objective of the Stockholm Convention is to **protect human health and the environment from Persistent Organic Pollutants (POPs)**.

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- Persistent Organic Pollutants (POPs) are **chemicals that remain intact in the environment for long periods of time (many years).**

#### **Other Properties of Persistent Organic Pollutants (POPs):**

- They **become widely distributed geographically,**
- **accumulate in the fatty tissue of humans and wildlife,** and
- **have harmful impacts on human health or on the environment.**

#### **Effects on Health:**

Exposure to Persistent Organic Pollutants (POPs) can lead to serious health effects including

- cancers,
- birth defects,
- dysfunctional immune and reproductive systems,
- greater susceptibility to disease and
- damages to the central and peripheral nervous systems.

#### **Why Global Convention?**

- Given their long range transport, no one government acting alone can protect its citizens or its environment from POPs.
- In response to this global problem, the Stockholm Convention was adopted in 2001 and entered into force in 2004.
- It requires its parties to take measures to **eliminate or reduce the release of POPs into the environment.**
- Persistent Organic Pollutants (POPs) are listed in various Annexes to the Stockholm Convention after thorough scientific research, deliberations and negotiations among member countries.

#### **India and Stockholm Convention:**

- India had ratified the Stockholm Convention on January 13, 2006.
- It ratified the treaty under Article 25(4) of the Convention.
- This article enables India to keep itself in a default "opt-out" position such that amendments in various Annexes of the convention cannot be enforced on it unless an instrument of ratification/ acceptance/ approval or accession is explicitly deposited with UN depositary.
- Considering its commitment towards providing safe environment and addressing human health risks, the Ministry of Environment, Forest and Climate Change (MoEFCC) had notified the 'Regulation of Persistent Organic Pollutants Rules, on March 5, 2018 under the provisions of Environment (Protection) Act, 1986.
- The regulation inter alia prohibited the manufacture, trade, use, import and export seven chemicals namely
  - 1) Chlordcone (used as insecticide, additive in plywood adhesives)
  - 2) Hexabromobiphenyl (used as flame retardant),

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- 3) Hexabromodiphenyl ether and Heptabromodiphenyl ether (Commercial octa-BDE) (used in flameretardents),
  - 4) Tetrabromodiphenyl ether and Pentabromodiphenyl ether (Commercial penta-BDE) (used in flame retardant in flexible polyurethane foam and printed circuit boards)
  - 5) Pentachlorobenzene (used as fungicide and flame retardent),
  - 6) Hexabromocyclododecane (used in thermoplastics), and
  - 7) Hexachlorobutadiene (used to make rubber compounds).
- The above seven are already listed as POPs under Stockholm Convention.
  - Under the Stockholm convention, **17 chemicals have been listed for elimination as there are alternatives to them and 2 chemicals have been listed for restricted use.**

**Ramsar Convention:**

**Asan Conservation Centre Recognised Under Ramsar Convention**

- Asan Conservation Centre in Dehradun, Uttarakhand was declared as a '**site of international importance**' under Ramsar Convention in October 2020.
- With addition of Asan Conservation Centre, the total number of Ramsar sites in India stands at 38.
- India has the highest number of Ramsar sites in South Asia.

**About Asan Conservation Centre:**

- It is located along the banks of Yamuna river in Dehradun, Uttarakhand.
- It hosts many threatened and critically-endangered species like white-rumped vulture (*gyps bengalensis*), ruddy shelduck, Baer's pochard (*Aythya baeri*), red-headed vulture (*sarcogyps calvus*), Egyptian vulture (*Neophron percnopterus*), Asian woollyneck (*ciconia episcopus*), etc.
- It is also home to 330 species of birds.
- It also acts as a host to several migratory birds from October to March.
- It is spread over 59 hectares of land.

**Significance of Wetlands:**

- Wetlands are among the most diverse and productive ecosystems.
- Wetlands are vital for human survival.
- They are among the
  - a) world's most productive environments;
  - b) cradles of biological diversity.
- They provide the water and productivity upon which countless species of plants and animals depend for survival.
- Wetlands are indispensable for the **countless benefits or "ecosystem services"** that they provide humanity such as

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- a) freshwater supply,
  - b) food supply,
  - c) contribution to biodiversity,
  - d) flood control,
  - e) groundwater recharge, and
  - f) climate change mitigation.
- Yet, wetland area and quality continue to decline in most regions of the world.
  - As a result, the ecosystem services that wetlands provide to people are compromised.

#### **About Ramsar Convention:**

- The Ramsar Convention was signed in 1971 in Iranian city of Ramsar. Hence, the convention got that name. However, the name of the Convention is usually written "Convention on Wetlands" officially.
- It is one of the oldest intergovernmental agreements (Convention).
- Its convention aim at
  - 1) conservation of wetlands around the world, and
  - 2) contribute towards achieving sustainable development throughout the world.

#### **Definition of Wetlands:**

- The Convention uses a broad definition of wetlands.
- It includes all lakes and rivers, underground aquifers, swamps and marshes, wet grasslands, peatlands, oases, estuaries, deltas and tidal flats, mangroves and other coastal areas, coral reefs, and all human-made sites such as fish ponds, rice paddies, reservoirs and salt pans.

#### **Obligations of Member Countries under the Treaty:**

- Under the "three pillars" of the Convention, the member countries commit to:
  - 1. work towards the wise use of all their wetlands;
  - 2. designate suitable wetlands for the list of Wetlands of International Importance (the "Ramsar List") and ensure their effective management;
  - 3. cooperate internationally on transboundary wetlands, shared wetland systems and shared species.

#### ***Arctic Expedition:***

##### **Arctic Science Expedition MOSAiC Ends**

- The **most ambitious Arctic research expedition** ever undertaken has come to a successful end in October 2020 after spending more than a year researching **climate change in the Arctic**.
- The ship returned to port of Bremerhaven in Germany.

#### **Why was the Mission Undertaken?**

- Arctic sea ice is an important part of the global climate system.

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- The mission strives to increase understanding of the Arctic climate system.
  - Hardly any region has warmed as much as the Arctic over recent decades. Understanding climate changes in Arctic will lead to further insights into climate change.
  - At the same time, there are no year-round observations from the ice-covered Arctic Ocean.

#### **Details:**

- In September 2019, **Polarstern, a German research ship**, began Arctic research expedition.
- 442 researchers from more than 70 research institutions from 20 countries were involved in the expedition.
- The mission was called **Multidisciplinary Drifting Observatory for the Study of Arctic Climate (MOSAiC)**.
- On September 20, 2019, Polarstern departed from the Norwegian port of Tromsø, bound for the Central Arctic, the epicentre of climate change.
- Once there, the ship allowed itself to become trapped in the ice, and began a one-year-long drift across the North Pole, completely at the mercy of natural forces - the route and speed were solely determined by the ice drift, powered by wind and currents.
- More than 70 research institutions from 20 countries were involved in the expedition.
- The mission was spearheaded by the Alfred Wegener Institute, Germany.

#### **Valuable Information Collected:**

- Valuable information has been gathered through the mission which will help in understanding climate change.
- Information has been collected about the ocean, ice, clouds, storms and ecosystems of the Arctic would prove invaluable in helping scientists understand the region, which is warming faster than any other part of the planet.
- The Arctic region's sea ice has been steadily shrinking in recent decades.
- The summer ice coverage in 2020 was the second lowest since satellite measurements began in 1979.
- Global warming has also caused sharp declines in older, thicker ice.

#### **Coral Reefs:**

#### **Aldabra's Coral Reefs Recovered Faster From Bleaching, Finds New Research**

- Aldabra's coral reefs recovered faster from bleaching according to new research published in Nature, weekly scientific journal based in London in October 2020. The research was carried on by Seychelles Islands Foundation (SIF). The SIF is a public trust established by government with an independent Board of Trustees.
- **Aldabra - one of the world's largest atolls - is a UNESCO (United Nations Educational, Scientific and Cultural Organization) World Heritage Site** in Seychelles and located in the Indian Ocean.

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- It comprises four main islands of coral limestone separated by narrow sea passages and encloses a large shallow lagoon.
  - It is home to a population of endemic giant Aldabra tortoises whose number is around 100,000. This is more than the 95,000 population of Seychelles.

#### **Background:**

- Climate change is the greatest threat to coral reef ecosystems.
- Ocean warming and associated coral bleaching are one of the foremost causes of coral loss across the world.
- Record-breaking high ocean temperatures, which occurred between 2014 and 2017, resulted in a prolonged and widespread coral bleaching.
- The hottest temperature recorded (36.3 degrees Celsius) in early April 2016.
- Bleaching is a process where corals lose their vivid colour and turn white.
- This happens when the zooxanthellae algae, which is in a symbiotic relationship with corals and provide them with food, die due to ocean warming and acidification.
- If bleaching continues for an extended period of time, corals eventually die.
- Coral bleaching and mortality exacerbated by climate change are one of the biggest threats to oceanic biodiversity.

#### **Findings of the Research on Aldabra's coral reefs:**

- Coral reefs in the lagoon of the Seychelles' Aldabra atoll, however, recovered faster after the 2015-2016 bleaching event due to lower sea temperatures in subsequent years.
- This allowed the corals a welcome reprieve from temperature stress.
- Research showed that rapid reef recovery of coral reefs is possible.
- It highlighted that **reducing stressors to coral reefs can enhance their resilience against climate change.**
- With severe bleaching events expected to occur annually on 90 per cent of the world's coral reefs by 2055, such **research and long-term commitment to monitoring these valuable ecosystems is critical.**

#### **DISASTER MANAGEMENT:**

##### ***Report on Disasters:***

##### **Report on Human Cost of Disasters 2000-2019**

- **India ranks third in the highest number of disaster events** recorded **over the last 20 years** according to the "**The Human Cost of Disasters 2000-2019**" report published by the **United Nations Office for Disaster Risk Reduction (UNDRR)** in October 2020.

##### **Other Highlights of the Report:**

Major Data on Disasters during 2000-2019

##### **1) Total Disasters:**

7,348 major disaster events had occurred. The figure is far higher than 4,212 disasters recorded between 1980 and 1999.

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## **2) Lives Lost:**

1.23 million (12.3 lakhs) lost lives due to disasters (this is on average 60,000 people for annum).

## **3) Total People Affected:**

Overall 4 billion peoples were affected by disasters.

## **4) Economic Loss:**

Disasters led to approximately US\$ 2.97 trillion in economic losses worldwide.

### **Reasons for Increasing Disasters:**

- Increased frequency of extreme weather events like heat waves, droughts, flooding, winter storms, hurricanes and wildfires.
- Governments are not doing enough to prevent climate hazards.

### **Global Statistics:**

- **In terms of affected countries globally due to disasters, China (577 events), United States of America (U.S.) (467 events) and India (321)** are the top three countries. These countries all have large and heterogeneous landmasses and relatively high population densities in at-risk areas.
- **Asia suffered the highest number of disaster events.** In total, between 2000 and 2019, there were 3,068 disaster events in Asia, followed by the 1,756 events in the Americas and 1,192 events in Africa.
- **China and India account for over 2.8 billion disaster-affected people** between 2000-2019, approximately **70% of the global total.**

### **Most Common Type of Disasters:**

- 1) **Floods:** Worldwide, **floods are the most common type of disaster**, accounting for 44% of total events during 2000-2019 affecting 1.6 billion people worldwide
- 2) **Storms** (hurricanes, cyclones and storm surges) are **the second most common type of disaster event**, accounting for **28% of events worldwide**. Storms most frequently affect coastal communities near the world's oceans.

### **Floods Impact on India and China:**

- **The most affected country by flooding in the past two decades was China**, which experienced an average of 20 floods per year. Flooding in China affected a total of 900 million people over the two decades, accounting for approximately 55% of people affected by flooding worldwide.
- **India is the 2nd most affected country by floods:** it experienced an average of 17 flood events per year and had a total of approximately 345 million people affected.

### **Droughts:**

- Drought affects Africa more than any other continent. 134 events of drought occurred on the continent between 2000 and 2019 (some 40% of the global total), including 70 droughts in East Africa alone.

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- Droughts take a high human toll in terms of **hunger, poverty and the perpetuation of under-development**.
  - Droughts are associated with widespread **agricultural failures, loss of livestock, water shortages and outbreaks of epidemic diseases**. Some droughts last for years, causing **extensive and long-term economic impacts**, as well as **displacing large sections of the population**.

**Recommendations:**

- A **temperature increase in global climate** is estimated to increase the frequency of potentially high impact natural hazard events across the world. This could **render current national and local strategies for disaster risk reduction and climate change adaptation obsolete in many countries**.
- **Shifting rainfall patterns and greater variability in precipitation** poses a risk to the **70% of global agriculture** that is rain-fed and the 1.3 billion people dependent on degrading agricultural land.
- There is **need for better preparation for looming disasters**.
- Investments should be increased in **prevention, climate change adaptation and disaster risk reduction**.
- Political commitment is essential if progress is to be made on
  - a) reducing the numbers of people affected by disasters and
  - b) reducing the economic losses and
  - c) damage to critical infrastructure that come with them.
- **Disaster risk governance should be strengthening** to manage disaster risk with clear vision, competence, plans, guidelines, funding and coordination across sectors and in a manner which takes account of the increasingly systemic nature of disaster risk.
- **Public and private investment in disaster risk prevention and reduction through structural and non-structural measures needs to be stepped up** to create disaster resilient societies.

***Additional Information:***

**Impact of Disasters: Comparative Data**

Year	1980-1999	2000-2019
Total Disasters	4,212	7,348
Total Deaths	1.19 Million	1.23 Million
Total Affected	3.25 Billion	4.03 Billion
Economic Loss (in US \$)	1.63 Trillion	2.97 Trillion

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### Total Disasters by Event Type:

Type of Disaster	1980-99	200-2019
Drought	263	338
Earthquake	445	552
Extreme Temperature	130	432
Floods	1389	3254
Landslides	254	376
Storm	1457	2043
Volcanic Activity	84	102
Wildfire	163	238

### What are the Criteria for Disasters?

In order to be recorded as a disaster, an event must meet at least one of the following criteria:

- a) Ten or more people reported killed
- b) 100 or more people reported affected
- c) Declaration of a state of emergency
- d) Call for international assistance.

### **HEALTH:**

#### ***Tuberculosis:***

#### **Global Tuberculosis Report 2020**

- The World Health Organization (WHO) has been publishing a Global TB Report every year since 1997.
- The purpose of the report is to provide a comprehensive and up-to-date assessment of the status of the TB epidemic, and of progress in the response to the epidemic - at global, regional and country levels.

#### **About Tuberculosis (TB):**

- Tuberculosis (TB) is a **communicable disease**.
- It is one of the **top 10 causes of death worldwide and the leading cause of death from a single infectious agent (ranking above HIV/AIDS)**.
- TB is caused by the bacillus **Mycobacterium tuberculosis**.
- It **spreads when people who are sick with TB expel bacteria into the air**; for example, by coughing.
- The **disease typically affects the lungs** (pulmonary TB) but can also affect other sites (extra pulmonary TB).

#### **Who are at Risk of TB?**

- TB can affect anyone anywhere, but most people who develop the disease are adults.
- There are more cases among men than women.
- 30 high TB burden countries account for almost 90% of those who fall sick with TB each year.

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**Treatment:**

- TB is curable and preventable.
- About 85% of people who develop TB disease can be successfully treated with a 6-month drug regimen,
- Treatment has the additional benefit of curtailing onward transmission of infection.
- Since 2000, TB treatment has averted more than 60 million deaths.
- However, with access still falling short of universal health coverage (UHC), many millions have also missed out on diagnosis and care.

**Status of the TB Epidemic as per the 2020 Report:**

- **Globally, an estimated 10.0 million people fell ill with TB in 2019.**
- There were an estimated 1.2 million TB deaths in 2019 (a reduction from 1.7 million in 2000). An additional 2, 08,000 deaths among HIV-positive people due to TB (a reduction from 678 000 in 2000).
- **Eight countries accounted for two thirds of the global total:** India (26%), Indonesia (8.5%), China (8.4%), the Philippines (6.0%), Pakistan (5.7%), Nigeria (4.4%), Bangladesh (3.6%) and South Africa (3.6%). The other 22 other countries in WHO's list of 30 high TB burden countries accounted for 21% of the global total.

**TB Incidence Declining:**

- Globally, the TB incidence rate is falling, but not fast enough to reach the 2020 milestone of a 20% reduction between 2015 and 2020.
- The cumulative reduction from 2015 to 2019 was 9% (from 142 to 130 new cases per 100 000 population).

**Global commitments and strategy to end TB:**

- A WHO global ministerial conference on TB held in 2017 adopted **Moscow Declaration to End TB**, which was welcomed by all Member States at the World Health Assembly in May 2018.
- Under the **WHO End TB Strategy, following goals were adopted**
- 80% reduction in the TB incidence rate (new and relapse cases per 100 000 population per year) by **2030**, compared with 2015 with following medium term targets.
- 2020 milestone with 20% reduction;
- 2025 milestone: 50% reduction.

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## **MISCELLANEOUS (AWARDS, PERSONS, SPORTS)**

### **INTERNATIONAL AWARDS**

#### **NOBEL PRIZES 2020:**

##### **MEDICINE:**

- The 2020 Nobel Prize in Physiology or Medicine was jointly awarded to Harvey J. Alter, Michael Houghton and Charles M. Rice for the **discovery of Hepatitis C virus**.

##### **What is Hepatitis C?**

- Hepatitis C is a blood-borne virus and causes Hepatitis C disease which affects the liver.
- Blood-borne hepatitis is associated with significant morbidity and mortality.
- It causes more than a **million deaths per year world-wide**, thus making it a global health concern on a scale comparable to **HIV-infection** and **tuberculosis**.
- **Globally, an estimated 71 million people have chronic hepatitis C virus infection** and a significant number develop cirrhosis or liver cancer.

##### **Causes:**

- Hepatitis is mainly caused by **viral infections**.
- **Alcohol abuse, environmental toxins** and **autoimmune disease** are also important causes.
- In the 1940's, it became clear that there are two main types of infectious hepatitis.
- The first, named **hepatitis A**, is transmitted by **polluted water or food** and generally **has little long-term impact on the patient**.
- The second type **hepatitis B** is transmitted through **blood and bodily fluids** and represents a much **more serious threat** since it can **lead to a chronic condition**, with the development of cirrhosis and liver cancer. This form of hepatitis is insidious, as otherwise healthy individuals can be silently infected for many years before serious complications arise.
- Hepatitis B virus discovery led to the development of diagnostic tests and an effective vaccine. Blumberg was awarded the Nobel Prize in Physiology or Medicine in 1976 for this discovery.

##### **Research of Nobel Prize Winners:**

- At the same time, Harvey J. Alter who was studying hepatitis in patients, who had received blood transfusions, found many unexplained infections.
- Tests for Hepatitis A and Hepatitis B virus infection showed that they were not the cause. His team demonstrated that blood from these patients could transmit the disease to chimpanzees, and more studies showed that an **unknown infectious agent was behind this**. The mysterious new illness was termed "non-A, non-B" hepatitis.
- This new virus could not be isolated for several years using the traditional techniques for virus isolation. **Michael Houghton and his team created a collection of DNA fragments** from the blood of an infected chimpanzee and thoroughly searched it. They found a **novel RNA virus** belonging to the **Flavivirus family** and named it the **Hepatitis C virus**.
- To understand if this new virus alone could cause hepatitis, **Charles M. Rice used genetic engineering**, generated an **RNA variant of the virus** and injected it into the liver of

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**chimpanzees.** The virus was detected in the blood and the chimpanzees exhibited changes similar to those seen in humans with the disease. This was the final proof that the virus alone was the cause behind the unexplained cases of transfusion-mediated hepatitis.

**Significance:**

- Their discovery helped develop antiviral drugs directed at hepatitis C. This has now raised hopes of eradicating the virus from the world population.

**CHEMISTRY:**

- The 2020 Nobel Prize in Chemistry was jointly awarded to two women scientists, Emmanuelle Charpentier (Germany) and Jennifer A. Doudna (USA), for the **development of a method for genome editing** technique known as the CRISPR-Cas9 DNA snipping "scissors"
- CRISPR/Cas9 system allows for **adding, altering and deleting the genomic code**.
- Using these, researchers can **change the DNA of animals, plants and microorganisms with extremely high precision**.
- This technology has had a revolutionary impact on the life sciences.

**Significance:**

- CRISPR/Cas9 technique is contributing to **new cancer therapies**.
- It may make the dream of **curing inherited diseases** come true in future.

**Agriculture:**

- CRISPR/Cas9 technique is being extensively used in agriculture.
- It is being used in agriculture primarily to increase plant yield, quality, disease resistance, herbicide resistance and domestication of wild species.
- Prof. Charpentier and Prof. Doudna are just the sixth and seventh women to receive the Nobel Prize in Chemistry. This is also the first time a Nobel science prize goes to a women-only team.

**Research of Nobel Prize Winners:**

- While researching a common harmful bacteria, Prof. Charpentier discovered a previously unknown molecule - part of the **bacteria's ancient immune system that disarms viruses by snipping off parts of their DNA**.
- After publishing her research in 2011, Prof. Charpentier worked with Prof. Doudna to recreate the bacteria's genetic scissors, simplifying the tool so it was easier to use and apply to other genetic material.
- They then reprogrammed the scissors to cut any DNA molecule at a predetermined site - paving the way for scientists to rewrite the code of life where the DNA is snipped.
- The CRISPR-Cas9 system consists of two molecules that make an edit in the DNA.
- Cas9 - An enzyme which functions as a pair of 'molecular scissors'. It has the ability to cut the two strands (sense and anti-sense) of DNA at a specific location in the genome.
- guide RNA (gRNA) - A short (20 bases or so) piece of pre-designed RNA sequence located within a longer RNA scaffold.

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- The gRNA guides the Cas9 to the planned part of the genome ensuring the right place is cut. The gRNA has bases which are complementary to the target sequence in the DNA like a very specific lego piece. This in theory ensures that the gRNA binds only to the desired sequence and not somewhere off-target.

#### **PHYSICS:**

- The 2020 Nobel Prize in Physics was awarded with one half to Roger Penrose and the other half jointly to Reinhard Genzel and Andrea Ghez for advancing our understanding of black holes.
- Black holes have long been considered as the Milky Way's darkest secret. They are at the center of every galaxy, and smaller ones are dotted around the universe. Nothing, not even light, can escape their incredible gravity.
- Scientists say the smallest black holes are as small as just one atom. The largest black holes are called "supermassive." and have masses that are more than 1 million suns together.

#### **Research of Nobel Prize Winners:**

- Penrose proved with mathematics that the **formation of black holes was possible**, based heavily on Albert Einstein's general theory of relativity.
- Reinhard Genzel and Andrea Ghez discovered that an invisible and extremely heavy object governs the orbits of stars at the centre of our galaxy. A super massive black hole is the only currently known explanation.

#### **LITERATURE:**

- American poet **Louise Glück** is the winner of the 2020 Nobel Prize in Literature.
- Louise Glück is a professor of English at Yale University.
- She made her debut in 1968 with a collection of poems called 'Firstborn.'
- She has since then published twelve collections and some volumes of essays on poetry.

#### **PEACE:**

- The Nobel Peace Prize 2020 was awarded to United Nations' World Food Programme (WFP).
- The World Food Programme delivers food assistance in emergencies, **from wars to civil conflicts, natural disasters and famines.**
- The World Food Programme is the **world's largest humanitarian organisation** addressing hunger and promoting food security.
- In 2019, the WFP provided assistance to close to **100 million people in 88 countries** who are victims of acute **food insecurity and hunger.**
- In 2015, eradicating hunger was adopted as one of the UN's Sustainable Development Goals. The WFP is the UN's primary instrument for realising this goal.
- It was created in 1962 on the request of the then US President Dwight Eisenhower as an experiment to provide food aid through the UN system.
- Two-thirds of its work is in **conflict-affected countries**, where people are three times more likely to be undernourished than elsewhere.
- It works closely with the other two Rome-based UN agencies: the Food and Agriculture Organization (FAO), which helps countries to support sustainable agriculture, and the

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International Fund for Agricultural Development (IFAD), which finances projects in poor rural areas.

- WFP is funded **entirely by voluntary donations**, most of which comes from governments.
- It raised \$8 billion in 2019, which it says was used to provide 4.2 million metric tons of food and \$2.1 billion of cash and vouchers.
- It has more than 17,000 staff, with 90 percent based in the countries where the agency provides assistance.

### ECONOMICS:

- Milgrom and Robert B. Wilson, both of whom teach at Stanford University, were awarded the 2020 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel "for improvements to auction theory and inventions of new auction formats".
- The contributions of Dr. Milgrom and Dr. Wilson have helped governments and private companies design their auctions better.
- When potential buyers compete to purchase goods in an auction, it helps sellers discover those buyers who value the goods the most. Further, selling goods to the highest bidder also helps the seller maximise his or her revenues. So, both buyers and sellers benefit from auctions.
- **Robert Wilson** developed the theory for auctions of objects with a common value - a value which is uncertain beforehand but, in the end, is the same for everyone.
- Examples include the future value of radio frequencies or the volume of minerals in a particular area. Wilson showed why rational bidders tend to place bids below their own best estimate of the common value: they are worried about the **winner's curse** - that is, about paying too much and losing out.
- **Paul Milgrom** formulated a more general theory of auctions that not only allows common values, but also private values that vary from bidder to bidder. Dr. Milgrom developed an analysis arguing that individual bidders may still submit vastly different bids due to their unique circumstances. A company that can sell oil at a higher price or process it at a lower cost, for instance, may be willing to pay more for crude oil.
- Over time, societies have allocated ever more complex objects among users, such as landing slots and radio frequencies.
- In response, Milgrom and Wilson invented new formats for auctioning off many interrelated objects simultaneously, on behalf of a **seller motivated by broad societal benefit rather than maximal revenue**.
- In 1994, the US authorities first used one of their auction formats to sell radio frequencies to telecom operators. Since then, many other countries have followed suit.

### INTERNATIONAL PERSONS

Tajikistan's President **Emomali Rahmon** was re-elected with 90 per cent of the votes in the elections held in October 2020. Mr. Rahmon, who removed term limits through a 2016 constitutional reform, has been in power since 1992.

Tajikistan is one of the poorest countries in central Asia. Many people in the country are dependent on remittances from relatives abroad mainly Russia. Remittances make up 40 per cent of gross domestic product.

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**Sean Connery (90)**, the charismatic Scottish actor who rose to international superstardom as the suave and fearless secret agent James Bond, passed away on October 31, 2020.

Connery had a commanding screen presence for some 40 years. He was in his early 30s when he starred in the first Bond thriller film in 1962 'Dr. No', based on the Ian Fleming novel.

Connery continued as Bond in 'From Russia With Love', 'Goldfinger', 'Thunderball', 'You Only Live Twice' and 'Diamonds Are Forever'.

#### **NATIONAL PERSONS**

**Ram Vilas Paswan (74)**, Union Minister for Food and Consumer Affairs, passed away on October 8, 2020 due to prolonged heart ailment in New Delhi. He was a stalwart of the socialist movement who later emerged as Bihar's foremost Dalit leader. He had been elected to the Lok Sabha eight times,

Mr. Paswan was a Minister under six Prime Ministers - from the United Front government of Deve Gowda and the Manmohan Singh-led United Progressive Alliance government to the current Narendra Modi-led National Democratic Alliance government.

**V.S. Ramamoorthy (100)**, veteran Bharatanatyam dancer, guru and founder of Hyderabad-based Sri Rama Nataka Niketan.

**Shobha Naidu (64)**, renowned Kuchipudi dance exponent, passed away due to brain hemorrhage in Hyderabad on October 14, 2020.

She served as the Principal for the 40 year old Kuchipudi Art Academy, Hyderabad and trained more than 1,500 students from India and abroad. She had performed in various countries across the world like the U.S., the U.K., the USSR, Syria, Baghdad, Kampuchea, Turkey, Hong Kong, Bangkok, West Indies, Mexico, Venezuela, Tunis, and Cuba.

The Government of India had honoured her with Padma Shri and Sangeet Natak Akademi awards in recognition of her contribution to Indian art and culture.

**Akkitham Achuthan Namboothiri (94)**, legendary Malayalam poet and Jnanpith laureate, died in Thrissur, Kerala on October 15, 2020.

Akkitham was considered the tallest among Malayalam poets. He introduced "meaningful modernism" in Malayalam poetry several decades ago. He also edited magazines such as Unni Namboothiri, Mangalodayam and Yogakshemam.

His work Balidarshanam won the Kerala and Kendra Sahitya Akademi Awards in 1972-73. He was awarded Padma Shri in 2017.

**Bhanu Athaiya (91)**, costume designer who became India's first Oscar winner, died in Mumbai due to pneumonia. She won the Oscar for Best Costume Design for Richard Attenborough's Gandhi in 1983, along with John Mollo.

Her career as a costume designer in Hindi cinema started with Guru Dutt's 1956 superhit C.I.D. Her career spanned over 100 films and six decades.

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## **SPORTS PERSONS**

**Carlton Chapman (49)**, former Indian football team captain, passed away on . Chapman was part of the Indian team from 1995 to 2001.

Under his captaincy, India won the South Asian Football Federation Championship (SAFF) Championship in Kathmandu in 1997. Chapman was part of the Indian team which won the South Asian Federation (SAF) Games (1995) in Chennai, Nehru Cup (1997) in Kochi, and SAFF Championship (1999) in Margao.

## **SPORTS**

### **TENNIS:**

***French Open (Paris, 2020 October)***

#### **Men's Singles:**

Rafael Nadal (Spain) - Winner

Novak Djokovic (Serbia) - Runner

#### **Women's Singles:**

Iga Swiatek (Poland) - Winner

Sofia Kenin (USA) - Runner

#### **Men's Doubles:**

Kevin Krawietz (Germany) and Andreas Mies (Germany) - Winners

Mate Pavic (Croatia) and Bruno Soares (Brazil) - Runners

#### **Women's Doubles:**

Timea Babos (Hungary) and Kristina Mladenovic (France) - Winners

Alexa Guarachi (Chile) and Desirae Krawczyk (USA) - Runners

### **BADMINTON:**

***Denmark Open (Odense, Denmark, 2020 October)***

#### **Men's Singles:**

Anders Antonsen (Denmark) - Winner

Rasmus Gemke - Runner

#### **Women's Singles:**

Nozomi Okuhara (Japan) - Winner

Carolina Marin - Runner