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IAS CURRENT AFFAIRS

MAY 2022

CONTENT

IAS VISION CURRENT AFFAIRS

UPSC CIVIL SERVICE - 2022

CHAPTER: 1- ISRAEL PALESTINE CONFLICT

This unit has been covered under the following segments-

1. FORMATION OF ISRAEL
2. SUEZ CRISIS
3. SIX DAY WAR
4. CAMP DAVID
5. GREEN LINE

The above segments have been described below:

FORMATION OF ISRAEL

The land which would become Israel was for centuries part of the Turkish-ruled Ottoman Empire. After World War One and the collapse of the empire, territory known as Palestine - the portion of which **west of the River Jordan was also known as the land of Israel by Jews** - was marked out and assigned to Britain to administer by the victorious allied powers (soon after endorsed by the League of Nations). The terms of the mandate entrusted Britain with establishing in Palestine "a national home for the Jewish people", so long as doing so did not prejudice the civil and religious rights of non-Jewish communities there.

The rise of Palestinian Arab nationalism coupled with the rapid growth of Palestine's smaller Jewish population - especially after the advent of Nazism in the 1930s - saw an escalation in Arab-Jewish violence in Palestine. Britain handed the problem to the United Nations, which in 1947 proposed partitioning Palestine into two states - one Jewish, one Arab - with the Jerusalem-Bethlehem area to become an international city. The plan was accepted by Palestine's Jewish leadership but rejected by Arab leaders.

The Jewish leadership in Palestine **declared the establishment of the State of Israel on 14 May 1948**, the moment the British mandate terminated, though without announcing its borders. The following day Israel was invaded by five Arab armies, marking the start of Israel's War of Independence. The fighting ended in 1949 with a series of ceasefires, producing armistice lines along Israel's frontiers with neighbouring states, and creating the boundaries of what became known as the Gaza Strip (occupied by Egypt) and East Jerusalem and the West Bank (occupied by Jordan). The surrounding Arab states refused to recognise Israel, meaning its borders remained unset.

1917- Britain seizes Palestine from Ottomans. Gives support to "national home for the Jewish people" in Palestine through the **Balfour Declaration**, along with an insistence that "nothing shall be done which may prejudice the civil and religious rights of existing non-Jewish communities".
1920 - San Remo Allied Powers conference grants Palestine to Britain as a mandate, to prepare it for self-rule. European Jewish migration, which increased in the 19th century, continues.
1922 - Britain separates Transjordan from Mandate Palestine, forbids Jewish settlement in former.
1939 - British government White Paper seeks to limit Jewish migration to Palestine to 10,000 per year, excepting emergencies.

1940s - **Nazi Holocaust** of the Jews in Europe prompts efforts at mass migration to Palestine. Jewish armed groups in pursuit of independent Jewish state fight British authorities.

1947 - United Nations recommends partition of Palestine into separate Jewish and Arab states, with international control over Jerusalem and its environs.

INDEPENDENCE

1948 - Israel declares independence as British mandate ends. Admitted to United Nations.

1948-1949 - First Arab-Israeli war. Armistice agreements leave Israel with more territory than envisaged under the Partition Plan, including western Jerusalem. Jordan annexes West Bank and eastern Jerusalem, Egypt occupies Gaza.

Around 750,000 Palestinian Arabs either flee or are expelled out of their total population of about 1,200,000.

1949-1960s - Up to a million Jewish refugees and immigrants from Muslim-majority countries, plus 250,000 Holocaust survivors, settle in Israel.
1948-1977 - Centre-left dominates coalition governments, initially under **Prime Minister David Ben-Gurion** (1948-54; 1955-63). Promotes a self-sufficient, agrarian and secular Jewish democracy with a non-aligned foreign policy.

SUEZ CRISIS

1956-1957 - Israel colludes with Britain and France to invade Egypt during the Suez Crisis, in order to re-open canal to Israeli shipping and end armed incursions by Palestinians from Sinai. UN buffer force set up in Sinai and Gaza, Israeli shipping allowed through Suez Canal.
1957 - Israel begins to build a large nuclear reactor at Dimona in the Negev desert, with French assistance. This becomes the basis for the country's officially unconfirmed nuclear weapons programme ten years later.
1961 - Trial and execution of Nazi war criminal Adolf Eichmann, whom Israeli agents kidnapped from Argentina.
1962 - Improving relations and concerns about the Middle Eastern balance of power prompt the United States to sell Israel missiles. When France halts arms supplies to Israel in 1966, the United States increases sales.
1964 - National Water Carrier completed, to bring water from the River Jordan to the Negev. Tensions rise with Arab neighbours over Jordan water allocations.

SIX DAY WAR

1967 June - After months of tension, including border skirmishes, Egypt's expulsion of the UN buffer force from Sinai and its closure of the Straits of Tiran to Israeli shipping, Israel launches a pre-emptive attack on Egypt, and Jordan and Syria join the war. The war lasts six days and leaves Israel in control of east Jerusalem, all of West Bank, Gaza, Golan Heights and Sinai. Jewish settlements are set up in all of these areas in coming years, with government approval.

- The biggest change to Israel's frontiers came in 1967, when the conflict known as the Six Day War left Israel in occupation of the Sinai peninsula, the Gaza Strip, the West Bank, East Jerusalem and most of the Syrian Golan Heights - effectively tripling the size of territory under Israel's control.
- Israel effectively annexed East Jerusalem - claiming the whole of the city as its capital - and the Golan Heights.
- These moves were not recognised by the international community, until the US changed its official position on the matter under the Trump administration, becoming the first major power to do so.
- Overwhelmingly, international opinion continues to consider East Jerusalem and the Golan Heights as occupied territory.

1972 - Palestinian "Black September" gunmen take the Israeli team hostage at the Munich Olympics. Two of the athletes are murdered at the site and nine more killed during a failed rescue attempt by the German authorities.

1973 October - Egypt and Syria launch co-ordinated attack against Israeli forces in the occupied Sinai and **Golan Heights in the Yom Kippur or October War**. Israel prevails, but only after suffering significant losses. Public mood turns against dominant Labour Party.

1974 - Gush Emunim (Block of the Faithful) movement formed to promote Jewish religious settlements on the West Bank.

1975 - UN General Assembly adopts a resolution describing Zionism as a form of racism. Rescinded in 1991.

1976 March - Mass protests by Israeli Arabs at government attempts to expropriate land in the Galilee area of northern Israel. Six Arab citizens were killed in clashes with security forces. The events are commemorated annually as Land Day.
1976 July - Israeli commandos carry out a raid on Entebbe Airport in Uganda to free more than 100 mostly Israeli and Jewish hostages being held hostage by German and Palestinian gunmen.

CAMP DAVID ACCORD
1977 May - Menachem Begin's right-wing Likud party wins surprise election victory, partly by harnessing non-European Jews' resentment at political hegemony of European-origin Jews. Launches economic liberalisation, brings religious Jewish parties into mainstream, and encourages settlements.
1977 November - Egyptian President Anwar Sadat visits Jerusalem and begins the process that leads to Israel's withdrawal from Sinai and Egypt's recognition of Israel in the Camp David Accords of 1978. Accords also pledge Israel to expand Palestinian self-government in the West Bank and Gaza.
1981 June - Israeli Air Force raid destroys nuclear reactor at Osirak in Iraq.

INVASION OF LEBANON
1982 June - Israel invades Lebanon in order to expel Palestine Liberation Organisation (PLO) leadership after assassination attempt by small Palestinian militant group on Israeli ambassador to London.
1982 September - Massacre of Palestinians in the Sabra and Shatila camps in Beirut by Israel's Christian Phalangist allies. Government commission finds Defence Minister Ariel Sharon indirectly responsible and recommends his removal from office. Mass protests against massacre in Israel galvanise anti-war movement.

UPRISING
1987 December - **First Intifada uprising** begins in Occupied Territories. Muslim Brotherhood in Gaza forms Hamas movement, which rapidly turns to violence against Israel.
1988 September - Israel becomes one of only eight countries at the time to have capability independently to launch satellites with Ofek reconnaissance probe.
1990 - Soviet Union allows Jews to emigrate, leading to about a million ex-Soviet citizens moving to Israel.

OSLO DECLARATION
1993 - Prime Minister **Rabin and PLO leader Yasser Arafat** sign Oslo Declaration to plot Palestinian self-government and formally end First Intifada. Violence by Palestinian groups that reject Oslo Declaration continues.
1994 May-July - Israel withdraws from most of Gaza and the West Bank city of Jericho, allowing Yasser Arafat to move PLO administration from Tunis and set up Palestinian National Authority.
1994 October - Jordan and Israel sign peace treaty.
1994 December - Yitzhak Rabin, Yasser Arafat and Israeli Foreign Minister Shimon Peres jointly awarded Nobel Peace Prize.

1995 September - Mr Rabin and Yasser Arafat sign Interim Agreement for transfer of further power and territory to Palestinian National Authority. Forms basis for 1997 Hebron Protocol, 1998 - **Wye River Memorandum** and internationally-sponsored "Road Map for Peace" of 2003.
1995 November - Jewish extremist shoots Yitzhak Rabin dead in Tel Aviv. Shimon Peres takes over as prime minister.

PULLOUT FROM LEBANON
2000 May - Israel withdraws from southern Lebanon, although Lebanon disputes status of Shebaa Farms area.
2000 July - Talks between Prime Minister Barak and Yasser Arafat break down over timing and extent of proposed further Israeli withdrawal from the West Bank.
2000 September - Likud leader Ariel Sharon visits Jerusalem site known to Jews as the Temple Mount and to Muslims as Al-Haram al-Sharif. Palestinian protests escalate into new wave of violence.
2001 January - Failure of last-ditch efforts at restarting Israeli-Palestinian talks in Taba, Egypt, Ehud Barak loses elections to Ariel Sharon, who declines to continue talks.
2002 March-May - Israeli army launches Operation Defensive Shield on West Bank after spate of Palestinian suicide bombings. Largest military operation on West Bank since 1967.
2002 June - Israel begins building barrier in and around West Bank. Israel says barrier aimed at stopping Palestinian attacks; Palestinians see it as a tool to grab land. Route is controversial as frequently deviates from pre-1967 ceasefire line into West Bank.
2003 June - Quartet of United, States, European Union, Russia and United Nations propose road map to resolve Israeli-Palestinian conflict, proposing independent Palestinian state. Israel and Palestinian National Authority both accept plan, which requires freeze on West Bank Jewish settlements and an end to attacks on Israelis.
2004 July - International Court of Justice issues advisory opinion that West Bank barrier is illegal.

WITHDRAWAL FROM GAZA
2005 September - **Israel withdraws all Jewish settlers and military personnel from Gaza**, while retaining control over airspace, coastal waters and border crossings.
2006 January - Ariel Sharon incapacitated by stroke. He dies in 2014, never having emerged from a coma. Succeeded as prime minister by Ehud Olmert.
Hamas Islamist group wins Palestinian parliamentary elections. Rocket attacks on Israel from Gaza escalate. Met with frequent Israeli raids and incursions over following years.

GAZA INVASION
2008 December - Israel launches month-long full-scale invasion of Gaza to prevent Hamas and other groups from launching rockets.
2009 January - Discovery of major offshore natural gas deposits.
2009 February - Right-wing parties prevail in elections, Likud leader Benjamin

TRUMP THAW
2017 February - Parliament passes a law which retroactively legalises dozens of Jewish settlements built on private Palestinian land in the West Bank.
2017 June - Work begins on the first new Jewish settlement in the West Bank for 25 years.

UNESCO votes to declare the Old City of Hebron a Palestinian World Heritage site, a move that Israel complains ignores the city's Jewish heritage.
2017 December - US President Donald Trump recognises Jerusalem as the capital of Israel, upsetting the Arab world and some Western allies.
The following March, he recognises Israeli sovereignty over the Golan Heights, which Israel seized from Syria in the 1967 war and later annexed. The international community does not recognise Israeli sovereignty.
2020 August - **The United Arab Emirates** become the first Gulf state to establish diplomatic relations with Israel.

The **Green Line**, **(pre-)1967 border**, or **1949 Armistice border**, is the demarcation line set out in the 1949 Armistice Agreements between the armies of Israel and those of its neighbors (Egypt, Jordan, Lebanon and Syria) after the 1948 Arab–Israeli War. It served as the *de facto* borders of the State of Israel from 1949 until the Six-Day War in 1967.

Palestine Liberation Organization (PLO), is an umbrella political organization claiming to represent the world's Palestinians—those Arabs, and their descendants, who lived in mandated Palestine before the creation there of the State of Israel in 1948. It was formed in 1964 to centralize the leadership of various Palestinian groups that previously had operated as clandestine resistance movements. It came into prominence only after the Six-Day War of June 1967, however, and engaged in a protracted guerrilla war against Israel during the 1960s, '70s, and '80s before entering into peace negotiations with that country in the 1990s.

Hamas is the largest of several Palestinian militant Islamist groups.
Its name is an Arabic acronym for the Islamic Resistance Movement, originating as it did in 1987 after the beginning of the first Palestinian intifada, or uprising, against Israel's occupation of the West Bank and Gaza Strip. Under its charter, it is committed to the destruction of Israel.

More than 70 years after Israel declared statehood, its borders are yet to be entirely settled. Wars, treaties and occupation mean the shape of the Jewish state has changed over time, and in parts is still undefined.

Israel–United States relations

Since the 1960s the United States has been a very strong supporter of Israel, and promoted good relations between Israel and Jordan, Lebanon and Egypt, along with several other states in the **Abraham Accords**, while holding off the hostility from other Middle Eastern nations, especially Syria and Iran. The relations are a very important factor in the United States government's overall policy in the Middle East, and Congress has placed considerable importance on the maintenance of a close and supportive relationship.

Since 1985, the United States has provided nearly US$3 billion in grants annually to Israel, with Israel being the largest annual recipient of American aid from 1976 to 2004 and the largest cumulative recipient of aid.

In addition to financial and military aid, the United States also provides political support to Israel, having used its **United Nations Security Council veto power** 42 times with respect to resolutions relating to Israel, out of a total 83 times in which its veto has ever been used. Between 1991 and 2011, 15 vetos were used to protect Israel out of 24 in total.

BASIS OF RELATION

BILATERAL RELATIONS have evolved from an initial US policy of sympathy and support for the creation of a Jewish homeland in 1948 to a partnership that links a small but powerful Israel with an American superpower trying to balance other competing interests in the region, including Russia's intentions. Others maintain that Israel is a strategic ally, and that US relations with Israel strengthen the US presence in the Middle East. Israel is one of the United States' two original major non-NATO allies in the Middle East. Late Republican Senator Jesse Helms used to call Israel "America's aircraft carrier in the Middle East", when explaining why the United States viewed Israel as such a strategic ally, saying that the military foothold in the region offered by the Jewish State alone justified the military aid that the United States grants Israel every year. Currently, there are seven major non-NATO allies in the Greater Middle East.

The Abraham Accords are a joint statement between Israel, the United Arab Emirates, and the United States, reached on August 13, 2020.

- Subsequently, the term was used to refer collectively to agreements between Israel and the United Arab Emirates and Bahrain.
- The statement marked the first public normalization of relations between an Arab country and Israel since that of Egypt in 1979 and Jordan in 1994.
- The accords are named to emphasize the shared belief in the Prophet Abraham in Judaism and Islam.

CHAPTER: 2- SOUTH CHINA SEA ISSUE

This unit has been covered under the following segments-

1. IMPORTANCE
2. COUNTRIES INVOLVED
3. ROLE OF INDIA

The above segments have been described below:

IMPORTANCE

The South China Sea is considered to be one of the busiest waterways in the world and is a significant gateway for trade and merchant shipping. The South China Sea disputes are maritime and island claims between different sovereign states in the region. The countries party to these disputes are **China, Brunei, Taiwan, the Philippines, Vietnam, and Malaysia** and are geopolitically located in the Indo-Pacific region.

While China claims the largest area in accordance with its rather infamous nine-dash line, Southeast Asian nations such as Taiwan, Brunei, Malaysia, Vietnam, and the Philippines have their own disputes regarding the resource-rich sea and the control of islands.

The Philippines and Vietnam have territorial disputes with China over the Spratly Islands and Paracel Islands. The Philippines has claimed the western portion of the Spratly Islands since 1970, whereas Vietnam is only second to China in its sweeping claim over the parts of the two islands in the South China Sea. Brunei, on the other hand, asserts its rights over the islands lying within their Exclusive Economic Zone (EEZ).

While Taiwan and Brunei are constantly hounded by China, Indonesia whose claimed Exclusive Economic Zone (EEZ) overlaps with that of China's has also positioned itself against Beijing. The issue is further complicated by the fact that China, being the dominant party, creates important stakes for the United States to maintain the balance of power in the region.

For instance, **Washington has thrown its weight behind Taiwan as Bejing continues to intimidate the island militarily**.

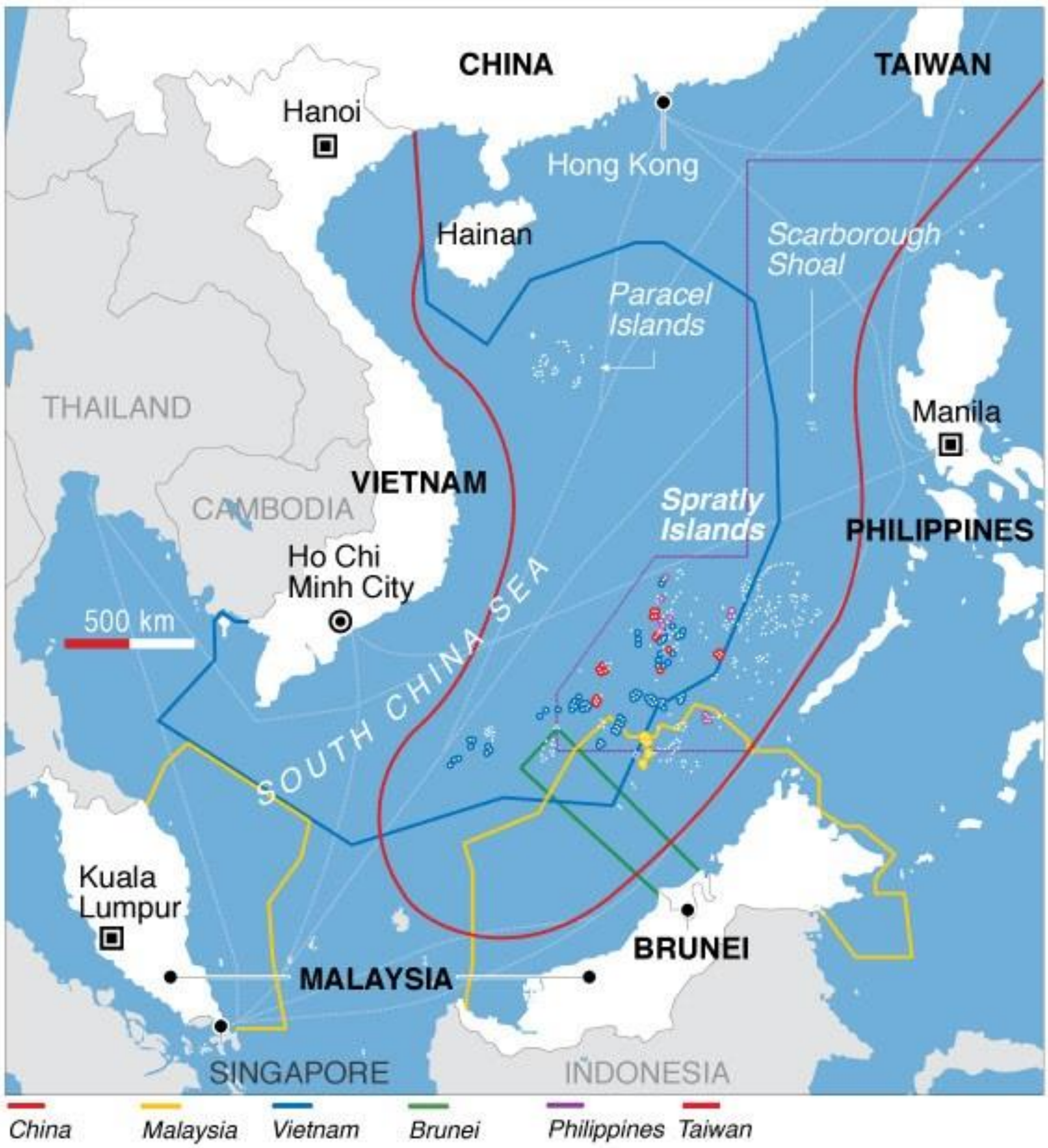
South China Sea dispute – latest updates

- China was recently in the news for unilaterally changing things on the ground in the South China Sea. In the middle of the global coronavirus pandemic, It is busy increasing its presence in the SCS. It approved the establishment of two districts to administer disputed Paracel and the Spratly Islands in the South China Sea.

- Before that, Beijing had issued new names for 25 islands or reefs and 55 undersea entities in the South China Sea in a bid to reaffirm its sovereignty in the region.

What is the South China Sea Dispute?

The regions of contention are the Spratly Island, the Paracel Island, maritime boundaries in the Gulf of Tonkin and other places. Waters near the Indonesian Natuna Islands are also disputed. The reason why these areas are disputed and of interest to the concerned nations is the acquisition of fishing areas around the two archipelagos; suspected crude oil and natural gas in different parts of the South China Sea; and the control of strategically important shipping lanes.



History of South China Sea Territorial Dispute

At the height of World War II, the Imperial Japanese Army and Navy had used several islands for military reasons and stated that these islands were unclaimed, despite historical records that showed that France had controlled some of those islands before their colonial possessions fell into the hands of the Japanese. Upon the end of the war, the 1951 Treaty of San Francisco forced Imperial Japan into giving up any territory they had conquered during the war. The People's Republic of China made various claims to the islands during the 1951 treaty negotiations.

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Chinese claims in the South China sea are described in part by the nine-dash line. Originally an "eleven-dashed-line," this line was first indicated by the Kuomintang government of the Republic of China in 1947, for its claims to the South China Sea. When the Communist Party of China took over mainland China and formed the People's Republic of China in 1949, the line was adopted and revised to nine dashes/dots, as endorsed by Zhou Enlai. China's 1958 declaration described China's claims in the South China Sea islands based on the nine-dotted line map. The legacy of the nine-dash line is viewed by some PRC government officials, and by the PRC military, as providing historical support for their claims to the South China Sea.

The Geneva Accords of 1954, which ended the First Indochina War, gave South Vietnam control of the Vietnamese territories south of the 17th Parallel, which included the islands in the Paracels and Spratlys. Two years later the North Vietnamese government claimed that the People's Republic of China is the lawful claimant of the islands, while South Vietnam took control of the Paracel Islands.

Countries Involved in South China Sea Dispute

Modern International laws and proofs from history explain how the different territories are raising their concerns and claims on the Sea regions. Given below are the various claims raised by the different countries involved in the dispute:

1. **China**: The country claims that ancient history records show that China held control over the entire waterway and it was only during the modern era that the dispute began. China also raises legal concerns and rights over the Sea. However, China has not been successful in proving its claim over the region.
2. **Vietnam**: The country raises its claims based on inheritance grounds. It was only in the 1970s that Vietnam raised its claim after its relations with China deteriorated.
3. **Malaysia**: The country claims the feature in the southern Spratley falls inside the border of Malaysia's continent which makes their claim acceptable on legal grounds.
4. **Indonesia**: The country claims only the part of the sea which comes under its exclusive special economic zones.
5. **Philippines**: The country bases its claims on historical grounds. They only demand the part that comes under their exclusive economic zone.
6. **Brunei**: Its claims are based on EEZ as mentioned by the United Nations Convention on the Law of the Sea (UNCLOS).

South China Sea Dispute Causes

The maritime disputes in the South China Sea impact on a series of regional bilateral relations and continue to trouble ties between China and the Association of Southeast Asian Nations (ASEAN).

Various reasons have led to the dispute regarding the South China Sea. Given below are the causes for the South China Sea Dispute:

1. The main cause of this dispute is the claim of different territories over the Sea and territorial demarcation of the sea.
2. The Sea is said to be a major source of natural resources for the different territories.
3. It is a source of about 10 percent of the country's fishery, which makes it an essential source of food for hundreds of people. This is also a major reason why people from different countries are claiming their rights over the sea.
4. The islands and rocks have also been a cause of dispute. Country's claim their right over the different islands, which makes it tougher for countries to trade through this waterway as it may lead to seizing their trading ships.
5. There are exclusive economic zones (EEZ) and mostly in the case of water bodies, these zones overlap for different territories.

Effects of the South China Sea Dispute

The South China Sea Dispute has adversely affected the territories involved in the dispute but along with them, other countries involved in trade with them are affected. It is one of the most vital trade routes and it is important to end the dispute over the South China Sea so that trade and economic activities of the country are not disrupted.

Also, the US is playing a very important role in mending the dispute because it has wide-ranging security commitments in East Asia and is allied with several of the countries bordering the South China Sea, such as the Philippines, Singapore, and Vietnam. So any dispute among them will directly affect the US.

Role of India in South China Sea Dispute

Under the **'Look East' policy**, India has been taking a higher position at the global high table- this was reflected in the joint statement issued in September 2014, by the Governments of U.S. and India when Indian PM Narendra Modi, traveled to the U.S. The joint statement "urged the concerned parties to pursue resolution of their territorial and maritime disputes through all peaceful means, following universally recognized principles of international law, including the United Nations Convention on the Law of the Sea."

- The joint statement also, "affirmed the importance of safeguarding maritime security and ensuring freedom of navigation and overflight throughout the region, especially in the South China Sea."
- In the wake of the recent judgment by the Permanent Court of Arbitration, it is a good time for India to assert that it believes in global commons and freedom of navigation. India has rightfully not come out in 'open' support of the verdict from the tribunal, as any overt support to this verdict might run against India's ambitions of securing membership into the NSG- where China's support is needed.

- India has a legitimate commercial interest in the South China Sea (SCS) region. But India follows the policy of not involving itself in the disputes between sovereign nations.
- India has been concerned about the security of its trade flows and energy interests in the South China Sea. Vietnam has offered India seven oil blocks in its territory of the SCS- this move didn't get down well with China. India has signed energy deals with Brunei too.
- **The South China Sea sees a heavy percentage of world trade that passes through Malacca** Strait a part of the South China Sea. India's 55 % of trade passes through the Strait of Malacca which opens into the South China Sea. If China controls the region, it will upset the global trade practices and countries like India will directly get affected. Any belligerent action by China can hamper India's foreign trade passing through that region. Therefore, India has a stake in ensuring freedom of navigation in the region.

Steps that can be taken to settle the South China Sea Dispute

Since the South China Sea Dispute has been affecting many territories, the concerned authorities need to come to a resolution to solve the dispute so that the economic growth of the countries is not affected. Also, it is important that the claimant nations do not escalate the issue, but work on arriving at a consensus through effective diplomacy.

Judicial verdicts on issues of contested sovereignty have had historical precedents of triggering a nationalist backlash. It is thus important to consider possible solutions to this dispute. Some measures are as under:

- To resolve the disputes peacefully, the claimants in the region should be willing to abandon their confrontational attitude, and instead, agree to find a middle path- even if this requires sacrificing certain portions of their claims.

- All claimants can perhaps limit their claim to the areas of 200 nautical miles of the Special Economic Zone following the United Nations Convention on the Law of the Sea (UNCLOS). Thus, by agreeing to such a proposal, the claimants can also reach an agreement to leave international waters for free navigation.

- Another possible solution would be for the parties concerned to establish common ownership of the disputed areas whereby all the revenues from the South China Sea are equitably shared among the littoral countries.

- Perhaps another possibility would be for the disputing countries to specifically lay out their claims and allow a neutral party to adjudicate based on the UNCLOS or any other relevant international laws.

China has put forward a bilateral negotiation point of view but it has not been accepted by the other countries. This is because the other countries believe that China because of its size may have an unsaid advantage in the distribution of the water body.

ASEAN has also been involved in solving the dispute but the decision has yet been taken. But resolving the dispute has become important because it is affecting the trade across the world and especially an issue for the US regarding security issues.

CHAPTER - 3- AFGHAN CIVIL WAR

A timeline of key events in Afghanistan's 40 years of wars

The former Soviet Union marched into Afghanistan on Christmas Eve, 1979, claiming it was invited by the new Afghan communist leader, Babrak Karmal, setting the country on a path of 40 years of seemingly endless wars and conflict.

More than 5 million Afghans fled to Pakistan and 3 million to Iran after 1980, and **today, Afghans still make up the world's second-largest refugee population**. After the 9/11 terrorist attacks in America, the U.S. invaded Afghanistan to oust the Taliban regime, which had harbored al-Qaida leader Osama bin Laden.

Now, after an 18-year war, the possibility of peace has emerged as the United States and the Taliban signed a peace deal Saturday, one that could offer a glimmer of hope to war-weary Afghans.

Here is a timeline of some key dates in Afghanistan's 40 years of wars:

Dec. 25, 1979 — Soviet Red Army crosses the Oxus River into Afghanistan. In neighboring Pakistan, Afghan mujahedeen, or Islamic holy warriors, are assembling, armed and financed by the U.S. for an anti-communist war.

1980s — CIA's covert Operation Cyclone funnels weapons and money for the war through Pakistani dictator Mohammed Zia-ul Haq, who calls on Muslim countries to send volunteers to fight in Afghanistan. Bin Laden is among the thousands to volunteer.

1983 — President Ronald Reagan meets with mujahedeen leaders, calling them freedom fighters, at the White House.

September 1986 — The U.S. provides the mujahedeen with shoulder-held anti-aircraft Stinger missiles, which turned around the course of the war and sped-up negotiated Soviet withdrawal.

January 1987 — Afghan Communist President Najibullah launches National Reconciliation Program to encourage the mujahedeen to join a new government of national reconciliation; they refuse.

Feb. 15, 1989 — The last Soviet soldier leaves Afghanistan, ending 10 years of occupation

April 1992 — Mujahedeen groups enter Kabul as Najibullah tries to flee. He is stopped at the airport and put under house arrest at a U.N. compound.

1992-1996 — A power-sharing deal among seven mujahedeen leaders falls apart and they spend four years fighting one another; much of Kabul is destroyed and nearly 50,000 people are killed.

1994 — **The Taliban emerge in southern Kandahar, mainly from the ranks of former mujahedeen fighters. They take over the province, setting up a rule adhering to a strict interpretation of Islam**.

Sept. 26, 1996 — The Taliban take Kabul after sweeping across the country with hardly a fight; Northern Alliance's Tajik leader Ahmed Shah Masood and his forces retreat north toward the Panjshir Valley. The Taliban hang Najibullah and his brother.

1996-2001 — Though initially welcomed as an end to the fighting, the Taliban rule with a heavy hand under Mullah Mohammed Omar, imposing strict Islamic edicts, denying women the right to work and girls the right to go to school. Punishments and executions are carried out in public.

2000 — **The Taliban eradicate opium production but laborers who lived off the poppy fields become even poorer**.

March 2001 — The Taliban dynamite the world's largest standing **Buddha statues in Bamyan** province, to global shock.

Set. 9, 2001 — Two Arab-speaking suicide bombers, posing as journalists with Belgium passports, kill Masood in northern Takhar province, two days before the 9/11 terrorist attacks.

September 2001 — Washington gives Mullah Omar an ultimatum: hand over bin Laden and dismantle militant training camps or prepare to be attacked. The Taliban leader refuses.

Oct. 7, 2001 — A U.S.-led coalition launches an invasion of Afghanistan.

Nov. 13, 2001 — The Taliban flee Kabul for Kandahar as the U.S.-led coalition marches into the Afghan capital with the Northern Alliance.

Dec. 5, 2001 __ The **Bonn Agreement** is signed in Bonn, Germany, giving the majority of power to the Northern Alliance's key players and strengthening the warlords who had ruled between 1992 and 1996. **Hamid Karzai, an ethnic Pashtun like most Taliban**, is named president.

Dec. 7, 2001 — Mullah Omar leaves Kandahar and the Taliban regime officially collapses.

Dec. 13, 2001 — Karzai arrives in Kabul; contrary to the Bonn Agreement, militias loyal to warlords also enter the Afghan capital.

Dec. 22, 2001 — Karzai is sworn in as chairman of a 29-member governing council established under the Bonn Agreement.

2004 and 2009 — General elections are held and Karzai is elected president for two consecutive terms, the limit under the Afghan constitution.

April 5, 2014 — Deeply flawed election results in the two front-runners, **Ashraf Ghani and Abdullah Abdullah,** both claiming victory. U.S. Secretary of State John Kerry negotiates a power-sharing deal for a so-called Unity Government, with Ghani serving as president and Abdullah as chief executive.

Dec. 8, 2014 — American and NATO troops formally end their combat mission, transitioning to a support and training role though President Barack Obama had authorized U.S. forces to carry out operations against Taliban and al-Qaida targets.

September 2018 — **Seeking to fulfill his election promise to bring U.S. troops home, President Donald Trump appoints veteran Afghan-American diplomat Zalmay Khalilzad as negotiator with the Taliban.**

2018-2019 — **Zalmay** engages in on-again, off-again talks with the Taliban, mainly in the Gulf Arab state of Qatar where the insurgents maintain a political office. The Taliban refuse to negotiate with the Kabul government

Sept. 9, 2019 — After a particularly intense escalation in Taliban attacks, including a Kabul bombing that killed a U.S. soldier, Trump scraps talks with the Taliban.

Sept. 28, 2019 — Presidential elections are held but official results are not known for months.

Feb. 18, 2020 — Afghanistan's election commission declares Ghani the official winner of September elections; his rival Abdullah refuses to recognize the results and instead declares himself the winner.

Feb. 29, 2020 — The U.S. and the Taliban sign a deal in Doha, Qatar, laying out the withdrawal of U.S. troops from Afghanistan; the deal also envisions intra-Afghan talks on a future political road map.

Today, that the Taliban controls 87 districts, or 21 percent, and contested 214, or 53 percent

Today, the Taliban directly threaten 16 of Afghanistan's 34 provincial capitals, including Maidan Wardak and Pul-I-Alam, the capitals of Wardak and Logar provinces respectively. These two provinces are outside of the capital of Kabul and are the gateway to Kabul City.

INTELLIGENCE AGENCIES OF DIFFERENT COUNTRIES

An intelligence agency is an agency of government that is responsible for the collection, analysis, and exploitation of information which is in support of law enforcement, national security, military, and foreign policy objectives. They gather information directly or indirectly and that includes espionage, communication interception, cryptanalysis, cooperation with other institutions, and evaluation of sources (public).The process by which the collected information about an enemy is used to answer tactical questions about ongoing operations or to predict future behavior is known as Intelligence analysis.

1. RAW (Research and Analysis Wing) – India
2. Mossad – Israel
3. CIA (Central Intelligence Agency) – America
4. ISI (Inter-Services Intelligence) – Pakistan
5. MSS (Ministry of State Security) – China
6. M1-6 (Military Intelligence Section 6 or Secret Intelligence Service (SIS))– United Kingdom
7. ASIS (Australian Secret Intelligence Service) – Australia
8. DGSE (Directorate-General for External Security) – France
9. BND (Bundesnachrichtendienst)– Germany
10. FSB (Federal Security Service of Russian Federation) – Russia

HERE'S WHERE THE TALIBAN MONEY COMES FROM

The Taliban militants of Afghanistan have grown richer and more powerful since their fundamentalist Islamic regime was toppled by U.S. forces in 2001. Here's where their money comes from.

1. Drugs – $416 million

Afghanistan accounted for approximately 84% of global opium production over the past five years, according to the United Nation's World Drug Report 2020.

Much of those illicit drug profits go to the Taliban, which manage opium in areas under their control. The group imposes a 10% tax on every link in the drug production chain.

2. Mining – $400 million to $464 million

Mining iron ore, marble, copper, gold, zinc and other metals and rare-earth minerals in mountainous Afghanistan is an increasingly lucrative business for the Taliban. Both small-scale mineral-extraction operations and big Afghan mining companies pay Taliban militants to allow them to keep their businesses running. Those who don't pay have faced death threats.

3. Extortion and taxes – $160 million

Like a government, the Taliban tax people and industries in the growing swath of Afghanistan under their control.

The group also imposes a traditional Islamic form of taxation called "ushr" – which is a 10% tax on a farmer's harvest – and "zakat," a 2.5% wealth tax.

4. Charitable donations – $240 million

The Taliban receive covert financial contributions from private donors and international institutions across the globe.

Many Taliban donations are from charities and private trusts located in Persian Gulf countries, a region historically sympathetic to the group's religious insurgency. Those donations add up to about $150 million to $200 million each year, according to the Afghanistan Center for Research and Policy Studies. These charities are on the U.S. Treasurey Department's list of groups that finance terrorism.

Private citizens from Saudi Arabia, Pakistan, Iran and some Persian Gulf nations also help finance the Taliban, contributing another $60 million annually to the Taliban-affiliated Haqqani Network, according to American counterterrorism agencies.

5. Exports – $240 million

The Taliban's net income from exports is thought to be around $240 million a year. This figure includes the export of poppy and looted minerals, so there may be financial overlap with drug revenue and mining revenue.

6. Real estate – $80 million

7. Specific countries

According to BBC reporting, a classified CIA report estimated in 2008 that the Taliban had received $106 million from foreign sources, in particular from the Gulf states.

Today, the governments of Russia, Iran, Pakistan and Saudi Arabia are all believed to bankroll the Taliban, according to numerous U.S. and international sources. Experts say these funds could amount to as much as $500 million a year, but it is difficult to put an exact figure on this income stream.

In 2018, President Donald Trump became the first sitting U.S. president to meet with a North Korean leader when he held a summit with Kim Jong Un in Singapore.

The surprising amity and dialogue came after a tense period in 2017, when the two leaders exchanged insults and threats as North Korea carried out a series of missile and nuclear tests. Less than a year after Trump called Kim "rocket man" and warned that the U.S. would "totally destroy North Korea" if it had to defend itself or its allies, he said the North Korean leader was "very honorable" and "very open."

KOREAN WAR - World War II divided Korea into a Communist, northern half and an American-occupied southern half, divided at the 38th parallel. The Korean War (1950-1953) began when the North Korean Communist army crossed the 38th Parallel and invaded non-Communist South Korea.

This cycle of threats, talks and weapons tests is familiar territory for the United States and North Korea. Here, we examine the turbulent history between the two countries.

Early Ambitions

North Korea's quest for a nuclear weapon can be traced back decades to the Korean War."They felt that they needed to develop a capability that would deter an American attack.The fear was not unfounded. In 1950, President Harry Truman said there was "active consideration" of using the atomic bomb in the conflict. "Ever since the **KOREAN WAR**, they always assumed that Washington would attack them any day and wipe them out," . "The only way for them to survive and not get attacked would be to develop the most powerful weapon on Earth, which would be the nuclear bomb."

- With the help of the Soviet Union, North Korea began work on a nuclear complex, and in the early 1980s, built its first power plant, Yongbyon.
- In these early days, Pyongyang insisted that its aims were peaceful. It became party to the Nuclear Nonproliferation Treaty (NPT) in 1985, and signed an agreement in 1991 with its rival South Korea in which both countries agreed not to produce or use nuclear weapons.
- But as the International Atomic Energy Agency (IAEA) pressed for access to the North's nuclear waste sites, the country warned that it would withdraw from the NPT.

1994-2001:

In early 1994, North Korea threatened to reprocess fuel rods from its nuclear reactor, a step that would give it enough weapons-grade plutonium for five or six nuclear weapons. The Clinton administration considered various responses, including a strike on the Yongbyon facility, but eventually chose to negotiate with Pyongyang. Amid the crisis, Kim Il-sung — the founding dictator of North Korea, who ruled for more than four decades — died. His son, Kim Jong Il, took over as leader.

- By October 1994, negotiations resulted in a deal known as the **Agreed Framework**. Under the framework, North Korea agreed to freeze and eventually dismantle its nuclear facilities, in exchange for a move toward normalizing relations with the United States. North Korea would also receive shipments of fuel oil and assistance with constructing light-water reactor power plants (which would have safeguards to ensure that fuel could not be diverted to weapons).

- "The North Koreans agreed to the deal because there was a shift in the geopolitical situation in the late 1980s, early 1990s,"."First of all, they lost the Soviet Union as their main ally, and secondly, the Chinese were shifting towards establishing better relations with South Korea,". "And so the North Koreans made a strategic decision that if they could secure better relations with the United States, they were willing to pay the price. And the price was, of course, their nuclear program."

Non-Proliferation Treaty - of Nuclear Weapons (NPT), which entered into force in March 1970, seeks to

- inhibit the spread of nuclear weapons.
- Its 190 (191 with North Korea*) states-parties are classified in two categories: nuclear-weapon states (NWS)—consisting of the United States, Russia, China, France, and the United Kingdom—and non-nuclear-weapon states (NNWS).
- **India did not sign it & neither its successor CTBT(COMPREHENSIVE TEST BAN TREATY)**

North Korea shut down its nuclear reactor, and stalled construction of two others. In 1998, it test-fired an intermediate-range missile — the Taepo Dong-1, with an estimated range of 900 to 1,800 miles — that failed. Nevertheless, negotiations kept on. North Korea agreed to a moratorium on testing medium- and long-range missiles as long as talks with the U.S. continued.

2001-2003: The Framework Collapses

- When President George W. Bush took office in 2001, his administration took a more hardline approach to North Korea, postponing talks and expressing skepticism about whether Pyongyang was adhering to the Agreed Framework. North Korea warned Washington that such tough talk would force it to "strongly react."

- Bush listed North Korea among one of three nations in an "**axis of evil**" in his 2002 State of the Union. Later that year, in October, the administration said that North Korea was secretly enriching uranium – a claim Pyongyang denied. A month later, the fuel oil shipments agreed to under President Clinton were suspended.

- By the end of 2002, North Korea ordered IAEA inspectors out of the country. The Agreed Framework had collapsed.

Experts have described this period as a missed opportunity. Had North Korea not begun enriching uranium, they say, and had the U.S. moved faster to implement its portion of the agreed framework — including the construction of light-water reactors — things may have gone differently. By January 2003, the relationship hit a new low with **North Korea's official withdrawal from the *Nonproliferation Treaty*.** Four months later, U.S. officials said North Korea admitted to having at least one nuclear weapon.

2003-2006: Six-Party Talks Begin

- The Bush administration would re-engage with North Korea later in 2003, joining South Korea, Japan, Russia and China in what came to be known as the Six Party Talks.

- The talks produced a joint statement in 2005 in which North Korea once again agreed in principle to give up its nuclear weapons program, rejoin the Nonproliferation Treaty and accept IAEA inspections, while maintaining that it had the right to peaceful nuclear energy.

- In exchange, the five other countries agreed to energy assistance and to discuss giving North Korea light-water reactors "at an appropriate time." The U.S. and South Korea said they would not deploy nuclear weapons on the Korean Peninsula, and the U.S. and Japan said they would move toward normalizing relations.

However, progress was short lived. In July 2006, North Korea — angered by U.S. targeting of its financial assets and the pace of the light-water reactor project — broke its 1999 moratorium on testing medium- and long-range missiles.

"Under Kim Jong Il's rule, a useful way of understanding the dynamics of North Korea and the U.S. is the idea of cycles," "North Korea comes to dialogue, then retracts, using the U.S.'s 'hostile policy' as an excuse to conduct missile or nuclear tests, then re-enters dialogue to dampen sanctions implementation or reduce tension."

2006: A First Nuclear Test

In October 2006, the situation reached a dangerous new stage with North Korea's first nuclear test. The explosion yielded less than a kiloton, per the Nuclear Threat Initiative. For comparison, the atomic bomb that devastated Hiroshima was 15 kilotons.

The United Nations responded swiftly with a resolution requiring North Korea to stop testing nuclear weapons and to abandon its missile program. In response, a representative for the regime said the nuclear test was “entirely attributable to United States threats, sanctions and pressure.” He accused the Bush administration of responding to North Korea’s “patient and sincere efforts with sanctions and blockades.”

The regime’s rhetoric aside, the Six Party talks began to show dividends. In July 2007, North Korea shut down its nuclear facilities at Yongbyon, a move confirmed by a visiting IAEA team. It also agreed to disable the facilities, which would make it harder to restart them. In return, it would receive fuel oil and be removed from the U.S. list of state sponsors of terrorism. However, disagreements on how to verify North Korea’s actions once again led to stalemate.

Again, sanctions followed — first from the U.N. Security Council and then the U.S. By the fall of 2011, Pyongyang hinted that it would be willing to resume multilateral talks, but then suddenly, North Korean leader Kim Jong Il died in December, after holding power for 17 years. His youngest son, Kim Jong Un, was named North Korea’s leader.

2012-2016: Testing Accelerates

The pace of ballistic missile tests and nuclear tests would significantly escalate under Kim Jong Un. North Korea used the nuclear and missile tests to establish “strategic relevance in the region,”

2017: A War of Words with Trump

In 2017, North Korea reached two significant milestones. It successfully test-fired its first intercontinental ballistic missiles in July, capable of reaching Alaska. It once again claimed to successfully test a hydrogen bomb. Whether it was indeed a hydrogen bomb has not been confirmed, but its nuclear test in September was recorded as North Korea’s most powerful yet at an estimated 250 kilotons.

When he addressed the U.N. General Assembly in September, Trump said that if the U.S. was forced to defend itself or its allies, it would have “no choice but to totally destroy North Korea.” Referring to Kim Jong Un as “rocket man,” Trump said the North Korean leader was “on a suicide mission for himself and for his regime.”

CHAPTER: 5- CLIMATE DEBATE

This unit has been covered under the following segments-

1. **HISTORY OF CLIMATE DEBATE**
2. **FORMATION OF THE IPCC) UNFCCC**
3. **KYOTO PROTOCOL**
4. **COPENHAGEN ACCORD**
5. **PARIS AGREEMENT**
6. **KYOTO PROTOCOL VS PARIS AGREEMENT**
7. **NATIONALLY DETERMINED CONTRIBUTIONS**

The above segments have been described below:

1. **HISTORY OF CLIMATE DEBATE**

Average surface temperatures on earth have risen more than 2°F over the past 100 years. During this time period, atmospheric levels of greenhouse gases such as carbon dioxide (CO2) and methane (CH4) have notably increased.

In Mar. 1958, US climate scientist Charles Keeling began measuring atmospheric CO2 at the Mauna Loa observatory in Hawaii for use in climate modeling. Using these measurements, Keeling became the first scientist to confirm that atmospheric CO2 levels were rising rather than being fully absorbed by forests and oceans (carbon sinks). When Keeling began his measurements, atmospheric CO2 levels stood at 315 parts per million (ppm) & currently the level stands at 425 parts per million (ppm).

The US National Academy of Sciences issued a 1977 report titled "Energy and Climate" that concluded the burning of fossil fuels was increasing atmospheric CO2, and that increased CO2 was associated with a rise in global temperatures.

FORMATION OF THE IPCC AND THE UN FRAMEWORK CONVENTION ON CLIMATE CHANGE

The Intergovernmental Panel on Climate Change (IPCC) was created in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) to review research on global climate change (as of Mar. 2020, there were 195 IPCC member countries). The IPCC issued its first assessment report in 1990 stating that "emissions resulting from human activities are substantially increasing the atmospheric concentrations of the greenhouse gases," resulting in "an additional warming of the Earth's surface."

The **United Nations Framework Convention on Climate Change** (**UNFCCC**) is an international environmental treaty addressing climate change, negotiated and signed by 154 states at the United Nations Conference on Environment and Development (UNCED), informally known as the Earth Summit, held in Rio de Janeiro in 1992. It is headquartered in Bonn and entered into force in 1994. As of 2020, the UNFCCC has 197 signatory parties. Its supreme decision-making body, the Conference of the Parties (COP), meets annually to assess progress in dealing with climate change.

The United Nations Framework Convention on Climate Change (UNFCCC) was signed by US President George H.W. Bush on Oct. 13, 1992. The goal of the convention was the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." The UNFCCC became the parent treaty for the 1997 Kyoto Protocol and the 2015 Paris Agreement.

KYOTO PROTOCOL

The Kyoto Protocol, which was signed in 1997 and which entered into force in 2005, was the first implementation of measures under the UNFCCC until 31 December 2020

Over 161 nations met in Kyoto, Japan, in Dec. 1997 to negotiate a treaty to limit greenhouse gas emissions and work toward the objectives of the UNFCCC. The resulting Kyoto Protocol, set binding targets for 37 industrialized countries and the European Union to reduce greenhouse gas emissions roughly 5% below 1990 levels by 2012.

COPENHAGEN ACCORD -

In Dec. 2009 the COP 15 conference took place in Copenhagen, Denmark. The resulting Copenhagen Accord, signed by 114 nations including the United States and China, called for "deep cuts" in human greenhouse gas emissions in order to make sure that earth's temperature rises no more than 1.5°C above pre-industrial levels.

PARIS AGREEMENT

The Kyoto protocol was superseded by the Paris Agreement, which entered into force in 2016.

In Dec. 2015, the COP 21 met in Paris where 195 countries adopted the Paris Agreement. The agreement's central aim was to prevent global temperatures from rising more than 1.5°C – 2°C above pre-industrial levels. Under the agreement, all countries were required to create a national plan to reduce greenhouse gas emissions and report regularly on their individual progress towards meeting their emission reduction goals.

Aims of Paris Agreement

As countries around the world recognized that climate change is a reality, they came together to sign a historic deal to combat climate change – Paris Agreement. The aims of Paris Agreement is as below:

1. Keep the global temperature rise this century **well below 2 degrees Celsius** above the pre-industrial level.
2. Pursue efforts to limit the temperature increase even **further to 1.5 degrees Celsius**.
3. Strengthen the ability of countries to **deal with the impacts of climate change**.

Paris Agreement: Things to note

- *In French, the Paris* Agreement *is known as L'accord de Paris*.
- The key vision of Paris Agreement is to keep global temperatures "well below" 2.0C (3.6F) above pre-industrial times and "endeavour to limit" them even more, to 1.5C.
- Paris Accord talks about limiting the amount of greenhouse gases emitted by human activity to the same levels that trees, soil and oceans can absorb naturally, beginning at some point between 2050 and 2100.
- It also mentions the need to review each country's contribution to cutting emissions every five years so they scale up to the challenge.
- Rich countries should help poorer nations by providing "climate finance" to adapt to climate change and switch to renewable energy.
- The Paris Agreement has a 'bottom up' structure in contrast to most international environmental law treaties which are 'top down.
- The agreement is binding in some elements like reporting requirements, while leaving other aspects of the deal such as the setting of emissions targets for any individual country as non-binding.

Is this the first international agreement to combat climate change due to global warming?

No. In fact, Paris Agreement comes under the broad umbrella of **United Nations Framework Convention on Climate Change (UNFCCC)**. UNFCCC is a convention held in 1992 to combat climate change. Kyoto Protocol (1997) was another major international commitment under UNFCCC.

Paris Agreement (2015) vs Kyoto Protocol (1997)

- **Paris Agreement** is the world's first comprehensive climate agreement. Although developed and developing countries were parties to **Kyoto Protocol**, developing countries were not mandated to reduce their emissions.
- This means that while **Paris Agreement is legally binding** to all parties, Kyoto Protocol was not.
- Paris Agreement was reached on the twenty-first session of the Conference of the Parties **(COP)** and the eleventh session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol **(CMP)**.

Nationally Determined Contributions (NDC)

- The national pledges by countries to cut emissions are **voluntary**.
- The Paris Agreement requires all Parties to put forward their best efforts through "nationally determined contributions" (NDCs) and to strengthen these efforts in the years ahead.
- This includes requirements that all Parties report regularly on their emissions and on their implementation efforts.
- In **2018**, Parties will take stock of the collective efforts in relation to progress towards the goal set in the Paris Agreement.
- There will also be a global stock take every 5 years to assess the collective progress towards achieving the purpose of the Agreement and to inform further individual actions by Parties.

India's Intended Nationally Determined Contribution (INDC)

- India's INDC include a reduction in the emissions intensity of its GDP by 33 to 35 per cent by 2030 from 2005 level.
- India has also pledged to create an additional carbon sink of 2.5 to 3 billion tonnes of CO_2 equivalent through additional forest and tree cover by 2030.
- India will anchor a global solar alliance, INSPA (International Agency for Solar Policy & Application), of all countries located in between Tropic of Cancer and Tropic of Capricorn.

Frameworks under Paris Agreement

- Technology Framework
- Capacity Building Framework
- Transparency Framework

Why is Paris Agreement important?

- **Current commitments on greenhouse gas emissions** (Kyoto Protocol) will expire in 2020. Paris Agreement deals with what should be done in the decade after 2020 and beyond this time frame.
- The text of the agreement includes a provision requiring developed countries to send **$100 billion annually** to their developing counterparts beginning in 2020. That figure will be a "floor" that is expected to increase with time.
- The Paris Agreement has a 'bottom up' structure in contrast to most international environmental law treaties which are 'top down.
- For the first time, the accord lays out a longer-term plan for reaching a peak in greenhouse emissions "as soon as possible" and achieving a balance between the output of man-made greenhouse gasses and absorption – by forests or the oceans – "by the second half of this century".

When will Paris Agreement come into force?

- Thirty days after the date on which **at least 55 Parties to the Convention** accounting in total for **at least an estimated 55 % of the total global greenhouse gas emissions** have deposited their instruments of ratification, acceptance, approval or accession with the Depositary.
- On 5 October 2016, the threshold for entry into force of the Paris Agreement was achieved.
- The Paris Agreement will enter into force on **4 November 2016**.

Criticisms about Paris Agreement

- According to a study published in *Nature* on June 2016, current country pledges are too low to lead to a temperature rise below the Paris Agreement temperature limit of "well below 2 °C".
- Even a UNFCCC report had observed that even if all the pledges made by 197 countries that are signatory to the Paris pact were fulfilled, it would be insufficient to meet the conservative goal of keeping global temperature rise within the 2 degree Celsius threshold.
- Most of the agreement consists of "promises" or aims and not firm commitments.
- The starting point of $100bn per year remains under 8% of worldwide declared military spending each year.
- Since the only mechanism remains voluntary national caps on emissions, without even any guidance on how stringent those caps would need to be, it is hard to be optimistic that these goals are likely to be achieved.
- There is only a "name and shame" system or a "name and encourage" plan and the 'contributions' themselves are not binding as a matter of international law.

The IPCC continues its work through the present day, and issues a series of Assessment Reports and supplemental reports that describe the state of scientific understanding at the time each report is prepared. Scientific developments during this period are summarized about once every five to six years in the IPCC Assessment Reports which were published in 1990 (First Assessment Report), 1995 (Second Assessment Report), 2001 (Third Assessment Report), 2007 (Fourth Assessment Report), and 2013/2014 (Fifth Assessment Report)

CHAPTER: 6 – INTERNATIONAL MONETARY SYSTEM

International Monetary System

Global trade depends on the smooth exchange of currencies between countries. Businesses rely on a predictable and stable mechanism. This chapter takes a look at the recent history of global monetary systems and how they have evolved over the past two centuries. While the current monetary system continues to evolve, lessons learned over the past fifty years help determine the best future options. As part of the post–World War II monetary environment, two institutions were created; these institutions have expanded to play an increasingly larger role in world economy. Understanding the role of the IMF and the World Bank provides insight into how governments in developing countries prioritize and fund projects and work with the private sector to implement these initiatives.

What Is the International Monetary System?

Without money, individuals and businesses would have a harder time obtaining (purchasing) or exchanging (selling) what they need, want, or make. Money provides us with a universally accepted medium of exchange.

Before the current monetary system can be fully appreciated, it's helpful to look back at history and see how money and systems governing the use of money have evolved. Thousands of years ago, people had to barter if they wanted to get something. That worked well if the two people each wanted what the other had. Even today, bartering exists.

History shows that ancient Egypt and Mesopotamia—which encompasses the land between the Euphrates and Tigris Rivers and is modern-day Iraq, parts of eastern Syria, southwest Iran, and southeast Turkey—began to use a system based on the highly coveted coins of gold and silver, also known as bullion, which is the purest form of the precious metal. However, bartering remained the most common form of exchange and trade.

Gold and silver coins gradually emerged in the use of trading, although the level of pure gold and silver content impacted the coins value. Only coins that consist of the pure precious metal are bullions; all other coins are referred to simply as *coins*. It is interesting to note that gold and silver lasted many centuries as the basis of economic measure and even into relatively recent history of the gold standard, which we'll cover in the next section. Fast-forward two thousand years and bartering has long been replaced by a currency-based system. Even so, there have been evolutions in the past century alone on how—globally—the monetary system has evolved from using gold and silver to represent national wealth and economic exchange to the current system.

Let's take a look at the last century of the international monetary system evolution. International monetary system refers to the system and rules that govern the use and exchange of money around the world and between countries. Each country has its own currency as money and the international monetary system governs the rules for valuing and exchanging these currencies.

Until the nineteenth century, the major global economies were regionally focused in Europe, the Americas, China, and India. These were loosely linked, and there was no formal monetary system governing their interactions. The rest of this section reviews the distinct chronological periods over the past 150 years leading to the development of the modern global financial system. Keep in mind that the system continues to evolve and each crisis impacts it. There is not likely to be a final international monetary system, simply one that reflects the current economic and political realities. This is one main reason why understanding the historical context is so critical. As the debate about the pros and cons of the current monetary system continues, some economists are tempted to advocate a return to systems from the past. Businesses need to be mindful of these arguments and the resulting changes, as they will be impacted by new rules, regulations, and structures.

Pre–World War I

As mentioned earlier in this section, ancient societies started using gold as a means of economic exchange. Gradually more countries adopted gold, usually in the form of coins or bullion, and this international monetary system became known as the gold standard. This system emerged gradually, without the structural process in more recent systems. The gold standard, in essence, created a fixed exchange rate system. An exchange rate is the price of one currency in terms of a second currency. In the gold standard system, each country sets the price of its currency to gold, specifically to one ounce of gold. A fixed exchange rate stabilizes the value of one currency vis-à-vis another and makes trade and investment easier.

Our modern monetary system has its roots in the early 1800s. The defeat of Napoleon in 1815, when France was beaten at the Battle of Waterloo, made Britain the strongest nation in the world, a position it held for about one hundred years. In Africa, British rule extended at one time from the Cape of Good Hope to Cairo. British dominance and influence also stretched to the Indian subcontinent, the Malaysian peninsula, Australia, New Zealand—which attracted British settlers—and Canada. Under the banner of the British government, British companies advanced globally and were the largest companies in many of the colonies, controlling trade and commerce. Throughout history, strong countries, as measured mainly in terms of military might, were able to advance the interests of companies from their countries—a fact that has continued to modern times, as seen in the global prowess of American companies. Global firms in turn have always paid close attention to the political, military, and economic policies of their and other governments.

In 1821, the United Kingdom, the predominant global economy through the reaches of its colonial empire, adopted the gold standard and committed to fixing the value of the British pound. The major trading countries, including Russia, Austria-Hungary, Germany, France, and the United States, also followed and fixed the price of their currencies to an ounce of gold.

The United Kingdom officially set the price of its currency by agreeing to buy or sell an ounce of gold for the price of 4.247 pounds sterling. At that time, the United States agreed to buy or sell an ounce of gold for \$20.67. This enabled the two currencies to be freely exchanged in terms of an ounce of gold. In essence,

£4.247 = 1 ounce of gold = \$20.67.

The exchange rate between the US dollar and the British pound was then calculated by

\$20.67/£4.247 = \$4.867 to £1.

The Advantages of the Gold Standard

The gold standard dramatically reduced the risk in exchange rates because it established fixed exchange rates between currencies. Any fluctuations were relatively small. This made it easier for global companies to manage costs and pricing. International trade grew throughout the world, although economists are not always in agreement as to whether the gold standard was an essential part of that trend.

The second advantage is that countries were forced to observe strict monetary policies. They could not just print money to combat economic downturns. One of the key features of the gold standard was that a currency had to actually have in reserve enough gold to convert all of its currency being held by anyone into gold. Therefore, the volume of paper currency could not exceed the gold reserves.

The third major advantage was that gold standard would help a country correct its trade imbalance. For example, if a country was importing more than it is exporting, (called a trade deficit), then under the gold standard the country had to pay for the imports with gold. The government of the country would have to reduce the amount of paper currency, because there could not be more currency in circulation than its gold reserves. With less money floating around, people would have less money to spend (thus causing a decrease in demand) and prices would also eventually decrease. As a result, with cheaper goods and services to offer, companies from the country could export more, changing the international trade balance gradually back to being in balance. For these three primary reasons, and as a result of the 2008 global financial crises, some modern economists are calling for the return of the gold standard or a similar system.

Collapse of the Gold Standard

If it was so good, what happened? The gold standard eventually collapsed from the impact of World War I. During the war, nations on both sides had to finance their huge military expenses and did so by printing more paper currency. As the currency in circulation exceeded each country's gold reserves, many countries were forced to abandon the gold standard. In the 1920s, most countries, including the United Kingdom, the United States, Russia, and France, returned to the gold standard at the same price level, despite the political instability, high unemployment, and inflation that were spread throughout Europe.

However, the revival of the gold standard was short-lived due to the Great Depression, which began in the late 1920s. The Great Depression was a worldwide phenomenon. By 1928, Germany, Brazil, and the economies of Southeast Asia were depressed. By early 1929, the economies of Poland, Argentina, and Canada were contracting, and the United States economy followed in the middle of 1929. Some economists have suggested that the larger factor tying these countries together was the international gold standard, which they believe prolonged the Great Depression. The gold standard limited the flexibility of the monetary policy of each country's central banks by limiting their ability to expand the money supply. Under the gold standard, countries could not expand their money supply beyond what was allowed by the gold reserves held in their vaults.

Too much money had been created during World War I to allow a return to the gold standard without either large currency devaluations or price deflations. In addition, the US gold stock had doubled to about 40 percent of the world's monetary gold. There simply was not enough monetary gold in the rest of the world to support the countries' currencies at the existing exchange rates.

By 1931, the United Kingdom had to officially abandon its commitment to maintain the value of the British pound. The currency was allowed to float, which meant that its value would increase or decrease based on demand and supply. The US dollar and the French franc were the next strongest currencies and nations sought to peg the value of their currencies to either the dollar or franc. However, in 1934, the United States devalued its currency from $20.67 per ounce of gold to $35 per ounce. With a cheaper US dollar, US firms were able to export more as the price of their goods and services were cheaper vis-à-vis other nations. Other countries devalued their currencies in retaliation of the lower US dollar. Many of these countries used arbitrary par values rather than a price relative to their gold reserves. Each country hoped to make its exports cheaper to other countries and reduce expensive imports. However, with so many countries simultaneously devaluing their currencies, the impact on prices was canceled out. Many countries also imposed tariffs and other trade restrictions in an effort to protect domestic industries and jobs. By 1939, the gold standard was dead; it was no longer an accurate indicator of a currency's real value.

Post–World War II

The demise of the gold standard and the rise of the Bretton Woods system pegged to the US dollar was also a changing reflection of global history and politics. The British Empire's influence was dwindling. In the early 1800s, with the strength of both their currency and trading might, the United Kingdom had expanded its empire. At the end of World War I, the British Empire spanned more than a quarter of the world; the general sentiment was that "the sun would never set on the British empire." British maps and globes of the time showed the empire's expanse proudly painted in red. However, shortly after World War II, many of the colonies fought for and achieved independence. By then, the United States had clearly replaced the United Kingdom as the dominant global economic center and as the political and military superpower as well.

Bretton Woods

In the early 1940s, the United States and the United Kingdom began discussions to formulate a new international monetary system. John Maynard Keynes, a highly influential British economic thinker, and Harry Dexter White, a US Treasury official, paved the way to create a new monetary system. In

July 1944, representatives from forty-four countries met in Bretton Woods, New Hampshire, to establish a new international monetary system.

"The challenge "was to gain agreement among states about how to finance postwar reconstruction, stabilize exchange rates, foster trade, and prevent balance of payments crises from unraveling the system."

The resulting Bretton Woods Agreement created a new dollar-based monetary system, which incorporated some of the disciplinary advantages of the gold system while giving countries the flexibility they needed to manage temporary economic setbacks, which had led to the fall of the gold standard. The Bretton Woods Agreement lasted until 1971 and established several key features.

Fixed Exchange Rates

Fixed exchange rates are also sometimes called pegged rates. One of the critical factors that led to the fall of the gold standard was that after the United Kingdom abandoned its commitment to maintaining the value of the British pound, countries sought to peg their currencies to the US dollar. With the strength of the US economy, the gold supply in the United States increased, while many countries had less gold in reserve than they did currency in circulation. The Bretton Woods system worked to fix this by tying the value of the US dollar to gold but also by tying all of the other countries to the US dollar rather than directly to gold. The par value of the US dollar was fixed at $35 to one ounce of gold. All other countries then set the value of their currencies to the US dollar. In reflection of the changing times, the British pound had undergone a substantial loss in value and by that point, its value was $2.40 to £1. Member countries had to maintain the value of their currencies within 1 percent of the fixed exchange rate. Lastly, the agreement established that only governments, rather than anyone who demanded it, could convert their US dollar holdings into gold—a major improvement over the gold standard. In fact, most businesspeople eventually ignored the technicality of pegging the US dollar to gold and simply utilized the actual exchange rates between countries (e.g., the pound to the dollar) as an economic measure for doing business.

National Flexibility

To enable countries to manage temporary but serious downturns, the Bretton Woods Agreement provided for a devaluation of a currency—more than 10 percent if needed. Countries could not use this tool to competitively manipulate imports and exports. Rather, the tool was intended to prevent the large-scale economic downturn that took place in the 1930s.

Creation of the International Monetary Fund and the World Bank

In essence, the IMF's initial primary purpose was to help manage the fixed rate exchange system; it eventually evolved to help governments correct temporary trade imbalances (typically deficits) with loans. The World Bank's purpose was to help with post–World War II European reconstruction. Both institutions continue to serve these roles but have evolved into broader institutions that serve essential global purposes, even though the system that created them is long gone.

Collapse of Bretton Woods

Despite a fixed exchange rate based on the US dollar and more national flexibility, the Bretton Woods Agreement ran into challenges in the early 1970s. The US trade balance had turned to a deficit as Americans were importing more than they were exporting. Throughout the 1950s and 1960s, countries had substantially increased their holdings of US dollars, which was the only currency pegged to gold. By the late 1960s, many of these countries expressed concern that the US did not have enough gold reserves to exchange all of the US dollars in global circulation. This became known as the Triffin Paradox, named after the economist Robert Triffin, who identified this problem. He noted that the more dollars foreign countries held, the less faith they had in the ability of the US government to convert those dollars. Like banks, though, countries do not keep enough gold or cash on hand to honor all of their liabilities. They maintain a percentage, called a reserve. Bank reserve ratios are usually 10 percent or less. (The low reserve ratio has been blamed by many as a cause of the 2008 financial crisis.) Some countries state their reserve ratios openly, and most seek to actively manage their ratios daily with open-market monetary policies—that is, buying and selling government securities and other financial instruments, which indirectly controls the total money supply in circulation, which in turn impacts supply and demand for the currency.

The expense of the Vietnam War and an increase in domestic spending worsened the Triffin Paradox; the US government began to run huge budget deficits, which further weakened global confidence in the US dollar. When nations began demanding gold in exchange for their dollars, there was a huge global sell-off of the US dollar, resulting in the Nixon Shock in 1971.

The Nixon Shock was a series of economic decisions made by the US President Richard Nixon in 1971 that led to the demise of the Bretton Woods system. Without consulting the other member countries, on August 15, 1971, Nixon ended the free convertibility of the US dollar into gold and instituted price and wage freezes among other economic measures.

Later that same year, the member countries reached the Smithsonian Agreement, which devalued the US dollar to $38 per ounce of gold, increased the value of other countries' currencies to the dollar, and increased the band within which a currency was allowed to float from 1 percent to 2.25 percent. This agreement still relied on the US dollar to be the strong reserve currency and the persistent concerns over the high inflation and trade deficits continued to weaken confidence in the system. Countries gradually dropped out of system—notably Germany, the United Kingdom, and Switzerland, all of which began to allow their currencies to float freely against the dollar. The Smithsonian Agreement was an insufficient response to the economic challenges; by 1973, the idea of fixed exchange rates was over.

Before moving on, recall that the major significance of the Bretton Woods Agreement was that it was the first formal institution that governed international monetary systems. By having a formal set of rules, regulations, and guidelines for decision making, the Bretton Woods Agreement established a higher level of economic stability. International businesses benefited from the almost thirty years of stability in exchange rates. Bretton Woods established a standard for future monetary systems to improve on; countries today continue to explore how best to achieve this. Nothing has fully replaced Bretton Woods to this day, despite extensive efforts.

Post–Bretton Woods Systems and Subsequent Exchange Rate Efforts

When Bretton Woods was established, one of the original architects, Keynes, initially proposed creating an international currency called Bancor as the main currency for clearing. However, the Americans had an alternative proposal for the creation of a central currency called unitas. Neither gained momentum; the US dollar was the reserve currency. Reserve currency is a main currency that many countries and institutions hold as part of their foreign exchange reserves. Reserve currencies are often international pricing currencies for world products and services. Examples of current reserve currencies are the US dollar, the euro, the British pound, the Swiss franc, and the Japanese yen.

Many feared that the collapse of the Bretton Woods system would bring the period of rapid growth to an end. In fact, the transition to floating exchange rates was relatively smooth, and it was certainly timely: flexible exchange rates made it easier for economies to adjust to more expensive oil, when the price suddenly started going up in October 1973. Floating rates have facilitated adjustments to external shocks ever since.

The IMF responded to the challenges created by the oil price shocks of the 1970s by adapting its lending instruments. To help oil importers deal with anticipated current account deficits and inflation in the face of higher oil prices, it set up the first of two oil facilities

After the collapse of Bretton Woods and the Smithsonian Agreement, several new efforts tried to replace the global system. The most noteworthy regional effort resulted in the European Monetary System (EMS) and the creation of a single currency, the euro. While there have been no completely effective efforts to replace Bretton Woods on a global level, there have been efforts that have provided ongoing exchange rate mechanisms.

Jamaica Agreement

In 1976, countries met to formalize a floating exchange rate system as the new international monetary system. The Jamaica Agreement established a managed float system of exchange rates, in which currencies float against one another with governments intervening only to stabilize their currencies at set target exchange rates. This is in contrast to a completely free floating exchange rate system, which has no government intervention; currencies float freely against one another. The Jamaica Agreement also removed gold as the primary reserve asset of the IMF. Additionally, the purpose of the IMF was expanded to include lending money as a last resort to countries with balance-of-payment challenges.

The Gs Begin

In the early 1980s, the value of the US dollar increased, pushing up the prices of US exports and thereby increasing the trade deficit. To address the imbalances, five of the world's largest economies met in September 1985 to determine a solution. The five countries were Britain, France, Germany, Japan, and the United States; this group became known as the Group of Five, shortened to G5. The 1985 agreement, called the Plaza Accord because it was held at the Plaza Hotel in New York City, focused on forcing down the value of the US dollar through collective efforts.

By February 1987, the markets had pushed the dollar value down, and some worried it was now valued too low. The G5 met again, but now as the Group of Seven, adding Italy and Canada—it became known as the G7. The Louvre Accord, so named for being agreed on in Paris, stabilized the dollar. The countries agreed to support the dollar at the current valuation. The G7 continued to meet regularly to address ongoing economic issues.

The G7 was expanded in 1999 to include twenty countries as a response to the financial crises of the late 1990s and the growing recognition that key emerging-market countries were not adequately included in the core of global economic discussions and governance. It was not until a decade later, though, that the G20 effectively replaced the **G8**, which was made up of the original G7 and Russia. The European Union was represented in G20 but could not host or chair the group.

Keeping all of these different groups straight can be very confusing. The news may report on different groupings as countries are added or removed from time to time. The key point to remember is that anything related to a G is likely to be a forum consisting of finance ministers and governors of central banks who are meeting to discuss matters related to cooperating on an international monetary system and key issues in the global economy.

The G20 is likely to be the stronger forum for the foreseeable future, given the number of countries it includes and the amount of world trade it represents. "Together, member countries represent around 90 per cent of global gross national product, 80 per cent of world trade

Today's Exchange Rate System

While there is not an official replacement to the Bretton Woods system, there are provisions in place through the ongoing forum discussions of the G20. Today's system remains—in large part—a managed float system, with the US dollar and the euro jostling to be the premier global currency. For businesses that once quoted primarily in US dollars, pricing is now just as often noted in the euro as well.

Some smaller nations have chosen to voluntarily set exchange rates against the dollar while other countries have selected the euro. Usually a country makes the decision between the dollar and the euro by reviewing their largest trading partners. By choosing the euro or the dollar, countries seek currency stability and a reduction in inflation, among other various perceived benefits. Many countries in Latin America once dollarized to provide currency stability for their economy. Today, this is changing, as individual economies have strengthened and countries are now seeking to dedollarize.

Spotlight on Dollarizing and Dedollarizing in Latin America

Since the abandonment of the gold standard at the outbreak of WWI and the Bretton Woods Conference following WWII, some countries have been desperately seeking ways to promote global economic stability and hence their own prosperity. For the majority of these countries, the optimal way to obtain currency stability has been to peg the local currency to a major convertible currency. However, another option is to abandon the local currency in favor of the exclusive use of the U.S. dollar (or another major international currency, such as the euro). This is known as full dollarization.

HISTORY AND NEED OF INTERNATIONAL MONETARY SYSTEM

What Is the International Monetary System?" The fall of the gold standard led countries to raise trade barriers, devalue their currencies to compete against one another for export markets and curtail usage of foreign exchange by their citizens. All these factors led to declining world trade, high unemployment, and plummeting living standards in many countries. In 1944, the Bretton Woods Agreement established a new international monetary system. The creation of the International Monetary Fund (IMF) and the World Bank were two of its most enduring legacies.

The World Bank and the IMF, often called the Bretton Woods Institutions, are twin intergovernmental pillars supporting the structure of the world's economic and financial order. Both have taken on expanding roles, and there have been renewed calls for additional expansion of their responsibilities, particularly in the continuing absence of a single global monetary agreement. The two institutions may seem to have confusing or overlapping functions. However, while some similarities exist (see the following figure), they are two distinct organizations with different roles.

"Despite these and other similarities, however, the Bank and the IMF remain distinct. The fundamental difference is this: the Bank is primarily a *development* institution; the IMF is a *cooperative* institution that seeks to maintain an orderly system of payments and receipts between nations. Each has a different purpose, a distinct structure, receives its funding from different sources, assists different categories of members, and strives to achieve distinct goals through methods peculiar to itself.

International Monetary Fund
History and Purpose

The architects of the Bretton Woods Agreement, John Maynard Keynes and Harry Dexter White, envisioned an institution that would oversee the international monetary system, exchange rates, and international payments to enable countries and their citizens to buy goods and services from each other. They expected that this new global entity would ensure exchange rate stability and encourage its member countries to eliminate the exchange restrictions that hindered trade. Officially, the IMF came into existence in December 1945 with twenty-nine member countries. (The Soviets, who were at Bretton Woods, refused to join the IMF.)

In 1947, the institution's first formal year of operations, the French became the first nation to borrow from the IMF. Over the next thirty years, more countries joined the IMF, including some African countries in the 1960s. The Soviet bloc nations remained the exception and were not part of the IMF until the fall of the Berlin Wall in 1989. The IMF experienced another large increase in members in the 1990s with the addition of Russia; Russia was also placed on the IMF's executive committee. Today, 187 countries are members of the IMF; twenty-four of those countries or groups of countries are represented on the executive board.

The **purposes of the International Monetary Fund** are as follows:

1. To promote international monetary cooperation through a permanent institution which provides the machinery for consultation and collaboration on international monetary problems.
2. To facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and maintenance of high levels of employment and real income and to the development of the productive resources of all members as primary objectives of economic policy.
3. To promote exchange stability, to maintain orderly exchange arrangements among members, and to avoid competitive exchange depreciation.
4. To assist in the establishment of a multilateral system of payments in respect of current transactions between members and in the elimination of foreign exchange restrictions which hamper the growth of world trade.
5. To give confidence to members by making the general resources of the Fund temporarily available to them under adequate safeguards, thus providing them with opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity.

In addition to financial assistance, the IMF also provides member countries with technical assistance to create and implement effective policies, particularly economic, monetary, and banking policy and regulations.

Special Drawing Rights (SDRs)

A Special Drawing Right (SDR) is basically an international monetary reserve asset. SDRs were created in 1969 by the IMF in response to the Triffin Paradox. The Triffin Paradox stated that the more US dollars were used as a base reserve currency, the less faith that countries had in the ability of the US government to convert those dollars to gold. The world was still using the Bretton Woods system, and the initial expectation was that SDRs would replace the US dollar as the global monetary reserve currency, thus solving the Triffin Paradox. Bretton Woods collapsed a few years later, but the concept of an SDR solidified. Today the value of an SDR consists of the value of four of the IMF's biggest members' currencies—the US dollar, the British pound, the Japanese yen, and the euro—but the currencies do not hold equal weight. SDRs are quoted in terms of US dollars. The basket, or group of currencies, is reviewed every five years by the IMF executive board and is based on the currency's role in international trade and finance. The following chart shows the current valuation in percentages of the four currencies.

Currency	Weighting
US dollar	44 percent

Currency	Weighting
Euro	34 percent
Japanese yen	11 percent
British pound	11 percent

The SDR is not a currency, but some refer to it as a form of IMF currency. It does not constitute a claim on the IMF, which only serves to provide a mechanism for buying, selling, and exchanging SDRs. Countries are allocated SDRs, which are included in the member country's reserves. SDRs can be exchanged between countries along with currencies. The SDR serves as the unit of account of the IMF and some other international organizations, and countries borrow from the IMF in SDRs in times of economic need.

The IMF's Current Role and Major Challenges and Opportunities
Criticism and Challenging Areas for the IMF

The IMF supports many developing nations by helping them overcome monetary challenges and to maintain a stable international financial system. Despite this clearly defined purpose, the execution of its work can be very complicated and can have wide repercussions for the recipient nations. As a result, the IMF has both its critics and its supporters. The challenges for organizations like the the IMF and the World Bank center not only on some of their operating deficiencies but also on the global political environment in which they operate. The IMF has been subject to a range of criticisms that are generally focused on the conditions of its loans, its lack of accountability, and its willingness to lend to countries with bad human rights records.

These criticisms include the following:

1. **Conditions for loans.** The IMF makes the loan given to countries conditional on the implementation of certain economic policies, which typically include the following:
   - Reducing government borrowing (higher taxes and lower spending)
   - Higher interest rates to stabilize the currency
   - Allowing failing firms to go bankrupt
   - Structural adjustment (privatization, deregulation, reducing corruption and bureaucracy)

The austere policies have worked at times but always extract a political toll as the impact on average citizens is usually quite harsh. Some suggest that the loan conditions are "based on what is termed the '**Washington Consensus**,' focusing on liberalisation—of trade, investment and the financial sector—, deregulation and privatisation of nationalised industries. Often the conditionalities are attached without due regard for the borrower countries' individual circumstances and the prescriptive recommendations by the World Bank and IMF fail to resolve the economic problems within the countries. IMF conditionalities may additionally result in the loss of a state's authority to govern its own economy as national economic policies are predetermined under IMF packages.

1. **Exchange rate reforms.** "When the IMF intervened in Kenya in the 1990s, they made the Central bank remove controls over flows of capital. The consensus was that this decision made it easier for corrupt politicians to transfer money out of the economy (known as the Goldman scandal). Critics argue this is another example of how the IMF failed to understand the dynamics of the country that they were dealing with—insisting on blanket reforms.
2. **Devaluations.** In the initial stages, the IMF has been criticized for allowing inflationary devaluations.
3. **Free-market criticisms of the IMF.** "Believers in free markets argue that it is better to let capital markets operate without attempts at intervention. They argue attempts to influence exchange rates only make things worse—it is better to allow currencies to reach their market level. They also assert that bailing out countries with large debts is morally hazardous; countries that know that there is always a bailout provision will borrow and spend more recklessly.
4. **Lack of transparency and involvement.** The IMF has been criticized for "imposing policy with little or no consultation with affected countries.
5. **Supporting military dictatorships.** The IMF has been criticized over the decades for supporting military dictatorships.

Opportunities and Future Outlook for the IMF

The 2008 global economic crisis is one of the toughest situations that the IMF has had to contend with since the Great Depression.

For most of the first decade of the twenty-first century, global trade and finance fueled a global expansion that enabled many countries to repay any money they had borrowed from the IMF and other official creditors. These countries also used surpluses in trade to accumulate foreign exchange reserves. The global economic crisis that began with the 2007 collapse of mortgage lending in the United States and spread around the world in 2008 was preceded by large imbalances in global capital flows. Global capital flows fluctuated between 2 and 6 percent of world GDP between 1980 and 1995, but since then they have risen to 15 percent of GDP. The most rapid increase has been experienced by advanced economies, but emerging markets and developing countries have also become more financially integrated.

The founders of the Bretton Woods system had taken for granted that private capital flows would never again resume the prominent role they had in the nineteenth and early twentieth centuries, and the IMF had traditionally lent to members facing current account difficulties. The 2008 global crisis uncovered fragility in the advanced financial markets that soon led to the worst global downturn since the Great Depression. Suddenly, the IMF was inundated with requests for standby arrangements and other forms of financial and policy support.

The international community recognized that the IMF's financial resources were as important as ever and were likely to be stretched thin before the crisis was over. With broad support from creditor countries, ***the IMF's lending capacity tripled to around $750 billion***. To use those funds effectively, the IMF overhauled its lending policies. It created a flexible credit line for countries with strong economic fundamentals and a track record of successful policy implementation. Other reforms targeted low-income countries. These factors enabled the IMF to disburse very large sums quickly; the disbursements were based on the needs of borrowing countries and were not as tightly constrained by quotas as in the past.

Many observers credit the IMF's quick responses and leadership role in helping avoid a potentially worse global financial crisis. As in case on Greece, the IMF has played a role in helping countries avert widespread financial disasters. The IMF's requirements are not always popular but are usually effective, which has led to its expanding influence. The IMF has sought to correct some of the criticisms; the fund's strengths and opportunities include the following:

1. **Flexibility and speed.** "In March 2009, the IMF created the Flexible Credit Line (FCL), which is a fast-disbursing loan facility with low conditionality aimed at reassuring investors by injecting liquidity…Traditionally, IMF loan programs require the imposition of austerity measures such as raising interest rates that can reduce foreign investment…In the case of the FCL, countries qualify for it not on the basis of their promises, but on the basis of their history. Just as individual borrowers with good credit histories are eligible for loans at lower interest rates than their risky counterparts, similarly, countries with sound macroeconomic fundamentals are eligible for drawings under the FCL.
2. **Cheerleading.** "The Fund is positioning itself to be less of an adversary and more of a cheerleader to member countries. For some countries that need loans more for reassurance than reform, This enables more domestic political and economic stability.
3. **Adaptability.** "Instead of providing the same medicine to all countries regardless of their particular problems, the new loan facilities are intended to aid reform-minded governments by providing short-term resources to reassure investors. In this manner, they help politicians in developing countries manage the downside costs of integration
4. **Transparency.** The IMF has made efforts to improve its own transparency and continues to encourage its member countries to do so. Supporters note that this creates a barrier to any one or more countries that have more geopolitical influence in the organization. In reality, the major economies continue to exert influence on policy and implementation.

To underscore the global expectations for the IMF's role, China, Russia, and other global economies have renewed calls for the G20 to replace the US dollar as the international reserve currency with a new global system controlled by the IMF.

Experts agree that the goal should be to create a reserve currency that is disconnected from individual nations and is able to remain stable in the long run, thus removing the inherent deficiencies caused by using credit-based national currencies. "'This is a clear sign that China, as the largest holder of US dollar financial assets, is concerned about the potential inflationary risk of the US Federal Reserve printing money, "The outbreak of the [current] crisis and its spillover to the entire world reflected the inherent vulnerabilities and systemic risks in the existing international monetary system,

China has little choice but to hold the bulk of its $2,000bn of foreign exchange reserves in US dollars, and this is unlikely to change in the near future.

To replace the current system, it is suggested that the role of special drawing rights be expanded, which were introduced by the IMF in 1969 to support the Bretton Woods fixed exchange rate regime but became less relevant once that collapsed in the 1970s….

China is politically and economically motivated to recommend an alternative reserve currency. Politically, the country whose currency is the reserve currency is perceived as the dominant economic power. Economically, China has come under increasing global pressure to increase the value of its currency, the **RENMINBI.**

The World Bank and the World Bank Group

History and Purpose

The World Bank came into existence in 1944 at the Bretton Woods conference. Its formal name is the International Bank for Reconstruction and Development (IBRD), which clearly states its primary purpose of financing economic development. The World Bank's first loans were extended during the late 1940s to finance the reconstruction of the war-ravaged economies of Western Europe. When these nations recovered some measure of economic self-sufficiency, the World Bank turned its attention to assisting the world's poorer nations. The World Bank has one central purpose: to promote economic and social progress in developing countries by helping raise productivity so that their people may live a better and fuller life:

- Today, The World Bank consists of two main bodies, the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA), established in 1960.
- The World Bank is part of the broader World Bank Group, which consists of five interrelated institutions: the IBRD; the IDA; the International Finance Corporation (IFC), which was established in 1956; the Multilateral Investment Guarantee Agency (MIGA), which was established in 1988; and the International Centre for Settlement of Investment Disputes (ICSID), which was established in 1966.

These additional members of the World Bank Group have specific purposes as well.

- The IDA typically provides interest-free loans to countries with sovereign guarantees.
- The IFC provides loans, equity, risk-management tools, and structured finance. Its goal is to facilitate sustainable development by improving investments in the private sector.
- The MIGA focuses on improving the foreign direct investment of developing countries.
- The ICSID provides a means for dispute resolution between governments and private investors with the end goal of enhancing the flow of capital.

The current primary focus of the World Bank centers on six strategic themes:

1. **The poorest countries.** Poverty reduction and sustainable growth in the poorest countries, especially in Africa.
2. **Postconflict and fragile states.** Solutions to the special challenges of postconflict countries and fragile states.
3. **Middle-income countries.** Development solutions with customized services as well as financing for middle-income countries.
4. **Global public goods.** Addressing regional and global issues that cross national borders, such as climate change, infectious diseases, and trade.
5. **The Arab world.** Greater development and opportunity in the Arab world.
6. **Knowledge and learning.** Leveraging the best global knowledge to support development.“

The World Bank provides low-interest loans, interest-free credits, and grants to developing countries. There’s always a government (or “sovereign”) guarantee of repayment subject to general conditions. The World Bank is directed to make loans for projects but never to fund a trade deficit. These loans must have a reasonable likelihood of being repaid. The IDA was created to offer an alternative loan option. IDA loans are free of interest and offered for several decades, with a ten-year grace period before the country receiving the loan needs to begin repayment. These loans are often called soft loans.

GENERATION OF FUNDS - Since it issued its first bonds in 1947, the IBRD generates funds for its development work through the international capital markets. The World Bank issues bonds, typically about $25 billion a year. These bonds are rated **AAA (the highest possible rating**) because they are backed by member states’ shared capital and by borrowers’ sovereign guarantees. Because of the **AAA credit rating**, the World Bank is able to borrow at relatively low interest rates. This provides a cheaper funding source for developing countries, as most developing countries have considerably low credit ratings. The World Bank charges a fee of about 1 percent to cover its administrative overheads.

What Are the World Bank’s Current Role and Major Challenges and Opportunities?

Like the IMF, the World Bank has both its critics and its supporters. The criticisms of the World Bank extend from the challenges that it faces in the global operating environment. Some of these challenges have complicated causes; some result from the conflict between nations and the global financial crisis. The following are four examples of the world’s difficult needs that the World Bank tries to address:

1. **Even in 2010, over 3 billion people lived on less than $2.50 a day.**
2. At the start of the twenty-first century, almost a billion people couldn’t read a book or sign their names.
3. Less than 1 percent of what the world spends each year on weapons would have put every child into school by the year 2000, but it didn’t happen.
4. Fragile states such as Afghanistan, Rwanda, and Sri Lanka face severe development challenges: weak institutional capacity, poor governance, political instability, and often ongoing violence or the legacy of past conflict.

World Bank is criticized primarily for the following reasons:

- **Administrative incompetence.** The World Bank and its lending practices are increasingly scrutinized, with critics asserting that "the World Bank has shifted from being a 'lender of last resort' to an international welfare organization," resulting in an institution that is "bloated, incompetent, and even corrupt." Also incriminating is that "the bank's lax lending standards have led to a rapidly deteriorating loan portfolio.
- **Rewarding or supporting inefficient or corrupt countries.** The bank's lending policies often reward macroeconomic inefficiency in the underdeveloped world, allowing inefficient nations to avoid the types of fundamental reforms that would in the long run end poverty in their countries. Many analysts note that the best example is to compare

The fantastic growth in East Asia to the deplorable economic conditions of Africa. In 1950 the regions were alike—South Korea had a lower per capita GDP than Nigeria. But by pursuing macroeconomic reforms, high savings, investing in education and basic social services, and opening their economies to the global trading order, the "Pacific Tigers" have been able to lift themselves out of poverty and into wealth with very little help from the World Bank. Many countries in Africa, however, have relied primarily on multilateral assistance from organizations like the World Bank while avoiding fundamental macroeconomic reforms, with deplorable but predictable results.

Conservatives point out that the World Bank has lent more than $350 billion over a half-century, mostly to the underdeveloped world, with little to show for it. One study argued that of the sixty-six countries that received funding from the bank from 1975 to 2000, well over half were no better off than before, and twenty were actually worse off. The study pointed out that Niger received $637 million between 1965 and 1995, yet its per capita GNP had fallen, in real terms, more than 50 percent during that time. In the same period Singapore, which received one-seventh as much World Bank aid, had seen its per capita GNP increase by more than 6 percent a year.

  - **Focusing on large projects rather than local initiatives.** Some critics claim that World Bank loans give preference to "large infrastructure projects like building dams and electric plants over projects that would benefit the poor, such as education and basic health care." The projects often destroy the local environment, including forests, rivers, and fisheries. Some estimates suggest "that more than two and a half million people have been displaced by projects made possible through World Bank loans."
  - Failed projects, argue environmentalists and anti-globalization groups, are particularly illustrative:
  - "The Sardar Sarovar dam on the Narmada River in India was expected to displace almost a quarter of a million people into squalid resettlement sites.
- **Negative influence on theory and practice.** As one of the two Bretton Woods Institutions, the World Bank plays a large role in research, training, and policy formulation. Critics worry that because "the World Bank and the IMF are regarded as experts in the field of

financial regulation and economic development, their views and prescriptions may undermine or eliminate alternative perspectives on development

- **Dominance of G7 countries.** The industrialized countries dominate the World Bank (and IMF) governance structures. Decisions are typically made and policies implemented by these leading countries—the G7—because they are the largest donors, some suggest without sufficient consultation with poor and developing countries.

Opportunities and Future Outlook for the World Bank

As vocal as the World Bank's critics are, so too are its supporters. The World Bank is praised by many for engaging in development projects in remote locations around the globe to improve living standards and reduce poverty. The World Bank's current focus is on helping countries achieve the Millennium Development Goals (MDGs), which are eight international development goals, established in 2000 at the Millennium Summit, that all 192 United Nations member states and twenty-three international organizations have agreed to achieve by the year 2015. They include reducing extreme poverty, reducing child mortality rates, fighting disease epidemics such as AIDS, and developing a global partnership for development. The World Bank is focused on the following four key issues:

1. **Increased transparency.** In response to the criticisms over the decades, the World Bank has made progress. More of the World Bank's decision making and country assessments are available publicly. The World Bank has continued to work with countries to combat corruption both at the country and bank levels.
2. **Expanding social issues in the fight on poverty.** In 2001, the World Bank began to incorporate gender issues into its policy. "Two years later the World Bank announced that it was starting to evaluate all of its projects for their effects on women and girls," noting that "poverty is experienced differently by men and women" and "a full understanding of the gender dimensions of poverty can significantly change the definition of priority policy and program interventions."
3. **Improvements in countries' competitiveness and increasing exports.** The World Bank's policies and its role as a donor have helped improve the ability of some countries to secure more of the global revenues for basic commodities. In Rwanda, for example, reforms transformed the country's coffee industry and increased exports. Kenya has expanded its exports of cut flowers, and Uganda has improved its fish-processing industry. World Bank efforts have also helped African financial companies develop.
4. **Improving efficiencies in diverse industries and leveraging the private sector.** The World Bank has worked closely with businesses in the private sector to develop local infrastructure, including power, transportation, telecommunications, health care, and education. In Afghanistan, for example, small dams are built and maintained by the locals themselves to support small industries processing local produce.

The World Bank continues to play an integral role in helping countries reduce poverty and improve the well-being of their citizens. World Bank funding provides a resource to countries to utilize the services of global companies to accomplish their objectives.

CHAPTER: 7- STATE OF INDIAN ECONOMY

History of the Indian economy

The **economic history of India** begins with the Indus Valley Civilisation (3300–1300 BCE), whose economy appears to have depended significantly on trade and examples of overseas trade. The Vedic period saw countable units of precious metal being used for exchange. The term *Nishka* appears in this sense in the Rigveda. Historically, India was the largest economy in the world for most of the next three millennia, starting around the 1st millennia BCE and ending around the beginning of British rule in India.

Around 600 BCE, the Mahajanapadas minted punch-marked silver coins. The period was marked by intensive trade activity and urban development. By 300 BCE, the Maurya Empire had united most of the Indian subcontinent except Tamilakam, which was ruled by Three Crowned Kings. The resulting political unity and military security allowed for a common economic system and enhanced trade and commerce, with increased agricultural productivity.

The Maurya Empire was followed by classical and early medieval kingdoms, including the Cholas, Pandyas, Cheras, Guptas, Western Gangas, Harsha, Palas, Rashtrakutas and Hoysalas. The Indian subcontinent had the largest economy of any region in the world for most of the interval between the 1st century and 18th century. Up until 1000 CE, its GDP per capita was not much higher than subsistence level.

India experienced per-capita GDP growth in the high medieval era after 1000 CE, during the Delhi Sultanate in the north and Vijayanagara Empire in the south, but was not as productive as Ming China until the 16th century. By the late 17th century, most of the Indian subcontinent had been reunited under the Mughal Empire, which became the largest economy and manufacturing power in the world, producing about a quarter of global GDP, before fragmenting and being conquered over the next century.[8] Bengal Subah, the empire's wealthiest province, that solely accounted for 40% of Dutch imports outside the west, had an advanced, productive agriculture, textile manufacturing and shipbuilding, in a period of proto-industrialization.

By the 18th century, the Mysoreans had embarked on an ambitious economic development program that established the Kingdom of Mysore as a major economic power. Sivramkrishna analyzing agricultural surveys conducted in Mysore by Francis Buchanan in 1800-1801, arrived at estimates, using "subsistence basket", that aggregated millet income could be almost five times subsistence level.[13] The Maratha Empire also managed an effective administration and tax collection policy throughout the core areas under its control and extracted chauth from vassal states.[14]

India experienced de-industrialisation and cessation of various craft industries under British rule, which along with fast economic and population growth in the Western world, resulted in India's share of the world economy declining from 24.4% in 1700 to 4.2% in 1950, and its share of global industrial output declining from 25% in 1750 to 2% in 1900. Due to its ancient history as a trading zone and later its colonial status, colonial India remained economically integrated with the world, with high levels of trade, investment and migration.

The Republic of India, founded in 1947, adopted central planning for most of its independent history, with extensive public ownership, regulation, red tape and trade barriers.[18][19] After the 1991 economic crisis, the central government began policy of economic liberalisation. While this has made it one of the world's fastest growing large economies, it has come at the cost of deepening income inequality.

Economy since 1947:

India's independence was in itself a turning point in its economic history. The country was hopelessly poor as a result of steady deindustrialization by Britain. Less than a sixth of Indians were literate. The abject poverty and sharp social differences had cast doubts on India's survival as one nation. Cambridge historian Angus Maddison's work shows that India's share of world income shrank from 22.6% in 1700—almost equal to Europe's share of 23.3%—to 3.8% in 1952. As former prime minister Manmohan Singh put it: "The brightest jewel in the British Crown" was the poorest country in the world in terms of per capita income at the beginning of the 20th century.

India's economic model: the state's primacy over individual enterprise

Prime minister Jawaharlal Nehru's development model envisaged a dominant role of the state as an all-pervasive entrepreneur and financier of private businesses. The Industrial Policy Resolution of 1948 proposed a mixed economy. Earlier, the Bombay Plan, proposed by eight influential industrialists including J.R.D Tata and G.D. Birla, envisaged a substantial public sector with state interventions and regulations in order to protect indigenous industries. The political leadership believed that since planning was not possible in a market economy, the state and public sector would inevitably play a leading role in economic progress.

The very first budget, and the defence of fiscal federalism

A lawyer, economist and politician who served as independent India's first finance minister, R.K. Shanmukham Chetty tabled the country's first Union budget in Parliament on 26 November 1947. He was also India's delegate to the World Monetary Conference at Bretton Woods in 1944, a consequential gathering of economists towards the fag end of World War II which set up the global financial architecture that governs the world to this day. In the Constituent Assembly, Chetty made several interventions in defence of fiscal federalism, an issue which would prove significant for his home state of Tamil Nadu in the decades ahead.

Planning, commissioning, executing the programme to hasten growth

India set up the Planning Commission in 1950 to oversee the entire range of planning, including resource allocation, implementation and appraisal of five-year plans. The five-year plans were centralized economic and social growth programmes modelled after those prevalent in the USSR. India's first five-year plan, launched in 1951, focused on agriculture and irrigation to boost farm output as India was losing precious foreign reserves on foodgrain imports. It was based on the Harrod-Domar model that sought to boost economic growth through higher savings and investments. The plan was a success, with the economy growing at an annualized 3.6%, beating the target of 2.1%.

The free-market proponent who cried wolf on policy—but was proved right

A student of the libertarian economist F.A. Hayek, B.R. Shenoy was an influential early advocate of free market liberalism. In a celebrated dissent note, he warned that the second five-year plan's dependence on deficit financing to promote "heavy industrialization" was a recipe for trouble. Government control over the economy would undermine a young democracy, he said. Shenoy was proved right when India faced an external payments crisis a year after the plan period began. He was also critical of the Nehru government's penchant for import substitution. Though ignored in his lifetime, his ideas outlived him and became part of India's mainstream economic doctrine.

The man who gave India modern statistics and the swadeshi spirit

The second five-year plan (1956-61) laid the foundation for economic modernization to better serve India's long-term growth imperatives. Launched in 1956, it was based on the Mahalanobis model that advocated rapid industrialization with a focus on heavy industries and capital goods. Prasanta Chandra Mahalanobis was perhaps the single most important individual in directing Indian development planning. He was the chief adviser to the commission from 1955, founded the Indian Statistical Institute, and is considered the father of modern statistics in India. The Mahalanobis plan was, in a way, an invocation of the spirit of swadeshi or self-reliance.

After throwing off the yoke of the British Raj, the licence Raj begins

The second five-year Plan and the Industrial Policy Resolution 1956 (long considered the economic constitution of India) paved the way for the development of the public sector and ushered in the licence Raj. The resolution set out as national objective the establishment of a socialist pattern of society. It also categorized industries into three groups. Industries of basic and strategic importance were to be exclusively in the public sector. The second group comprised industries that were to be incrementally state-owned. The third, comprising mostly consumer industries, was left for the private sector. The private sector, however, was kept on a tight leash through a system of licences.

Bad stock and the story of India's first big financial scam

More than 60 years ago, a debate in the Lok Sabha exposed a nexus between the bureaucracy, stock market speculators, and small businessmen. The subject was the Mundhra scandal, free India's first big financial scam, raised by Feroze Gandhi, Nehru's son-in-law. Gandhi had found evidence that under governmental pressure, Life Insurance Corporation had bought fraudulent stock worth ₹1.24 crore—the largest investment the public-sector entity had made in its short history—in six companies owned by Kolkata-based Haridas Mundhra, without mandatory consultation with its investment committee. It led to the resignation of then finance minister T. T. Krishnamachari.

From Bhakra-Nangal to Bhilai, the temples of a modern India

Nehru identified power and steel as the key bases for planning. He described the 680ft Bhakra multi-purpose project on the Sutlej river in Himachal Pradesh as the new temple of a resurgent India. The politics of big dams aside, the huge Bhakra-Nangal dams are among several hydel projects India built to light up homes, run factories, and irrigate crops. The second plan set a target to produce 6 million tonnes of steel. Germany was contracted to build a steel plant in Rourkela, while Russia and Britain would build one each in Bhilai and Durgapur, respectively. The Indian Institutes of Technology and the Atomic Energy Commission were the other “modern temples".

The onset of economic troubles and the death of a nation builder

The quest to quickly industrialize had caused a large reallocation of funds away from the farm sector. Agriculture outlay was nearly halved to 14% in the second Plan. Food shortages worsened, and inflation spiked. Imports of foodgrains depleted precious foreign exchange reserves. Chakravarti “Rajaji" Rajagopalachari, a one-time-friend-turned-critic of Nehru, was a staunch proponent of economic freedom. He fell out with Nehru on the question of excessive state involvement in the economy. On 27 May 1964, Nehru died, but, despite criticism then and in later years, he had cemented his legacy as a modernizer.

It took a war hero to rethink the direction of India’s policymaking

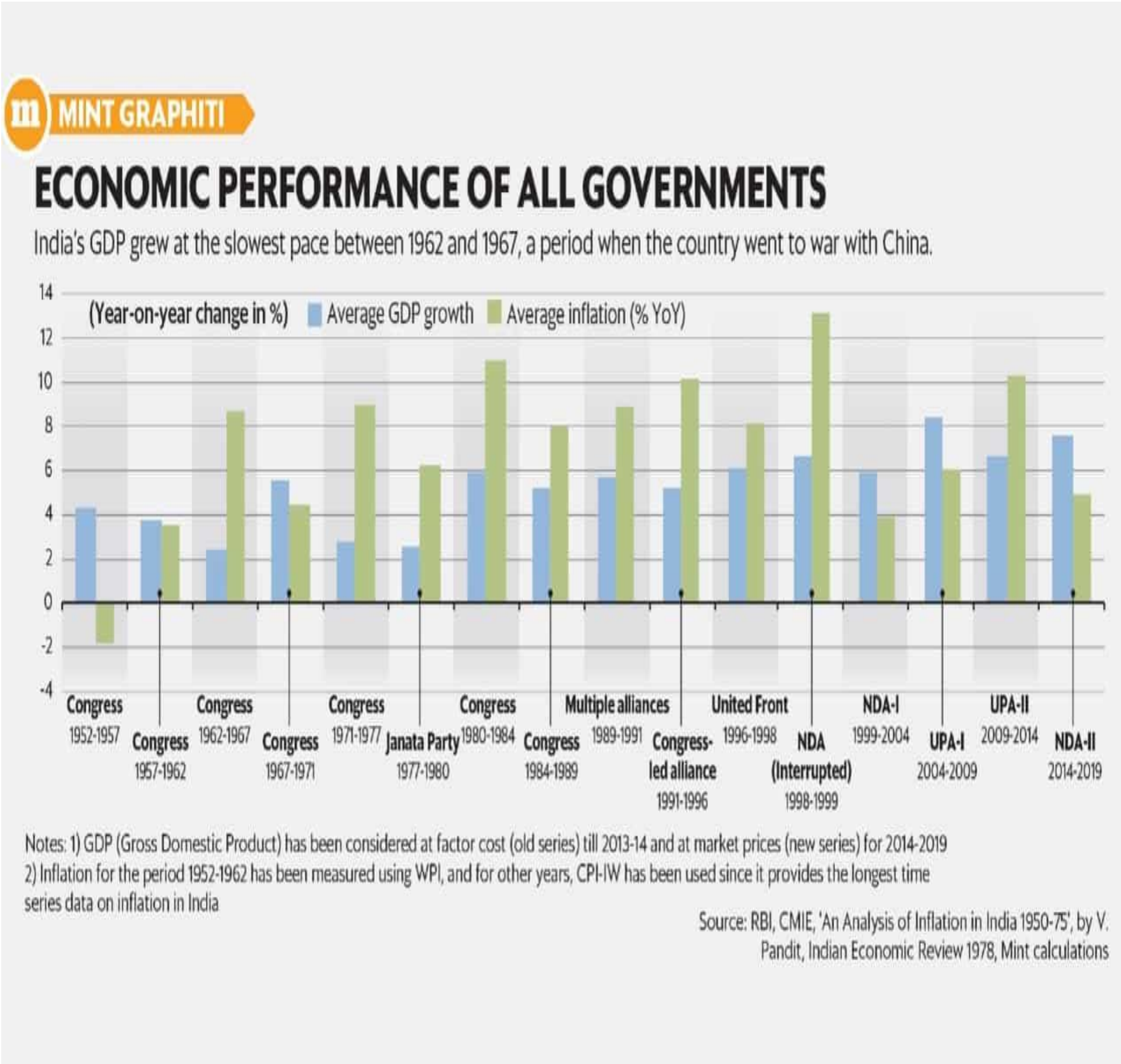
Lal Bahadur Shastri, a minister without portfolio in Nehru’s cabinet, succeeded him as prime minister on 9 June 1964. The war with China had exposed India’s economic weakness. Chronic food shortages and price rise convinced him that India needed to move away from centralized planning and price controls. He renewed focus on agriculture, accepted a larger role for private enterprise and foreign investment, and trimmed the erstwhile Planning Commission’s role. India’s victory over Pakistan in the 1965 war gave him the political capital to consider economic reforms of the kind that took place 25 years later, P.N. Dhar wrote in Indira Gandhi, The ‘Emergency’ And Indian Democracy.

After the Green Revolution, the shift towards an Evergreen Revolution

Shastri’s focus on food security arose from the fact that in the 1960s, India was on the verge of a mass famine. Food aid imports from the US, on which the country was reliant, were beginning to hit India’s foreign policy autonomy. That was when geneticist M.S. Swaminathan, along with Norman Borlaug and other scientists, stepped in with high-yield variety seeds of wheat, setting off what came to be known as the Green Revolution. Swaminathan is now an advocate for moving India towards sustainable development. He champions environmentally sustainable agriculture, sustainable food security and the preservation of biodiversity. He calls this an “evergreen revolution".

Getting the bread and butter of the dairy business right

Following the success of the Green Revolution, Shastri turned his attention to the dairy sector, particularly the cooperative movement in Gujarat’s Anand, led by Verghese Kurien. He helped Kaira District Co-operative Milk Producers’ Union Ltd expand its work, ushering in the White Revolution. In the years that followed, the government’s Operation Flood led to a rapid increase in milk production. Self-sufficiency in the dairy sector was achieved entirely through the cooperative movement, which has spread to more than 12 million dairy farmers across the country. Decades later, Amul, the brand started by cooperative farmers in Anand, remains a market leader.



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A shaky economy forces annual plans in place of the five-year plan

India suspended five-year plans briefly, drawing up annual plans between 1966 and 1969 instead. This was done as the country was not in a position to commit resources over a longer period. The war with China, the below-par growth outcomes of the third Plan, and the diversion of capital to finance the war with Pakistan had left the economy severely weakened. The vital monsoon rains had once again played truant during the 1966-67 season, worsening food shortages and causing a sharp spike in inflation. The constant need to import foodgrains or seek foreign aid also posed a serious risk to India's political economy.

The state's takeover of banks opens a new account

The 1960s was a decade of multiple economic and political challenges for India. Two wars had caused hardships for the masses. The death of Nehru and Shastri in quick succession had caused political instability and triggered jockeying for power within the Congress. Indira Gandhi's rupee devaluation had led to a general price rise. The result? Congress returned to power with a truncated majority after the 1967 general elections and the party lost power in seven states. In response, Gandhi nationalized 14 private banks on 20 July 1969. The main aim of the move was to accelerate bank lending to agriculture at a time when big businesses cornered large chunks of the credit flow.

The effect of making political gains from economic moves

Gandhi's draconian move, aimed at aligning the banking sector with the goals of socialism, had made her the darling of the masses. Bank nationalization helped boost farm credit and lending to other priority sectors. Financial savings jumped as banks were made to open branches in rural areas. Without competition, however, the lenders became complacent. Further, politically-influenced lending decisions led to crony capitalism. These banks competed to please their political bosses, instead of focusing on project appraisals. Today, state-owned banks are creaking under a nearly ₹10-trillion mountain of bad loans, which represent about 90% of the total dud loans.

Indira Gandhi's move on the rupee and the effect it had on Gulf nations

On 6 June 1966, Indira Gandhi took the drastic step of devaluing the Indian rupee by a sharp 57%. The rupee fell to 7.50 per US dollar from 4.76. This was done to counter India's significant balance of payments crisis. The country's apathy to foreign investments and neglect of the exports sector meant that it ran constant trade deficits. The devaluation aimed to boost exports amid limited access to foreign exchange. Instead, it accelerated inflation and drew wide criticism. India's move had implications for other countries as well. Oman, Qatar and the UAE, which used the Reserve Bank of India-issued Gulf rupee, had to come up with their own currencies.

The Janata years: Demonetization 1.0 and the exit of Coca-Cola

Angry Indians punished Indira Gandhi for imposing Emergency. The Janata Party came to power after the 1977 elections. Prime Minister Morarji Desai withdrew the legal-tender status of ₹1,000, ₹5,000 and ₹10,000 banknotes in a crackdown on illicit wealth. The legalization of strikes, outlawed by Gandhi, and reinstatement of trade unions affected economic activity. George Fernandes, the symbol of resistance during Emergency, was made industries minister. He insisted IBM and Coca-Cola comply with the Foreign Exchange Regulation Act that mandated foreign investors cannot own over 40% in Indian enterprises. The two multinationals shut their India operations.

Indira Gandhi returns, this time with a reformist bent of mind

Indira Gandhi returned to power in 1980 after the Janata Party government, riddled with inherent contradictions, unravelled. Gandhi, a left-leaning populist until the 1970s, initiated big-ticket economic reforms in order to secure an International Monetary Fund loan. The sixth five-year plan (1980-85), in essence, pledged to undertake a string of measures aimed at boosting the economy's competitiveness. This meant the removal of price controls, initiation of fiscal reforms, a revamp of the public sector, reductions in import duties, and de-licensing of the domestic industry, or in other words ending the licence Raj.

Amartya Sen: new measures for problems of inequity, welfare
Known and feted internationally for his work on welfare economics, Amartya Sen has been working in India, the US and the UK since the 1970s. In 1998, he received the Nobel Prize in Economic Sciences. He's long been a critic of India's model of development that tends to ignore the needs of the bottom of the pyramid. Now a professor at Harvard, his popular books such as *The Argumentative Indian* made economics accessible to the ordinary reader. He proved that gross national product was not enough to assess the standard of living, a finding that led to the creation of the UN Human Development Index, now the most authoritative source to compare welfare of countries.

A small car that drove the rise of a new middle class and consumption
In 1983, the first Maruti car rolled off the assembly line in Gurgaon. Prime minister Indira Gandhi handed over its keys to Delhi's Harpal Singh that November. It was a project mired in controversy—conceptualized by Indira's son Sanjay, but so ridden with flaws that the government finally signed a joint venture with Suzuki of Japan to produce the vehicle. It was a real people's car—fuel efficient, affordable and easy to drive, a far cry from the clunky cars Indians were used to till then. The Maruti 800 and the demand for it signalled the rise of a new Indian middle class. It would take 20 years for a similar revolution to disrupt aviation—courtesy Air Deccan.

The fiscal deficit as a permanent feature on India's economic map
Acritical feature of the Indian economy has always been its high fiscal deficit—an outcome of the government spending more than its income. Much of the government spending is on servicing interest cost of borrowings; defence; pensions; subsidizing food, fertilizer and fuel consumption; and schemes directed at housing, poverty, health and cleanliness. A large portion of the government's capital remains locked up in its own companies and holdings, which it is unable to sell. The Indian economy, thus, continues to suffer from good capital chasing bad, and a lack of political will to implement bold reforms.

The economist with policy ideas ahead of their time
The first Asian woman to get a PhD in Economics from Harvard back in 1960, Padma Desai is best known for a critique of India's erstwhile planned economy. Her early 1970s book, co-authored with husband and fellow economist Jagdish Bhagwati, on India's industrial and trade policies had a profound impact on professional thinking and policymaking in India in the 1970s. Manmohan Singh, after becoming prime minister in the 2000s, would go so far as to say: "When in 1991 our government undertook sweeping reforms in our industrial and trade policies, we were only implementing ideas that Jagdish and Padma wrote about two decades earlier."

The golden moment that brought down the last pillars of socialist India
The signs pointing to India's 1991 economic crisis, its worst ever, were long evident. The country, for the first time, had to sell 20 tonnes of gold to investment bank UBS on 30 May that year to secure a $240 million loan. It pledged gold three more times after that sale, shipping 46.8 million tonnes of the yellow metal to secure $400 million in loans from Bank of England and Bank of Japan. All this gold was repurchased by December that year. The Narasimha Rao-led government with Manmohan

Singh as finance minister took over on 21 June 1991 and launched a raft of economic reforms, including the dismantling of the licence Raj.

two-day operation to lower the value of the rupee

The rupee was devalued for the first time by 57% on 6 June 1966 to shore up exports. The move was triggered by the 1965 Indo-Pak war, after which the US withdrew aid to India. The next devaluation, however, proved to be far more eventful: On 1 July 1991, the Reserve Bank of India lowered the value of the currency by 9%, and then by 11% just two days later. This was when the economy was facing its worst crisis, and the country's foreign exchange reserves could pay for only three weeks of imports. Devaluation is no longer a real option for governments and policymakers as exchange rates are determined by markets. Currency value is now calibrated by the central bank.

Reformist returns as a champion of redistributive economics

Finance minister in 1991, Manmohan Singh became prime minister in 2004 but he was not quite the same reformer. His government launched the Mahatma Gandhi National Rural Employment Guarantee Scheme in February 2006 in 200 most backward districts, which was later expanded to cover all rural districts. The scheme aimed to enhance livelihood security by providing at least 100 days of guaranteed wage employment in a fiscal year to every rural household whose adult members volunteer to do unskilled manual work. The 10 years when Singh was prime minister were also a time of high growth and expansion of the economy as loan rates softened.

Of bulls, bears and market watchdogs: A cautionary tale

In liberalizing India, investments in the stock market became a means to make a quick buck as well as compensate for falling savings rates—and with this boom came white-collar crime and strengthened regulations. In April 1992, Indians were introduced to the term 'stock market scam' when stockbroker 'Big Bull' Harshad Mehta was caught using the government bond market to fund his purchases. It was a scam pegged at ₹4,025 crore, and accelerated the rise of the Securities and Exchange Board of India as it exists today. This and subsequent scandals led regulators to tighten the screws, bring more transparency, and use technology to eventually reform Indian markets.

Clubbing together for a fight that didn't really happen

After 1991, the Indian state tried to shed its diffidence about foreign capital and attract investments. The 'Bombay Club', an informal grouping of politically connected, old-school Indian industrialists who felt threatened by deep-pocketed multinationals, sought protection from the government and got some allowances. The club—whose face was Rahul Bajaj—represented a sense of insecurity and a desire for status quo, the struggle between the entrenched and the innovative. But in time, many of those who stridently opposed reforms have built themselves into stronger and bigger companies, competing with global leaders in their segments.

Sowing the seeds for the nation's economic growth surge

In the Union budget for 1999-2000,went for —disinvestment in public sector enterprises and downsizing the government. privatization of state-owned companies to reduce subsidies increased focus on welfare. Through the rationalized interest rates,the housing boom, triggered India's growth surge.

Circumventing the sell-by date of public sector enterprises
Dependent on the support of the Left parties in the Lok Sabha, Manmohan Singh during the first United Progressive Alliance government (2004-2009) had no room to privatize public sector companies. With limited options to raise resources and an ever-expanding social sector budget, Singh resorted to selling 5% to 20% stake in state-run companies through initial public offerings or secondary issues. The government was able to raise funds without selling a majority stake in its firms, while increasing retail participation in the stock market. Now answerable to public shareholders, state-run firms are focusing on improving corporate governance and becoming cost-conscious.

The bellwether as the weather vane for the state of the economy
The rise of the Indian economy is best reflected in BSE's Sensex, the 30-share benchmark index. The 30 component companies represent all sectors of the economy. From 1,955.29 points in 1991, the year India ushered in economic reforms, the Sensex touched an all-time high of 50,312.07 points in 2020 with expectations of big-ticket reforms from a government with a massive majority driving the optimism. Even as rising taxation on capital gains continues to dog the markets, India, a country so far obsessed with cash-driven gold and real estate, is slowly veering towards investing in a formal and organized equity market.

India goes global
Ten years of economic liberalization unchained Indians, and the first decade of the 21st century reflected that. Thus it came to be that a much smaller Tata Steel acquired the UK-based company Corus for an eye-popping $13.1 billion in 2007. The Aditya Birla Group's Hindalco Industries Ltd followed this up with a $6-billion buyout of US-based Novelis in 2007. The next year, Tata Motors bought Jaguar-Land Rover for $2.3 billion. Bharti Airtel bought out Zain Africa in 2010, coughing up $10.7 billion. It was an era of multi-billion dollar acquisitions. The frenzy has since ebbed but not the aspirations.

R.H. Patil, the man who tamed the wolves of Dalal Street
In the early 1990s, the Harshad Mehta (pictured) scam had just rocked the country and the Bombay Stock Exchange, now BSE, was under the iron grip of a coterie of powerful brokers. Reforming the country's capital markets was becoming a dire necessity. Enter Ramachandra H. Patil, who helped set up the National Stock Exchange of India and other institutions that changed the face of India's capital markets. In his words: "Indian capital market around the early 1990s was akin to the Stone Age." The absence of entry barriers and a tech-driven, computer-based trading exchange, which everyone takes for granted these days, would not have been possible without Patil's contributions.

The overnight note-ban on an unsuspecting nation
Few announcements by an Indian prime minister have had as long-lasting and wide-ranging an effect as the one made by Narendra Modi at 8pm on 8 November 2016. In his address to the nation, he said ₹500 and ₹1,000 banknotes, amounting to 85% of the currency in circulation by value, were no

longer valid. "Today, I will be speaking to you about some critical issues and important decisions. Today I want to make a special request to all of you," Modi said. "To break the grip of corruption and black money, we have decided that the five hundred rupee and thousand rupee currency notes presently in use will no longer be legal tender from midnight tonight."

Planning Commission – outlives its utility - Within eight months of taking over as Prime Minister on 25 May 2014, Narendra Modi replaced the Planning Commission with NITI Aayog (NITI stood for National Institute for Transforming India, in line with Modi's penchant for acronyms). The Planning Commission was a Soviet-style body that drew up five-year plans for the country and played an advisory role in formulating allocation of central funds to each state. NITI Aayog now serves as the government's think tank, formulating medium- and long-term strategies and breaking them into year-wise plans after consultation with the states.

Insolvency and Bankruptcy Code, 2016 (IBC) - Bringing in a code of conduct to help provide for sick promoters
India is a country with sick companies but no sick promoters—the result of a system that hasn't held the influential promoters of large companies to account. To change that, the Modi government introduced the Insolvency and Bankruptcy Code, 2016 (IBC). The code made it possible for lenders to oust errant promoters from a company and hand it over to financially sound owners. The success of the IBC is questionable, but it has created a sense of responsibility among promoters. However, there are still cases of promoters trying to retain control of their companies through the back door and others like Nirav Modi fleeing the country after defaulting on large loans.

The blanket tax regime that made India one country, one market
The Narendra Modi government has put improving ease of doing business high on its agenda. As part of this, in July 2017, it implemented the goods and services tax. India is now one of the few countries to have an indirect tax law that unifies various central and state tax laws. In spite of a lot of teething troubles and the increased compliance burden on companies, particularly traders and small and medium enterprises, the new system has removed tax barriers across states and created a single common market, ensuring a free flow of goods without trucks being halted at borders for payment of interstate levies.

A country beginning to consider startups as a new business model
Over the past decade, a number of *startups* have mushroomed across India as young entrepreneurs experiment with ideas in digital payments, online retail, on-demand delivery, education, software and more. One of India's first startups and early unicorns, Flipkart, which was founded by two former Amazon employees in 2007, was valued at over $21 billion when US-based Walmart acquired a 77% stake in it in 2018. The number of unicorns, or new businesses valued at over $1 billion, has also risen every year. The rise of startups has created a new ecosystem of angel and venture funding, and incubators and accelerators—as well as new patterns of consumption in society

Some important economic statistics

Union Budget of India – 2020-21

Total revenue	(US$220 billion) ▼ (8.5%)
Total expenditures	(US$480 billion) ▲ (28.4%)

Foreign exchange reserves of India – may 2021

1. **Foreign Currency Assets** - Total FCA USD 590.028 billion
2. **Gold** - As of March 2021 RBI held 695.31 metric tonnes of gold. Gold reserves rose by USD 174 million to USD 36.654 billion. 292.30 tonnes of gold is held domestically.
3. **special drawing rights (SDRs**) with the International Monetary Fund (IMF) increased by USD 2 million to USD 1.506 billion.
4. **Reserve Tranche Position** (**RTP**) - USD 4.999 billion

INDIA'S EXTERNAL DEBT

INDIA'S EXTERNAL DEBT was US$ 563.5 billion at the end of December 2020. It recorded a marginal decrease of US$ 0.5 billion over its level at end of December 2019. The **external debt** to GDP ratio increased to 21.4% at end of December 2020 from 20.1% an year ago.

INDIA'S INTERNAL DEBT

INTERNAL DEBT also known as public debt is the loan taken by the government from general public. acceptable and safe internal debt to GDP ratio is 60-65%.

Above ratio at the end of 2019, prior to the pandemic, was 74 per cent of Gross Domestic Product (GDP), and at the end of 2020, it is almost 90 per cent of GDP.

Effect – if government prints more money to pay these loans then high inflation can increase poverty by reducing welfare.

CHAPTER: 8- GLOBAL FUEL SCENARIO

World energy consumption is the total energy produced and used by humans. Typically measured per year, it involves all energy harnessed from every energy source applied towards activity across all industrial and technological sectors, in every country.

- From 2000 to 2012 coal was the source of energy with the total largest growth. The use of oil and natural gas also had considerable growth, followed by hydropower and renewable energy. Renewable energy grew at a rate faster than any other time in history during this period.
- The demand for nuclear energy decreased, in part due to nuclear disasters (Three Mile Island in 1979, Chernobyl in 1986, and Fukushima in 2011).
- More recently, consumption of coal has declined relative to renewable energy. Coal dropped from about 29% of the global total primary energy consumption in 2015 to 27% in 2017, and non-hydro renewables were up to about 4% from 2%.

In 2010, expenditures on energy totaled over US$6 trillion, or about 10% of the world gross domestic product (GDP). Europe spends close to one-quarter of the world's energy expenditures, North America close to 20%, and Japan 6%.

Electricity generation

In 2014, the share of world energy consumption for electricity generation by source was coal at 41%, natural gas at 22%, hydro at 16%, nuclear at 11%, other sources (solar, wind, geothermal, biomass, etc.) at 6% and oil at 4%.

Coal and natural gas were the most used energy fuels for generating electricity. The world's electricity consumption was 18,608 TWh in 2012. This figure is about 18% smaller than the generated electricity, due to grid losses, storage losses, and self-consumption from power plants (gross generation).

Cogeneration (CHP) power stations use some of the heat that is otherwise wasted for use in buildings or industrial processes.

In 2016 the total world energy came from 80% fossil fuels, 10% biofuels, 5% nuclear, and 5% renewable (hydro, wind, solar, geothermal). Only 18% of that total world energy was in the form of electricity. Most of the other 82% was used for heat and transportation.

Fossil fuels

The twentieth century saw a rapid twenty-fold increase in the use of fossil fuels. Between 1980 and 2006, the worldwide annual growth rate was 2%. According to the US Energy Information Administration's 2006 estimate, the estimated 471.8 EJ total consumption in 2004, was divided as given in the table above, with fossil fuels supplying 86% of the world's energy.

Coal

In 2000, China accounted for 28% of world coal consumption, other Asia consumed 19%, North America 25% and the EU 14%.

- The single greatest coal-consuming country is China. Its share of the world coal production was 28% in 2000 and rose to 48% in 2009.
- Coal is the largest source of carbon dioxide emissions in the world.
- Indonesia and Australia exported together 57.1% of the world coal export.
- China, Japan, South Korea, India and Taiwan had 65% share of all the world coal import.

Oil

Coal fueled the industrial revolution in the 18th and 19th century. With the advent of the automobile, aeroplanes and the spreading use of electricity, oil became the dominant fuel during the twentieth century. The growth of oil as the largest fossil fuel was further enabled by steadily dropping prices from 1920 until 1973. After the oil shocks of 1973 and 1979, during which the price of oil increased from 5 to 45 US dollars per barrel, there was a shift away from oil. From 1965 to 2008, the use of fossil fuels has continued to grow and their share of the energy supply has increased. From 2003 to 2008, coal was the fastest growing fossil fuel.

Renewable energy

Renewable energy is generally defined as energy that comes from resources that are not significantly depleted by their use, such as sunlight, wind, rain, tides, waves and geothermal heat.Renewable energy is gradually replacing conventional fuels in four distinct areas: electricity generation, hot water/space heating, motor fuels, and rural (off-grid) energy services.

Renewables contributed 18.1 percent to the world's energy consumption and 26 percent to its electricity generation in 2017 and 2018, respectively. This energy consumption is divided as 7.5% coming from traditional biomass, 4.2% as heat energy (non-biomass), 1% biofuels for transport, 3.6% hydro electricity and 2% electricity from wind, solar, biomass, geothermal, and ocean power.

INDIAS ENERGY SCENARIO

India's electricity consumption accounts for about 4 % of world's total electricity consumption and it is growing at the rate of 8–10 % per year.

- **India** is the world's third largest producer and third largest consumer of **electricity**. The national **electric** grid in **India** has an **installed capacity** of 382000 MW as of 31 March 2021
- India has become self reliant in electricity production in 2017 & 99.99% of the population having access to power supply.

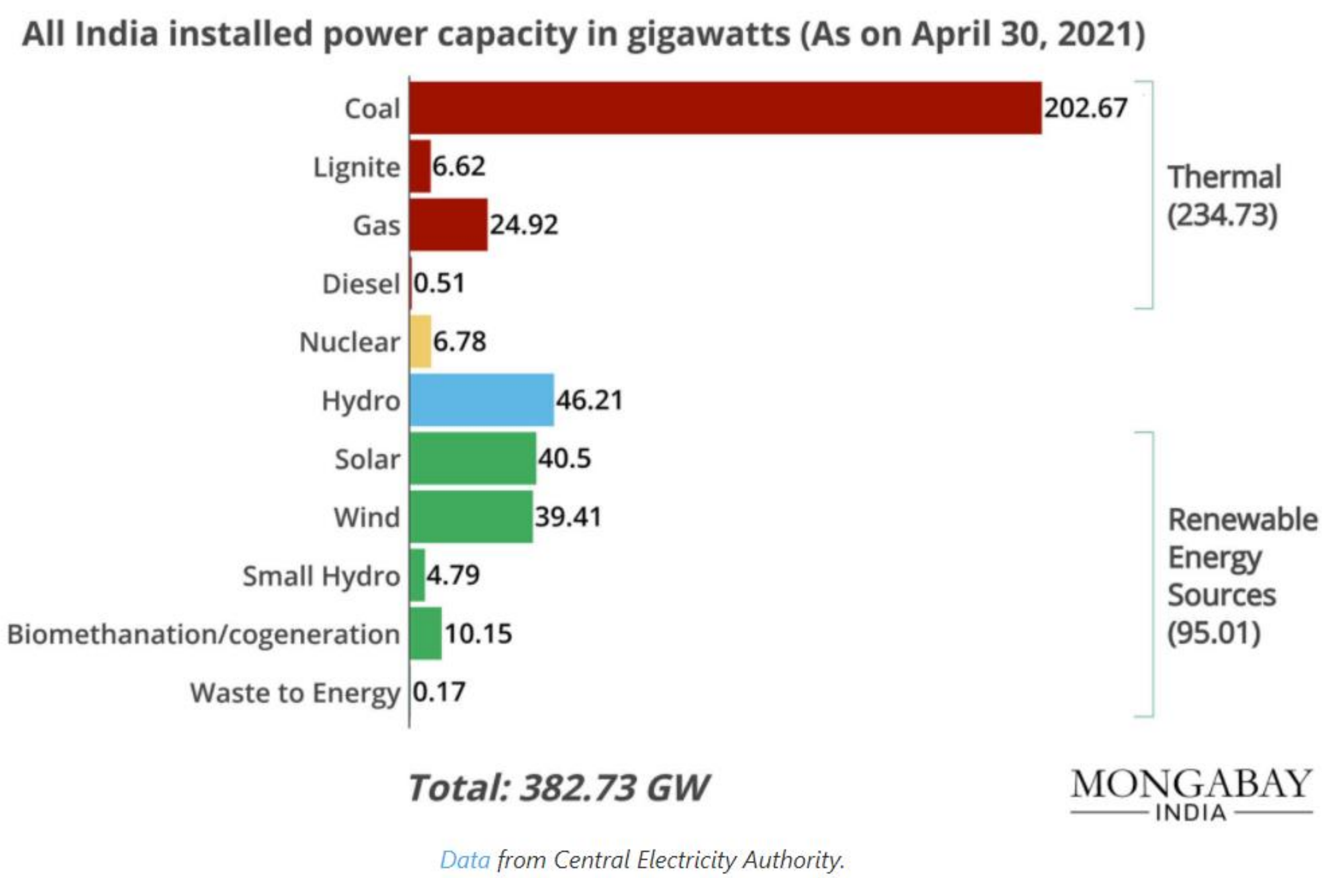
- India is largely dependent on fossil fuel imports to meet its energy demands – About 80% of India's electricity generation is from fossil fuels. India is surplus in electricity generation and also marginal exporter of electricity in 2017.
- India has 111 gigawatts (GW) (32%) installed capacity of renewable energy. It is one of the world leaders in renewable energy investments and installations.
- India has set a target of 175 GW of renewable energy capacity by 2022. This would include 100 GW capacity from solar energy sources, 60 GW from wind power, 10 GW from biopower, and 5 GW from small hydropower.
- TOTAL INSTALLED CAPACITY OF ELECTRICITY BY FUEL: MARCH - 2021

Fuel	**MW**	**% of Total**
Total Thermal	2,33,171	61.5%
Coal	2,01,085	53.0%
Lignite	6,620	1.7%
Gas	24,957	6.6%
Diesel	510	0.1%
Hydro (Renewable)	46,209	12.2%
Nuclear	6,780	1.8%
RES* (MNRE)	91,154	24.5%

- Indias Per capita consumption of electricity is one of the lowest in the world – comparison

Rank	**Country/Region**	**Electricity consumption (GW·h/yr)**	**Population**	**Average electrical energy per capita (kWh per person per year)**	**Average power per capita (watts per person)**
—	World	23,398,000	7,800,000,000	3081	350

Rank	Country/Region	Electricity consumption (GW·h/yr)	Population	Average electrical energy per capita (kWh per person per year)	Average power per capita (watts per person)
1	China	7,225,500	1,427,647,000	4,617	527
2	United States	3,989,566	328,200,000	12,154	1,387
3	India	1,547,000	1,384,660,000	935	107



1 GIGAWATT(GW) – 1000 MEGA WATT(MW)

Indian Energy Scenario

Coal dominates the energy mix in India, contributing to 55% of the total primary energy production. Over the years, there has been a marked increase in the share of natural gas in primary energy production from 10% in 1994 to 13% in 1999. There has been a decline in the share of oil in primary energy production from 20% to 17% during the same period. Energy Supply

Coal Supply - India has huge coal reserves, at least 84,396 million tonnes of proven recoverable reserves (at the end of 2003). This amounts to almost 8.6% of the world reserves and it may last for about 230 years at the current Reserve to Production (R/P) ratio. India is the fourth largest producer of coal and lignite in the world.

India traditionally bought coking coal from Australia given its limited domestic reserves of this higher-energy grade, but in recent months it has started buying increasing volumes of thermal coal

Coal production is concentrated in these states (Andhra Pradesh, Uttar Pradesh, Bihar, Madhya Pradesh, Maharashtra, Orissa, Jharkhand, West Bengal).

Crude Oil - Oil accounts for about 36 % of India's total energy consumption.

- The gigantic energy consumption has been the cause of increased demand that was reflected in the volume of crude **oil imports** across the country, which was approximated to be around 226 million metric tons during financial **year** 2019.
- **India** generated 35.2 million tons of **petroleum** products from **indigenous crude oil production** whereas the consumption of **petroleum** products is 204.9 million tons.
- Similarly **India** generated 31.7 bcm natural gas locally against the consumption of 58.1 bcm.
- **Indian crude oil** refining capacity currently stands at 250 million mt/year.
- India is the **second biggest oil importer** after China and **3rd largest consumer** globally is highly dependent on imported crude oil.
- **India's oil (POL- PETROLEUM, OIL & LUBRICANTS) - import bill** in FY20 and FY19 was $101.4 billion and $111.9 billion, respectively and is single largest item of import.
- **India's oil (POL- PETROLEUM, OIL & LUBRICANTS) exports are** $35 billion largely due to excess refining capacity.

CHAPTER: 9- INDIAS FOOD SECURITY

Food security has been a major concern in **India**. According to UN-**India**, there are nearly 195 million undernourished people in **India**, which is a quarter of the world's hunger burden. ... **India** ranks 74 out of 113 major countries in terms of **food security** index.

India's foodgrains production is estimated at a record 291.95 million tonnes in the 2019-20 crop year (July-June), beating the target of 291 million tonnes.

- Today, **India ranks second worldwide** in farm output. The economic contribution of agriculture to India's GDP is steadily declining with the country's broad-based economic growth, yet, having nearly **50% of the population dependent** on it for livelihood.
- Horticultural crops occupy 10% of the gross cropped area and producing 160.75 m tones. The total production of fruits is 49.36 m tones and vegetables are at 93 m tones.
- **Animal husbandry** output constitutes about 32% of the country's agricultural output. The contribution of this sector to the total GDP during 2006-07 was 5.26%.
- **India is the highest producer** of milk (Milk production in the country is expected to increase to 208 MT in FY21 from 198 MT in FY20, registering a growth of 10% y-o-y) and the second highest producer of fruits and vegetables.
- India accounts for 57% of the world's buffalo population and 14% of cattle population.
- India holds 6th place with 7% world's market share in medicinal and aromatic plants.
- During 2019-20 crop year, food grain production reached a record of 296.65 million tonnes. In 2020-21, Government of India is targeting food grain production of 298 million tonnes.
- INDIA at a record 319.56 million metric tonnes (MMT) is the second largest Producer of horticulture crops in the world .
- India has the largest livestock population of around 535.78 million, which translates to around 31% of the world population.
- **Sugar production** in India is 26.46 MT and a lot of sugarcane production is diverted to **FUEL.**
- India is among the 15 leading **exporters of agricultural products** in the world. Agricultural export from India reached US$ 38.54 billion in FY19 and US$ 35.09 billion in FY20.
- **The organic food segment** in India is expected to grow at a CAGR of 10% during 2015-25 and is estimated to reach Rs. 75,000 crore (US$ 10.73 billion) by 2025 from Rs. 2,700 crore (US$ 386.32 million) in 2015.
- The Indian food processing industry is expected to reach US$ 535 billion by 2025-26 on the back of government initiatives such as planned infrastructure worth US$ 1 trillion and Pradhan Mantri Kisan Sampada Yojna.

The Productivity of Agriculture in India

- Although India has attained self-sufficiency in food staples, the productivity of its farms is below that of Brazil, the United States, France, and other nations. Indian wheat farms, for example, produce about a third of the wheat per hectare per year compared to farms in France.
- Rice productivity in India was less than half that of China. Other staple's productivity in India is similarly low.
- Indian total factor productivity growth remains below 2% per annum; in contrast, China's total factor productivity growth is about 6% per annum, even though China also has smallholding farmers.
- Several studies suggest India could eradicate its hunger and malnutrition and be a major source of food for the world by achieving productivity comparable with other countries.

POVERTY

About 60% of India's nearly 1.3 billion people live on less than $3.10 a day, the World Bank's median poverty line. And 21%, or more than 250 million people, survive on less than $2 a day.

Some 220 million Indians sustained on an expenditure level of less than Rs 32 / day — the poverty line for rural India — by the last headcount of the poor in India in 2013

Top 5 major marine capture fish producing countries:

People's Republic of China (PRC) or China is leading fish production and are at first place followed Peru (**India is on 6th number -4%**)

Sr.No	Country	Percentage of total
1	China	15%
2	Peru	8%
3	Indonesia	8%
4	Russian Federation	6%
5	USA	6%

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Top 5 major Inland capture fish producing countries:

- **C** China is leading Inland fish production and are at first, place followed India

Sr.	Country	Share (%)
1	China	16%
2	India	14%
3	Bangladesh	10%

4	Myammar	7%
5	Cambodia	4%

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Setting Goals

With weather office predicting normal rainfall, govt aims to produce 25.6 MT pulses & 36.64 MT oilseeds this year

Targeted output 2020-21

Figures in millions

Crops	Estimated output in 2019-20	Targeted output in 2020-21
Rice	117.47	117.5
Wheat	106.21	106.5
Pulses	23.02	25.6
Total foodgrains	291.95	298.3

BCCL

Source: Agriculture ministry

Indian agriculture: Potential, Prospects and Prescriptions

Potential: Facts about Agriculture in India

Index	**Figure**
Gross cropped area	195 million hectare
Net sown area	141 million hectare
Agricultural irrigated land (% of total agricultural land)	36% (As per 2014 World bank data)
Animal husbandry output	Constitutes about 32% of the country's agricultural output
Agricultural growth	4.1% in the current year from 1.2% in 2015-16

IRRIGATION

Availability of water

Currently, about 51% of the agricultural area cultivating food grains is covered by irrigation. The rest of the area is dependent on rainfall (rain-fed agriculture). Sources of irrigation include ground water (wells, tube-wells) and surface water (canals, tanks). Table 5 shows the various sources of irrigation used in agriculture.

Sources of irrigation (as of 2010-11)

Source of Irrigation	% share of holdings	Number of holdings
Tube wells	44.2%	31,722
Canals	25.7%	18,414
Wells	19.7%	14,101
Other sources	8.4%	6,046
Tanks	5.8%	4,180

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· There is a need to improve the efficiency of water use, especially in agriculture. Irrigation currently consumes about 84% of the total available water in the country.

· Nearly 65% of the irrigated land holdings use ground water sources such as tube wells and wells for irrigation.

CHAPTER:10 – INTELLECTUAL PROPERTY RIGHTS

INTELLECTUAL PROPERTY RIGHTS (IPR)

- Intellectual Property Rights (IPR) are the rights acquired by an owner of an intellectual property.
- **Intellectual property is a category of property that includes intangible creations of the human intellect.**
- In simple terms, it refers to **creations of the mind**, such as
  - **inventions**
  - **literary & artistic works**
  - **designs** & **symbols,**
  - **names** & **images** used in commerce.
- The main purpose of intellectual property law is to
  - **encourage the creation of a wide variety of intellectual goods** &
  - strike the right **balance between the interests of innovators** & **wider public interest**.

Laws & Rules that govern Intellectual Property Rights (IPR)

- **The importance of IPR was first recognized in the**

1. **Paris Convention** for the **Protection of Industrial Property (1883) &**
2. **Berne Convention** for the **Protection of Literary & Artistic Works (1886)**.

- Both are administered by the **World Intellectual Property Organization (**WIPO**)**.
- **IPRs have been outlined in Article 27 of the Universal Declaration of Human Rights.**
- **WTO governs IPR through Trade-Related Aspects of the Intellectual Property Rights (**TRIPS**).**

World Intellectual Property Organization (WIPO)

- **WIPO is one of the 15 specialized agencies of the United Nations (UN).**
- WIPO was created to promote and protect intellectual property (IP) across the world by cooperating with countries as well as international organizations.
- It began operations in 1970.
- Headquarters: Geneva, Switzerland.
- WIPO currently has 193 member states.
- **WIPO's activities include**
  - hosting forums to discuss and shape international IP rules and policies,

- providing global services that register and protect IP in different countries,
- resolving transboundary IP disputes,
- helping connect IP systems through uniform standards and infrastructure, and
- serving as a general reference database on all IP matters.

Trade-Related Aspects of the Intellectual Property Rights (TRIPS)

- TRIPS is an international agreement on intellectual property rights.
- The Agreement covers most forms of intellectual property including
  - **patents,**
  - **copyright,**
  - **trademarks,**
  - **geographical indications,**
  - **industrial designs,**
  - **trade secrets, &**
  - **exclusionary rights over new plant varieties.**
- It came into force in 1995 & is **binding on all members of the World Trade Organization (WTO)**.

Patents

- **A patent is an exclusive right granted for an invention, which is a new product or process that meets conditions of**
  - **novelty,**
  - **non-obviousness, &**
  - **industrial use.**
- A patent provides the owner with the right to decide how – or whether – the invention can be used by others.

Criteria for issuing Patents in India

1. **Novelty:** it should be new (not published earlier + no prior Public Knowledge/ Public Use in India)
2. **Non obviousness:** It must involve an inventive step (technical advanced in comparison to existing knowledge + non-obvious to a person skilled in the relevant field of technology)
3. **Industrial use:** It should be capable of Industrial application

- **Patents in India are governed by "The patent Act 1970"** which was amended in 2005 to make it compliant with TRIPS.

What cannot be patented?

- Frivolous Invention: Invention that harms public order/Morality/ health of animals, plants & humans
- Methods of agriculture or horticulture
- Traditional Knowledge
- Computer Program
- Inventions related to Atomic Energy
- Plants & Animals
- Mere discovery of scientific principle

Patent (Amendment) Rules, 2020

- The central government has published an amended Patent (Amendment) Rules, 2020.
- The new rules have **amended the format of a disclosure statement** that **patentees & licensees are required to annually submit to the** Patent **Office**.
- The format contains disclosing the extent to which they have commercially worked or made the **patented inventions available to the public in the country**.
- The disclosure is to be made in the **Form 27** format as prescribed under the Patent Rules, 2003.
- The patentees & licensees as well as the Patent Office have blatantly disregarded this statutory requirement.
- There has been significant **pressure from MNCs & the U.S. to do away with this requirement**.

Criticism of Patent (Amendment) Rules, 2020

- The amendment has significantly weakened the requirement of submitting information in the disclosure.
- This could **hamper the effectiveness of India's compulsory licensing regime** which **depends on full disclosure of patent working information**.
- This in turn could hinder access to vital inventions including life-saving medicines.

Industrial Designs

- An industrial design constitutes the ornamental or aesthetic aspect of an article/object.
- A design may consist of three-dimensional features, such as the shape or surface of an article, or of two-dimensional features, such as patterns, lines or colors.
- **Industrial Designs in India are governed by "The Designs Act 2000".**

Copyright

- Copyright is a legal term used to describe the rights that creators have over their **literary & artistic works**.
- Works covered by copyright range from books, music, paintings, sculpture & films, to **computer programs**, databases, advertisements, maps & technical drawings.
- **Copyrights in India are governed by "The Copyright Act, 1957".**
- In the case of original literary, dramatic, musical and artistic works, the **duration** of **copyright** is the lifetime of the author or artist, and 60 years counted from the year following the death of the author.

Trademarks

- **A trademark is a sign capable of distinguishing the goods or services of one enterprise from those of other enterprises.**
- Trademarks date back to ancient times when artisans used to put their signature or "mark" on their products.
- **Trademarks in India are governed by Trade Marks Act 1999 which was amended in 2010.**
- The mark is registered for a **period** of 10 years from the date of filing of the application and can be renewed from **time** to **time** on payment of renewal fees. Each renewal term is for a **period** of 10 years.

Geographical Indications

- A GI tag is a legal recognition given primarily to an agricultural, natural or a manufactured product (handicrafts & industrial goods) originating from a definite geographical territory.
- GI tag **conveys an assurance of quality & distinctiveness of a product,** which is essentially attributable to the place of its origin.
- Most commonly, a geographical indication **includes the name of the place of origin of the goods**.
- Once the GI protection is granted, **no other producer can misuse the name** to market similar products.
- It also provides comfort to customers about the authenticity of that product.
- **Geographical Indicators in India are governed by "The Geographical Indications of Goods (Registration & Protection) Act, 1999".**

Geographical indications

What is a geographical indication?

A geographical indication (GI) is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin. In order to function as a gi, a sign must identify a product as originating in a given place. In addition, the qualities, characteristics or reputation of the product should be essentially due to the place of origin. Since the qualities depend on the geographical place of production, there is a clear link between the product and its original place of production.

What rights does a geographical indication provide?

A geographical indication right enables those who have the right to use the indication to prevent its use by a third party whose product does not conform to the applicable standards. For example, in the jurisdictions in which the darjeeling geographical indication is protected, producers of darjeeling tea can exclude use of the term "darjeeling" for tea not grown in their tea gardens or not produced according to the standards set out in the code of practice for the geographical indication.

However, a protected geographical indication does not enable the holder to prevent someone from making a product using the same techniques as those set out in the standards for that indication. Protection for a geographical indication is usually obtained by acquiring a right over the sign that constitutes the indication.

For what type of products can geographical indications be used?

Geographical indications are typically used for agricultural products, foodstuffs, wine and spirit drinks, handicrafts, and industrial products.

How are geographical indications protected?

There are three main ways to protect a geographical indication:

- So-called *sui generis* systems (i.e. Special regimes of protection);
- Using collective or certification marks; and
- Methods focusing on business practices, including administrative product approval schemes.

These approaches involve differences with respect to important questions, such as the conditions for protection or the scope of protection. On the other hand, two of the modes of protection — namely *sui generis* systems and collective or certification mark systems — share some common features, such as the fact that they set up rights for collective use by those who comply with defined standards.

Broadly speaking geographical indications are protected in different countries and regional systems through a wide variety of approaches and often using a combination of two or more of the approaches outlined above. These approaches have been developed in accordance with different legal traditions and within a framework of individual historical and economic conditions.

GI tag is the abbreviation of Geographical Indications tags in India. It came into force with effect from 15th September 2003. Darjeeling Tea was the first Indian product to get a GI tag. This article will discuss more such information on GI in detail.

Government has allotted GI Tags to Kashmir Saffron and Manipuri Black Rice recently.

GI tags to 4 new products from 3 different states in August 2019.

1. Palani Panchamirtham in Palani Town, Tamil Nadu
2. Tawlhlohpuan from Mizoram
3. Mizo Puanchei from Mizoram
4. Tirur Betel leaf from Kerala

List of GI Tags 2021

Various products from different states received GI tags in 2019-20 which includes Jeeraphool from Chhattisgarh, Himachali Kala Zeera, Kandhamal Haldi from Odisha, etc. the complete list of geographical indications tagged products for 2019-20 is given below:

GI Tags 2019-2020		
Products	**Categories**	**States/UTs**
Kashmir Saffron	Agriculture	Jammu & Kashmir
Manipuri Black Rice	Food Stuff	Manipur
Kandhamal Haladi	Agricultural	Odisha
Rasagola	Food Stuff	Odisha
Kodaikanal Malai Poondu	Agricultural	Tamil Nadu
Pawndum	Handicraft	Mizoram
Ngotekherh	Handicraft	Mizoram
Hmaram	Handicraft	Mizoram
Palani Panchamirtham	Food Stuff	Tamil Nadu
Tawlhlohpuan	Handicraft	Mizoram

Mizo Puanchei	Handicraft	Mizoram
Gulbarga Tur Dal	Agricultural	Karnataka
Tirur Betel Leaf (Tirur Vettila)	Agricultural	Kerala
Khola Chilli	Agricultural	Goa
Idu Mishmi Textiles	Handicraft	Arunachal Pradesh
Dindigul Locks	Manufactured	Tamil Nadu
Kandangi Saree	Handicraft	Tamil Nadu
Srivilliputtur Palkova	Food Stuff	Tamil Nadu
Kaji Nemu	Agricultural	Assam

What is the difference between a Geographical Indication (GI) & a Trademark?

- A trademark is a sign/word/phrase used by an entity to distinguish its goods & services from those of others.
- A geographical indication tells consumers that a **product is produced in a certain place** & **has certain characteristics that are due to that place of production**.
- A trademark gives the entity the right to prevent others from using the trademark.
- On the other hand, **GI may be used by all producers** who make their products in the **place designated by a geographical indication**.

Trade secrets

- Trade secrets are IP rights on confidential information which may be sold or licensed.
- The unauthorized acquisition use or disclosure of such secret information by others is regarded as an unfair practice & a violation of the trade secret protection.
- There is no specific law.

Plant Variety Protection

- **It refers to the protection granted for plant varieties.**
- These rights are given to the farmers & breeders to encourage the development of new varieties of plants.
- **Plant variety protection in India is governed by "The** Protection of Plant Varieties **& Farmers' Rights (PPV&FR) Act, 2001".**

Protection of Plant Varieties & Farmers' Rights (PPVFR) Act, 2001

- PPVFR Act, 2001 has been enacted in India for giving effect to the **TRIPS** Agreement.
- The PPVFR Act retained the main spirit of TRIPS viz., **IPRs as an incentive for technological innovation**.
- However, the Act also had strong provisions to protect **farmers' rights**.
- The act **allows farmers to plant, grow, exchange & sell patent-protected crops, including seeds,** & **only bars them from selling it as "branded seed"**.
- It recognised three roles for the farmer: cultivator, breeder & conserver.
- As cultivators, farmers were entitled to plant-back rights.
- As breeders, farmers were held equivalent to plant breeders.
- As conservers, farmers were entitled to rewards from a National Gene Fund.

- After joining WTO in 1995, the choice before India was to either enact a law or to accept the plant breeders' rights given by the **International Union for Protection of New Plant Varieties (UPOV Convention)**.
- UPOV option was earlier rejected because it **denied the farmers the freedom to re-use farm-saved seeds & to exchange them with their neighbours**.
- However, in 2002, India joined the **UPOV convention**.

Objectives of the PPVFR Act

- Facilitate an effective system for the protection of plant varieties & the rights of farmers.
- Encourage the development of new varieties of plants.
- Protect the rights of the farmers in respect of their contribution in conserving plant genetic resources.
- Facilitate the growth of the seed industry which will ensure the availability of high quality seeds.

Criticism of PPVFR Act, 2001

- **Discourages research & innovation**: PPVFR Act allows farmers to use patented varieties & hence private companies are not keen to bring new technology.
- India neither invests in public sector nor respects private & foreign players' IPR (bad for business).

National IPR Policy, 2016

- The Policy aims to push IPRs as a **marketable financial asset**, promote innovation & entrepreneurship while protecting public interest.
- The plan will be **reviewed every five years** in consultation with stakeholders.
- To have strong & effective IPR laws, steps would be taken — including review of existing IP laws — to update & improve them or to remove anomalies & inconsistencies.
- **The policy is entirely compliant with the WTO's agreement on TRIPS.**
- **Department of industrial policy & promotion (DIPP)** is the **nodal agency for all IPR issues**.
- The policy **retains the provisions on Compulsory Licensing (CL)** as well as **preventing ever-greening of drug patents** (Section 3(d) of India's Patents Act).
- Under Indian Patents Act, a **CL can be issued for a drug if the medicine is deemed unaffordable**, among other conditions, & the government grants permission to qualified generic drug makers to manufacture it.

Intellectual Property Rights Issues: The Five Major Challenges Faced

- There are many IPR issues that one faces while getting IP rights in India. The issues are as follows:

Patent Evergreening Prevention

- One of the most important intellectual property rights issues challenges is the prevention of the evergreening of the patents for multinational companies.
- **Evergreening** is strategy for extending the term of granted patent which is about to expire **without increasing therapeutic efficacy** in order to retain royalties.
- As we know, the **companies cannot evergreen their patents simply by making minor changes**.
- So, section 3(d) in the Indian Patent Act (IPA) possess as one of the biggest issues with regards to IPR.
- This **act bars the grant of patents to new forms of substances**.
- This has discouraged investments from western countries.

Subsidies & IPR Issues

- A major form of subsidies includes food subsidy, fertilizer subsidy, education subsidy, etc.
- For the complete implementation of TRIPS agreements, one needs to reduce or eliminate these subsidies.
- Thus, GOI needs to **create a balance between providing subsidies & providing IP rights in India**.

The Product Patents Process

- A product patent protects a product.
- It offers high protection to the original inventor to reduce the competition for the same product.
- Whereas a **process patent protects the process through which one manufactures the product & not the product**.
- It reduces the element of monopoly in the market.
- As India is a part of the **TRIPS agreement**, the agreement **requires all its members to shift their patent regime from process to product patent**.
- This remains a challenge for India, as process patent would be more helpful to a country like India.
- This is since India is a developing country & ordinary people are struggling with basic necessities like food.

Protecting traditional knowledge

- Traditional knowledge, especially in the field of medicine, is like a gold mine.
- GOI is bound to protect traditional knowledge by not allowing MNC's to get patents on traditional culture.
- Above all, the government has created a **Traditional Knowledge Digital Library (TKDL)** to prevent the patenting of traditional knowledge.
- So, this is one of the intellectual property rights issues in India.

Compulsory Licensing & Drug Price Control Order

- One of the most important intellectual property rights issues that the government needs to address is the use of compulsory licensing.
- **Compulsory licenses** are authorizations given to a third-party by the Government to make, **use or sell a particular patented product without the need of the permission of the patent owner**.
- The provisions regarding compulsory licenses are given in the Indian Patents Act, 1970 & in the TRIPS (Trade-Related Aspects of Intellectual Property Rights) Agreement.
- It is a relaxation available to the developing countries under the TRIPS agreement, something which organizations misuse sometimes.
- Moreover, under section 84 of the IPA, a company can acquire **a compulsory license for "private commercial use" under certain circumstances**.
- With the Drug Price Control Order, the company needs to justify the price of the drug with regards to investments.
- If someone plays foul, then the government has the right to intervene.
- Multinationals are asking the government to revoke this provision.
- However, the government is not ceding the demands to protect the interest of the masses.

Some other issues

- **Trademark Violations: India has very high level of trademark counterfeiting against which the authorities in India do not take proper actions.**
- **Enforcement of IPR regulations is quite weak** in the country because of two important reasons
- India is key exporter of counterfeit fake products such as foodstuffs, textiles, shoes, electronics etc
- Judicial delays in IPR disputes
- **India maintains high custom duties** on IP intensive products as advocated by western countries impacting the investment (US puts India into priority watch list i.e., **special 301 report).**

Related Topics

Cell for IPR Promotion & Management (CIPAM)

- **CIPAM has been created as a professional body under the aegis of DIPP to take forward the implementation of the National** IPR Policy **2016.**
- **Functions:**
- CIPAM is working towards creating public awareness about IPRs in the country,
- Promoting the filing of IPRs through facilitation.
- Providing inventors with a platform to commercialize their IP assets &
- Coordinating the implementation of the National IPR Policy in collaboration with Government Ministries/Departments & other stakeholders.

IP Nani

- **IP Nani was launched by Ministry of Commerce & Industry in 2018.**
- It is a tech-savvy grandmother who helps the government & enforcement agencies in combating IP crimes with the help of her grandson “Chhotu” aka Aditya.
- The IP mascot will spread awareness about the importance of Intellectual Property Rights (IPRs) among people, especially children, in an interesting manner.

CHAPTER: 11- GOVERNMENT WELFARE SCHEMES IN INDIA

EXISTING GOVERNMENT WELFARE SCHEMES IN INDIA

About the Government Schemes

Knowing all the government schemes is one thing, but the candidates must also know their purpose. Candidates stand a better chance of scoring high marks if and when they go through the purpose of each scheme given below.

1. Pradhan Mantri Jan Dhan Yojana: Pradhan Mantri Jan Dhan Yojana is a National Mission on Financial Inclusion that provides an integrated approach to bring about a robust financial inclusion and ultimately provide banking services to all households in the country.

2. Make in India: PM Narendra Modi launched the 'Make in India' campaign that will facilitate investment, foster innovation, enhanced protection for intellectual property and build best in manufacturing infrastructure.

'Make in India' has identified 25 sectors in manufacturing, infrastructure and service activities and detailed information is being shared through interactive web-portal and professionally developed brochures.

3. Swachh Bharat Mission: Swachh Bharat Mission was launched in the entire country as a national movement. The campaign aims to achieve the vision of a 'Clean India' by 2nd October 2019. The Swachh Bharat Abhiyan is the most significant campaign with regards to sanitation by the Government of India.

4. Beti Bachao Beti Padhao: The goal of this scheme is to make girls socially and financially self-reliant through education.

5. Atal Pension Yojna: Atal Pension Yojana is a pension scheme mainly aimed at providing a universal pension scheme for those who are a part of the unorganized sector such as maids, gardeners, delivery boys, etc. This scheme replaced the previous Swavalamban Yojana which wasn't well-received by the people.

6. Digital India Mission: The Digital India programme is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy.

7. **Pradhan Mantri Shram Yogi Maan-dhan:** It is a voluntary and contributory pension scheme, under which the subscriber would receive the following benefits:

(i) Minimum Assured Pension: Each subscriber under the PM-SYM, shall receive minimum assured pension of Rs 3000/- per month after attaining the age of 60 years.

(ii) Family Pension: During the receipt of a pension, if the subscriber dies, the spouse of the beneficiary shall be entitled to receive 50% of the pension received by the beneficiary as a family pension. Family pension is applicable only to a spouse.

(iii) If a beneficiary has given a regular contribution and died due to any cause (before age of 60 years), his/her spouse will be entitled to join and continue the scheme subsequently by payment of regular contribution or exit the scheme as per provisions of exit and withdrawal.

8. Gold Monetisation Scheme: Gold Monetisation Scheme was launched by Government of India in 2015, under this scheme one can deposit their gold in any form in a GMS account to earn interest as the price of the gold metal goes up.

9. PM CARES Fund -Prime Minister's Citizen Assistance and Relief in Emergency Situation Fund: Is a public charitable trust initiated by the Prime Minister Narendra Modi. This national trust is created with the objective to meet the distressed and dreadful situation like COVID-19 in times ahead. PM CARES was initiated on March 28, 2020, under the chairmanship of the Indian Prime Minister with Ministry of Home Affairs, Defence Minister and Finance Minister as the ex-officio Trustee.

10. Aarogya Setu: The Government of India took the initiative to fight the Coronavirus pandemic. It launched a mobile application to spread the awareness of COVID_19 among the citizens of India through an app called Aarogya Setu. The Aarogya Setu mobile app has been developed by the National Informatics Centre (NIC) that comes under the Ministry of Electronics and Information Technology. For detailed information, visit the link of Aarogya Setu given above.

11. Ayushman Bharat: Launched in 2018 by Prime Minister Narendra Modi Ayushman Bharat is a health scheme. It is the largest government-funded healthcare programme in the world with over 50 crore beneficiaries. The Ayushman Bharath programme has two sub-missions PM-JAY & HWCs.

- Pradhan Mantri Jan Arogya Yojana (PM-JAY), earlier known as the National Health Protection Scheme (NHPS) will cover the financial protection for availing healthcare services at the secondary and tertiary levels.
- Health and Wellness Centres (HWCs) aimed at improving access to cheap and quality healthcare services at the primary level. Read about Ayushman Bharat in detail in the link provided above.

12. UMANG – Unified Mobile Application for New-age Governance is a mobile application launched by PM Narendra Modi to provide secured access to the citizens to multiple government services at one platform. UMANG is a key component of the Digital India initiative of the government that intends to make all traditional offline government services available 24 * 7 online through a single unified app.

13. PRASAD Scheme – Pilgrimage Rejuvenation And Spirituality Augmentation Drive. The Scheme is launched under the Ministry of tourism in the year 2015. The aims of PRASAD Scheme is the integrated development of pilgrimage destinations in a prioritised, planned, and sustainable manner for providing complete religious tourism experience. The focus of Pilgrimage Rejuvenation And Spirituality Augmentation Drive- PRASAD is on the development and beautification of the identified pilgrimage destinations. Further details on PRASAD scheme is given in the related page link given above in the article.

14. Atmanirbhar Bharat Abhiyan – The scheme (meaning self-reliant India scheme) is a

name given to the full-fledged economic stimulus package announced by the Union Government. It has been launched with an aim to make people self-dependent and overcome the difficulties caused by the coronavirus pandemic.

15. National Digital Health Mission – Launched on August 15, 2020, the mission aims to create an integrated healthcare system linking practitioners with the patients digitally by giving them access to real-time health records.

16. PM Atmanirbhar Swasth Bharat Yojana – The scheme is launched to develop capacities of primary, secondary, and tertiary health care systems, strengthen existing national institutions, and create new institutions, to cater to detection and cure of new and emerging diseases.

17. National Infrastructure Pipeline Project – It is a social and economic infrastructure project which was launched in 2019 in order to improve the overall quality of life of for all citizens. The NIP will fulfil all the crucial factors that will help India in achieving its target in becoming a $5 trillion economy by the financial year 2025.

The path to success in the Government and bank exams is paved with difficulties but it is not an impossible path to walk on. Practising with mock tests and brushing up daily on study materials will lead to success.

10 IMPORTANTSCHEMES OF GOVERNMENT OF INDIA AT PRESENT,

2020-21

AGRICULTURE

PM KISAN SAMMAN NIDHI YOJANA

The Pradhan Mantri Kisan Samman Nidhi Yojana (PM-Kisan Yojana) is a government scheme through which, all small and marginal farmers will get up to Rs 6,000 per year as minimum income support. This 75,000-crore scheme aims to cover 125 million farmers, irrespective of the size of their landholding in India.

When did the PM-Kisan scheme come into effect?

The PM Kisan Yojana came into effect from December 1, 2018. It was launched by prime minister Narendra Modi-led government.

PM Kisan Yojana explained

Under the PM Kisan Yojana, income support of Rs 6000 per annum is provided to all eligible farmer families across the country in three equal installments of Rs 2,000 each every four months. The scheme defines family as husband, wife and minor children. The fund of Rs 2,000 is directly transferred to the bank accounts of the farmers/farmer's family.

Who is eligible for PM Kisan scheme?

- Landholding farmers' families with cultivable landholding in their names can apply under this scheme
- Farmers from both the urban and rural areas
- Small and marginal farmers families

PM Krishi Sinchayee Yojana,

Launched IN 2015 with the motto of "**Har Khet Ko Paani**", the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) is being implemented to expand cultivated area with assured irrigation, reduce wastage of water and improve water use efficiency. PMKSY not only focuses on creating sources for assured irrigation, but also creating protective irrigation by harnessing rain water at micro level through "**Jal Sanchay**" and "**Jal Sinchan**". Micro irrigation is also incentivized through subsidy to ensure "**Per drop-More crop**".

Components:

- **Water Resource**: Source augmentation, distribution, ground water development, lift irrigation, diversion of water from water plenty to water scarce areas, supplementing rain water harvesting beyond IWMP, MGNREGA, repair, restoration, renovation of traditional water bodies.
- **Per Drop More Crop** (Micro Irrigation): Installation of Micro Irrigation Systems (Drip & Sprinkler) in fields, extension activities, coordination & management.
- **Watershed**: Ridge area treatment, drainage line treatment, soil and moisture conservation, water harvesting structure, livelihood support activities and other watershed works.

ADVANTAGES OF MICRO IRRIGATION

- Higher Profits
- Water Saving & Water Use Efficiency (WUE)
- Less Energy Costs
- Higher fertilizer-use efficiency (FUE)
- Reduced Labour Costs
- Reduce Soli Loss
- Marginal Solis & Water
- Efficient & Flexible
- Improved Crop Quality
- Higher Yields

PM Fasal Bima Yojana;

The new Crop Insurance Scheme is in line with One Nation – One Scheme theme

Objectives

1. To provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crop as a result of natural calamities, pests & diseases.
2. To stabilise the income of farmers to ensure their continuance in farming.
3. To encourage farmers to adopt innovative and modern agricultural practices.
4. To ensure flow of credit to the agriculture sector.

Highlights of the scheme

- There will be a uniform premium of **only 2% to be paid by farmers for all Kharif crops** and **1.5% for all Rabi crops**. In case of annual commercial and horticultural crops, the premium to be paid by farmers will be only 5%. The premium rates to be paid by farmers are very low and balance premium will be paid by the Government to provide full insured amount to the farmers against crop loss on account of natural calamities.
- **There is no upper limit on Government subsidy**. Even if balance premium is 90%, it will be borne by the Government.
- Earlier, there was a provision of capping the premium rate which resulted in low claims being paid to farmers. This capping was done to limit Government outgo on the premium subsidy.

This capping has now been removed and farmers will get claim against full sum insured without any reduction.

- The use of technology will be encouraged to a great extent. Smart phones will be used to capture and upload data of crop cutting to reduce the delays in claim payment to farmers. Remote sensing will be used to reduce the number of crop cutting experiments.
- PMFBY is a replacement scheme of NAIS / MNAIS, there will be exemption from Service Tax liability of all the services involved in the implementation of the scheme. It is estimated that the new scheme will ensure about 75-80 per cent of subsidy for the farmers in insurance premium.

Farmers to be covered

All farmers growing notified crops in a notified area during the season who have insurable interest in the crop are eligible.

To address the demand of farmers, the scheme has been made voluntary for all farmers from Kharif 2020.

Earlier to Kharif 2020, the enrollment under the scheme was compulsory for following categories of farmers:

- Farmers in the notified area who possess a Crop Loan account/KCC account (called as Loanee Farmers) to whom credit limit is sanctioned/renewed for the notified crop during the crop season. and
- Such other farmers whom the Government may decide to include from time to time.

Voluntary coverage : Voluntary coverage may be obtained by all farmers not covered above, including Crop KCC/Crop Loan Account holders whose credit limit is not renewed.

Risks covered under the scheme

- **Yield Losses** (standing crops, on notified area basis). Comprehensive risk insurance is provided to cover yield losses due to non-preventable risks, such as Natural Fire and Lightning, Storm, Hailstorm, Cyclone, Typhoon, Tempest, Hurricane, Tornado. Risks due to Flood, Inundation and Landslide, Drought, Dry spells, Pests/ Diseases also will be covered.
- In cases where majority of the insured farmers of a notified area, having intent to sow/plant and incurred expenditure for the purpose, **are prevented from sowing/planting the insured crop due to adverse weather conditions**, shall be eligible for indemnity claims upto a maximum of 25 per cent of the sum-insured.
- In post-harvest losses, coverage will be available **up to a maximum period of 14 days from harvesting for those crops** which are kept in “cut & spread” condition to dry in the field.
- For certain localized problems, Loss / damage resulting from occurrence of identified localized risks like hailstorm, landslide, and Inundation affecting isolated farms in the notified area would also be covered.

HEALTH AND WELL- BEING

PM JAN AROGYA YOJANA,

It was launched in 2018.

Pradhan Mantri Jan Arogya Yojana (PM-JAY)

PMJAY is one of India's most ambitious health sector schemes.

- It was launched as the National Health Protection Mission and renamed later.
- It is the largest government-funded health insurance scheme in the world.
- **The scheme offers eligible families an insurance cover of Rs. 5 lakh per annum per family**.
- This amount is intended to cover all **secondary and most tertiary care** expenditures incurred.
- There is **no cap on family size and age under the scheme**, to ensure that nobody is left behind.
- The cover will include pre and post-hospitalization expenses. It will also cover all pre-existing conditions.
    - **3 days of pre-hospitalization and 15 days of post-hospitalization like medicines and diagnostics are covered.**

Components of treatment covered under the scheme:

- Medical examination, consultation, and treatment
- Medical consumables and medicines
- Intensive and non-intensive care services
- Medical implant services
- Lab and diagnostic investigations
- Complications arising out of treatment
- Accommodation benefits and food services

The beneficiary will also receive a defined transport allowance per hospital.

The beneficiaries can take cashless treatment from any empanelled hospital anywhere in the country. This includes both public and private hospitals. By default, all government hospitals in the states that are implementing the scheme will be empanelled

JAL JEEVAN MISSION

The Mission was ***announced in August 2019.*** The chief objective of the Mission is ***to provide piped water supply (Har Ghar Jal) to all rural households by 2024.***

Key features:

1. It aims to create local infrastructure for rainwater harvesting, groundwater recharge and management of household waste water for reuse in agriculture.
2. The Jal Jeevan Mission is set to be based on various water conservation efforts like point recharge, desilting of minor irrigation tanks, use of greywater for agriculture and source sustainability.
3. The Jal Jeevan Mission will converge with other Central and State Government Schemes to achieve its objectives of sustainable water supply management across the country.

Need for and significance of the mission:

India has 16% of the world population, but only 4% of freshwater resources. Depleting groundwater level, overexploitation and deteriorating water quality, climate change, etc. are major challenges to provide potable drinking water. It is an urgent requirement of water conservation in the country because of the decreasing amount of groundwater level. ***Therefore, the Jal Jeevan Mission will focus on integrated demand and supply management of water at the local level.***

SWACHH BHARAT MISSION;

Swachh Bharat Mission is a massive mass movement that seeks to create a Clean India by 2019. The father of our nation Mr. Mahatma Gandhi always puts the emphasis on swachhta as swachhta leads to healthy and prosperous life. Keeping this in mind, the Indian government launched the swachh bharat mission on October 2, 2014.The mission will cover all rural and urban areas. The urban component of the mission will be implemented by the Ministry of Urban Development, and the rural component by the Ministry of Drinking Water and Sanitation.

Swachh Bharat Mission (Urban) 2.0 -

The Finance Ministry announced in February 2021 that

- Swachh Bharat Mission (Urban) 2.0 will be launched under the "**Health and Wellbeing" vertical.**
- The SBM-U phase-II will have a **new component** of wastewater treatment, including **faecal sludge management** in all Urban Local Bodies (ULBs) **with less than 1 lakh population.**

Swachh Bharat Mission for Urban Areas phase - 1 2014-19

- The programme includes **elimination of open defecation, conversion of unsanitary toilets** to pour flush toilets, eradication of manual scavenging, municipal solid waste management and bringing about a behavioural change in people regarding healthy sanitation practices.
- The programme was implemented over a five-year period in 4,401 towns.

Swachh Bharat Mission for Urban Areas 2.0

This will be a continuation of the Swachh Bharat Mission (Urban), with the following components for funding and implementation across all statutory towns, viz.

- Sustainable sanitation (construction of toilets)
- Wastewater treatment, including fecal sludge management in all ULBs with less than 1 lakh population (this is a new component added to SBM-U 2.0)
- Solid Waste Management
- Information, Education and Communication, and
- Capacity building.

At the end of the Mission, the following outcomes are expected to be achieved:

- All statutory towns will become ODF+ certified
- All statutory towns with less than 1 lakh population will become ODF++ certified ,
- 50% of all statutory towns with less than 1 lakh population will become Water+ certified
- All statutory towns will be at least 3-star Garbage Free rated as per MoHUA's Star Rating Protocol for Garbage Free cities
- Bio-remediation of all legacy dumpsites.

Swachh Bharat Mission (Gramin)

Phase I

The Nirmal Bharat Abhiyan has been restructured into the Swachh Bharat Mission (Gramin).

- The SBM(G) was launched on 2nd October 2014 to ensure cleanliness in India and make it Open Defecation Free (ODF) in Five Years. It seeks to improve the levels of cleanliness in rural areas through Solid and Liquid Waste Management activities and making Gram Panchayats Open Defecation Free (ODF), clean and sanitised.

Phase II

Having achieved the milestone of an ODF India in a time bound manner in the last five years from 2014 to 2019, the work on sanitation and the behaviour change campaign has to continue to sustain the gains made under the programme and also to ensure no one is left behind and the overall cleanliness
(Sampoorn Swachhata) in villages as well.

The programme will be implemented in mission mode from 2020-21 to 2024-25.

Swachh Vidyalaya Abhiyan

The Ministry of Human Resource Development has launched Swachh Vidyalaya Programme under Swachh Bharat Mission with an objective to provide separate toilets for boys and girls in all government schools within one year. The programme aims at ensuring that every school in the country must have a set of essential interventions that relate to both technical and human development aspects of a good Water, Sanitation and Hygiene Programme.

The Ministry financially supports States/Union Territories inter alia to provide toilets for girls and boys in schools under Sarva Shiksha Abhiyan (SSA) and Rashtriya Madhyamik Shiksha Abhiyan (RMSA).

Rashtriya Swachhata Kosh

The Swachh Bharat Kosh (SBK) has been set up to facilitate and channelize individual philanthropic contributions and Corporate Social Responsibility (CSR) funds to achieve the objective of Clean India (Swachh Bharat) by the year 2019. The Kosh will be used to achieve the objective of improving cleanliness levels in rural and urban areas, including in schools. The allocation from the Kosh will be used to supplement and complement departmental resources for such activities. To incentivise contributions from individuals and corporate, modalities are being considered to provide tax rebates where it is possible.

Scheme for Faster Adoption and Manufacturing of Electric Vehicle in India [FAME]),

Promotion of Electric Vehicles

The Department of Heavy Industry (DHI) is administering Faster Adoption and Manufacturing of Hybrid & Electric Vehicles in India (FAME India) Scheme for promotion of adoption of electric/hybrid vehicles (xEVs) in India since 01st April, 2015.

- The Phase-I of the Scheme was extended from time to time and the last extension was allowed till 31st March, 2019.
- **Presently, Phase-II of FAME India Scheme is being implemented for a period of 3 years from 01st April, 2019** with a total budgetary support of Rs. 10,000 crore.
- This phase will mainly focus on supporting electrification of public and shared transportation, and aims to support through demand incentive approx. 7000 e-Buses, 5 lakh e-3 Wheelers, 55000 e-4 Wheeler Passenger Cars and 10 lakh e-2 Wheelers. With greater emphasis on providing affordable and environment friendly public transportation options for the masses, the scheme will be applicable mainly to vehicles used for public transport or those registered for commercial purposes in e-3W, e-4W and e-bus segments. However, privately owned registered e-2W will also be covered under the scheme as a mass segment. In addition, creation of charging infrastructure will be also supported to address range anxiety among users of electric vehicles.
- In the First Phase of the Scheme about 2.8 lakh hybrid and electric vehicles are supported by way of demand incentive amounting to about Rs 359 crore.
- The Department has also sanctioned about **500 Charging Stations/ Infrastructure** for Rs. 43 crore (approx.) under Phase-I of FAME-India Scheme.
- In addition, following initiatives were also taken up by the Government to promote the use of electric/ hybrid vehicles (including shared mobility) in various parts of the country –

  (i) Under the new GST regime, GST on EVs has been reduced from 12% rate to 5%.

  (ii) Ministry of Power has allowed sale of electricity as 'service' for charging of electric vehicles. This will provide a huge incentive to attract investments into charging infrastructure.

(iii) The Government has also granted exemption to the Battery Operated Transport Vehicles and Transport Vehicles running on Ethanol and Methanol fuels from the requirements of permit.

(iv) In the budget of 2019-20, the Finance Minister announced provision of additional income tax deduction of Rs 1.5 lakh on the interest paid on loans taken to purchase electric vehicles.

FINANCE (PM MUDRA YOJANA);

Ministry of Finance is committed to provide financial inclusiveness and support to the marginalized and hitherto socio-economically neglected classes. Financial needs of all stakeholders ranging from the budding entrepreneurs to the hard-working farmers has also been catered to through various initiatives. A key initiative towards this is **Pradhan Mantri MUDRA Yojana (PMMY)**, which has given wings to the dreams and aspirations of millions, along with a feeling of self-worth and independence.

PMMY was launched by the Hon'ble Prime Minister on April 8, 2015 for providing loans upto Rs.10 Lakh to the non-corporate, non-farm small/micro enterprises. As we are celebrating the sixth anniversary of PMMY, we take look at the major aspects of this Scheme and its achievements so far.

Why MUDRA Yojana?

India is a young country brimming with youthful enthusiasm and aspirations. In order to provide a fertile ground for sowing the seeds of India's development it is very important to harness this innovative zeal of young India which can provide new age solutions to existing gaps in the economic ecosystem of the country. Understanding the need to harness the latent potential of entrepreneurship in India, the NDA Government in the very first budget launched the Pradhan Mantri MUDRA Yojana.

How does MUDRA Yojana work?

Under PMMY collateral free loans of upto Rs. 10 Lakh are extended by Member Lending Institutions (MLIs) viz Scheduled Commercial Banks, Regional Rural Banks (RRBs), Small Finance Banks (SFBs), Non Banking Financial Companies (NBFCs), Micro Finance Institutions (MFIs) etc.

The loans are given for **income generating activities** in **manufacturing, trading and services sectors** and for activities allied to agriculture.

Mudra loans are offered in three categories namely, 'Shishu', 'Kishore'and 'Tarun' which signifies the stage of growth or development and funding needs of the borrowers:-

- **Shishu** : covering loans upto Rs. 50,000/-
- **Kishore** : covering loans above Rs. 50,000/- and upto Rs. 5 lakh
- **Tarun** : covering loans above Rs. 5 lakh and upto Rs. 10 lakh

With an objective to promote entrepreneurship among the new generation aspiring youth, it is ensured that more focus is given to Shishu Category loans and then Kishore and Tarun categories.

URBAN (SMART CITIES).

5TH Anniversary of Urban Missions

- Pradhan Mantri Awas Yojana (Urban) (Pmay-U), Smart Cities Mission (SCM) and Atal Mission for Rejuvenation and Urban Transformation (AMRUT)
- Under AMRUT - 11 reforms comprising 54 milestones implemented during four years--aimed at strengthening capacities of city level institutions for effective governance and citizen service delivery.
- Houses sanctioned under PMAY(urban) **almost eight times more** than those sanctioned under earlier urban housing schemes.
- Multiplier effect in **employment generation** due to construction activity under PMAY(U) with employment for approximately 1.65 cr citizens generated through forward and backward linkages.

Progress, Achievements and Outcomes of AMRUT, SCM and PMAY-(U)

Atal Mission for Rejuvenation and Urban Transformation (AMRUT)

- **START** - Atal Mission for Rejuvenation and Urban Transformation (AMRUT), launched on 25 June 2015, has completed 5 successful years.
- **The Mission** aims at ensuring **universal coverage of drinking water supply and substantial improvement in coverage and treatment capacities of sewerage and septage, along with storm water drainage, non-motorized urban transport and green spaces & parks**.
  - The Mission spans across 500 cities, covering more than 60% of urban population.
  - State Annual Action Plans (SAAPs) **worth ₹ 77,640 crore approved** and projects worth **₹ 75,829 crore grounded** so far. Projectsworth **₹ 10,654 crores completed and ₹ 65,175 crore in advanced stages of implementation.**

- **FOCUS AREAS -**
  1. **drinking water supply projects,**
  2. **sewerage and septage projects.**

3. The Mission helped cities to undertake a set of **11 reforms** comprising 54 milestones aimed at **strengthening capacities of city level institutions for effective governance and citizen service delivery**.
4. In order to promote **energy efficiency** across the Indian cities, **76 lakh streetlights replaced with energy efficient LED streetlights**.
5. **Online Building Permission System (OBPS)**, implemented as a **digital transformation-based reform** is aimed at reducing the overall time taken for approvals of building plans, while ensuring aseamless process.
6. Owing to the implementation of the reform across 2,057 cities, including 444 AMRUT cities, **India's ranking rose to 27th position in the World Bank Doing Business Report (DBR) 2020**, in the Ease of Doing Business in Construction Permits, moving up from 181 rank in DBR 2018, showing remarkable improvement since the implementation of the reform.
7. **Credit rating exercise** undertaken in 469 of the 500 Mission cities, out of which 163 cities have been found as **Investible Grade**.

Smart Cities Mission (SCM)

Smart Cities Mission (SCM) was **launched on 25thJune 2015** with the objective of promoting cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart' solutions. An additional 1000 projects amounting to ₹32,500 crore have been tendered and 1000 projects amounting to ₹ 36,000 crore grounded during last one year.

- **The Urban Learning Internship Program (TULIP)'** is designed for all ULBs and Smart City SPVs to engage fresh graduates as interns. More than 25,000 students have registered on the platform so far and more than 1000 internship positions have been posted by the cities. This will increase the capacity of our cities and positively engage our youth by making them market ready.

Climate Smart Cities and Data Smart Cities are two important programs under Smart Cities Mission. They are key enablers, driving the future course of action through data driven performance management, urban innovation and institutional capacity building.

- **114 India cities participated in the Ease of Living and Municipal Performance Index(EoL and MPI**. Many cities have participated in the Citizen Perception Survey exercise undertaken by the Ministry under EoL. More than 3 million people have filled these surveys and given constructive feedback on their cities.

- Top 20 cities have been paired as **'Sister cities'** with 20 cities who were behind in ranking. This has generated great enthusiasm amongst cities and stakeholders, wherein cities are helping each other to learn and perform.

- Financing - Smart Cities Mission is supporting interested cities in raising finance through **Municipal Bonds**. Recently, six cities were selected for technical assistance from US Treasury department to raise municipal bonds.

- **Start-up culture in Smart Cities** Joint efforts of Smart Cities Mission with AGNI and Invest India is fostering growth of a **start-up culture in Smart Cities**. The Smart Technology Showcase between the start-ups and our City administrators was undertaken by the Mission.

Pradhan Mantri Awas Yojana – Urban (PMAY-U)

Pradhan Mantri Awas Yojana – Urban (PMAY-U) completed five years on 25 June 2020. The scheme was launched in **2015**

- **Objective - providing pucca house to all eligible beneficiaries of Urban India by 2022 with the vision of** 'Housing for All'.
- The number of houses sanctioned in last five years under the Mission is almost **eight times more** than those sanctioned under earlier urban housing schemes during the span of 10 years.
- National Urban Housing Fund has been created to mobilize **₹ 60,000 Cr** through **Extra Budgetary Resources** over and above the budgetary allocation for the Mission To ensure regular flow of funds for implementation of PMAY(U).
- Through the **Credit Link Subsidy Scheme (CLSS),** for the first time, the Middle Income Group (MIG) is being provided benefits for their housing needs. More than **10 lakh** beneficiaries belonging to Economically Weaker Sections (EWS), Lower Income Group (LIG) and MIG have so far been brought under the fold of CLSS.
- Government has identified many **alternative and innovative technologies** through a **Global Housing Technology Challenge - India**.
- **6 Light House Projects** are being implemented**in six states** across the country which will act as **live laboratories** demonstrating innovative, proven construction technologies for speedier and cost-effective construction of houses which are sustainable green, eco-friendly and disaster resilient.
- **Angikaar** - In 2019 only, MoHUA launched **Angikaar- a campaign for change management** in more than **4000** cities. The campaign addressed and enabled beneficiaries to adapt to life transformation that comes with shifting to a newly constructed house. The campaign also converged with other government schemes like Ayushman Bharat and Ujjawala so that beneficiaries could avail the benefits of these schemes. Around **20 lakh** households were covered in the campaign.
- In line with '**Atma Nirbhar Bharat**', an **Affordable Rental Housing Complexes** (ARHCs) scheme for providing ease of living to **Urban Migrants/ Poor** has been announced by the Hon'ble Finance Minister on 14 May, 2020.

UJJWALA YOJANA

PURPOSE - In order to provide clean cooking fuel to poor households, the Government had launched "Pradhan Mantri Ujjwala Yojana"(PMUY) scheme to provide 5 Crore deposit-free LPG connections, which were subsequently increased to 8 Crore.

TARGET - The target of Scheme has already been achieved in September, 2019.

BENEFITS - Implementation of PMUY has resulted increase in national LPG coverage to from 61.9 % as on 01.04.2016 to 99.5% as on 01.01.2021. As on 01.01.2021, total number of LPG consumers is 28.74 crore.

PRICING MECHANISM - The prices of petroleum products including LPG in the country are linked to the prices of respective products in the international market.

CHAPTER: 12- SUGARCANE INDUSTRY DILEMMA

India brings forward target of 20% ethanol-blending in petrol to 2023

WHAT IS THE NEWS?

The government's has ambitious plans, it advanced the timeline for achieving 20 per cent blending from 2030 to 2025 in the hope that 10 per cent blending(previous target) would be achieved by 2022. If achieved, it could solve a number of problems. India depends on imports for over 85 per cent of its crude oil requirement and any substitution will bring down the import bill, saving precious foreign currency.

WHAT IS THE IMMEDIATE NECESSITY?

1. **DEALING WITH OVERCAPACITY** - Traditionally, India's sugar industry has been cyclical where three-four years of bumper crop - when overcapacity leads to a fall in prices and margins for companies - are followed by a couple of years of shortfall, which helps correct prices and bolster margins. That trend has been disrupted. Since FY17, the country has been producing far in excess of what it can consume. current sugar season from October last year began with record rollover stock of 10.7 million tonnes. With expected production of 30.2 million tonnes and domestic consumption of only 26 million tonnes, it will be the fourth straight year of production far outstripping consumption. **In the last 10 years, FRP has increased almost 100 per cent, against only a 15 per cent increase in sugar prices. At the same time, mills are duty-bound to crush all the cane that is brought to them by farmers each year. As a result, money owed by mills to farmers referred to as arrears has already ballooned to an all-time high Rs 22,900 crore (as on February 2021). At this time last year, outstanding dues to farmers were at Rs 19,200 crore**
2. **REDUCING POLLUTION** - Blending ethanol with gasoline would also partially curb tail-pipe emissions, which would in turn contribute to the country's war on air pollution.
3. **RANGRAJAN COMMITTEE-** The industry has been demanding for years that FRP should be linked to sugar prices that move according to demand and supply. This was advocated by the Rangarajan Committee way back in 2012. Reducing FRP, however, could mean a fall in income for farmers, something no government can afford.

WHAT ARE LONG TERM GOALS?

The diversion to ethanol is expected to solve the structural and sticky issues in the sector that have undermined its growth prospects, besides ushering in discontent among the 50-million strong sugarcane farming community in the country.

What is Fair and remunerative price (FRP) in sugar?

- Fair and remunerative price (FRP) is the minimum price at which rate sugarcane is to be purchased by sugar mills from farmers.
- The FRP is based on the recommendation of the Commission of Agricultural Costs & Prices (CACP).
- The approval will ensure a guaranteed price to cane growers. The 'FRP' of sugarcane is determined under Sugarcane (Control) Order.
- This will be uniformly applicable all over the country.

SUPPLEMENTARY READING

Blend It to Fix It

Ethanol blending promises to open up a sizeable market for the domestic sugar industry to utilise excess production, without hurting farmer interest

Midway through his address at the annual congregation of the domestic sugar industry in December 2020, Piyush Goyal, Union Minister for Commerce and Railways, said something that cast a pall of gloom on the occasion. Goyal said the industry should forget about reduction of the fair and remunerative price (FRP), the reference price set by the government every year which sugar mills are obliged to pay farmers.

The industry has been demanding for years that FRP should be linked to sugar prices that move according to demand and supply. This was advocated by the Rangarajan Committee way back in 2012. Reducing FRP, however, could mean a fall in income for farmers, something no government can afford.

"Let's be practical about it. We cannot reduce the FRP," Goyal said at the annual general meeting of industry body Indian Sugar Mills Association (ISMA). "It's an institutional mechanism that has been going on for several years." Instead, he urged the industry to look at alternatives such as ethanol, which can be blended with gasoline, to divert excess sugar production in the country. The prescription is not new. Nor is Goyal the first person to say it. His Cabinet colleague Nitin Gadkari, the Minister for Road Transport, Highways and MSME, who hails from the sugar-producing belt of Maharashtra, has been a strong proponent of blending ethanol with motor fuels. There is not a single public forum where he doesn't mention it. "Ethanol production from molasses and sugarcane juice can be easily ramped up in Uttar Pradesh and Maharashtra where we have excess sugar capacity," says Gadkari. "My dream is to take the ethanol economy from the current Rs 20,000 crore to Rs 2,00,000 crore."

Ethanol: The New Fad In Town

The government is walking the talk with steps on the ground as well. Procurement of ethanol by oil companies for blending has grown from just 38 crore litres in FY14 to an estimated 173 crore litres in FY20. The blending rate has increased from 1.53 per cent to over 5 per cent. Ethanol production capacity in the country has shot up to over 400 crore litres.

The government's plans are far more ambitious. Within a month of Goyal's address at ISMA, it advanced the timeline for achieving 20 per cent blending from 2030 to 2025 in the hope that 10 per cent blending would be achieved by 2022. If achieved, it could solve a number of problems. India depends on imports for over 85 per cent of its crude oil requirement and any substitution will bring down the import bill, saving precious foreign currency. Blending ethanol with gasoline would also partially curb tail-pipe emissions, which would in turn contribute to the country's war on air pollution. More importantly, 20 per cent blending would require substantial ethanol production, which will open up a sizeable opportunity for the sugar industry to divert its excess production. Ethanol can be produced either from sugarcane juice and molasses or damaged food crops.

"**Ethanol-blending programme** is an excellent opportunity for the industry to divert surplus production towards ethanol and create an alternative revenue stream," says Abinash Verma, Director-general, ISMA. "Currently, oil companies have sought 457 crore litres for FY21 (ethanol supply year December 2021-November 2022), of which contracted supply is approximately 300 crore litres till April 5, out of which 106 crore litres have already been supplied. The overall blending percentage in the country right now is 7.27 per cent, an all-time high. To understand how big the opportunity is, 20 per cent blending means the country would need around 1,000 crore litres of ethanol annually by 2030."

Incentives Galore

At current rates, with crude hovering over $60 per barrel, it is slightly remunerative for oil companies to blend even though the percentage is so low - sub 8 per cent that it doesn't make a difference overall. Ethanol pricing itself is decided by the government, so state-run oil companies have to simply adhere to it. For the current year, ethanol extracted from sugarcane juice is being procured at Rs 62.65 per litre, from C-Heavy molasses at Rs 45.69 per litre and from B-Heavy molasses at Rs 57.61 per litre. It is a far cry from 2010 when ethanol was being bought by oil companies at just Rs 27 per litre. In the past, blending did not take off also since not much was invested in building distilling capacities.

The government has formulated policies that incentivise mills that are desirous of building distilleries. These include financial assistance by way of interest subvention for five years at 6 per cent maximum rate of interest against loans availed by sugar mills from banks. Between 2018 and 2020, about Rs 3,600-crore loans were sanctioned for 70 ethanol projects (molasses-based distilleries) with a capacity of 195 crore litres. Of these, 31 projects have been completed, adding a capacity of 102 crore litres so far. In November last year, in-principle approval was granted to another 185 sugar mills and standalone distilleries to avail Rs 12,500 crore of loans for capacity addition of about 468 crore litre of ethanol per annum.

The Centre also increased ethanol prices, offering a significant premium above sugar prices to incentivise the industry. It was one of the factors that acted as a stumbling block in the past. Keeping in mind the business realities of different sources of raw materials for ethanol, differential pricing was introduced in 2018. In fact, in October last year, the Cabinet Committee on Economic Affairs (CCEA) announced the steepest ever hike in prices of ethanol - Rs 1.94 per litre for C-Heavy molasses, Rs 3.34 per litre for B-Heavy and Rs 3.17 per litre for sugarcane juice. The minimum support price for sugar, which was hiked by Rs 2 per kg in February 2019, is Rs 31 per kg and the market price right now is Rs 33-34 per kg.

"With ethanol contributing 10-15 per cent of sugar mills' turnover, remunerative prices are expected to encourage mills to enhance the supply of ethanol for blending, thereby supporting revenues, profitability and improving their ability to pay farmers," says Sabyasachi Majumdar, Senior Vice president and Group Head, ICRA Ratings.

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Ethanol is one of the panaceas for problems in this sector. At least 6 million tonnes of sugar production will have to be diverted for 20 per cent blending," says Tarun Sawhney, Vice chairman and Managing Director, Triveni Engineering and Industries. "If realised, this can bring parity between production and demand." During the current financial year, 39 per cent of the distillation capacity at Triveni has been utilised to produce ethanol using B-Heavy molasses, while it was only 15 per cent during the corresponding period of last year. Sawhney is also setting up a distillery with a capacity of 160 KLPD (kilolitre per day) at its sugar mill in Milak Narayanpur and a smaller grain-based distillery of 40 KLPD at Muzaffarnagar, Uttar Pradesh, with a combined investment of Rs 250 crore. This will enhance Triveni's capacity from 320 KLPD to 520 KLPD. It is already one of the country's largest ethanol producers.

Similarly, another major sugar producer, Dhampur Sugar Mills, is expanding its distillery capacity in Asmoli in UP from 1,50,000 to 2,50,000 LPD, which will take its overall capacity from 400 to 500 KLPD by November. It is investing Rs 160 crore for the same."The ethanol-blending programme is really welcome and a key driver of sustainability in the sector," says Joint Chief Financial Officer Nalin Gupta. "The investment that the industry is required to make to expand ethanol capacity at distilleries makes sense as the price of a litre of ethanol is 1.6 times the price of every kilogram of sugar. So, there is a revenue upside to this."

Solving The Problem Of Plenty

The diversion to ethanol is expected to solve the structural and sticky issues in the sector that have undermined its growth prospects, besides ushering in discontent among the 50-million strong sugarcane farming community in the country. At the heart of it is the glut in the domestic market.

Traditionally**, India's sugar industry has been cyclical where three-four years of bumper crop** - when overcapacity leads to a fall in prices and margins for companies - are followed by a couple of years of shortfall, which helps correct prices and bolster margins. That trend has been disrupted. Since FY17, the country has been producing far in excess of what it can consume.

The current sugar season from October last year began with record rollover stock of 10.7 million tonnes. With expected production of 30.2 million tonnes and domestic consumption of only 26 million tonnes, it will be the fourth straight year of production far outstripping consumption.

The excess capacity has been keeping prices low in the market even as FRP, a cost for the mills, has not come down. In the last 10 years, FRP has increased almost 100 per cent, against only a 15 per cent increase in sugar prices. At the same time, mills are duty-bound to crush all the cane that is brought to them by farmers each year. As a result, money owed by mills to farmers referred to as arrears has

already ballooned to an all-time high Rs 22,900 crore (as on February 2021). At this time last year, outstanding dues to farmers were at Rs 19,200 crore.
"The minister (Goyal) is absolutely right - FRP cannot be reduced. The farmer should not suffer," says Sawhney of Triveni. "Instead, the industry should be allowed to increase prices of sugar in the market."

Among the many solutions that have been offered, the most high profile was in 2012 by C. Rangarajan who was then the chairman of Manmohan Singh government's Economic Advisory Council. One of his key recommendations was a revenue-sharing formula (RSF) wherein the price of cane would be determined at 75 percent of the revenue of sugar. While the government has in-principle accepted these recommendations, they are yet to be implemented in spirit.
"For the past seven years we have been continuously asking the government to implement Rangarajan Committee's cane-pricing formula. Once its done, the price of cane will not be arbitrary but linked to market forces," says Verma of ISMA. "At the same time to protect farmers, a price stabilisation fund is proposed to bridge the gap between cane price as per RSF and the FRP that farmers are supposed to get. This has also been regularly recommended by the Commission for Agricultural Costs and Price (CACP) and most recently by Niti Ayog in March 2020."
In most commodities, a possible solution to a glut in the domestic market is exports. In the sugar industry it is generally a glut in international markets. Also, global prices are typically lower than in India. The government has, however, stepped in with subsidies from time to time to encourage mills to export surplus production. In the sugar season 2019/20 for example, a subsidy of Rs 10.45 per kg was provided with a quota of 6 million tonnes, which resulted in record exports of 7.25 million tonnes. This year, the subsidy has been lowered to Rs 5.8 per kg but it will still be enough for the industry to export at least 6 million tonnes of sugar.
But the window for exports is closing as well. WTO member countries have begun to complain about the subsidies being offered by India and though India has countered such claims, there is a deadline that ends in December 2023. "Exports are relevant to manage surplus stock but not a sustainable solution as India has moved to a surplus state by breaking the cyclicality," says Ravleen Sethi, Senior Manager, CARE Ratings.
The large number of vehicles already compliant with 10 per cent blended fuel and the buoyancy that India's automobile sector is expected to demonstrate in the years to come augur well for a steady rise in demand for ethanol.
The fortunes of the domestic sugar sector will be determined by how the "E" factor plays out on the ground in the years to come.