



Mains Marathon
Compilation

27th Feb to 4th March, 2023

Mains Marathon Compilation for the Month of February, (Fifth Week) 2023

1. Discuss the need for menstrual leave policies. Highlight the global practices around menstrual leave policies.
2. Heat waves have occurred earlier than expected time in India. What are the reasons behind winter heat waves in India?
3. Why is the New START nuclear treaty suspended? What could be the possible implications of its suspension?
4. Open financial borders are integral to India's aspirations for growth and prosperity. Do you agree? Give reasons for your argument.
5. In the light of the present challenges to federalism in India, highlight the recommendation of Punchhi Commission's report on Centre-state relations.
6. What are the issues associated with the methods used by V-Dem democracy to rank India on democracy? Also, discuss the lessons that India can learn from its findings.
7. Earthquake preparedness is not just about buildings — cities as a whole need to be reimagined. Elucidate.
8. Digital models for disease tracking are crucial, but there are also issues associated with these models. Discuss.
9. Discuss the significance and challenges of Supreme Court-induced changes to the process of the cc appointment.
10. Critically analyze India's stand on the Ukraine war.
11. What is the process of forest certification? Also, highlight its significance.
12. Clean energy solutions are transforming women's livelihoods at the grassroots, but they need to be scaled up. Discuss

Q.1) Discuss the need for menstrual leave policies. Highlight the global practices around menstrual leave policies.

The Hindu

Introduction: Contextual introduction.

Body: Explain the need for menstrual leave policies. Also write some global practices around menstrual leave policies.

Conclusion: Write a way forward.

Menstrual leave or period leave refers to all policies that allow employees or students to take time off when they are experiencing menstrual pain or discomfort. At the workplace, it refers to policies that allow for both paid or unpaid leave or time for rest. In India, there is **no legislative provision** for menstrual leave.

Need for menstrual leave policies:

- This pain lasts for a couple of days a month for some and for others the pain **hampers daily activities and productivity**. It was estimated that **employees lost around 8.9 days' worth of productivity** every year due to menstrual-cycle related issues.
- In India, 20% of menstruators have PCOS and approximately 25 million suffer from endometriosis.
- Menstrual leave could be an opportunity for women to speak up about their menstrual cycle and to receive **treatment for health issues** related to it.
- It was not that women needed rest while menstruating, it was just the lack of humane working conditions that made labour movements push for menstrual leaves.
- This will also **help reduce the drop-out rates** of female students from government schools in rural India caused by the lack of clean toilets, running water, sanitary pads, etc.

Global practices:

- **Spain:** Spain recently became the first European country to grant paid menstrual leave to workers.
- **Japan:** Japan introduced menstrual leave as part of labour law in 1947. However, as per a recent study, less than 0.9% of the women had actually taken leave.
- **Indonesia:** It introduced a policy in 1948 which said that workers experiencing menstrual pain are not obliged to work on the first two days of their cycle.
- **Philippines:** Workers are permitted two days of menstrual leave a month.
- **Taiwan:** It has an Act of Gender Equality in Employment. The act says employees have the right to request a day off as period leave every month, at half their regular wage.
- There are other countries that allow menstrual leave like the United Kingdom, South Korea, Zambia, China and Wales. However, the U.S does not have a formal menstrual leave policy.
- **Private Companies like Nike and Coexist** have introduced menstrual leave as an internal policy.

The path to equality does not lie in inaction due to fear of further discrimination. What is needed is a holistic outlook aimed at bridging existing gaps. It may become a pivotal step in ensuring proper **reproductive health equity** in India.

Q.2) Heat waves have occurred earlier than expected time in India. What are the reasons behind winter heat waves in India?

The Hindu

Introduction: Contextual introduction.

Body: Explain some reasons behind winter heat waves in India.

Conclusion: Write a way forward.

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Heat waves are defined based on the temperature thresholds over a region in terms of actual temperature or its departure from normal. According to the IMD, a region has a heat wave if the **maximum temperature crosses 45°C (or 37°C at a hill station)**. IMD warned that the maximum temperatures over northwest, west, and central India would be 35 °C higher than the long-term average.

Reasons behind winter heat waves in India:

- **Weak Western Disturbances:** Western disturbance is the factor that keeps the temperature in control during February and March. However, this year, western disturbances have been weak due to which wind is lacking moisture for adequate rainfall. It is causing dry spells over the plains and subdued rainfall or snowfall over hills.
- **Climate change:** In terms of climate change, the Middle East is warming faster than other regions near the equator, and it is acting as a source of warm air that blows toward India.
- **Anti-cyclone formation:** The anticyclone is forming over the north-eastern part of the Arabian Sea, which has now moved over southwest Rajasthan. Due to this anticyclone, hot and dry winds from Balochistan, South Sindh, and Thar Desert are reaching northwest India as well as Gujarat, Maharashtra, and Karnataka.
- **Possibility of El Nino Year:** The last three years have been La Nia years. Scientists have predicted a high likelihood that this year will be an El Nino year. It has a significant impact on weather and climate patterns and is linked to drought and poor monsoons in India. This may also contribute to a winter heat wave in India.
- **Air flowing in from the northwest** rolls in over the mountains of Afghanistan and Pakistan, so some of the compression also happens on the leeward side of these mountains, entering India with a bristling warmth.
- **Lapse rate:** the rate at which temperatures cool from the surface to the upper atmosphere – is declining under global warming. In other words, global warming tends to warm the upper atmosphere faster than the air near the surface. This in turn means that the sinking air is warmer due to global warming, and thus produces heat waves as it sinks and compresses.

The solution to climate change lies in understanding the impact of climate change in our life and taking steps to achieve climate resilience. Urban greening can help to cool down cities and towns.

Q.3) Why is the New START nuclear treaty suspended? What could be the possible implications of its suspension?

The Hindu

Introduction: Contextual introduction.

Body: Explain why the New START nuclear treaty is suspended. Also write some possible implications of its suspension.

Conclusion: Write a way forward.

The **New Strategic Arms Reduction Treaty** (New START Treaty) was signed by **USA and Russia** in 2010. Under the Treaty, America and Russia cannot deploy more than 1,550 strategic nuclear warheads and more than 700 long range missiles and bombers. The treaty gave the US and Russia seven years to reduce their stockpiles, including nuclear warheads that are launched using long-range missiles, submarines, and bombers.

Why is the New START nuclear treaty suspended?

- The Russian President has said that it is suspending the treaty as the North Atlantic Treaty Organisation (NATO) and the U.S wanted to “inflict ‘strategic defeat’ on Russia and try to get to Russian nuclear facilities at the same time.

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- Russia also accused the U.S. of rejecting Russian requests for visits to specific U.S. facilities. The U.S State Department also stated that Moscow was not complying with the pact as it had not let Washington carry out on-site inspections.

Possible implications of its suspension:

- The world could, in a worst-case scenario, see a return to a time when two nuclear-armed powers once again get stuck in **cycles of escalations and provocations** due to unresolvable mutual suspicions regarding the actions of the other side.
- It would continue abiding by the treaty's restrictions, a suspension of the treaty may mean that it will be **harder for the US to monitor compliance**.
- The Russian President said that the country is **not withdrawing** from the treaty entirely. But Russia will not allow US countries to inspect its nuclear arsenal.
- Analysts believe it is **entirely symbolic** since Russia had not been permitting inspections anyway. As per them, the move appears to be aimed at **pressuring the US President and his allies** so that Russia can dictate the terms under which the war would come to an end.

The Ukraine-Russia episode shows the dwindling pace of international law and loss of respect towards the sovereignty and integrity of nations. As an incumbent member of the UNSC, India must push for bringing the hostilities to an immediate end. At the same time, India should take proactive steps to hedge its interests amid the uncertainties.

Q.4) Open financial borders are integral to India's aspirations for growth and prosperity. Do you agree? Give reasons for your argument.

Business Standard

Introduction: Contextual introduction.

Body: Explain how financial globalization is integral to India's aspirations for growth and prosperity. Also write its challenges.

Conclusion: Write a way forward.

Financial globalization as a part of economic globalization, is understood as the integration of a country's local financial system with international financial markets and institutions. This integration typically requires that governments liberalize the domestic financial sector and the capital account.

Integral to India's aspirations for growth and prosperity:

- Financial markets become deeper and more sophisticated when they integrate with world markets, increasing the financial alternatives for borrowers and investors. Financial markets operating in a global environment enable international risk diversification.
- The Indian **Information Technology (IT) industry** has developed due to globalisation. It was one of the US investment banks that invested in the equity of an IT company back in 1993. This led to the development of the IT industries in India at that time when Indian investors didn't have much knowledge about this industry.
- Further, there is also a **need of foreign investment** in developing large scale renewable energies in India.
- Moreover, India's flows of both the current and the capital account have increased because of increase in the international trade.

Challenges:

- **Exchange rate distortions:** Prices move up and down in all markets to keep demand and supply in balance. Therefore, countries which do not like price volatility, have options to exchange the variable prices for a fixed price and by giving a fee. However, countries require sound thinking in financial economic policy to exchange for fixed prices. In the case of India, there is much to be done on this front.

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- **Uncertainties associated with the global financial flows:** Financial globalization and trade globalization are not different and move together. There are risks associated with both of them but both bring immense benefits for countries.
- **Loss of autonomy of monetary policy:** Countries like India have adopted **inflation targeting** to solve this problem. The targeting of 4 percent CPI inflation by the RBI helps it to cut through the exchange rates. Hence, monetary policy autonomy is ensured.

Although globalization brings risks for an economy, it should be adopted because of its huge benefits. Risks can be tackled by coming up with better institutions and policies.

Q.5) In the light of the present challenges to federalism in India, highlight the recommendation of Punchhi Commission's report on Centre-state relations.

Indian Express

Introduction: Contextual introduction.

Body: Explain some present challenges to federalism in India. Also write some recommendations of Punchhi Commission's report on Centre-state relations.

Conclusion: Write a way forward.

The Government of India constituted a Commission on Centre-State Relations under the chairmanship of Justice Madan Mohan Punchhi, former Chief Justice of India on 27th April 2007 to look into the new issues of Centre-State relations.

Present challenges to federalism in India:

- The **Inter-State Council** has met only once in the last seven years, while the National Development Council has not met at all.
- The **constitutional office of the Governor** has come under scrutiny several times for encroaching on the powers of state executive and legislature.
- Many important and politically sensitive decisions are taken without reference to, and consultation with, the concerned states. For instance, **Article 370** was removed without consulting the state legislature.
- The **GST** has already taken away much of the autonomy available to states and has made the country's indirect tax regime unitary in nature.
- The **tenure of the 15th Finance Commission** was mired in controversy, and many states expressed apprehensions about devolution.
- The **State Action Plans on Climate Change (SAPCCs)** have suffered from a lack of specificity in design and inadequate financial support from the Centre, and rank low among governance priorities in state capitals.

Recommendations of Punchhi Commission's report on Centre-state relations:

- **Governor:** The appointment of the Governor must be done by a panel which among others also has the State Chief Minister. There should be provisions for the **impeachment of the Governor** by the state legislature along the same lines as that of the President by Parliament.
- **Inter-State Council (ISC):** The council must meet at least thrice a year on an agenda evolved after proper consultation with states. The Centre should consult states before introducing bills on items in the concurrent list through the inter-state council.
- The States should be involved in the Finance Commissions' work to come up with the final terms of the contract.

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- The Finance Commission and the Planning Commission (now NITI Aayog) should work much closer together. This cooperation will be greatly enhanced by synchronising the Finance Commission's and the five-year plan's time frames.
- The **National Water Resources Council** needs to play a greater role in integrating policy and programmes on a continuous basis.

There is a need to go beyond the concept of cooperative federalism and create a new federal architecture for collaborative engagement of the appropriate levels and actors in the policy-making and implementation process.

Q.6) What are the issues associated with the methods used by V-Dem democracy to rank India on democracy? Also, discuss the lessons that India can learn from its findings.

Business Standard

Introduction: Contextual introduction.

Body: Explain some issues associated with the methods used by V-Dem democracy to rank India on democracy. Also explain what lessons India can learn from its findings.

Conclusion: Write a way forward.

Varieties of Democracy (V-Dem) Report is produced by the Varieties of Democracy Institute at Sweden's University of Gothenburg. The report is based on the score in the **Liberal Democracy Index (LDI)**. LDI captures both liberal and electoral aspects of democracy, based on the 71 indicators included in the Liberal Component Index (LCI) and the Electoral Democracy Index (EDI). It classifies India as an **electoral autocracy** ranking it 93rd on the LDI, out of 179 countries.

Issues associated with the methods used by V-Dem democracy:

- These indices are primarily based on the opinions of a **tiny group of unknown "experts"**.
- The questions that are used are **subjective** and are worded in a way that is impossible to answer objectively even for a country, let alone compare across countries.
- There are questions that should be asked but are excluded.
- Certain questions used by these indices are **not an appropriate measure** of democracy across all countries.

India can learn following lessons from its findings:

- The Government should **hear criticism** rather than rejecting it outrightly. Suggestions on eroding democratic values need a thoughtful, and respectful response.
- The report identified "misinformation" as a key tool deployed by autocratising governments to sharpen polarisation and shape domestic and international opinion. Thus, the **press and the judiciary** which are considered the pillars of India's Democracy, require to be independent of any executive interference.
- In order to **maintain trust in public institutions**, the principles of legality, legal certainty and prohibition of arbitrariness of the executive powers, judicial independence, impartiality, and equality before the law need to be respected.
- Strong democracy requires **strong opposition**. Without an alternative choice, the very objective of election to provide a check on arbitrary power gets defeated.
- To protect freedom domestically and build support for a foreign policy that protects democratic rights and values abroad, it is essential to foster a stronger public understanding of democratic principles, especially among young people.

Democratic values and principles are core to India's identity. We need to safeguard India's Democracy by strengthening its pillars- the Legislature, Executive, Judiciary, and the Media.

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Q.7) Earthquake preparedness is not just about buildings — cities as a whole need to be reimaged. Elucidate.

Indian Express

Introduction: Contextual introduction.

Body: Explain some issues related to Indian policy on earthquake. Also write some Measures to improve the preparedness for earthquakes.

Conclusion: Write a way forward.

Nearly 58% of the Indian landmass is vulnerable to earthquakes. According to the seismic zoning map of India prepared by the Bureau of Indian Standards (BIS), India has been divided into **four zones – II, III, IV and V**. Geologists have warned of a probable massive earthquake in the Himalayan state.

Issues related to Indian policy on earthquake:

- India's policy on earthquake preparedness operates primarily at the scale of **structural details**. It is guided by the **National Building Codes**.
- This includes specifying dimensions of columns, beams and details of the reinforcements that join these elements together.
- It ignores the buildings that were constructed before such codes were published in 1962. Such buildings form a large part of our cities.
- It assumes infallibility in the processes of enforcement. It **relies only on penalisation** and illegalities.
- It treats earthquakes **as a problem of individual buildings**. It assumes that buildings exist and behave in complete isolation from their urban context.

Measures to improve the preparedness for earthquakes:

- There is a need to create a system of **tax-based incentives for retrofitting** existing structures and enforcing **seismic codes with more efficiency**. This will generate a body of well-trained professionals and competent organisations.
- **Japan** is a good example in this case. It has invested **heavily in technological measures** to mitigate the damage from the frequent earthquakes that it experiences.
- Skyscrapers are built with **counterweights and other high-tech provisions** to minimise the impact of tremors.
- Small houses are built on flexible foundations and public infrastructure is integrated with **automated triggers** that cut power, gas, and water lines during earthquakes.
- The policy should start with **surveys and audits** that can generate **earthquake vulnerability maps**.
- Using such maps, enforcement, incentives, and response centres can be proportionally distributed across the urban terrain.
- A policy on earthquake preparedness will require a **visionary, radical and transformative approach**.

India's vulnerability to various earthquake hazards requires smart handling and long-term planning.

Q.8) Digital models for disease tracking are crucial, but there are also issues associated with these models. Discuss.

Times of India

Introduction: Contextual introduction.

Body: Explain importance of Digital models for disease tracking. Also write some issues associated with these models.

Conclusion: Write a way forward.

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Digital approaches can improve the timeliness and depth of surveillance information. In India **Integrated Disease Surveillance Project** was started in 2004 and the **Integrated Health Information Platform** in 2019. The World Health Organization now routinely uses **HealthMap, ProMED** and similar systems to monitor infectious disease outbreaks, inform clinicians etc.

Importance of Digital models for disease tracking:

- Public health surveillance helps in the **identification, collation and analysis of disease occurrence**. It is the bedrock of national healthcare architecture.
- Internet-based disease detection and monitoring tools **offer real-time surveillance** with much greater temporal and spatial resolution compared to traditional surveillance systems. Recent epidemics and the COVID-19 pandemic highlight its importance to support public health prevention and containment measures.
- Digital disease surveillance is **less costly and time consuming** compared to traditional surveillance.
- Two key advantages- speed and volume may increasingly help health officials spot outbreaks quickly and cheaply.

Issues associated with these models:

- Public health institutions tracking disease occurrence based on data generated by states are the primary disease surveillance arms. But the **state's performance so far has been less optimal** as they often function in silos.
- Over the next decade, **having adequate skilled personnel** in public health surveillance may be a bigger challenge. For instance, **WHO's International Health Regulations** are binding on members.
- At the same time, the huge volume of digital data also comes with sufficient challenges to accuracy and privacy to make it a **"double-edged sword"**. Digital models are not regulated by a robust personal data protection bill.
- Social media is justifiably notorious for **spreading falsehoods**, which in the case of infectious diseases can have **deadly consequences**. Public health depends on trust in public officials, but that trust can quickly erode if a government releases faulty information.
- **No automated framework** that combines data streams, analyses them in a statistically robust manner, and produces actionable reports in near real-time has been developed.

Digital models are set to bring far-reaching changes in public health surveillance by expanding sources of data collation to the private sector, which is an important component of the overall healthcare system.

Q.9) Discuss the significance and challenges of Supreme Court-induced changes to the process of the cc appointment.

Indian Express , ToI

Introduction: Contextual introduction.

Body: Explain significance of Supreme Court-induced changes to the process of the cc appointment. Also write some challenges.

Conclusion: Write a way forward.

Recently, a five-member constitution bench directs that selection of the CEC and other members of the Commission should be made by a panel comprising the **PM, the leader of the opposition (LoP) and CJI**, altogether welcome. The constitution bench has said that the scheme it has prescribed would continue, till Parliament passes a law on the subject.

Significance of these changes:

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- By directing the Election Commission to be appointed by a non-partisan panel, the Supreme Court **strengthens democracy**. An independent committee will correct the existing method of selection and add sanctity to the process.
- As the executive enjoyed the benefit of appointing people as chosen by it as the CEC and ECs, this led to **perceptions of bias** of the Commission in favour of the ruling party.
- A vulnerable Election Commission would result in an insidious situation and detract from its efficient functioning.
- The SC's verdict, apart from **ensuring fairness** in the process, can act as a constitutional lesson in India's troubled times. It found that in India, there is "an unrelenting abuse of the electoral process".
- The judgment recognises the fine distinction between conventional democracy and constitutional democracy.

Challenges:

- A non-executive should not be made part of the commission's selection process, including the Chief Justice of India as it would amount to **judicial overreach and violation of separation of power**.
- Formal appointments processes are **no predictors of performance** or bulwarks against the underlying distribution of political power. E.g. the Supreme Court.
- Politicians and administrators have **wide social and institutional experience** than judges.
- The structures of **accountability matter more** than the process of selection. For instance, many ex-post heroes like T N Seshan, would have been disqualified on their prior reputations for political intrigue.
- It should **respect the independence of the executive** by not encroaching upon its domain.
- The **posts of ECs and the CEC are Constitutional** and any change in the appointment process can be done only by the Parliament.

Elections are the cornerstone of democracy, and the Election commissioners are crucial to that legitimacy. Therefore, to defend its functional independence, the guardian of elections itself urgently needs structural safeguards.

Q.10) Critically analyze India's stand on the Ukraine war.

The Hindu

Introduction: Contextual introduction.

Body: Explain India's stand on the Ukraine war. Also write some issues with it.

Conclusion: Write a way forward.

Ukraine's bid for NATO membership and Russian interests in the Black Sea accompanied by the protests in the Ukraine are the major causes of the ongoing conflict. Recently, UNGA adopted a resolution, calling for an end to the war. The resolution was favoured by 141 members and opposed by seven, while 32 states abstained. India was one among the 32.

Indian position on the Ukraine crisis:

- India has refused to condemn Russia for the invasion. It has **refused to join the West's sanctions**.
- It has stepped up buying Russian fuel at a discounted price and has **consistently abstained from UN votes** on the war.
- Neither the **weakening of Russia nor the destruction of Ukraine** is in its interests. India wants an immediate end to the war and a **new security equilibrium** between great powers.

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- India has given the reasons behind it that it wants to maintain a **strategic autonomy and has stressed on diplomacy and dialogue** as the only way forward.
- India has decided to continue trade with Russia despite the sanctions imposed.
- Though India refused to endorse Russian aggression, Indian made some crucial diplomatic contributions such as, **a)** Underlined the importance of respecting the United Nations Charter, **b)** Emphasised the inviolability of territorial sovereignty, **c)** Warned against the use of nuclear weapons, **d)** Sought to draw attention to the economic impact of the war on the “Global South”, **etc.**

Issues:

- India’s abstaining has raised questions about **India’s global commitment to nuclear disarmament** and strengthening the non-proliferation order.
- Russia is **deepening its ties with China**. India should ask itself whether it should retain its leverage over Russia through existing ties or lose it completely by joining the western coalition over moral commitments.
- To manage its continental interests and tackle its **continental security concerns**, India has to work with powers in the Eurasian landmass where the U.S. is practically absent, especially after its disastrous withdrawal from Afghanistan.

India should stick to its pragmatic neutrality, rooted in realism, and continue to push for a practical solution to the Ukraine crisis.

Q.11) What is the process of forest certification? Also, highlight its significance.

Indian Express

Introduction: Contextual introduction.

Body: Explain process of forest certification. Also write its significance.

Conclusion: Write a way forward.

*Forest certification, a global movement initiated in 1990s after Rio Earth Summit, is a **market-based non-regulatory conservation tool** designed to promote sustainable management of forests and trees outside forests by an **independent third party**. The council of Programme for Endorsement of Forest Certification (PEFC) is supporting Network for Certification and Conservation of Forests (NCCF's) initiative to raise the profile of forest certification and develop the market for certified products in India. Currently, forests in only Uttar Pradesh are certified.*

Process of forest certification:

- In the United States, three major forest certification options are available for landowners. These certification programs include the American Tree Farm System (ATFS), the Forest Stewardship Council (FSC), and the Sustainable Forestry Initiative (SFI). These certification programs differ in genesis, cost, philosophy, membership requirements, implementation, and recognition.
- The certification process is usually **different for the different certification types** as well as certification programs.
- The main steps in the forest certification process include:
 - selecting an appropriate certification system,
 - contacting the certifying organization,
 - gathering information and materials about forest and management activities,
 - undergoing a verification audit,
 - receiving the certification report with decision,
 - implementing required changes, and
 - scheduling follow-up audits at regular intervals.

Significance of forest certification:

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- Given that forests of India serve important **ecological, economic and social functions** that also provide livelihood to over 275 million forest dependent people of this country, there is need for certification for sustaining and enhancing these roles of forests.
- Forest certification **assures the public** that the benefits and functions of the forest, including clean air and water, wildlife, soil health etc., are maintained or protected during management and harvest.
- Certification also ensures that management does **not diminish the value of the future forest**, nor create hardships for local communities.
- Certification systems assure consumers that the **product they are purchasing meets certain standards**.
- Forest certification refers to an **independent, third-party evaluation** of the management of a particular forest against a certain standard.
- Forest certification has direct influences on forestland ownership, **forest product marketing**, and forest stewardship.
- It provides **greater access to markets**, better environmental practices and better long-term management planning.

A simple, transparent, easy to adopt and internationally accepted indigenous system of certifications will take into account India's national circumstances and will make available sustainably grown and managed forest products in the domestic market.

Q.12) Clean energy solutions are transforming women's livelihoods at the grassroots, but they need to be scaled up. Discuss

The Hindu

Introduction: Contextual introduction.

Body: Explain how clean energy solutions are transforming women's livelihoods at the grassroots. Also write some measures to improve further.

Conclusion: Write a way forward.

Climate change affects women and girls disproportionately, as they are more vulnerable to threats posed by the crisis. From solar refrigerators to biomass-based cold storage to bulk milk chillers, distributed renewable energy (DRE) is transforming women's livelihoods at the grassroots. According to recent **Council on Energy, Environment and Water study**, out of the 13,000 early adopters of clean tech appliances, more than **80% are women**.

How clean energy is transforming women's livelihoods at the grassroots?

- Renewable energy powered technologies provide an additional advantage to women farmers and micro-entrepreneurs by **enhancing income opportunities** through mechanisation.
- They also free women from several gender assigned manual activities that are laborious.
- By 2030, India is expected to see **30 million women owned MSMEs**, employing around 150 million people. Renewable energy livelihood technologies have the potential to transform rural livelihoods, with women at the core of this transition.
- Health-related benefits as a result of less human suffering, reduced health-related expenditure as a result of less illness and the value of productivity gains resulting from less illness and fewer deaths.

What more can be done?

- **Leverage the experience of early women adopters:** DRE appliances are perceived as high risk purchases, especially by women users due to socio economic reasons. Technology providers must leverage early users to **share their experiences** with potential customers

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- **Organise local events and demos:** People want to see a high-tech product before believing in its ability and promised benefits, especially women. It can help them **procure, finance and use** these machines.
- **Enable easy finance to purchase products:** e.g. Technology manufacturers and promoters should also ensure adequate after sales service and buy backs.
- **Support backwards and forward market linkages:** Many rural products have larger market potential. Thus, finding and connecting producers to consumption hubs in urban areas are equally important to generate higher incomes.
- Collectivising women or **establishing business models** that enable them to sell to an intermediary can ensure a regular revenue stream.
- Multiple Ministries are working towards promoting livelihoods for women. They should embrace clean energy solutions to further their respective programmes and outcomes.

Restricted land rights, lack of access to financial resources, training and technology, and limited access to political decision-making spheres often prevent women from playing a full role in tackling climate change. They are crucial to climate change adaptation and mitigation.