Next IAS ID: ETRC25ON033, ANV2503, 03-08-2025 09:33 PM

NEXT IAS

anubhav-2025

(To be filled by candidate)

TEST CODE : ANV2503

Name of Candidate: WASIM UR RAHMAN Mobile No [redacted]5

Roll No. : ..... Start Time 9:00 AM End Time 12:00 PM

Date of Examination: ..... Medium : English ☐ Hindi ☐

Q. No.	Maximum Marks	Marks Obtained
1.	10	
2.	10	
3.	10	
4.	10	
5.	10	
6.	10	
7.	10	
8.	10	
9.	10	
10.	10	
TOTAL MARKS - 100		

Q. No.	Maximum Marks	Marks Obtained
11.	15	
12.	15	
13.	15	
14.	15	
15.	15	
16.	15	
17.	15	
18.	15	
19.	15	
20.	15	
TOTAL MARKS - 150		

GRAND TOTAL - ...../ 250 EVAL CODE: ..... EVAL DATE: .....

GENERAL INSTRUCTIONS

1. Immediately on receipt of the QCA booklet, please check that this QCA booklet does not have any misprint or torn or missing pages or items, etc. If so, get it replaced by a fresh QCA booklet.
2. Candidates must mention all relevant details like Name, Roll No, Mobile, etc. in the space allocated.
3. Candidate is expected to attempt all 20 questions within the given timeline.
4. Answers must be written in the medium authorized at the time of admission.
5. Candidates must write answers for the specific question under the respective question itself. Any answer written outside the space allotted may not be given credit.
6. Please write neatly. Avoid illegible writing.
7. Do not write/mark irrelevant matters in the QCAB.

सामान्य निर्देश

1. QCA पुस्तिका प्राप्त होने पर कृपया तुरंत जांच लें कि इस QCA पुस्तिका में कोई पृष्ठ या सामग्री आदि गलत छपी हुई या फटी हुई या गायब तो नहीं है। यदि ऐसा है, तो इसे एक नई QCA पुस्तिका से बदल लें।
2. अभ्यर्थियों को सभी प्रासंगिक विवरण जैसे नाम, रोल नंबर, मोबाइल नंबर आदि का आवंटित स्थान पर उल्लेख करना होगा ।
3. अभ्यर्थियों से अपेक्षा की जाती है कि वह आवंटित समय-सीमा के भीतर ही सभी 20 प्रश्नों के उत्तर-लेखन का प्रयास करें।
4. प्रत्येक उत्तर, प्रवेश के समय चुनी गयी भाषा के माध्यम में ही लिखे जाने चाहिए।
5. अभ्यर्थियों को विशिष्ट प्रश्न के उत्तर संबंधित प्रश्न के नीचे ही लिखने होंगे। आवंटित स्थान के बाहर लिखे गए किसी भी उत्तर को क्रेडिट नहीं दिया जाएगा।
6. कृपया साफ-सुथरा लिखें। अपठनीय लेखन से बचें।
7. QCAB में अप्रासंगिक तथ्यों को न लिखें / न ही चिह्नित करें।

REMARKS: .....

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Student Concerns / Query	Evaluator's Feedback / Response
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3	3 .....
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MARKING SCHEME *

Marks Per Ques	Below Average	Average	Above Average
10 Marks	Below 3.00	3.00 - 3.75	4.00 and above
15 Marks	Below 4.50	4.50 - 5.75	6.00 and above

* Subject to change without prior notice.

IMPORTANT QR CODES

Topper's Copy

Common mistake and Correct Filled QCAB

Copy Scanner App

Next IAS Test Centre Location

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MACRO COMMENTS

The Purpose of MTS 2.0 Score Improvement Program (SIP) is to provide constructive suggestions on 'How to improve Answer Writing and thereby score better marks.

Q1.

Introduction	Body	Conclusion

Q2.

Introduction	Body	Conclusion

Q3.

Introduction	Body	Conclusion

Q4.

Introduction	Body	Conclusion

Q5.

Introduction	Body	Conclusion

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Q6.

Introduction	Body	Conclusion

Q7.

Introduction	Body	Conclusion

Q8.

Introduction	Body	Conclusion

Q9.

Introduction	Body	Conclusion

Q10.

Introduction	Body	Conclusion

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Q11.

Introduction	Body	Conclusion

Q12.

Introduction	Body	Conclusion

Q13.

Introduction	Body	Conclusion

Q14.

Introduction	Body	Conclusion

Q15.

Introduction	Body	Conclusion

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Q16.

Introduction	Body	Conclusion

Q17.

Introduction	Body	Conclusion

Q18.

Introduction	Body	Conclusion

Q19.

Introduction	Body	Conclusion

Q20.

Introduction	Body	Conclusion

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1

1.How far do you think the recent proposals to reform India's tax structure will help in improving India's tax buoyancy and base?

As per Economic survey, India's tax-to-GDP ratio is 11.7% with Tax Buoyancy falling from 2.52 (2020-21) to 1.18 (2022-23).

Recent proposals to reform Tax

1. Union Budget 2025-26: Taxable income threshold raised to ₹12 lakh
2. Direct Tax Code to be brought under recommendations of Akhilesh Ranjan committee
3. Doing away with Angel Tax
4. Abolition of Equilisation Levy
5. Indirect Tax reforms - GST

Impact of these reforms

1) Disposable income would increase raising Aggregate Demand in the economy → Improve Tax Buoyancy

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2) Direct Tax Code would simplify Tax compliance and reduce Tax evasion → Broaden Tax Base (currently 9 crore file IT)

3) Ease of doing business due to removal of Angel tax and Equilisation Levy.

4) Ease Tax compliance for businesses.
   (e.g.) GST Submission – 80 lakh forms → 1.6 crore now

5) Entrepreneurship promoted by removal of ~~tax~~ Angel tax.

6) Tax Litigation would reduce with Jan Vishwas Bill

Way Forward
- ① Expedite Direct Tax code
- ② Bring Jan Vishwas Bill 2.0
- ③ Aabid Modi committee – Reform GST rates.

Hence, a simplified tax ecosystem can propel India to $7 trillion economy by 2030.

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(2)

2. How do the rising trends of economic nationalism and protectionism affect India's global trade competitiveness? What recent measures has India taken to navigate these challenges?

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Threats of retaliatory tariffs by Trump administration and Sino-American trade war has pushed for greater economic nationalism and protectionism

Impact on India's Global Trade Competitiveness

1) **Market Access** to traditional market for our exports would reduce. (Ex) USA

2) **Tariff Barriers** would render our exports uncompetitive.

3) China diversifying its market may pose greater competition to Indian exports.

4) **Current Account Deficit** (CAD) may rise.
currently → Export - $825bn
→ Import - $915bn
CAD = $70bn

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5) CBAM proposal of EU to check carbon leakage may be detrimental for steel exports of India

Measures Taken by India
- (1) DERISKING - Diversification of markets. (ex) Recent CETA of the UK
- (2) Domestic Strength (ex) Production Linked Incentive (PLI)
- (3) Foreign Trade Policy, 2023 → Target $2 trillion export by 2030
- (4) Reduce Logistics Cost (From 14% of GDP to 8-9%)
- (5) Tapping on unique strengths. (ex) ODOP

Way Forward
- (1) Diversify Export Basket (currently 20 items - 78% export)
- (2) Expand agri-exports (ex) currently 2.4% only
- (3) Branding (ex) GI Tag

Hence, export resilience can be achieved by focussing on ATMANIRBHARTA

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(3)

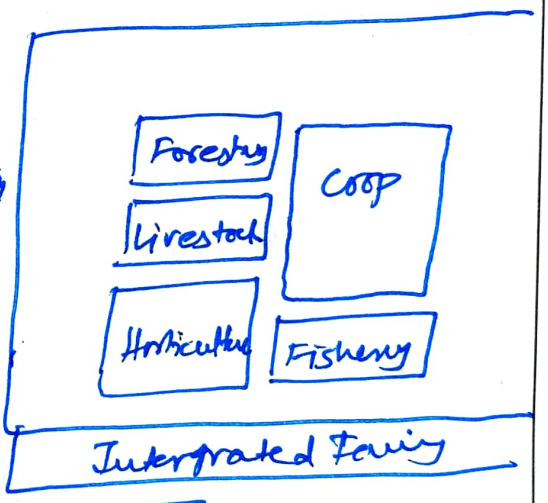
3. Examine the role of Integrated Farming System (IFM) in improving agricultural productivity and minimizing the environmental impact of agriculture.

As per FAO, Integrated farming System is the agricultural practice of combined crop production with livestocks, Fishery and forestry to leverage Synchronisation benefits.

Role of IFM

Improving Agri-Productivity

1) Circular Economy principle by reducing waste and use of in-situ inputs.



2) Reduce Input cost. (ex) organic fertilizers from cow dungs

3) Reduce dependence on water demands. (ex) Rice-Fish Farming

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4) Organic farming can become cost-competitive.

5) Improved yield due to ecosystem benefits. (ex) Pollination by bees

Minimising Environmental Impact

1) Carbon Footprint can be reduced.
   (ex) Biogas from livestock to reduce Methane emissions.

2) Water Footprint can be reduced.
   (ex) Water recharge by ponds.

3) Pest attacks and need for pesticides would reduce.

4) Land use utilisation can become efficient → Reduce soil erosion.

Way Forward:
- (1) Ashok Dalwai committee: promote Secondary Agriculture
- (2) Mechanisation for enhanced efficiency.

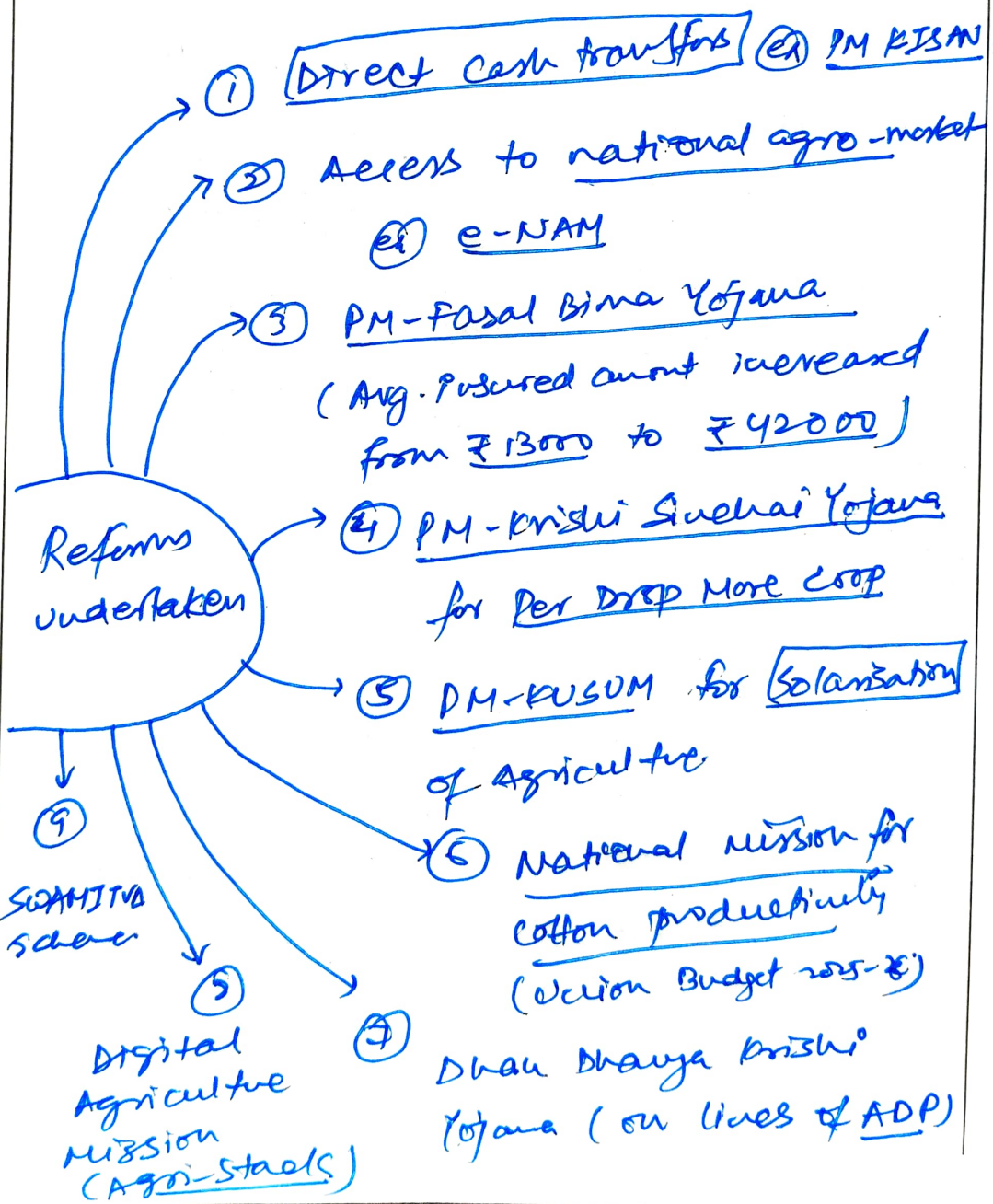
With agriculture contributing 18% to carbon emissions, IFM need to be promoted.

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(4)

4. In recent years, Indian agriculture has been witnessing a transformation towards better productivity and improved farmer incomes. What institutional and structural reforms have been undertaken by the Government to make agriculture more rewarding and sustainable

In pursuance of Doubling Farmers' Income, government has been taking strides to bring structural change in agricultural sector:

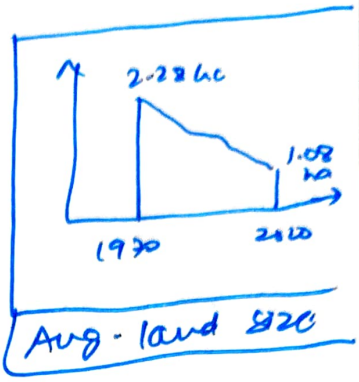


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Challenges persists

1) Land Fragmentation over the decades.



2) Rural distress
   - Rising input cost
   - Lower market prices.

3) Nationalisation of market through APMCs restricts Real Price realisation

4) Land reforms at a slow pace.

Way Forward

1. MS Swaminathan: From Green Revolution to Evergreen Revolution
2. Ashok Dalwai committee: Promote Agri-diversification
3. Shanta Kumar Committee: Liberalise Buffer stocking norms
4. Meenakumari committee: Improve infrastructure for Fishery

Thus, MS Swaminathan has rightly said "If agriculture goes wrong, Everything goes wrong in the economy"

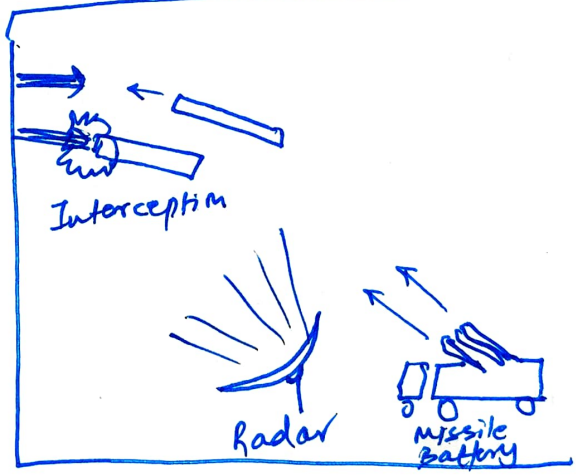
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5. How do Air Defence systems work? What are the various air-defense systems that India currently possesses?

Recently, India during operation Sindoor showcased capabilities of its air defence systems in neutralising kinetic weapons and drones from Pakistani side.

Working of Air Defence System.



1) Scanning and surveillance by Radars for foreign air-borne objects.

2) Signal transmission to Battery of missiles with precise coordinates

3) Launch of missiles from

4) Interception and Neutralisation of enemy missile in air

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Various Air Defence Systems of India

1) **S-400 Triumph**
   - → Bought from Russia
   - → Range : 600 km
   - → Altitude of interception : Upto 20 km

2) **Barak 8 system**
   - → Imported from Israel
   - → Low to Medium range surface to air missiles.
   - → Range : 100 km

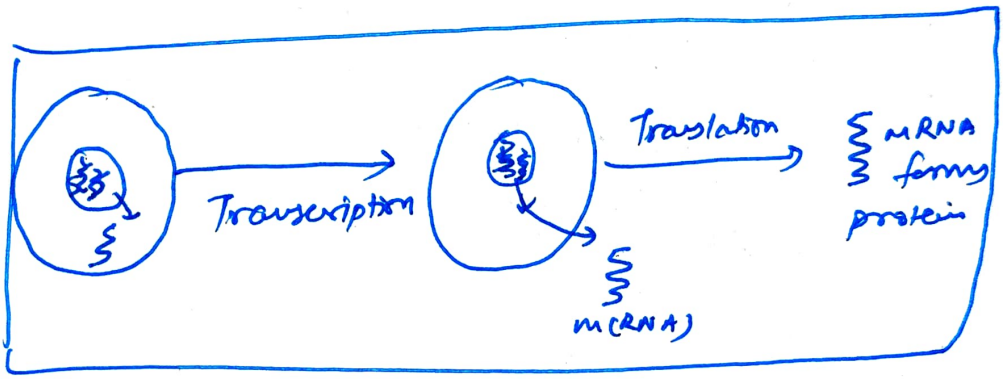
3) **Akash system**
   - → Indigenously produced
   - → Low range surface to Air missiles
   - → Range : 25 km

Hence, with a **hostile** **neighbourhood**, India should **indigenise** **Air defence** system to enhance security in the age of **Hybrid warfare**.

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(6) **6. Discuss the potential of RNA editing in treating genetic disorders. What are its advantages over DNA editing?**

Recently, a breakthrough has been achieved in editing of messenger RNA (mRNA) as a tool for treating genetic disorders.



RNA editing relies on changing the sequence of mRNA to effectively SILENCE the gene.

Potential on RNA editing

1) **Reversible** Gene silencing to treat diseases.
2) **Gene Therapy** tool without

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disturbing the Genetic Composition.

3) Gene Silencing flexibility to tackle protein production.

4) Polygenic diseases can also be tackled.

Advantages over DNA editing

1. Gene Flow risk can be minimised
2. Off-target effects during DNA editing can be avoided.
3. Reduce risk of permanent gene modification
4. Single protein could be targetted.
5. cost-effective.

Reversible

way forward

1. Enhance safety profile of RNA editing.
2. Enhance GERD to 2Y. (PM-STIAC)

Thus, RNA editing can usher in a new era for Biotechnology guided therapy for genetic disorders.

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7. Urban areas are more vulnerable to disasters due to unplanned growth and infrastructure collapses. Discuss. What strategies do you recommend to enhance urban resilience to such disasters?

As per UNDESA, 53% of Indian population would live in Urban areas by 2050. With urban areas contributing 60% to GDP, they are at increasing risk of disaster vulnerability

Reasons for greater vulnerability

1. Unplanned urbanisation ex: 24% of urban residents live in slums (NoHUA)
2. Limited capacity overwhelmed by footfalls. ex: New Delhi Railway Station Stampede
3. Narrow streets making fire-fighting difficult.
4. Encroachment of flood plains. ex: Hyderabad floods - Musi river encroachment
5. Water crisis due to wetland disappearance ex: Chennai
6. Heatwaves due to concretisation

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Strategies to enhance resilience

1) Long term planning - eg Delhi - Master Plan, 2041.
2) Model Building Bye Laws should be adopted by Municipalities.
3) NDMA guidelines should be followed to tackle urban floods - eg Decogging drains.
4) 2nd ARC suggestion for community led disaster management.
5) Disaster Management Act (Amendment) 2025 = Creation of Urban Disaster Management Authority (UDMA) should be expedited.
6) 15th Finance Commission grants should be utilised to enhance capacity of Municipal bodies.

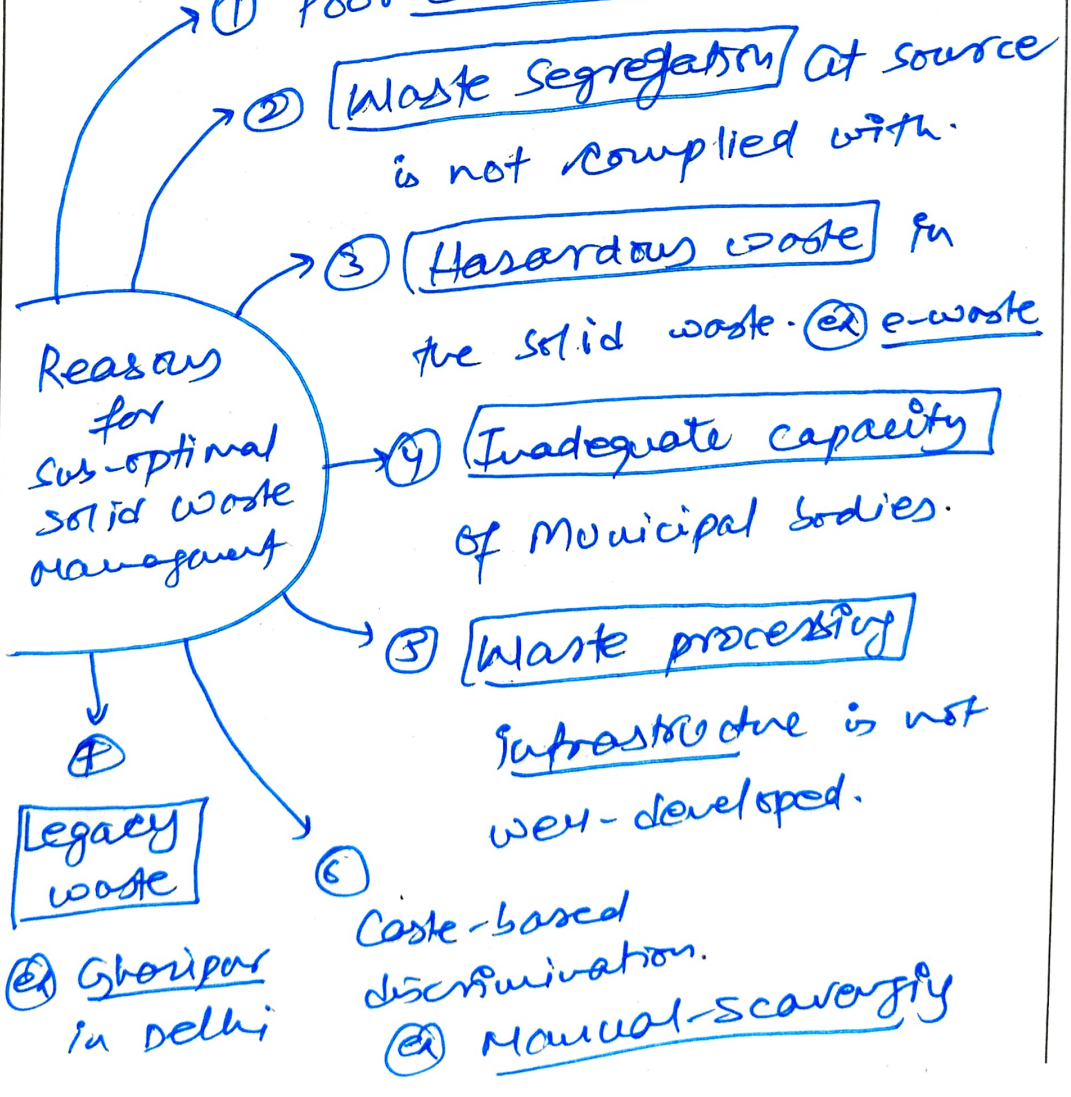
Thus, Sendai Framework for DRR need to be adopted to enhance disaster resilience of urban areas

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(8) **8. Despite its criticality for the success of the Swachha Bharat Mission, solid waste management in India remains at a sub-optimal level. In this context, suggest long-term technological and institutional solutions towards effective solid-waste management.**

As per MoHUA, only 90% of solid waste is collected out of which just 20% is processed and rest 80% are left to the dumpyards, highlighting sub-optimal success of SBM (Urban).



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Solutions for Solid-waste Management

I. Technological

1) Bio-remediation to clear legacy wastes.

2) Incineration for Non-Biodegradable wastes.

3) Waste-to-wealth plants for extracting items of value for economy.

4) Re-purposing of waste. (ex) Bangalore built plastic waste highways.

II. Institutional

1) Empower local bodies. (ex) Tirunveli achieved 100% source segregation.

2) Capacity enhancement (ex) Indore employing Waste-to-Energy plants.

Hence, CIRCULAR ECONOMY approach need to be followed to tackle solid waste mangmt.

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(9)

9. "Social media has emerged as a new frontier in modern warfare, shaping narratives,influencing perceptions, and impacting national security". In this context, analyse the role of social media in contemporary conflicts

"~~Fectio~~ "Disinformation is the new Ammunition"

Social Media has emerged as a new frontier of modern warfare with the rise of Hybrid Warfare.

Role of Social Media in conflicts

1) Information warfare. eg Pakistani propaganda during Op. Sindoor.

2) Espionage threatening national security eg Recent arrest of youtuber from Haryana

3) Hate speech and Fake news

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to disturb communal harmony.
(ex) Muzaffarnagar riots, Delhi riots (2020)

4) Targetted use of Troll army and Bots. (ex) Against family of India's foreign secretary

5) Deepfakes used to gain advantage in perception building
(ex) Galwan clash - drive.

6) Propaganda spread through impersonation.

Steps taken
- (1) IT Act and IT Rules
- (2) Fact checking by PIB
- (3) Fact checkers like WebQoof, Alt News
- (4) Internet shutdowns.

Thus, Social media must be not be made for the advantage of adversaries.

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10

10. The Border Security Force (BSF) has evolved significantly in its jurisdiction as well as its strategic importance in border management and the internal security framework. Explain the role and mandate of BSF. What are the issues BSF faces while operating in the border States?

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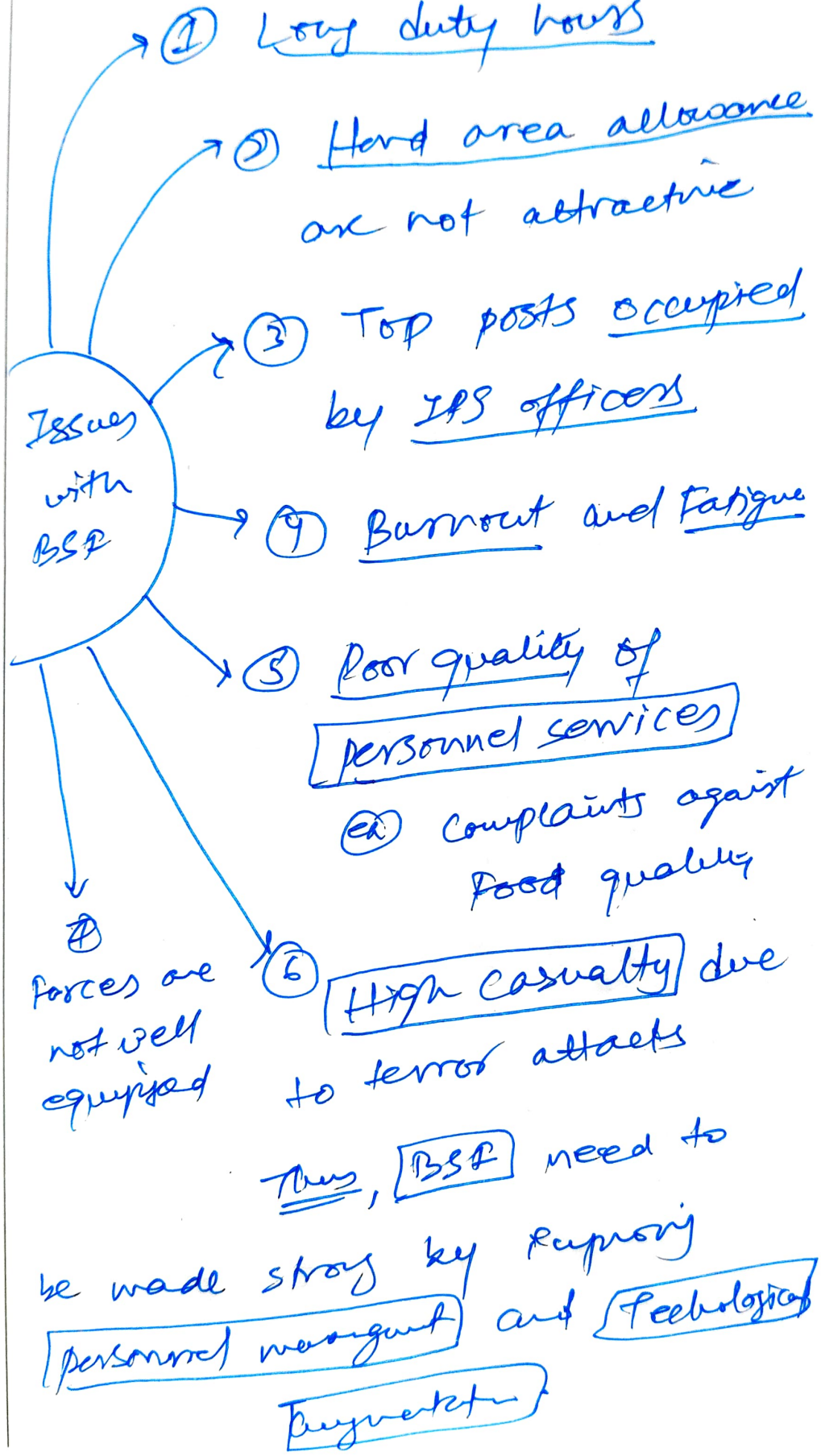
The Ministry of Home Affairs has expanded the territorial jurisdiction of BSF from 50 km to 150 km inwards from the border.

Role and Mandate of BSF

1. Border security of Line of Control with Pakistan
2. Border security of Indo-Bangladesh Borders
3. Border surveillance
4. Intelligence gathering
5. Anti-terror operations
6. Tackle organised crimes
   - a) Drug trafficking
7. Work in synergy with Army

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Thus, BSF need to be made strong by reposing personnel management and technological improvements

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11

11. India's growth story is marred by persistent challenges of inequality and the middle-income trap. Discuss. Highlight the approaches India should follow to escape the middle-income trap and ensure inclusive and sustainable economic growth.

World Bank has recently highlighted to India need to grow at 7-8% annually for coming 25 years to become a High Income country and escape Middle-Income trap.

Challenges in India's growth story

1) Per-capita income remains modest ($2800 compared to $13,600 for High Income status)

2) Increasing inequality (ex) Oxfam report held that top 1% hold 43% of country's wealth.

3) Structural challenges in economy

(ex) India jumped from Agriculture directly to services, skipping manufacturing (17.7% only)

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4) **Agricultural stagnation** (Average growth rate at 2%)

5) High **agricultural dependence** (44% of population in agriculture)

6) Low **Employment Elasticity** in service sector growth.

7) Threats due to **Automation** and technological development. (ex) World Bank held that 69% jobs are threatened due to Automation.

8) High **Incremental Capital output Ratio** (ICOR) leading to inefficiencies in production.

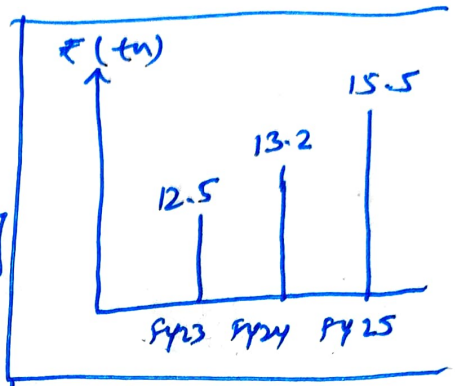
9) **Domestic savings** has declined from 34% (2011) to **30.4%** (2023)

Approach India requires

1) **Human Capital** development by investment in
   - Education
   - Health
   - Skill development
   - Innovation

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2) Enhance Capital expenditure to expand POTENTIAL GDP.



3) Vijay Kelkar recommended expediting PPP reforms.

4) Ashok Dalwai Committee recommendations for agricultural diversification for doubling farmers' income.

5) 2nd ARC suggestions to catalyse governance reforms @ Grievance Redressal

6) Ease of Doing Business and Ease of Living should be prioritised.

7) Fiscal Prudence (FRBM Act) for sustainability in fiscal management

Thus, SABKA SAATH, SABKA VIKAS, SABKA PRAYAS approach is needed to become VIKSIT BHARAT by 2047.

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12

12. MSMEs are central to the success of the Make in India initiative, yet they face challenges in scaling up and integrating into formal supply chains. Discuss. Suggest structural reforms needed to make MSMEs more resilient and competitive.

MSMEs contribute 35% to manufacturing GVA making it key to Make in India target to expand share of manufacturing to 25% of the GDP.

MSMEs are central to Make in India

① Employment intensive hence large job creation. ex: 11 crore people employed

② Large share in export
ex: 30% of exports by MSMEs

③ Diversity: JEANS TO JET manufacturing.

④ Balanced Regional development. ex: Tier 2,3 cities.

Challenges faced by MSMEs

1) Problem of DWARFISM highlighted by Economic survey

2) Perverse incentives keep the size

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of MSMEs small and restrict expansion.

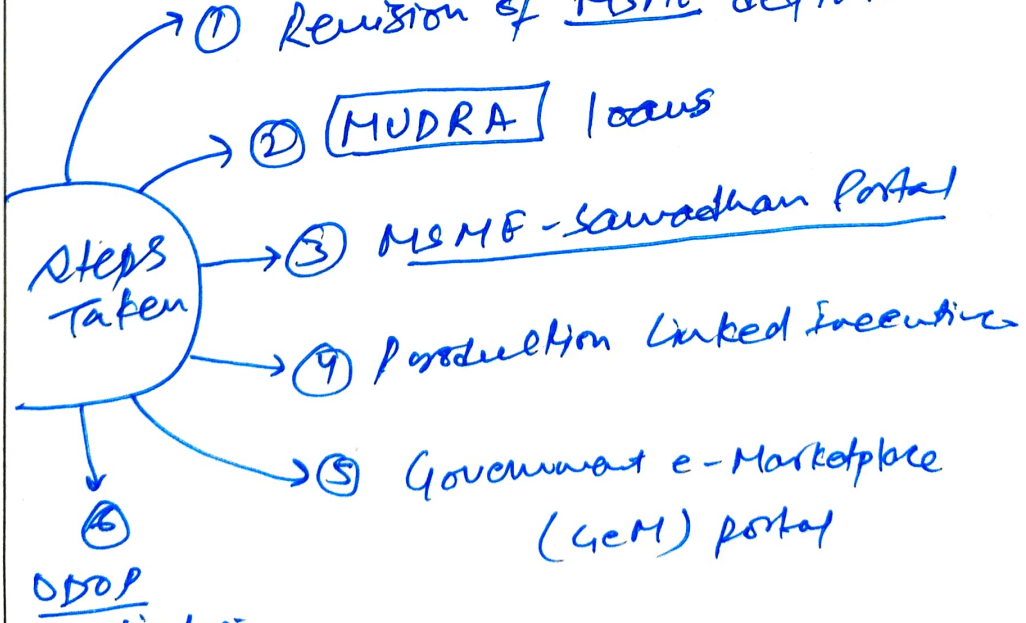
3) Informalisation (ex) 90% workers in informal sector.

4) Credit crunch due to poor access to formal credit.

5) Poor Market Intelligence restrict market access in exports.

6) Competition from Bangladesh and Vietnam in international market

7) High Logistics cost renders exports uncompetitive. (ex) 14% of GDP currently.



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Steps Required

1) Enhance credit access by providing collateral-free loans.
2) Sunset clause on benefits to tackle Dwarfism.
3) Entrepreneurship for job creation.
   Job seeker → Entrepreneurship → Job creator
4) Diversification of industry.
   (ex) Defence manufacturing.
5) Single-window portal for compliance
6) Multi-modal logistics hub to accelerate exports.
7) Sign new trade deals for greater market access. (ex) CETA with UK.

thus, UK Sinha Committee recommendations need to be focused for Make in India success and making India GLOBAL MANUFACTURING HUB

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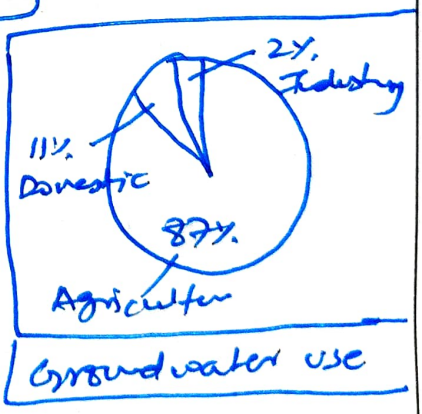
13. "The Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) aims to achieve 'more crop per drop', yet irrigation efficiency in India remains suboptimal." Critically analyse. What reforms are needed to strengthen its implementation?

Pradhan Mantri Krishi Sinchai Yojana (PMKSY) is the flagship scheme of the government to support irrigation efficiency in the agriculture sector.

Aims of PMKSY
1. Per-drop more crop
2. Watershed Development
3. Accelerated Irrigation Benefits Programme.

Challenges in PMKSY

1) Over dependence on groundwater for agriculture. (87%)



Groundwater use

2) Power subsidy disincentivise

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water-use efficiency. (ex) 3500 L water needed for 1 kg of Rice in India

3) Capital intensive micro-irrigation equipments

4) Indian Easement Act, 1998 makes a person non-liable for amount of water extracted from his land.

5) Limited Solarisation of water irrigation pumps.

6) Agro-climatic zones disregarded in cropping pattern. (ex) water guzzling Sugarcane grown in water scarce vidarbha region

Successes of PMKSY
- (1) Increased adoption of Microirrigation
- (2) Community involvement (ex) Paani Bachao, Paisa Kamao - Punjab.
- (3) Popularisation of Millets - less water intensive.

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① Participatory Irrigation management by involving community.

② Water Meters and Water pricing to encourage wise use

③ Traditional water harvesting (eg) Ahar-Pynes in Bihar

④ Water-use Efficiency to be promoted. (eg) Drip irrigation,

⑤ Affordability of micro-irrigation equipment (eg) sprinklers.

⑥ Shift cropping pattern through MSP/PDS reforms

Hence, MIHIR SHAH Committee recommendations need to be adopted to make agriculture VIABLE, PROFITABLE & SUSTAINABLE

⑦ Awareness of farmers on ENERGY

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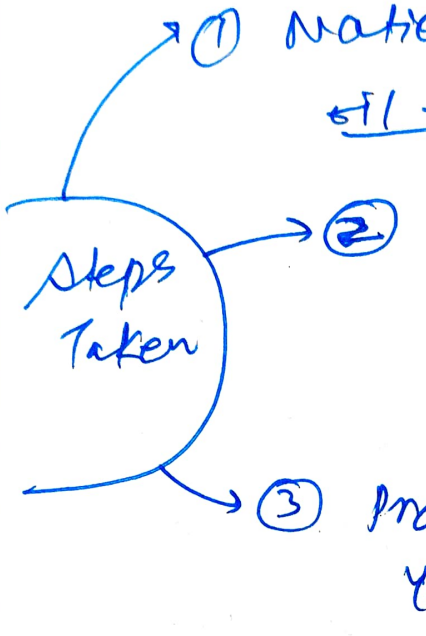
14. The rising import of oilseeds and pulses has made their cultivation unremunerative. In the light of this statement, elucidate the steps needed to promote the production and consumption of oilseeds and pulses in India

As per APEDA, India imports 60% of its ~~oilseed~~ edible oil demands and Indian remains the largest importer of pulses, leading to high pressure on Balance of Payments

Rising imports make cultivation unremunerative

1. Uncompetitive trade
2. High production cost of oilseeds in India
3. Skewed Cropping Pattern focussed on Wheat and Rice
4. Unsuitable climate for oilseeds
   - (ex) Palm oil requires Tropical climate
5. High domestic Demand
   - (ex) Rise in protein consumption – HCES Data
6. Limited land available for oilseed production

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Steps Needed

I. Oilseeds

1) MSP like guarantee for oilseeds.

2) Designating areas for agglomeration effect. ex Andaman & Nicobar and North-east being focussed.

3) PM-SAMPADA yojana to develop food processing industry for oilseeds

4) Temporary Rise in duties on imports to support domestic industry.

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5) Agricultural Extension services (ex) ICAR

II. Pulses

① Rationalise MSP in line with Shanta Kumar Committee recommendations

② Diversify the variety of pulses grown.

③ Cropping pattern as per Agro-climatic zones

④ Organic production based on Large Area certification Model.

⑤ Develop Forward Linkage with Food processing industry

⑥ Extension services to farmers

Hence, to achieve TRADE SOVEREIGNTY and reduce India's IMPORT BILL, Oilseeds and Pulses production must be increased.

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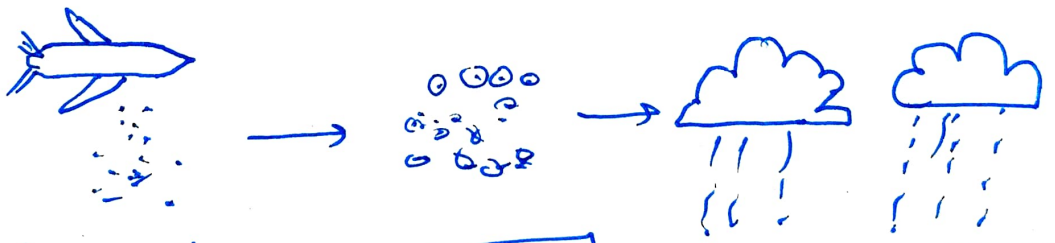
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15. Explain the scientific principles behind cloud seeding. Highlighting its role in alleviating air pollution and global warming, discuss its potential limitations.

Recently, Delhi government in collaboration with expertise from IIT-Kanpur tried cloud seeding for artificial rains to tackle air pollution in Delhi-NCR.

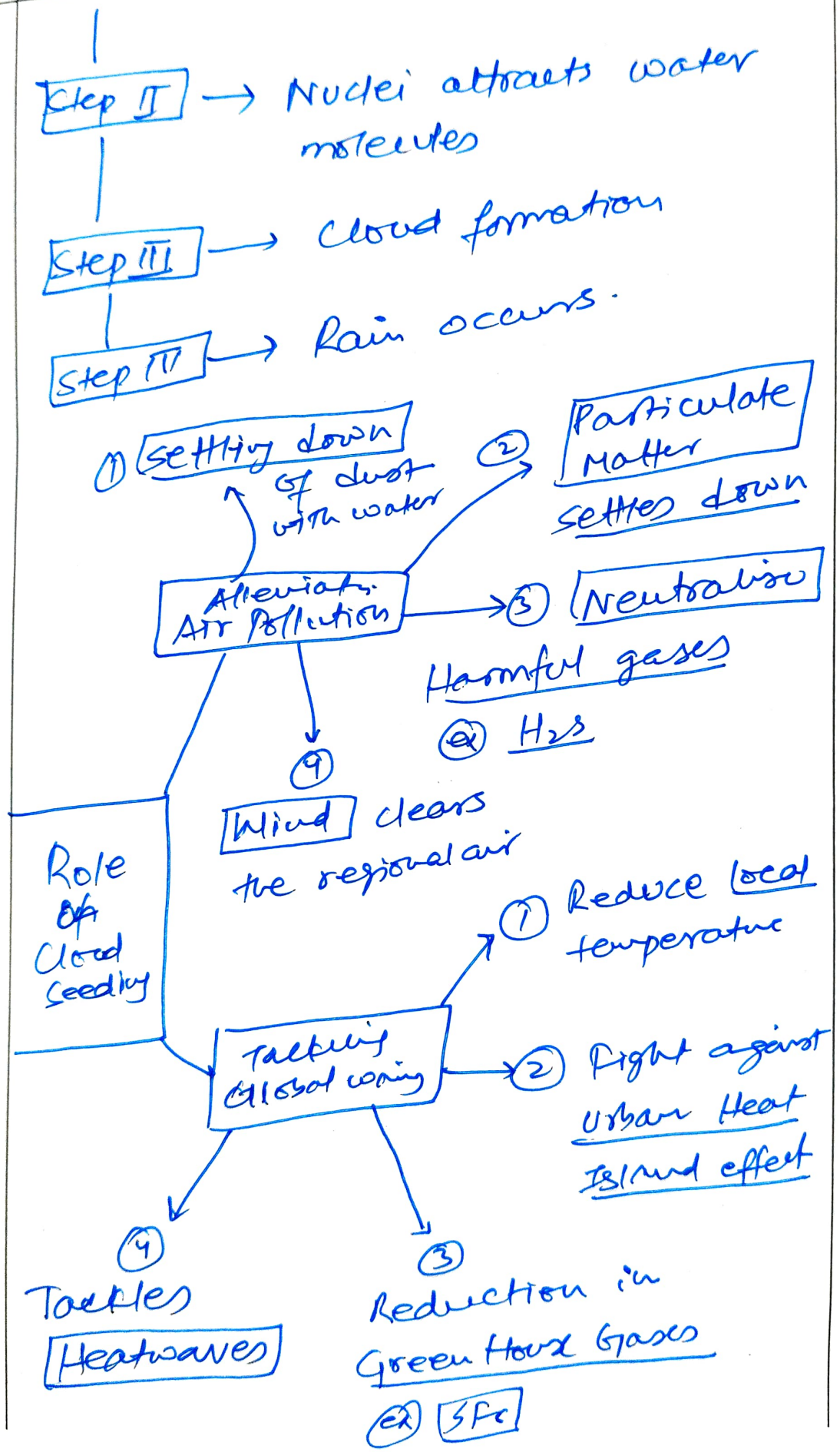
Principles behind Cloud seeding



Step-I : Aircraft or drones are used to spray hygroscopic molecules like Potassium Iodide

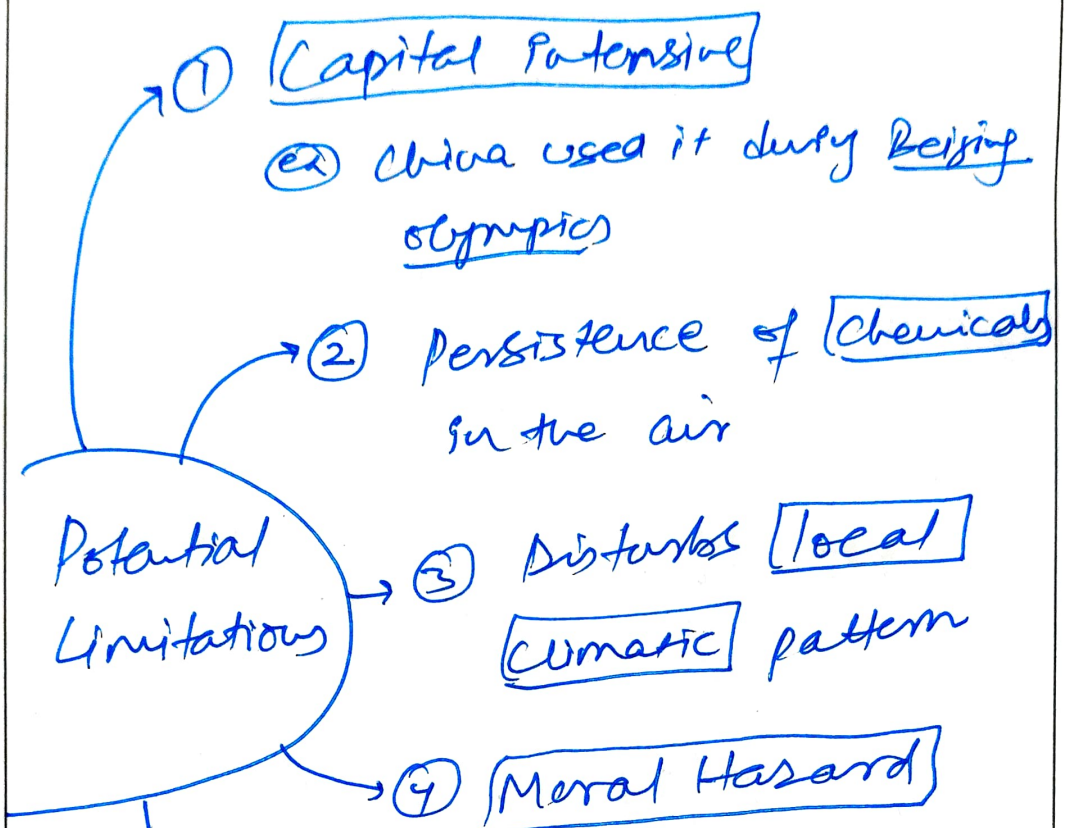
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Hence, Cloud seeding must be used sparingly and only as an Emergency tool. Climate Mitigation need to be prioritised through JAN-ANDOLAN

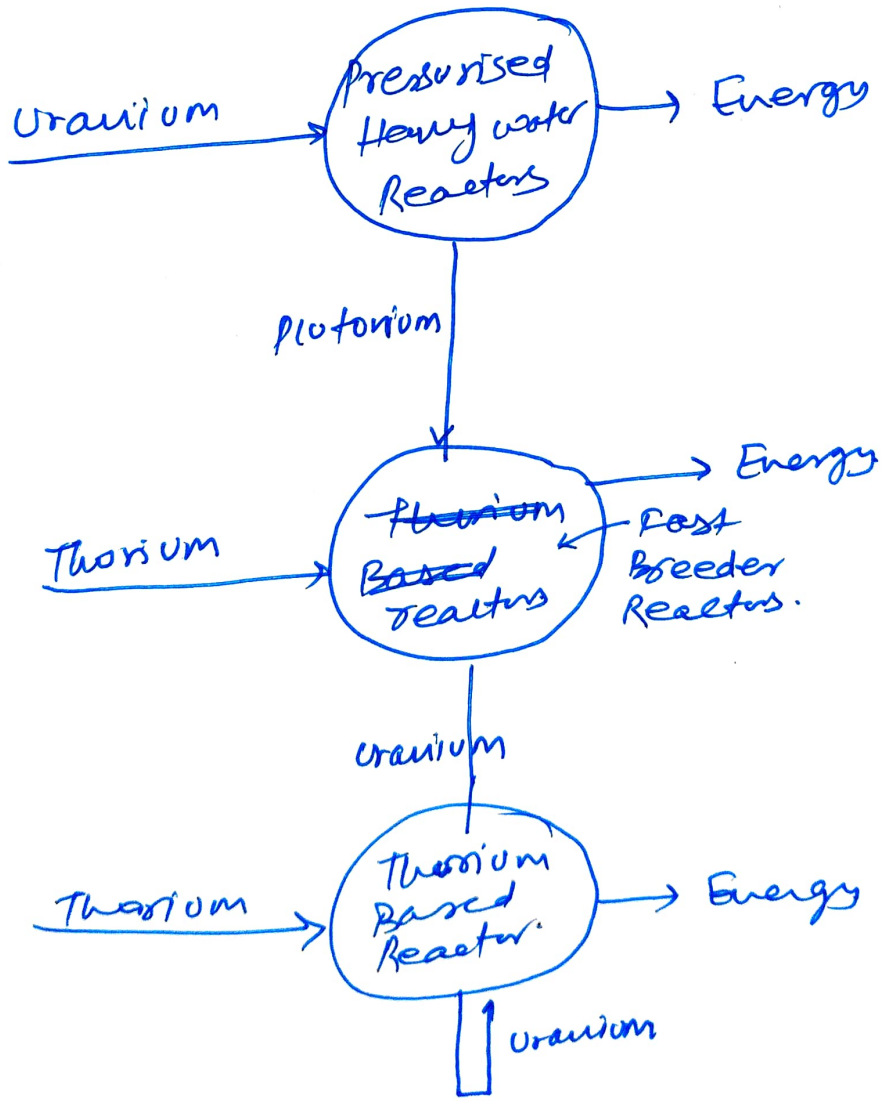
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(16)

16. Give an account of the evolution of India's 3-Stage Nuclear Power Programme. What are the advantages and strategic imperatives of realising the thorium-based third stage?

Dr. Homi Bhabha is credited for developing India's 3-stage Nuclear Power programme for civil use of Nuclear energy.



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Evolution of 3-Stage Nuclear Programme

First stage → India developed **PHWR** based Nuclear plants at multiple sites

(ex) Narora, Tarapur etc.

second stage → Fast Breeder Reactor based Nuclear Plants started being installed with Strategic collaboration

(ex) **Kalpakkam** - FBR units with help of **Russia**.

Third stage →
- Still under consideration & development
- Relies on **Thorium use** which are **abundantly** found in India.

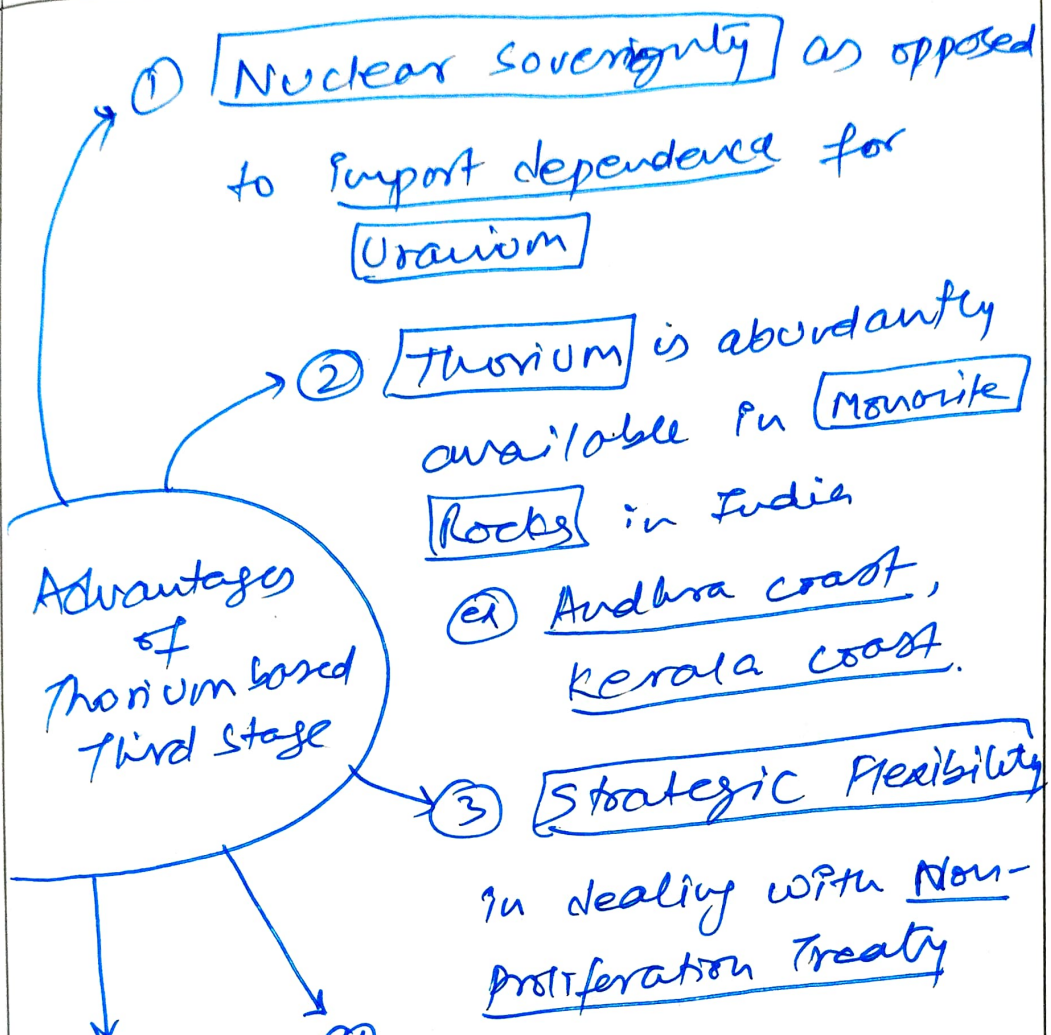
Additional Development

→ Focus on Bharat Small Reactors (BSRS)

→ Small Modular Reactor model adopted (India-France Horizon 2047)

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① Nuclear sovereignty as opposed to import dependence for Uranium

② Thorium is abundantly available in Monazite Rocks in India
(ex) Andhra coast, Kerala coast.

③ Strategic Flexibility in dealing with Non-Proliferation Treaty

④ Energy Transition goals could be achieved. i.e. Shift away from Coal

⑤ Reduced Nuclear Waste in third Stage.

Thus, Nuclear Energy Mission has targetted to achieve 100 GW from Nuclear energy by 2050 in which Thorium based 3rd stage could be crucial.

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17. Recent studies indicate that the 2014-2024 decade is the warmest decade and 2024 is the warmest year on record. In the light of rapid global warming, what are the impacts of climate change on biodiversity? Discuss the measures needed to ensure ecological resilience and conservation of species diversity.

As per IPCC AR-6 report, world will breach 1.5°C warming threshold before 2040 with 50% probability if the current status continues.

Impact of climate change on Biodiversity

① Coral Bleeding (90% Coral will disappear at 2°C warming)

② Migration of fish and fish death due to sea-surface Temperature rise.

③ Submergence of Mangroves due to sea-level rise

④ Vector Borne diseases and Pandemics affecting Fauna

⑤ Desertification due to loss of soil organic carbon

⑥ cryosphere melting → Boreal Forest disturbed.

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Steps Taken

① UNFCCC led COP
   ex Recent Baku-COP(29)

② NAPCC by India

③ UNCCD to halt desertification

④ REDD+, Green India mission for afforestation

⑤ Loss and Damage Fund for Climate Justice

Measures needed

I. Mitigation

1) Energy Transition away from Fossil fuels. ex ~~Eu transition~~ Int'l Solar Alliance.

2) Mobility transition towards renewable energy. ex Electric Vehicle (FAME scheme)

3) Afforestation. ex Green India mission

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4) UNCBD for conservation of Biodiversity (ex) Kunmig-Montreal Declaration.

5) Protected Areas Approach (ex) National Park, wildlife sanctuaries

6) Hotspot identification and protection of species.

7) IUCN led Red Data Book to protect threatened species.

8) Re-instate species in original ecological environment. (ex) Cheetah Translocation by India

II. Adaptation

9) Sea walls to protect against sea level rise. (ex) NEED in Europe.

10) Below sea level farm (ex) Kuttanad.

Therefore, PARIS Agreement and Kunmig Montreal Declaration need to be aimed to protect biodiversity amidst climate change

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18. Forest fires in India are increasing in frequency and intensity, posing severe ecological and economic challenges. Describe the various causes of forest fires. What measures are followed to prevent and manage forest fires in India?

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As per ISRO, based on satellite imagery 36% of Indian forests are prone to Forest fires with high vulnerability in North-east region of India

Causes of Forest fires

I. Natural
- 1. El-Nino
- 2. Heatwaves
- 3. High insolation
- 4. Warm/Hot winds (ex. Loo)

II. Anthropogenic
- 1. Accidental
- 2. Slash and burn agriculture.
- 3. Close human habitation
- 4. Campfires (Tourism)

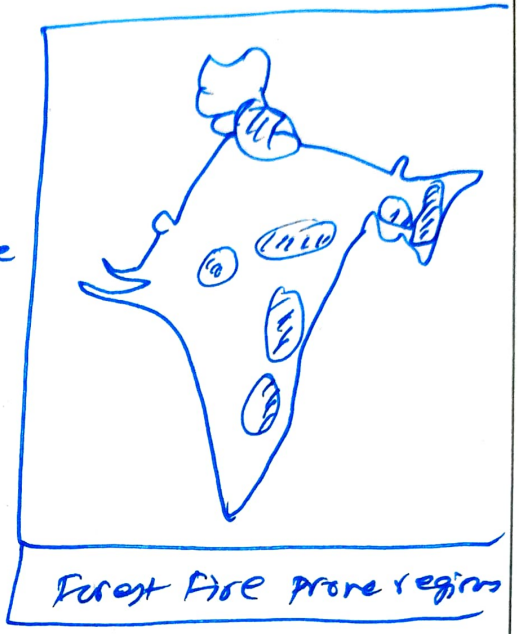
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Challages posed by Forest Fires

I. Ecological

1) Carbon emissions accelerating climate change.
2) Destruction of ecology
3) Migration of animals. (ex) forest fire in Australia.
4) Carbon Sinks destroyed.
5) Raise temperature of the region.



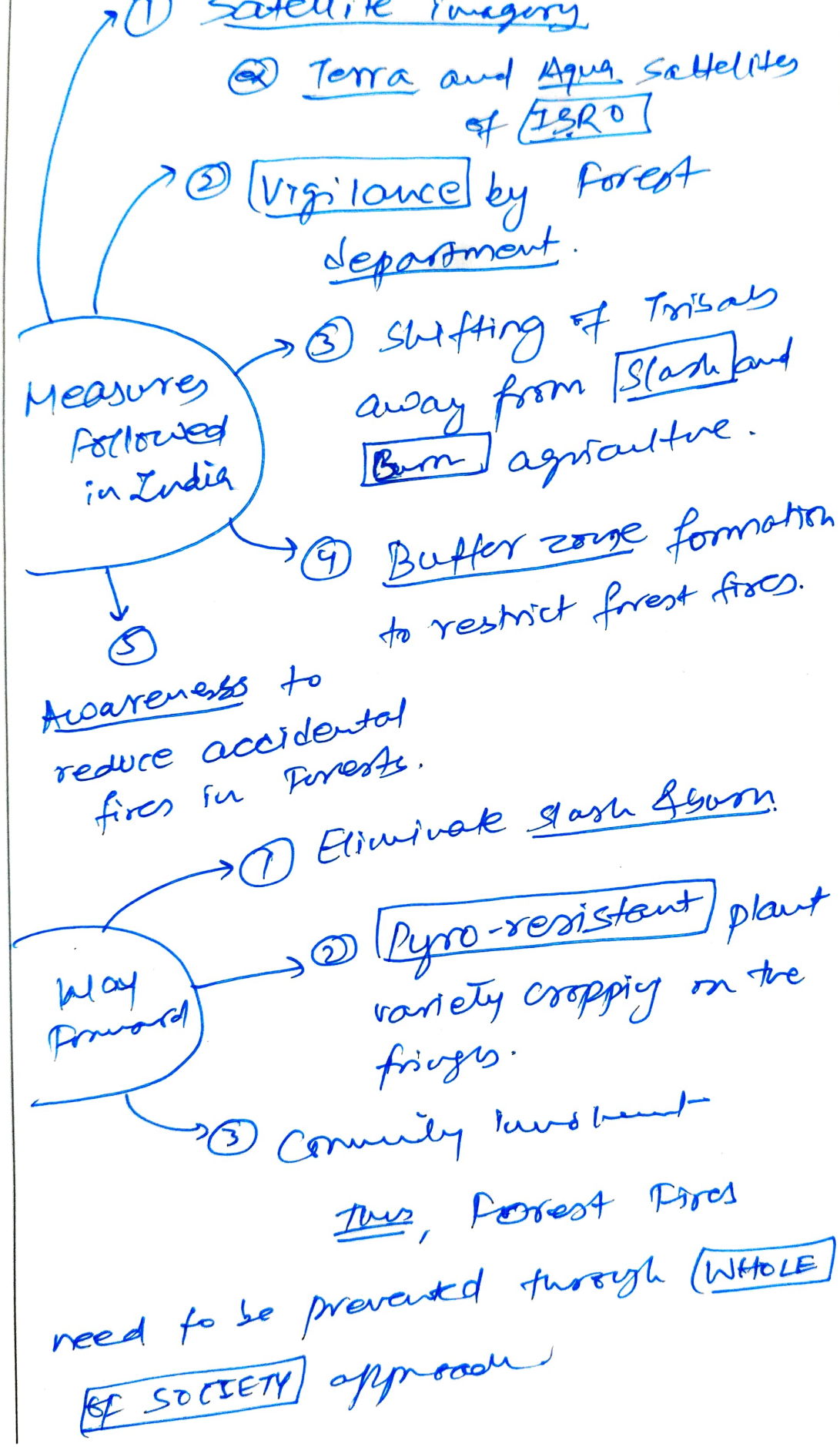
Forest Fire prone regions

II. Economic

6) Forest timber destroyed.
7) Minor forest produce of the tribals destroyed
8) Tourism impacted aversely.
9) Aesthetic value of the region disturbed.
10) Human outmigration

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Thus, Forest Fires need to be prevented through WHOLE OF SOCIETY approach

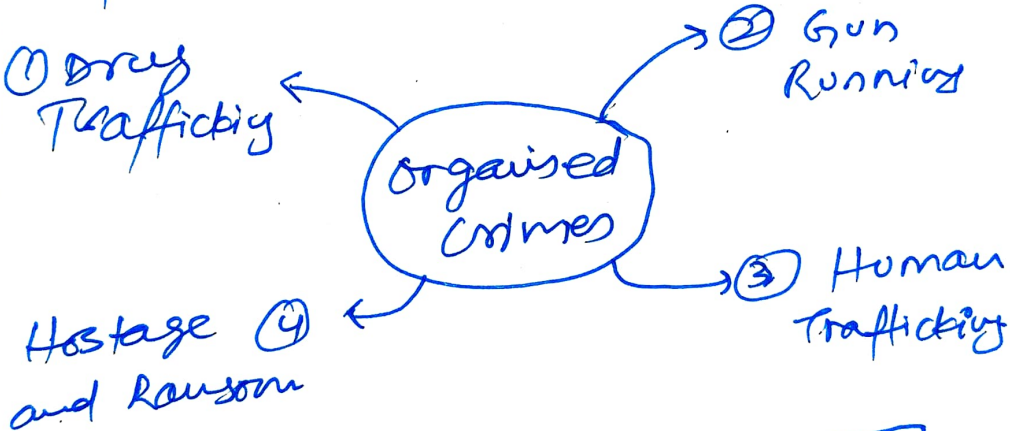
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19. What are organized crimes? Discuss the linkages between organized crime and terrorism. How do such linkages pose internal security challenges to India?

As per UNODC, organised crimes are defined as Continuing Criminal Enterprise that seek to benefit from illegal activities that are often in high demand.



Linkage between organised crime and Terrorism

1) Alliance between the two for specific task is the first step

ex) Arms smuggling for terror attacks.

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2) Second Stage = Operational Integration / Convergence

where both align themselves to carry out a specific task.

(ex) AQIM ← Terror attacks
Drug trafficking

3) Third Stage : Convergence

where both groups become mutually dependent.

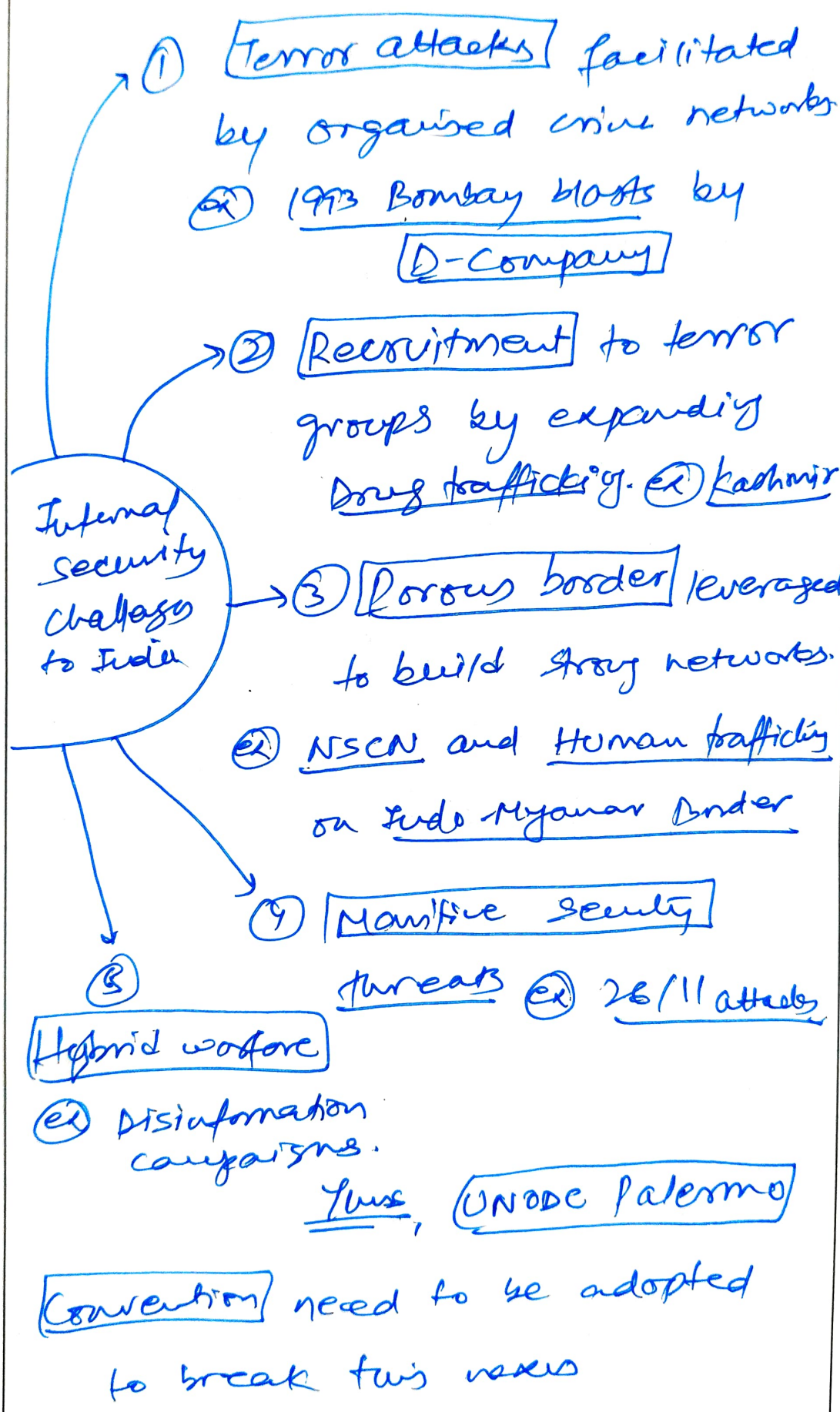
4) Forth stage : Black Hole

where both merge and distinction disappear. (ex) Failed State

Organised crime	Terrorism
1) Support Status quo	1) Seek to change Status quo.
2) Fulfil role the State	2) Overthrow the State.
3) Remain discreet	3) Openly announce their objective

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Thus, UNODC Palermo Convention need to be adopted to break this nexus

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20. India's north-eastern region is fraught with contentious issues and security challenges. Examine the various security challenges currently prevailing in the region. Discuss the steps to counter these challenges.

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"North-eastern region of India represent a state of [Stable Anarchy]" — 2nd ARC

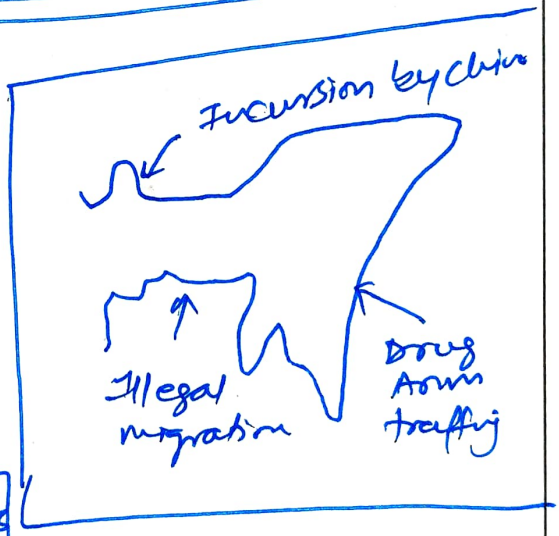
[Issues and security challenges in North east]

1) [Secessionist] tendencies.
   - eg: Demand of Nagalim

2) [Ethnic conflicts]
   - eg: Mizo-Bru conflict

3) [Tribal-caste conflicts]
   - eg: Meities-Kuki conflict in Manipur

4) Demand for [greater autonomy]
   - eg: Gorkhaland demand.



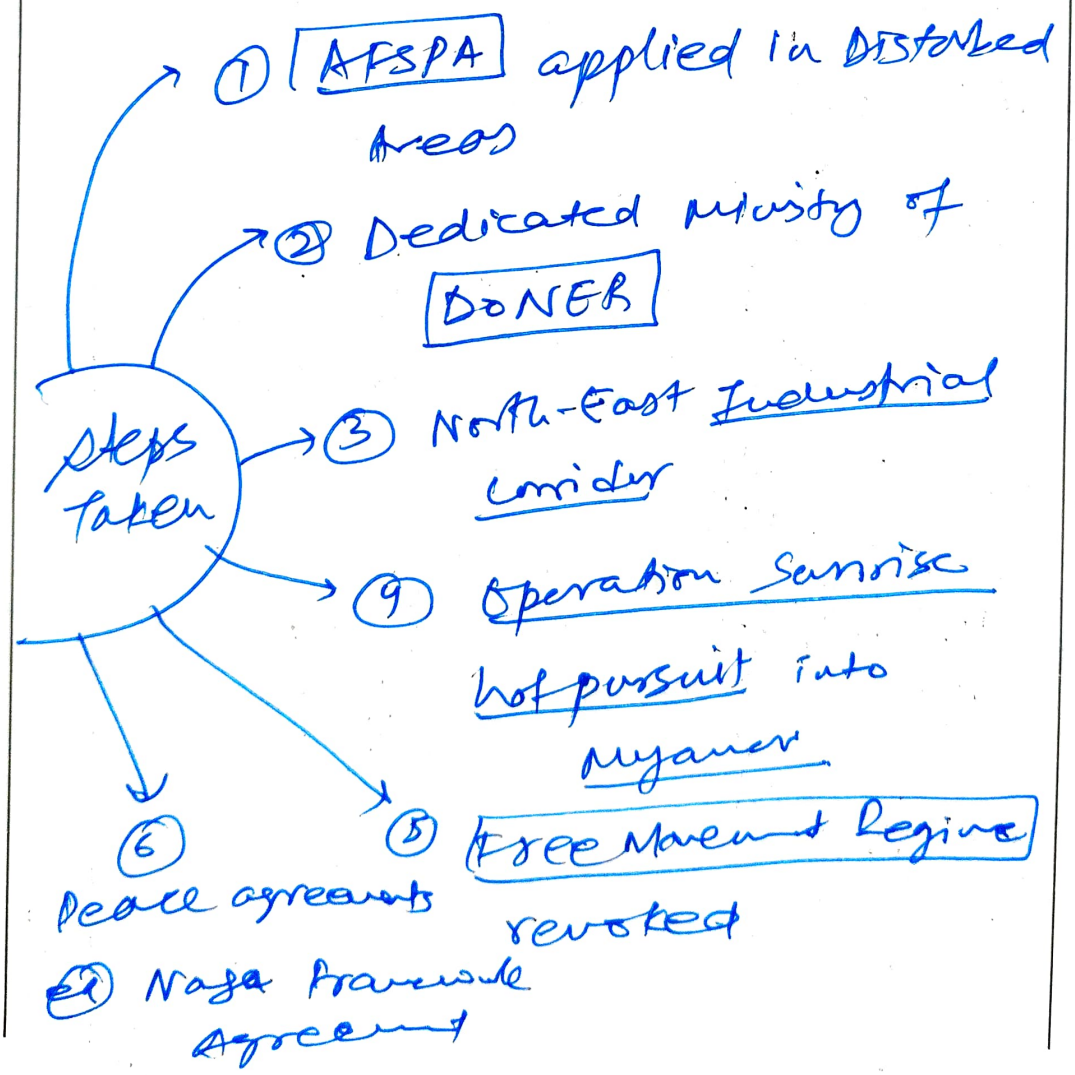
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5) Illegal immigration due to porous borders. eg Assam - Bengali immigrants.

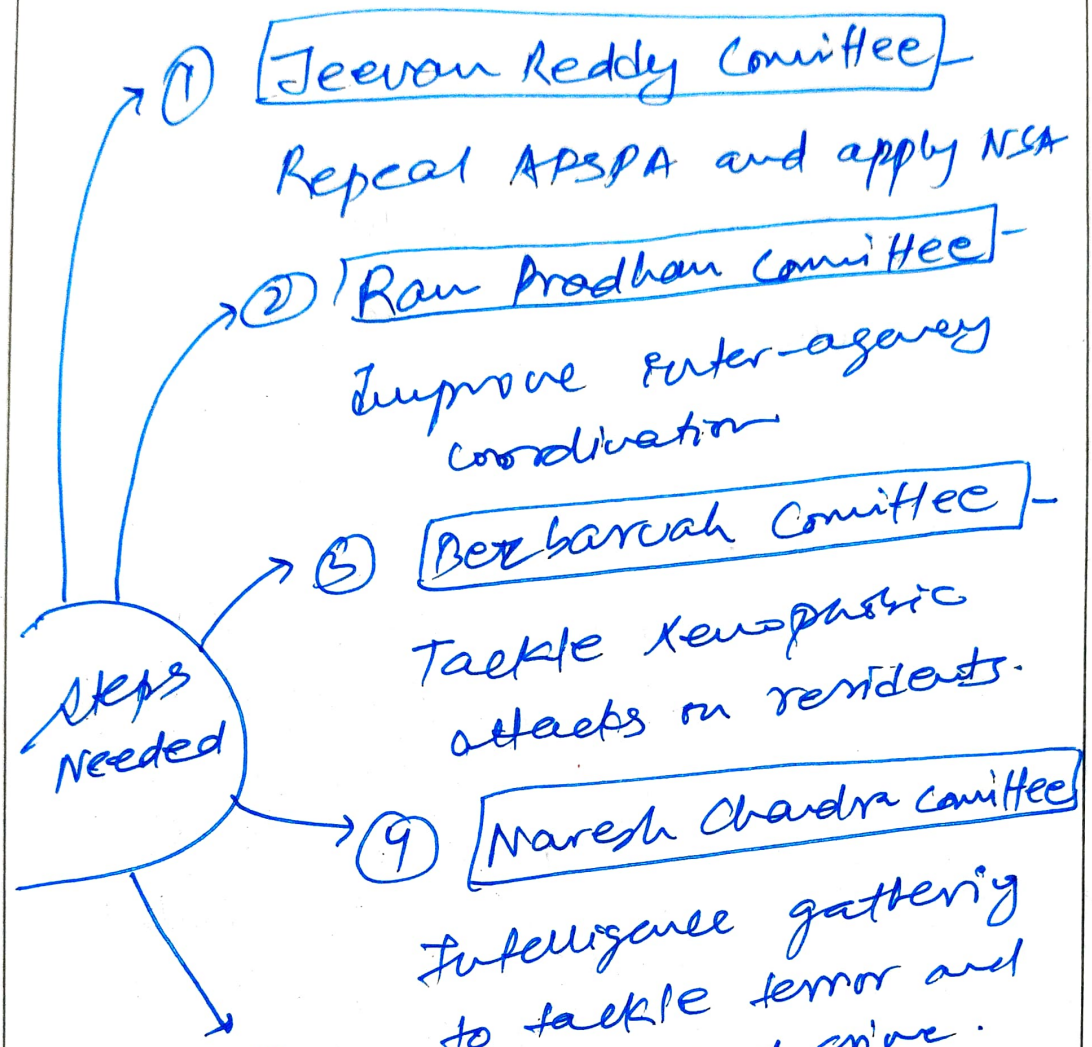
6) Organised Crimes eg Drug trafficking on Myanmar border.

7) Strategic challenges eg Chicken Neck Corridor.



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Hence, Northeast need Twin Strategy of Development and Counter-Insurgency to achieve sustained peace.