

- ① The fiscal management currently is in hands of government under the obligations of PRBM Act. This is inadequate because of lack of ~~at~~ accountability and lack of adherence to goals.

Current fiscal process - issues

- 1) The fiscal deficit targets are routinely breached (in 2018-19 F.D = 3.5, greater than target of 3.3%) and government is not held accountable
- 2) Creative accounting done to meet targets like rolling over subsidy expenses to next year
- 3) Extra Budgetary sources used to meet expenses are not accounted for
- 4) The centre and state fiscal process is not coherent - for eg states do not get cess or surcharge collections; cannot borrow without centre's approval.

Fiscal Council

- 1.) It was recommended by N.K. Singh panel as part of Fiscal & Debt Responsibility Act proposal
- 2.) Fiscal council would give targets, monitor performance of the government and submit assessment
- 3.) Approval needed before breaching the fiscal targets (slide path and flexibility)
- 4.) It will specify the accounting standards

Benefits

- 1) Comply or Explain Model will bring accountability
 - 2) More transparency in government accounting
 - 3) Attract investors as credibility increases
 - 4) Better debt situation of government
- After creation of a separate PDMA, Fiscal Council is natural next step.

2) Exports are crucial for successful economic transformation of India. The economic survey says exports, investment can create a virtuous cycle (Blue Sky approach)

Potential in job creation

- 1) Domestic Demand is not enough
- 2) Manufacturing sector can create jobs if it accesses export market
- 3) Logistic sector is great job creator

Steps to increase export competitiveness

Government has taken steps like -

- 1) MEIS and SEIS to support exporters by duty drawbacks
- 2) GST has zero rated exports
- 3) TIES scheme for export infrastructure
- 4) SEZs, NIMZs and planned CEZs focus on export growth

5) Foreign Trade policy 2015-2020

More steps are needed because the weak global growth, de-globalisation, protectionism is leading to weakening of export competitiveness :->

1) Push to labour intensive sectors like Textiles, Electronics is needed.

2) Ease of doing business for exporters

3) Need to compete better with ~~any~~ emerging players like Bangladesh, Vietnam.

4) Better trade deals to protect the domestic players (The ASEAN FTA led to more inflow of imports than exports)

5) Sanitary and phytosanitary standards should be worked on

6) Implementation of the Agso - export policy 2018

Export led growth is must to
take people out of agriculture

- ③ The mining and mineral sector is dealing with inefficiencies and inadequacies leading to HIGH IMPORT despite existence of domestic resources.

National Mineral Policy 2018

- 1) More active role for private player and ease of operating
- 2) Mineral corridors to be created for efficient mining and logistics
- 3) Status of Industry given to mining sector
- 4) Better tendering process and reduction of red-tape
- 5) The implementation of strict Mineral foundation (NMF) obligations

Benefits

- 1) This policy will help overcome the demand-supply mismatch.

2) It will provide synergy with other policies like steel policy, HELP is Hydrocarbon

3) It will aid the infrastructure growth by enabling timely provision of the inputs

4) The focus on SMP will ensure that the common people in regions will benefit from the growth in the sector. They would be given health, education benefits.

The policy needs to be implemented in spirit to maintain ecological health of the regions. The EIA should be done properly and mining should be sustainable

- 4) The new sunrise sector of bio-fuel energy can be catalyst for livelihood generation, renewable energy expansion and prevention of air pollution

JI-VAN Yojana

- 1.) Establishment of Bio-ethanol plants of 24 type using on crop stubble (15mm tonnes/year) ^{goal}
- 2.) The private players would be discentrised and assured of the raw material, market
- 3.) OMCs will buy the bio-ethanol as part of blending target
- 4.) It will help resolution of problem of crop stubble burning by farmers which causes ~~also~~ pollution in NCR region. It will also add to farm incomes.

National Biofuels Policy

This policy was aimed at increasing the

bio-fuel production by-

- ✓ Allow more options of feedstock like food waste / excess food production
- ✓ More focus on 2G and 3G biofuels
- ✓ Biomass to energy

The JI-VAN scheme is in line with these goals as:-

- 1) The Bio-ethanol plants will catalyse the bio-fuel production & investment in sector
- 2) The policy allows for more saw material availability
- 3) JI-VAN scheme aims at 15 mn tonne per year production

The JI-VAN scheme aims at materialising goal of policy

- 5) The ZBNF is a practice started by a farmer Subhas Palekar to decrease the input-cost by practising more nature based solutions

ZBNF - features

- 1) It does not take any chemical/costly inputs like fertiliser/pesticide
- 2) Bija matā - seeds are saved from farm. They are treated with mixture of cow urine, dung, jaggery before sowing
- 3) Jira matā - Compost / manure
- 4) Wapsa - Soil moisture maintenance
- 5) Biological pest control
It reduces the input cost to zero thereby aiming at increasing the net income of farmers.

Relevance

- 1) The indebtedness has increased (26% in 1990 to 35% in 2015 according to ES 2017) because of the capital intensive nature
 - 2) Small farmer are finding the agriculture unsustainable
 - 3) The ZBNF is eco-friendly
 - 4) Increased yield is reported from these farms by farmers practicing it in Karnataka
- ⇒ AP has announced 100% ZBNF policy and Union Budget 2019 also mentioned it

Concerns

- 1) Study on yield should be done
- 2) Training should be given properly through KVKs

The PM-KISAN and ZBNF can together help solve farmer distress

- ⑥ The global plastic production is ~ 8 billion tonnes and 13 million tonnes end up in oceans as waste every year. These ~~disi~~ cause damage to marine ecosystem and disrupt food chains

Damage to ecosystem

- 1) Micro plastic beads are ingested by fish and enter food chain
- 2) Plastic nets from ~~st~~ fishing equipments lead to trapping of marine animals
- 3) They hinder sunlight from reaching the marine plants (Pacific garbage patch)
- 4) Death of fish / whales from ingestion of plastic

Measures to Address

- 1) Recycling and re-use of plastic to form a circular economy. The firms should follow

Plastic Management rules, Extended Producer ~~to~~
responsibility (EPR)

2) Reducing use of plastic and increasing
alternate materials (Tute etc)

3) Liability - separation at
source to facilitate recycling

4) Campaigns like UN's clean seas, for
Pacific garbage - ocean cleanup

5) Blue Flag certification to encourage
clean beaches, clean ocean

6) Use of technology to remove the waste
from ocean

The recycle and reuse is the way
Recently Adidas^{India} decided to phase out
virgin plastic and use recycled one for
its sportswear, purchasing plastic from
a recycling firm in India

⑦

The BS norms aim at reducing the polluting nature of the fuel consumption in transport sector by better fuels.

Evolution of Norms

- 1) Adoption of Euro based norms in 1990s re-christened as Bharat Stage
- 2) BS-III has been phased out and BS-IV since April 2017
- 3) BS-VI from 2020 skipping BS-V norms
- 4) ~~BS-IV~~ Metros adopt the norms earlier faster than other areas.

Significance of BS-VI

- 1) Sulphur ppm reduction from 50 to 10 i.e. by 80% (Diesel)
- 2) NOx reduction by 50%.
- 3) P.M.2.5 pollution load would be less

Challenges

- 1) The engine needs to be upgraded. Thus there is need of capital investment $\Rightarrow$ cost increase
- 2) The older stock $\rightarrow$ inventory hard to sell leading to losses to business
- 3) Slow down in the sector ($\approx 27\%$ drop in car sales in 1 year) is making it hard
- 4) The consumers postponing ~~sales~~ purchase for the BS-VI norms

The BS-VI norms entail ^{high} cost by the firms. The government has recently announced some relaxation on sales of older BS-IV vehicles. This will help in easing the transition.

⑧ Black holes are the regions in space of high gravitational force and very high mass. They do not allow even light to escape them.

Black holes are formed by collision / merger of big neutron stars.

Imaging a Black Hole - challenges

- 1.) There is a lot of obstruction to the EM waves coming from the Black hole.
- 2.) The Black hole itself is dark (no light escapes). So the 'image' is of the radiation and light that escapes at the margins forming a RING SHAPE.
- 3.) To image a black hole we need telescope of a LARGE DIAMETER because of the sheer size of ~~the~~ Black hole which sun

is light years.

4.) Earth sized telescope is needed

Event Horizon

1.) It overcame the challenge by having 8 different telescopes around the earth

2.) The data from these was aggregated to create the simulation of a big single telescope

3.) Huge data had to be physically transported

The Event Horizon project confirms the Einstein's theoretical prediction about shape of black hole. and advances human science

⑨ The Arms Trade Treaty aims to control the arms race by putting restrictions on trade between the member nation or by member to non-member.

This treaty aims to establish verifiable protocols of controlling the trade in arms.

Challenges

1) Arms trade is a huge business and countries like USA, Israel have huge interest in this trade.

2) The treaty is seen as intrusion into sovereignty and right to uphold national security of one's country.

3) The treaty is not capable to dealing

with new medium of trade, advanced
technology (darknet etc)

The self interest of the own-exporter
nations is preventing the ATT from being
effective. Need is to bring them to
table for realising the potential

- ⑩ The cyber space and communication is general is a new theatre where the adverse actors try to harm internal security

Threat through network

- 1) Use by terrorists to spread propaganda
(e.g. Shamir witness account linked to ISIS spreading propaganda in India)
- 2) Recruit the terrorists, enable lone wolf attacks etc for e.g. Sri Lankan terrorist used internet to form the group, train, recruit
- 3) Execute operations, financial transaction facilitated by anonymity. e.g. Blockchain/Bitcoin, Darknet.

Threat to Network

- 1) The critical infrastructure like Aadhar data, Ayushman Bharat data is vulnerable to attack.

- 2.) Cyber attacks like ransomware (WannaCry), DDoS to disrupt essential services
- 3.) Disruption of power supply, Aviation sector
- 4.) Hacking of government website, espionage
- 5.) Threat to individual computers

Steps Taken

- 1.) ~~IS~~ CERT and NCC to be aware of the threats on the cyber space by tracking the network
 - 2.) NATGRID, CCTNS for coordination between enforcement agencies
 - 3.) Proposed data privacy law, incorporation of data privacy provision in PMJAY infrastructure
 - 4.) Tokenisation & virtual ID for Aadhar
- Need to develop a competitive cyber security sector

- ⑪ The Variable Renewable Energy means the part of the RE which is intermittent due to natural process e.g. ~~sun~~ solar energy and wind energy. The full utilisation of RE needs that the VRE be integrated into the grid

Importance

- 1) Integration would ensure sustainability of RE plants which otherwise face lack of continuous market
- 2) Integration allows scaling up
- 3) Competition in the market
- 4) Fragmented market harm optimum utilisation and harm both producers and consumers

Challenges

- 1) The solar and wind are localised in

certain regions and there is lack of connectivity to these regions

2) The intermittent nature discourages the buyer of the RE (like DISCOMS)

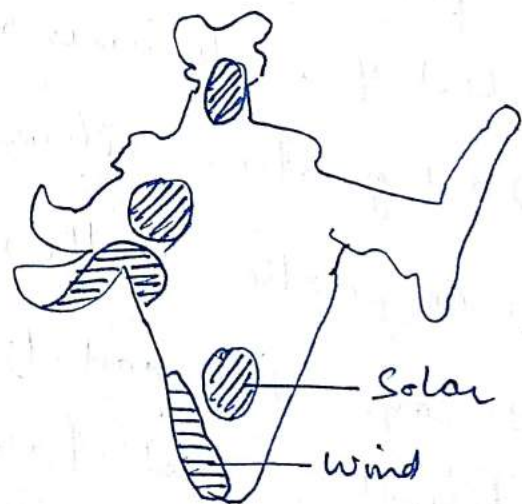
3) DISCOMS need to know the supply beforehand for proper management

4) Lack of infrastructure poses difficulty of evacuation of VRE

Steps to Integrate

1) Green energy corridor being built for evacuation of solar and wind energy

2) Solar-wind HYBRID policy can be implemented to tackle intermittent nature of the VRE



LOCALISED
NATURE of VRE

- 3) Storage technology should be focussed upon to better make use of VRE
- 4) Use of AI to forecast the output of solar power plant and accordingly adjust the downstream sector (a start-up in selbi is working on this)
- 5) Integration of power market using initiatives like Renewable Energy certificates (RECs)
- 6) Separation of distribution & supply supply to encourage more players

The integrated grid will help achieve goal of 175 GW of RE as it will incentivise investment in RE generation

⑫ 'Middle Income Trap' (MIT) is a phenomenon where a developing country having come out of low income group, but unable to structurally transform faces ~~the~~ trap in the middle income. ~~It~~ It can't compete with the lower cost of production in lower income, nor climb the ladder to become higher income because of low productivity.

Reasons for MIT

- 1) Unable to change the drivers of growth from the low productivity sectors (Agriculture) to higher productivity sectors (Manufacturing)
- 2) Inability to take advantage of global export market → dependence on domestic demand

3) Lack of human capital investment needed to attain higher productivity

4) Lack of technology transfer from developed nations, thus they are unable to transform to higher productivity

India - threats of MIT

1) Backlash against globalisation would hinder the export growth. The US China trade war, protectionism prevents us from fully tapping export potential. This while, Bangladesh and other countries have greater competitiveness in exports like textile due to preferential treatment

2) Human capital regression - While our skill levels are very low (4%), we face uphill task of re-skilling workforce for IR 4.0

3) Structural Transformation from agriculture to manufacturing is thwarted by roadblocks like investment slowdown, infrastructure bottlenecks, skill gap etc

4) Climate change threatens agricultural incomes (15-18% loss)

5) Private Investment slowdown

Steps to take

- 1) Revival of private investment by solving the twin balance sheet issue
- 2) Skill gap to be bridged at mission mode as per industry needs
- 3) Investment in labour intensive sector
- 4) Trade deals to capitalise on global demand in sectors like electronics
- 5) Infrastructure improvement through logistic improvement, Sagamals, Bharatmala etc

- ⑬ Monetary policy transmission means that the RBI's decision on policy rates should lead to corresponding change in interest rates by banks.

Importance

- 1) RBI's ability to control liquidity and manage money supply depends on MPT.
- 2) In absence of transmission, RBI's control weakens. This affects the stability and growth.
- 3) To discourage investment, reverse growth it is essential that repo rate cut should lead to rise in bank credit.
- 4) Ineffective transmission of monetary policy affects government's fiscal process too.
- 5) Inflation control depends on effective transmission.

Issues in India

- 1) The banks are slow to pass on rate cut although they readily pass rate hike to consumers
- 2) Overdependence on banks makes them less subject to repo rate changes
- 3) MCLR has not been implemented effectively some loans still work with previous system.
- 4) Lack of external benchmark

Steps taken by RBI

- 1) RBI had made changes in Base rate system from time to time. The new MCLR was aimed at effective transmission
- 2) Monetary Policy Committee and new monetary policy framework to have greater focus on inflation control using the

monetary policy

3.) Measures like sterilisation, Market stabilisation

scheme

4.) During demonetisation incremental CRR was implemented

5.) RBI suggested banks to move to EXTERNAL BENCHMARK. Today we, RBI has shifted to external benchmark for retail loans

⇒ Monetary Policy transmission is the basis of RBI's influence on markets. It should be effective for stability and growth

- (14) India has ~55% of the area under rainfed agriculture which is dependent on vagaries of nature. This is very crucial sector producing 80% of pulses, millets and 40% of other food grains cereals.

Constraints

- 1) These areas are generally populated by poor, small farmer.
- 2) Lack of mechanisation, irrigation facilities constrains them to fewer crop choices i.e. Millets in dry regions, paddy in wet areas
- 3) The public investment in agriculture is low in these areas
- 4) The crops grown are not MSP assured and they face lack of marketisation
- 5) Agricultural policies are BIASED towards

irrigated regions and do not help Rainfed areas.

6) The HYV seeds etc are made for water intensive agriculture which does not suit these dryland areas.

7) Violent movement in PRICES of these crops like pulses $\Rightarrow$ unstable income.

Agronomic practices

1) Seeds and other inputs suited to rainfed areas should be specifically developed

2) More public investment needed in these areas especially micro-irrigation in the dryland areas should be expanded

3) Extension services to train farmers in new techniques like ZBNF

4) Mulching in dry areas to maintain soil moisture.

5) ~~Plowing~~ Ploughing perpendicular to slope
to prevent erosion in water-abundant
regions.

6) Agroforestry, plants like Jatropha, oil palm
to increase income

7) Income support

Rainfed agriculture needs
specific, custom-made solutions instead of
'one-size fit all' approach.

- (15) The Urea is one of the fertiliser components which is most demanded. It is source of Nitrogen for the soil and largest consumption of all the fertiliser is of Urea.

Steps taken in Urea sector

- 1) Facilitation of saw material supply for Urea plants
- 2) Market control - subsidised urea prices for farmer
- 3) Canalisation of import to maintain supply and prevent black marketing
- 4) Revival of PSUs in Urea sector
- 5) DBT in the fertiliser to target subsidy better (directly to farmer)
- 6) Neem coating to prevent diversion

Problems that persist

- 1) The PSUs operating in this sector are very inefficient. They should be

rationalised and wound up as required.

2) Canalisation of Urea still ~~no~~ lead to supply bottlenecks. Thus need is to de-regulate this

3) Over-use / improper use of Urea by the farmers. Need to increase awareness and coverage of Soil Health Cards (4:2:1)

~~4) Allow private sector ~~in the~~ to have greater role to create competitiveness and reduce subsidy burden.~~

Reforms

1) The canalisation of Urea import should be done away with.

2) Lockdown on blackmarket

3) Private sector should have greater role

This would increase competitiveness of the sector

- 4) Increasing efficiency of the urea plants can lead to reduced subsidy burden.
- 5) The large farmer should not be given subsidy and small farmer should be better targeted

Urea sector ~~can~~ if reformed would bring greater efficiency in the agriculture sector overall

⑥ Access and Benefit sharing is a concept developed as part of Biodiversity management which means that benefits derived from commercialisation of bio-resources should be shared with all stakeholders ~~not~~ including indigenous people.

ABS mechanism recognises the role played by the ~~big~~ indigenous people in preserving the resources

Sustainable use of Biodiversity

1) The ABS mechanisms incentivises the locals to conserve and manage useful resources

2) Livelihoods of locals are enhanced instead of unequal sharing and exploitation by the big corporates

3.) ABS also guards against the reckless and predatory depletion of the biodiversity by incorporating the relevant ~~costs~~ costs

4.) It will allow the sectors like bio-pharma to benefit from biodiversity and enable greater growth in these sectors

Global Mechanisms

- Convention on Biological Diversity (CBD) signed at Earth Summit provides for ABS
- It empowers the local authorities to demand the sharing of benefits from the big MNCs
- Arctic Biodiversity Targets

National Mechanism

India incorporated the provisions of CBD

into our laws.

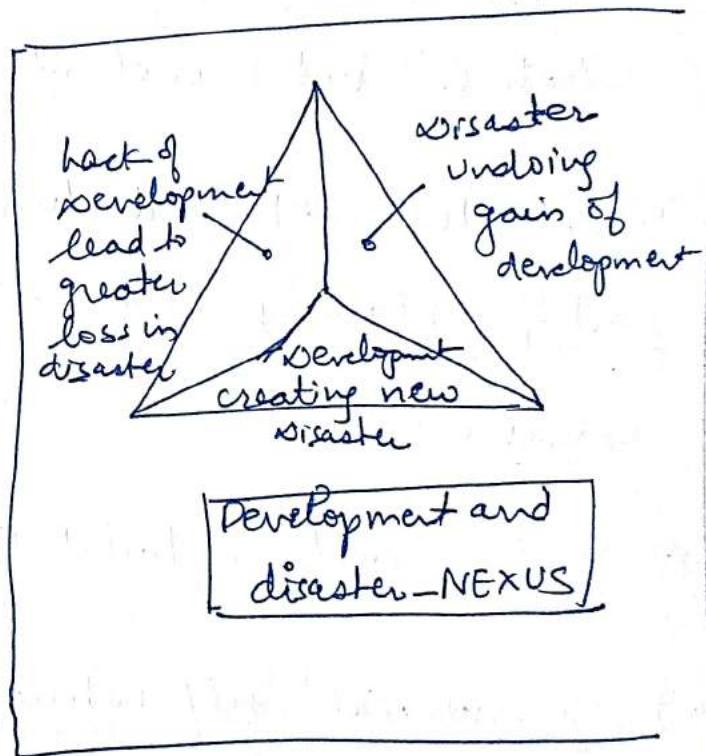
- National Biodiversity Act mandates the companies to share benefit with locals
- National Biodiversity Authority to implement the rules
- Local Biodiversity Management Committee and Biodiversity Registers to give control to the indigenous people
- SC ruling in a recent case where it ordered an Indian company (Patanjali Ltd) to give appropriate benefit to the local people for using the bio-resources

ABAs can help India's tribes benefit from the rich biodiversity resources preserved by them and also traditional knowledge by enabling rights over knowledge

(17)

Disaster Resilient Infrastructure is very significant part of the Senda framework because it will increase Disaster Risk Resilience (one of 4 components). It will help in overall Disaster Risk reduction.

Resilient Infrastructure helps in better preparedness against disaster. It also make the development MORE ROBUST AND SUSTAINABLE.



Challenges

1) Difficulties in enforcing norms - (eg earth -quake resistance buildings) - The stakeholders need to be persuaded to change

practices and old methods

- 2.) Obsolete technologies and outdated designs being used still today
- 3.) Need to retrofit the old infrastructure which is not resilient to disaster.
- 4.) Disaster risk reduction has not become part of planning. It is still seen as separate exercise.
- 5.) Higher costs entailed in resilient infrastructure
- 6.) Commercial self-interest leads to low quality infrastructure. e.g. frequent collapse of bridges, flyovers.
- 7.) Awareness among people is low

Ways to Mainstream

- 1) The development planning itself should take disaster resilience into account (CARC recommendations)
- 2) ~~Less~~ Better enforcement of norms (e.g. to avoid tragedies like Surat fire)
- 3) National Disaster Management Plan 2016 talks of responsibilities of various stakeholders
- 4) Region specific solutions e.g. in Himalayas earthquake and landslide resistant structures
- 5) Better business models and better PPP contracts to incorporate costs of disaster proofing

⑮ Data localisation means to mandate the companies to store data of the consumers of a country within the country.

Significance for India

Currently the data owned by giants like fb, google, Amazon is stored in the data centres in USA. This leads to issues.

- 1) Difficulty of accessing the data needed for law enforcement. The request has to be made to the country where it is stored.
- 2) 'Data ownership' questions. The data being NEW OIL raises question of 'who owns the data'?
- 3) There are national security concerns

4) India should have control over data
to create base for future digital economy
based on IoT, AI, Big data. (Economic
gain)

5) Financial data is sensitive, prone to
fraud. Hence need to localise

Steps

- RBI mandated storage of payment data
- e-commerce policy also talks of data
storage locally
- Sri-Krishna committee draft bill → storage
of copy of data locally

Challenges

- 1) Hinders free flow and thus puts
obstacle to digital economic growth
- 2) Increased cost of storing in India would
discourage investors

- 3) Cost for our own start ups would increase
- 4) It would lead to protectionism from other nations. This hurts our own IT industry
- 5) Localisation does not mean automatic security from fraud, data theft
- 6) It can be challenged in WTO in future

Like China, India should take steps to secure data sovereignty. But we should also balance it with the ease of doing business

- ① Money Laundering means practise of disguising the source of the funds obtained from illegal / criminal activity to show it as having legal origin. It involves complex transactions and processes like plaving, layering, integration

Menore for developing country

- 1) ML aids the organised crime and terror funding thus security threat
- 2) ML distorts the economy by introducing tainted money
- 3) It increases corruption by giving conduit to hide the proceeds
- 4) ML is the enabler of bad politics, criminalisation of politics

Money Laundering is at Base of crime disrupting development and peace

Measures taken

International Level -

- FATF is the organisation aiming at setting standards to implement regulatory and operational measures to combat terror funding
- Mechanisms of 920 like Legal Identifier (LEI) Entity for every transaction
- Blacklisting by FATF of countries for failing to implement standards

Domestic Level

- 1) FIU-India collects, and collates the information to nab these crimes
- 2) PMLA → Act for prosecuting the money laundering. This is implemented by agencies like ED, CBI. Special court have been set up

3.) Recent Amendments in PMLA to widen the ambit of offences. Proceeds from any criminal activity are now liable for confiscation

4.) Fugitive Economic offenders Act, 2018

5.) KYC norms in Banks

6.) De-registering of Shell companies

7.) FCRA norms for NGOs - Charities are sometimes used as front to ~~also~~ fund

terror

We need to catch up with new technology and sophisticated tools

that can be used for Money Laundering
Making Money laundering a separate offence
as suggested by FATF can be a good step

(20) Terrorism uses the violence as a means to achieve political aim. The organised crime is a structured process where group of people come together to commit crime and accumulate money.

Thus primary motive of Terrorism is political while that of OC is economic.

Symbiotic Relationship

1) Terrorists need funds to acquire weapons, organise operations.

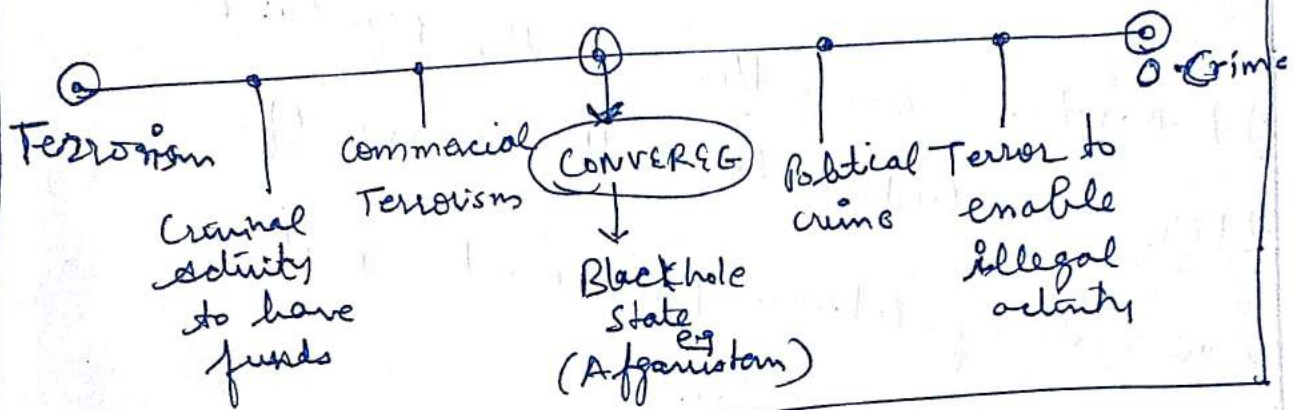
2) OC needs clientele and couriers to enable the crime.

3) ~~These~~ OC include drug trafficking, human trafficking, arms smuggling, gun running.

These are readily adopted by terrorists to make money. e.g. Taliban involved in

illegal opium trade to fund its insurgency
4) organised criminals use terror to subvert
the rule of law, and commit crime

Continuum of Terror and organised crime



Some examples of this symbiotic relationship :->

1) The hawala money used to fund Kashmiri insurgency

2) Opium production and illegal smuggling in Afghanistan used by Taliban to generate funds. They earn ~100 Crores per year by illegal opium trade according to some estimates

3.) The North East Insurgents act as Covers for drug smuggling groups of 'Golden Triangle'. They use the funds to foment terror, establish parallel governments, subvert the rule of law.

4.) N.M. Vohra Committee on the Mumbai Blasts of 1993 concluded that the nexus of criminals - politician - Bureaucrats enabled subversion of rule of law

Understanding this relationship is essential to devise counter terror strategies -