

GES REPORTER

December 2022
The HINDU Mind Maps PDF
compilation

By

Saurabh Pandey

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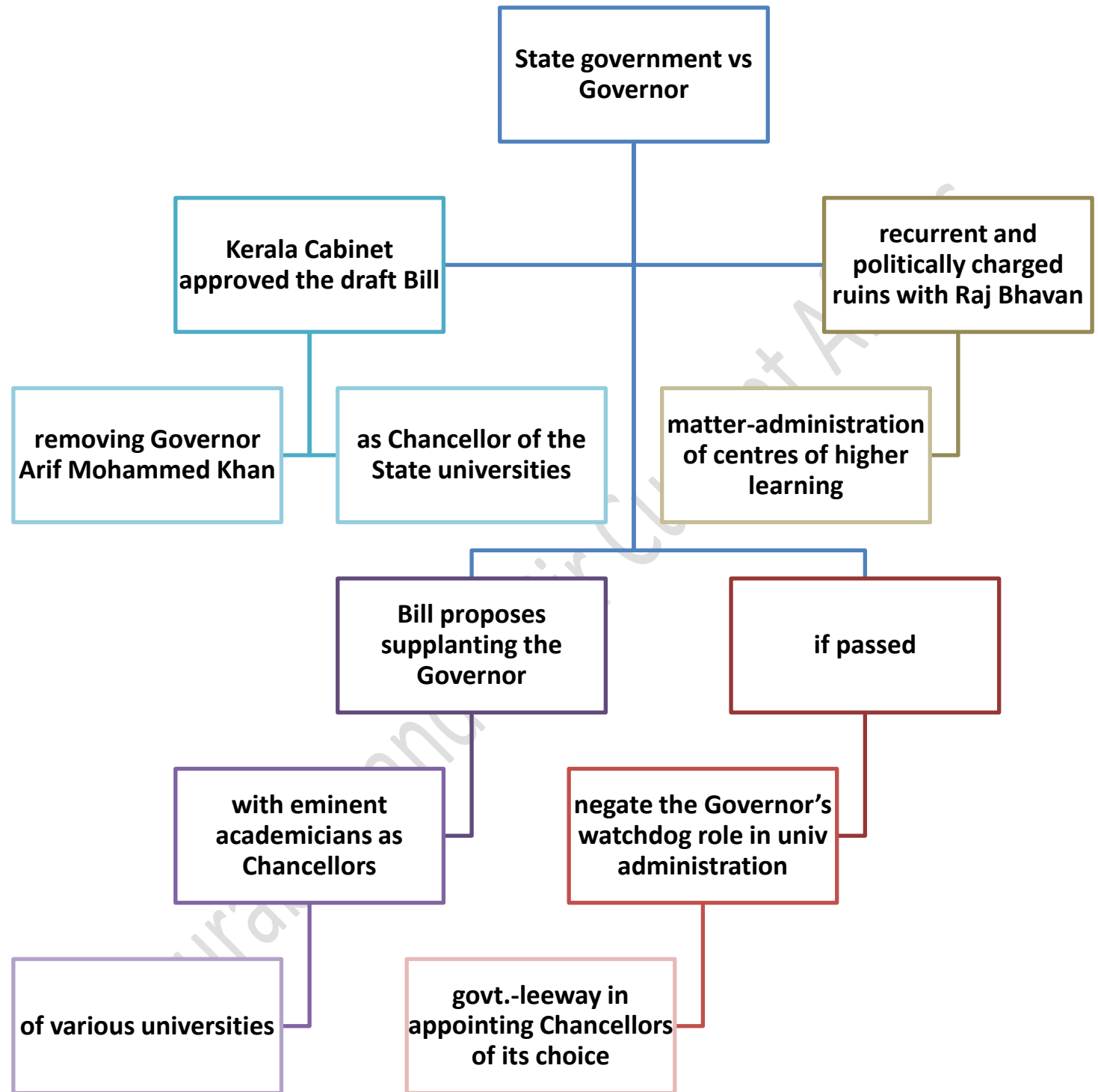


**The Hindu through Mind Maps
(Saurabh Pandey Sir)**

December 1
2022

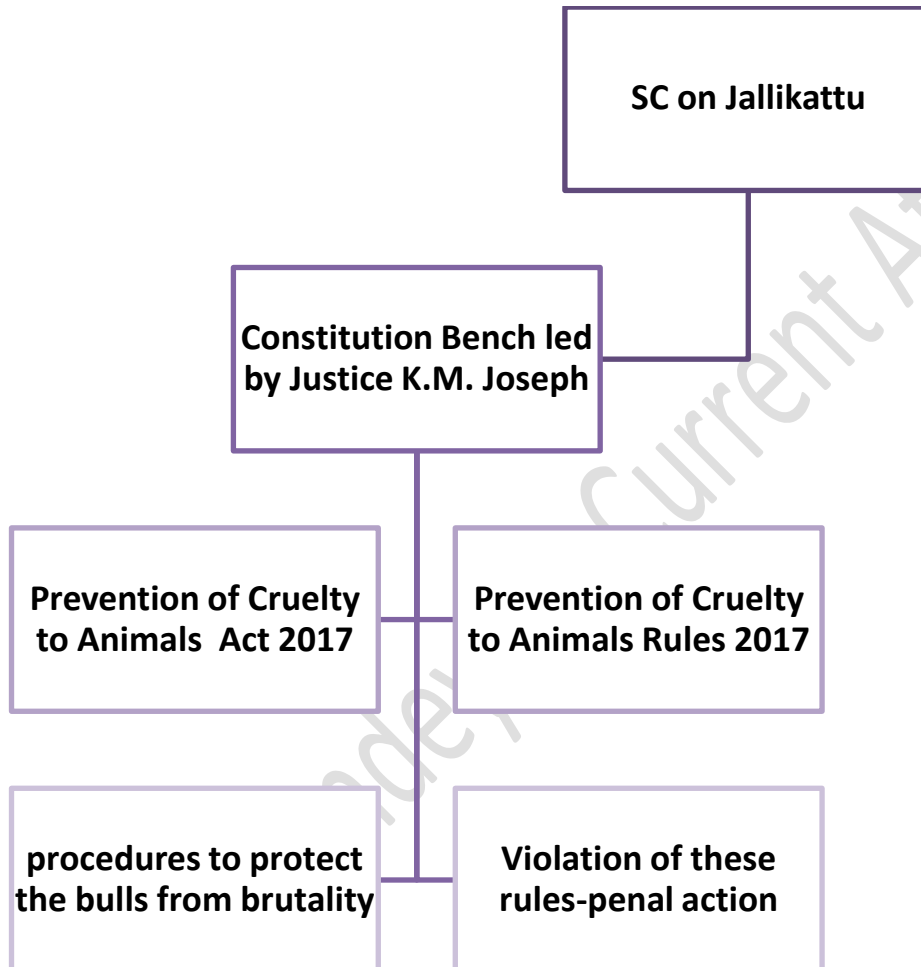
The Hindu Mind
Maps

State government vs Governor

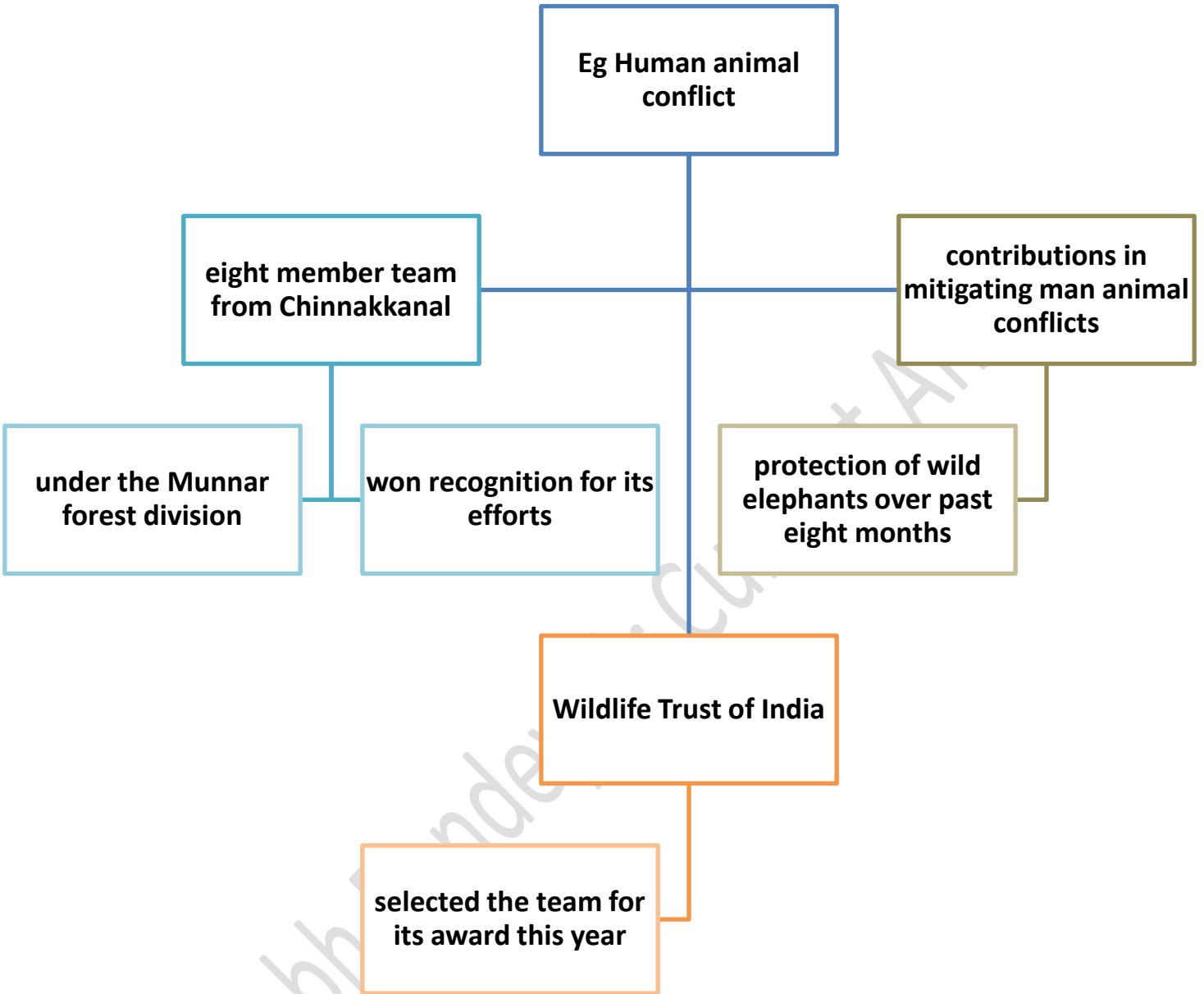


SC on Jallikattu

The Supreme Court said the sport of Jallikattu as such now might not be brutal but the “form” in which it was being held in Tamil Nadu might be cruel.

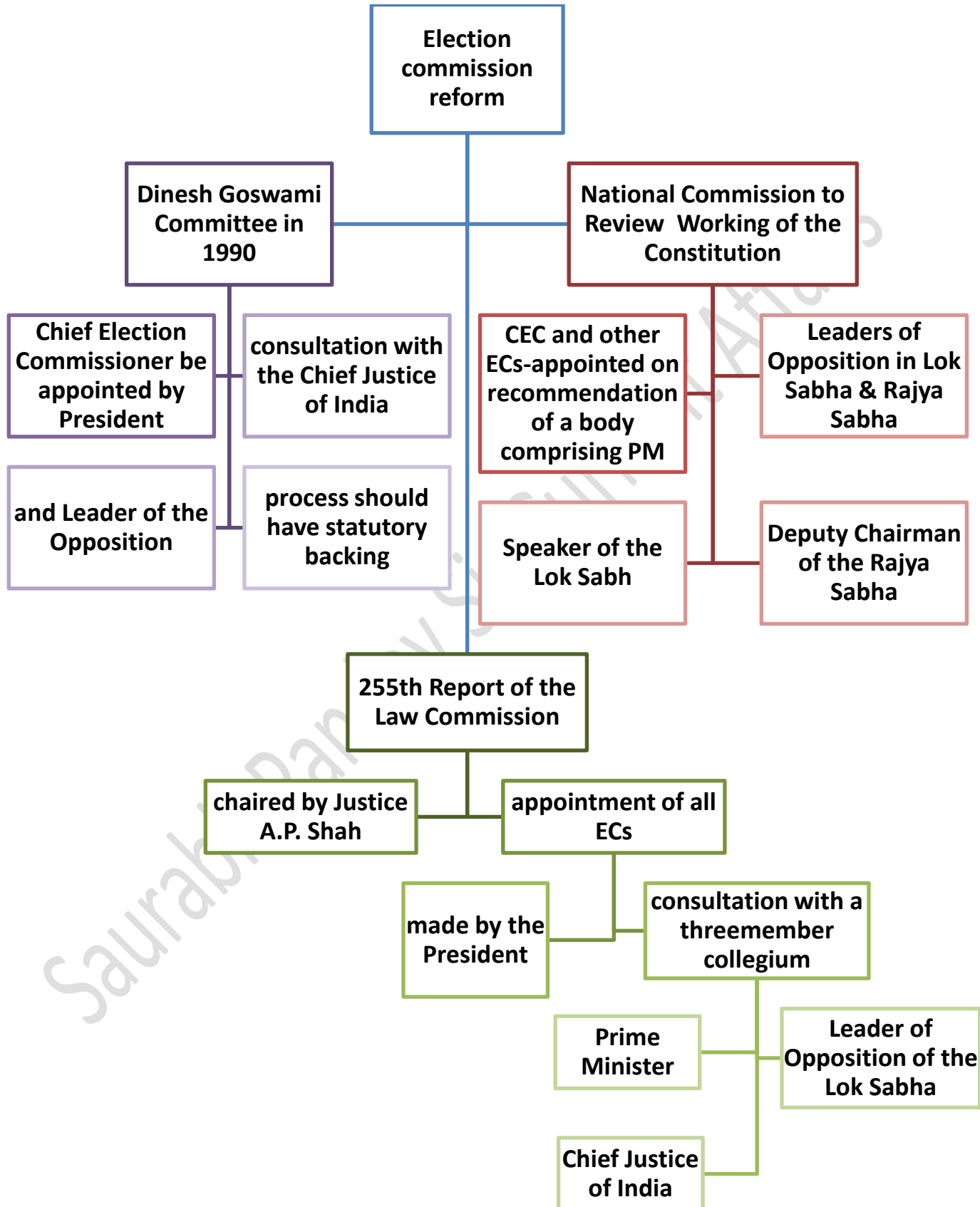


Eg Human animal conflict



Saurabh
nder
Chinnakkanal
A

Election commission reform



**Election
commission
reform**

**suggested
measures to
safeguard ECs**

**in absence of full
constitutional
security**

**from arbitrary
removal**

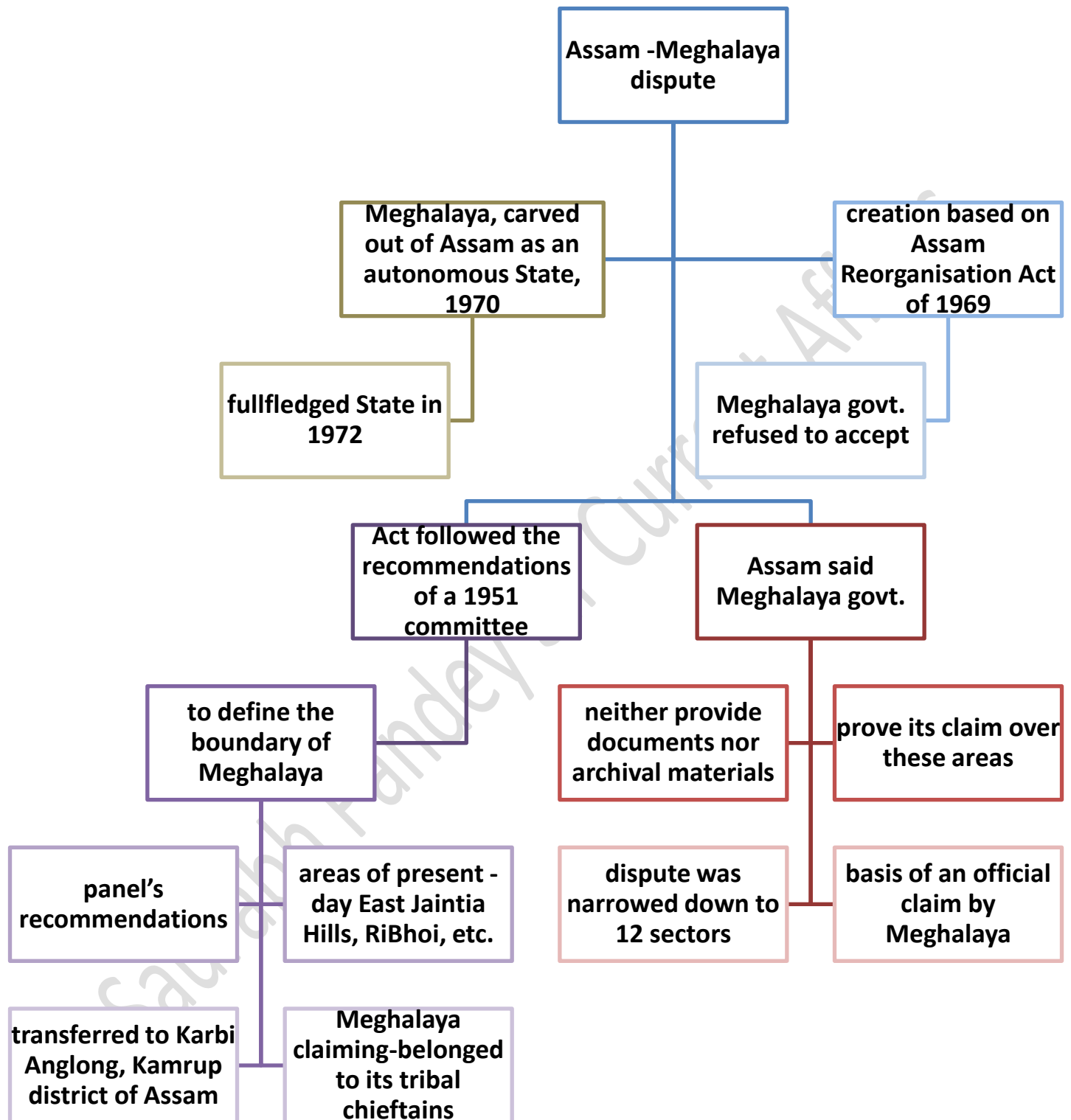
**as enjoyed by
Chief from day
of appointment**

**Election
Commissioner
could feel**

**must keep on
the right side of
the Chief EC**

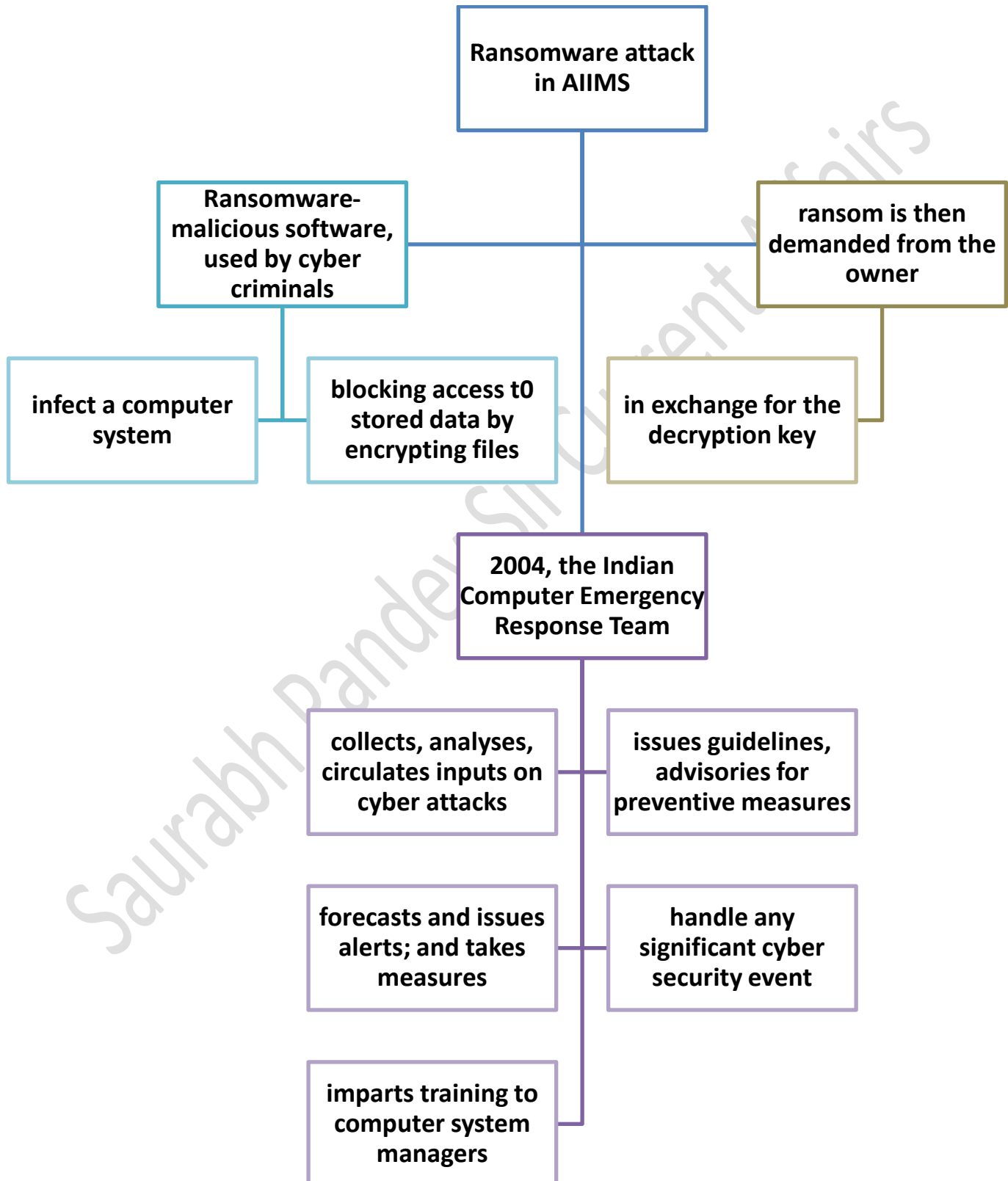
Saurabh Pandey Sir Current Affairs

Assam -Meghalaya dispute



Ransomware attack in AIIMS

On November 23, eservices at the All India Institute of Medical Sciences (AIIMS) were crippled by what is being suspected to be a ransomware attack



Ransomware attack in AIIMS

National Cyber Security Coordinator

National Critical Information Infrastructure Protection Centre

under the National Security Council Secretariat

coordinates with different agencies at national level

set up for protection of national critical info. infrastructure

govt.-Cyber Swachhta Kendra

National Cyber Coordination Centre

launched for detection of malicious software programmes

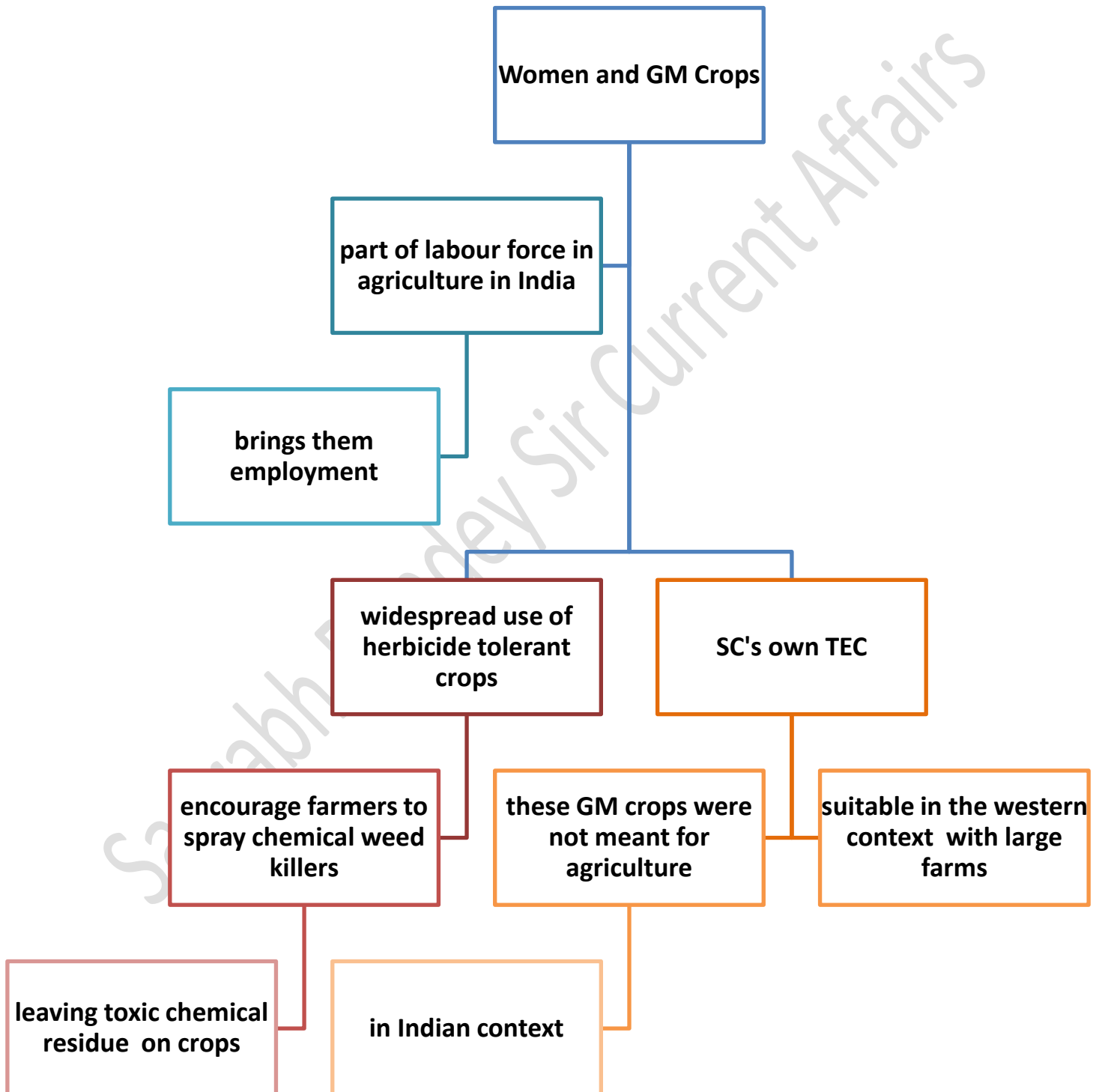
provide free tools to remove the same

creating awareness about existing and potential threats

Saurabh Prakash Sir Current Affairs

Women and GM Crops

The SC expressed concern about the plight of thousands of women agricultural labourers in rural areas traditionally engaged in weeding as they would be part of the human cost if the government permitted the commercial cultivation of herbicide tolerant crops such as GM mustard



Growing cooling sector in India

Growing cooling sector in india

From 2030, 160 million to 200 million people

nearly 34 million Indians will face job losses

exposed to lethal heatwaves in India every year

due to heat stress related productivity decline

2037, demand for cooling is likely to be 8X more

innovative energy efficient technologies-imp.

demand for cooling shooting up

report, "Climate investment opportunities in India's cooling sector"

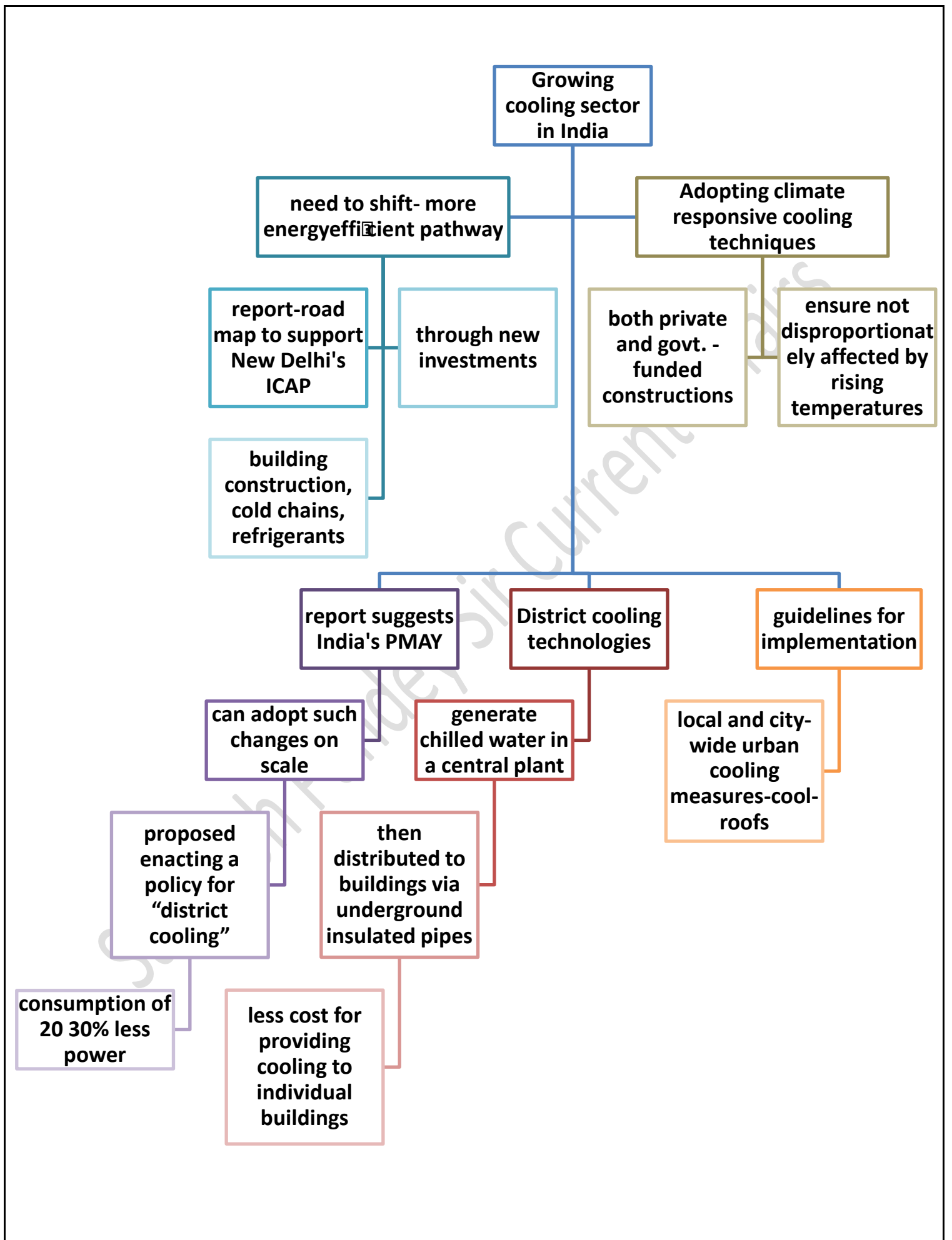
demand for a new air-conditioner every 15 sec.

open an investment opportunity of \$1.6 trillion, 2040

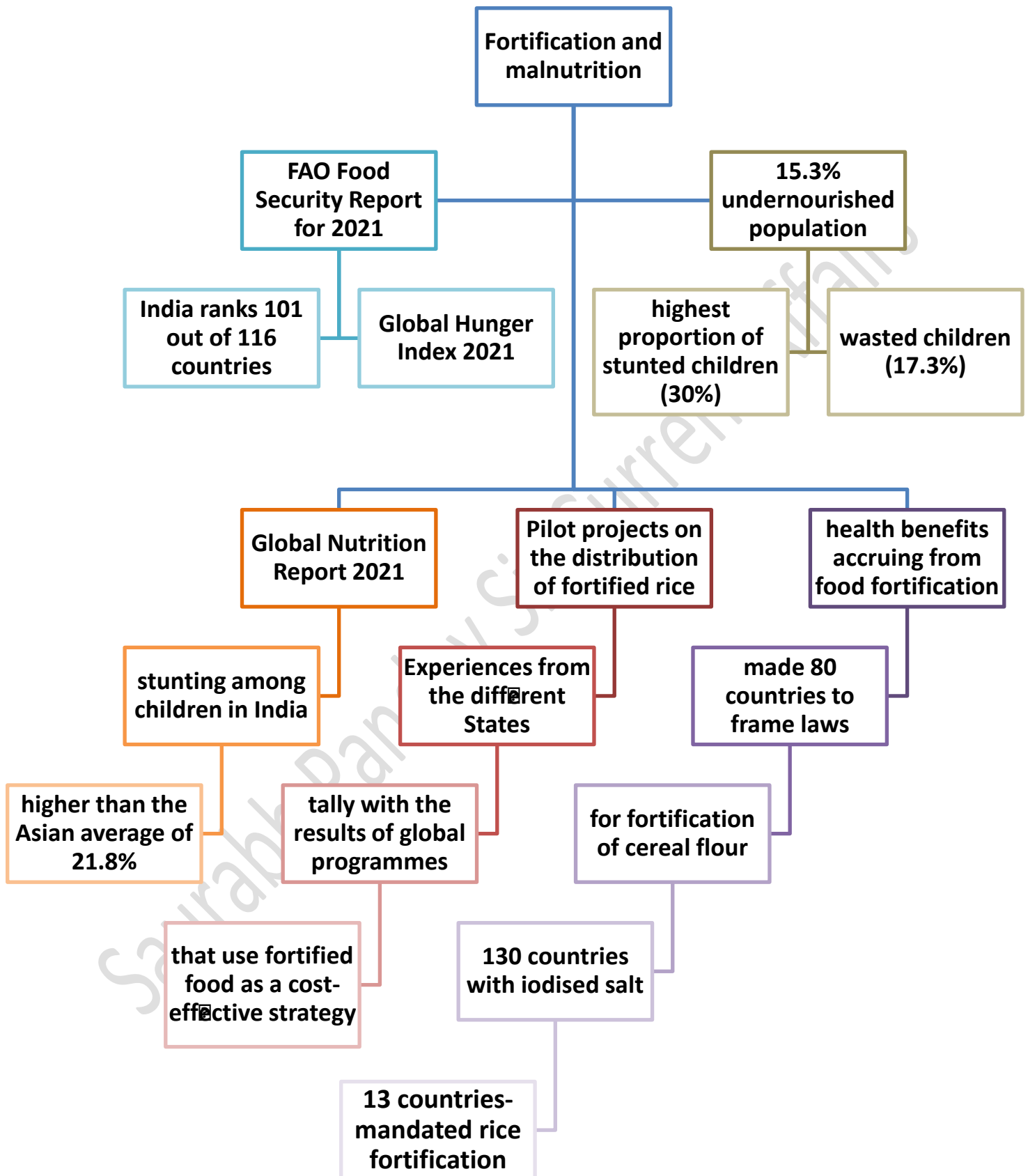
expected rise of 435%

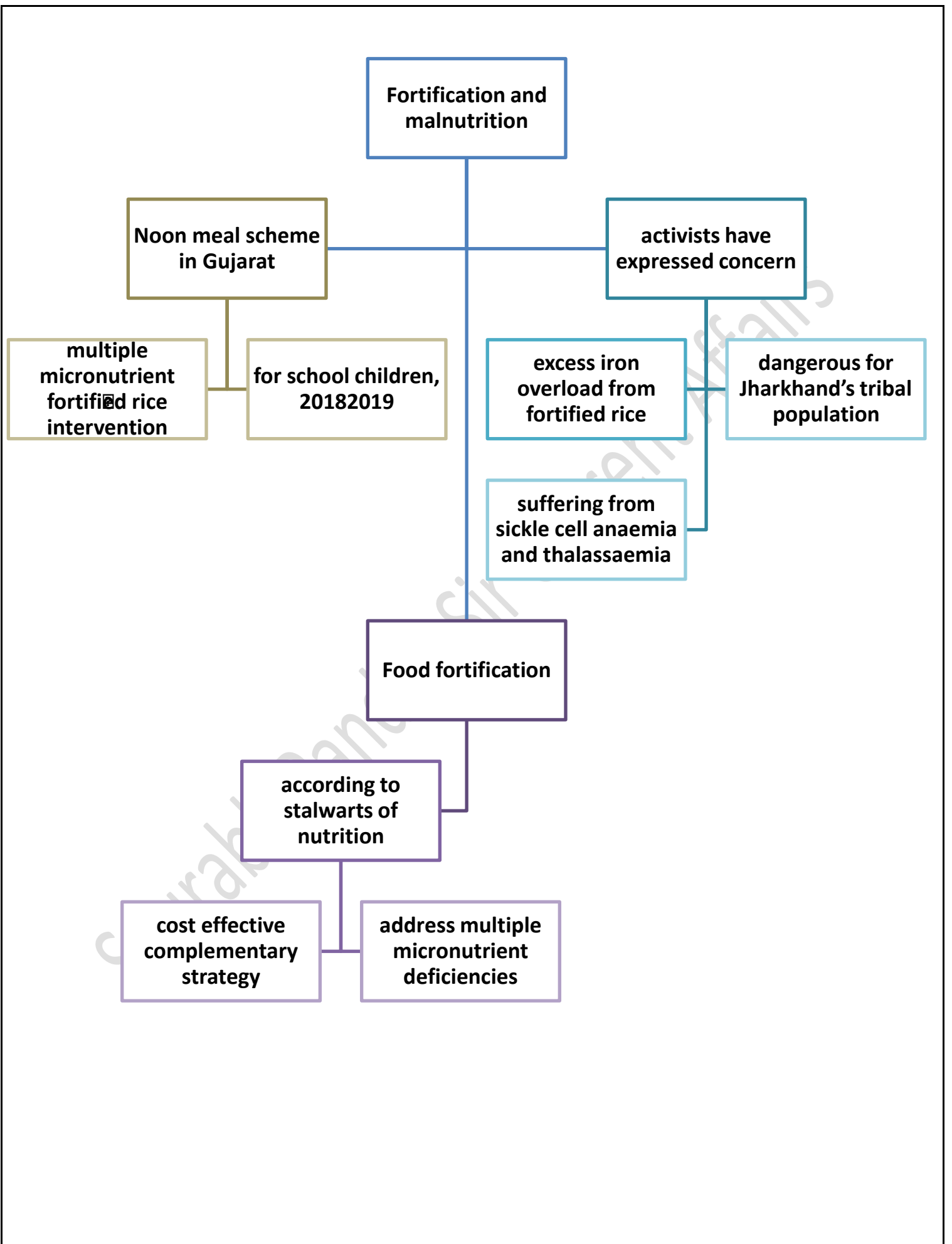
annual greenhouse gas emissions

besides reducing greenhouse gas emissions



Fortification and malnutrition





The Hindu through Mind Maps
(Saurabh Pandey Sir)

December 2
2022

The Hindu Mind
Maps

Why global layoff?

Why global layoff?

Alphabet CEO
Sundar Pichai

inflation soaring in
most parts of the
world

warned of a coming
winter in the tech
sector

potential economic
recession is a big
red flag

central banks-rein it
in by increasing
rates

to make it more
costly to borrow
and consume

eventually affect
economic growth
and jobs

estimates for this
calendar & next by

IMF-forecasts for
global GDP growth
in 2022, 2023

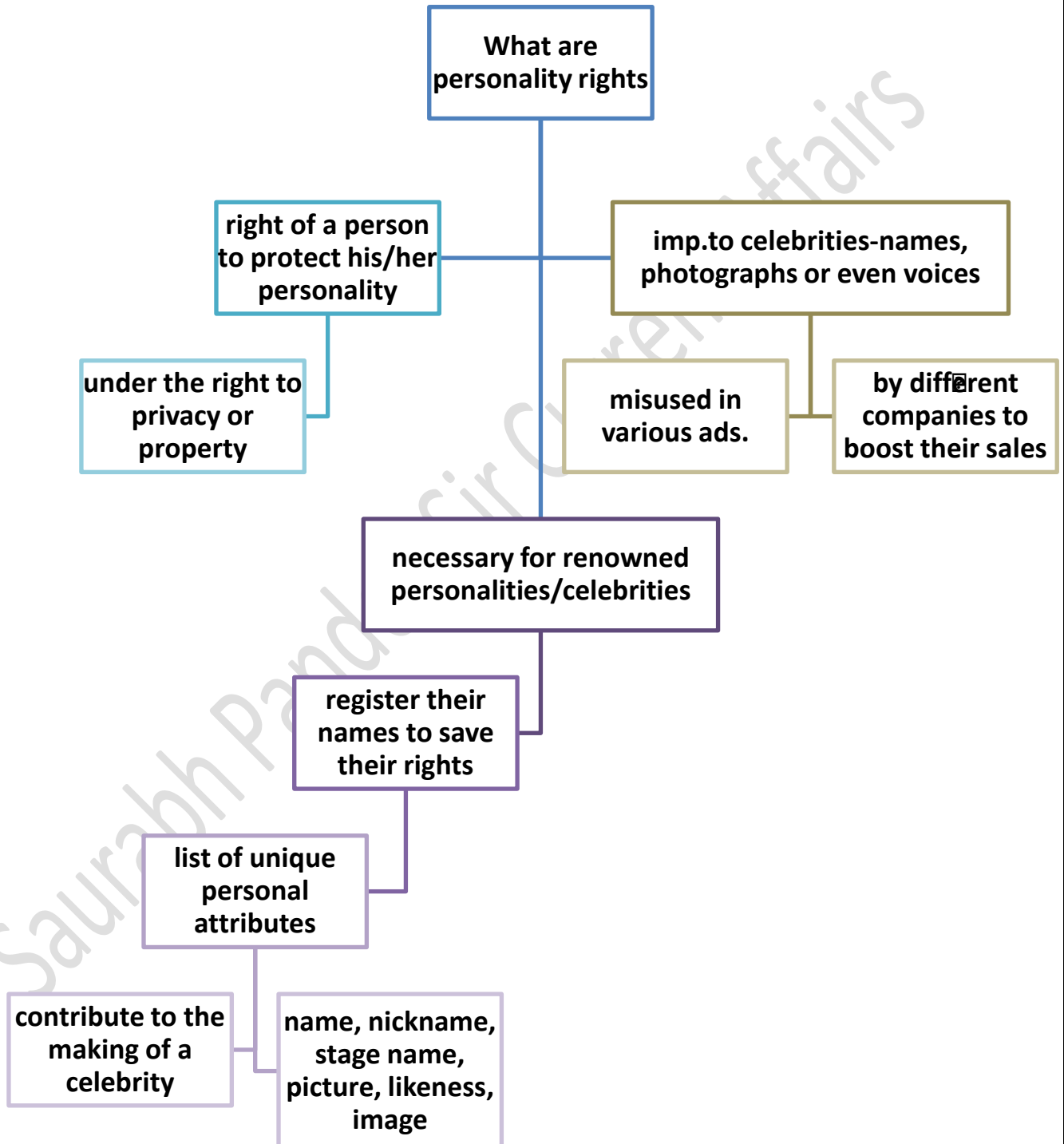
IMF are the
weakest since 2001

gloomy- pandemic,
Russia Ukraine war

Sundar Pichai responses to staff• queries
on budget cuts “We don’t get to choose
the macroeconomic conditions always.”

What are personality rights

Delhi High Court recently passed an interim order to prevent the unlawful use of Bollywood star Amitabh Bachchan's name, image and voice



Personality rights and publicity rights

Personality rights consist of two types of rights

second-right to privacy

right of publicity

right to keep one's image and likeness

right to not have one's personality

represented publicly without permission

being commercially exploited without permission

similar to use of a trademark

publicity rights fall into the realm

passes off their goods or services

Publicity rights are governed by statutes

of 'tort of passing off'

of person or business

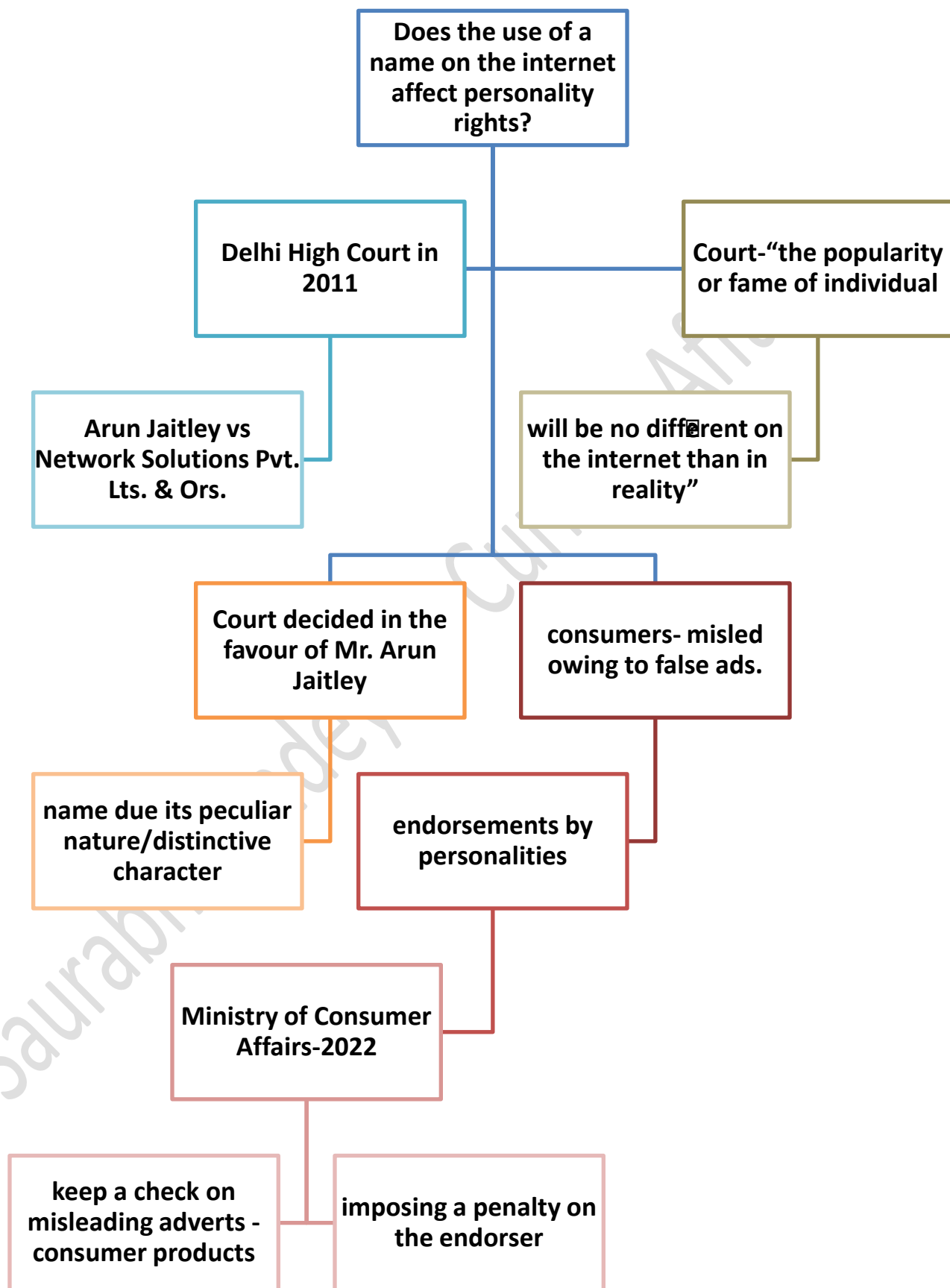
Trade marks Act 1999

when someone intentionally or unintentionally

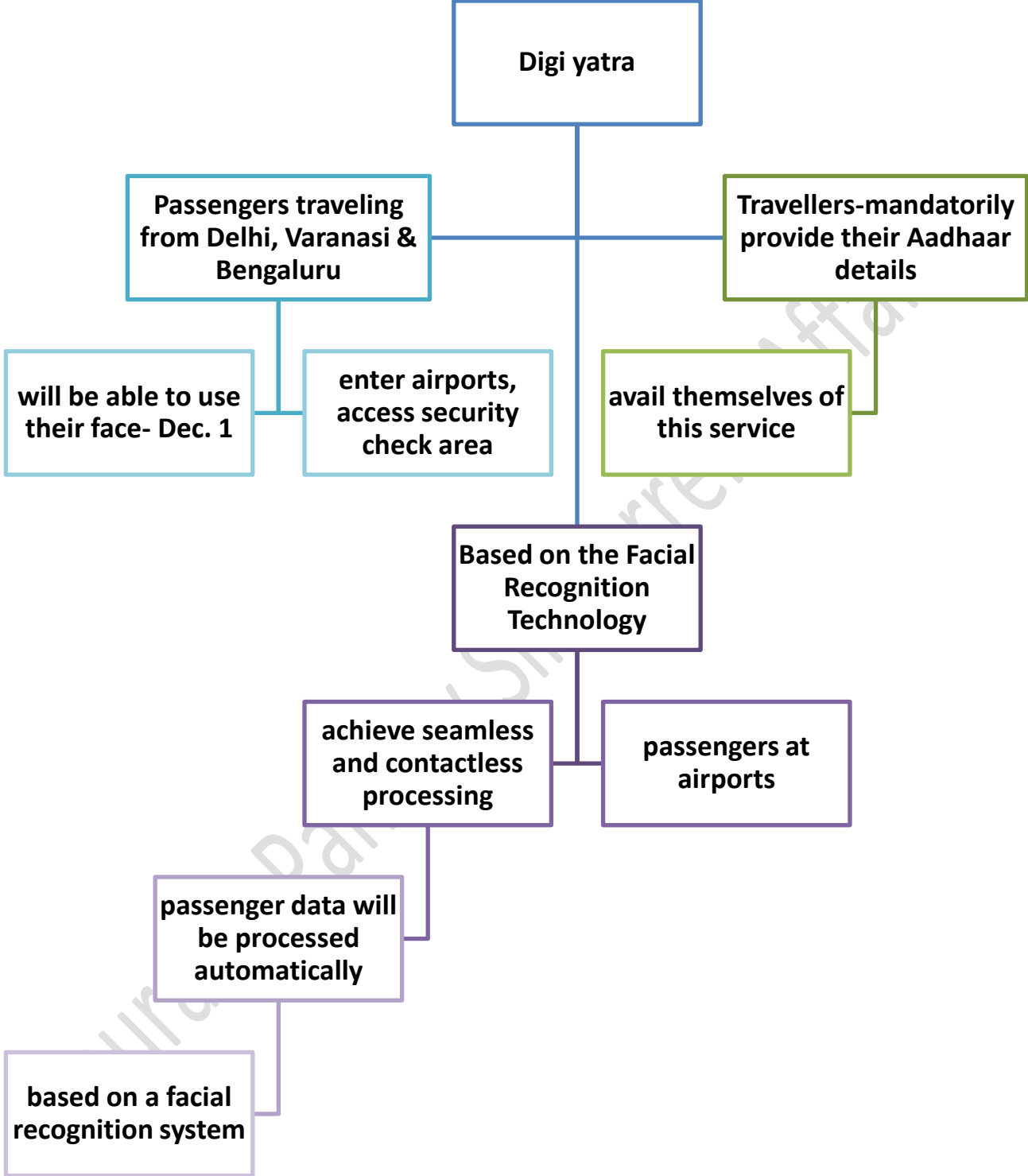
financial or reputational damage

Copyright Act 1957

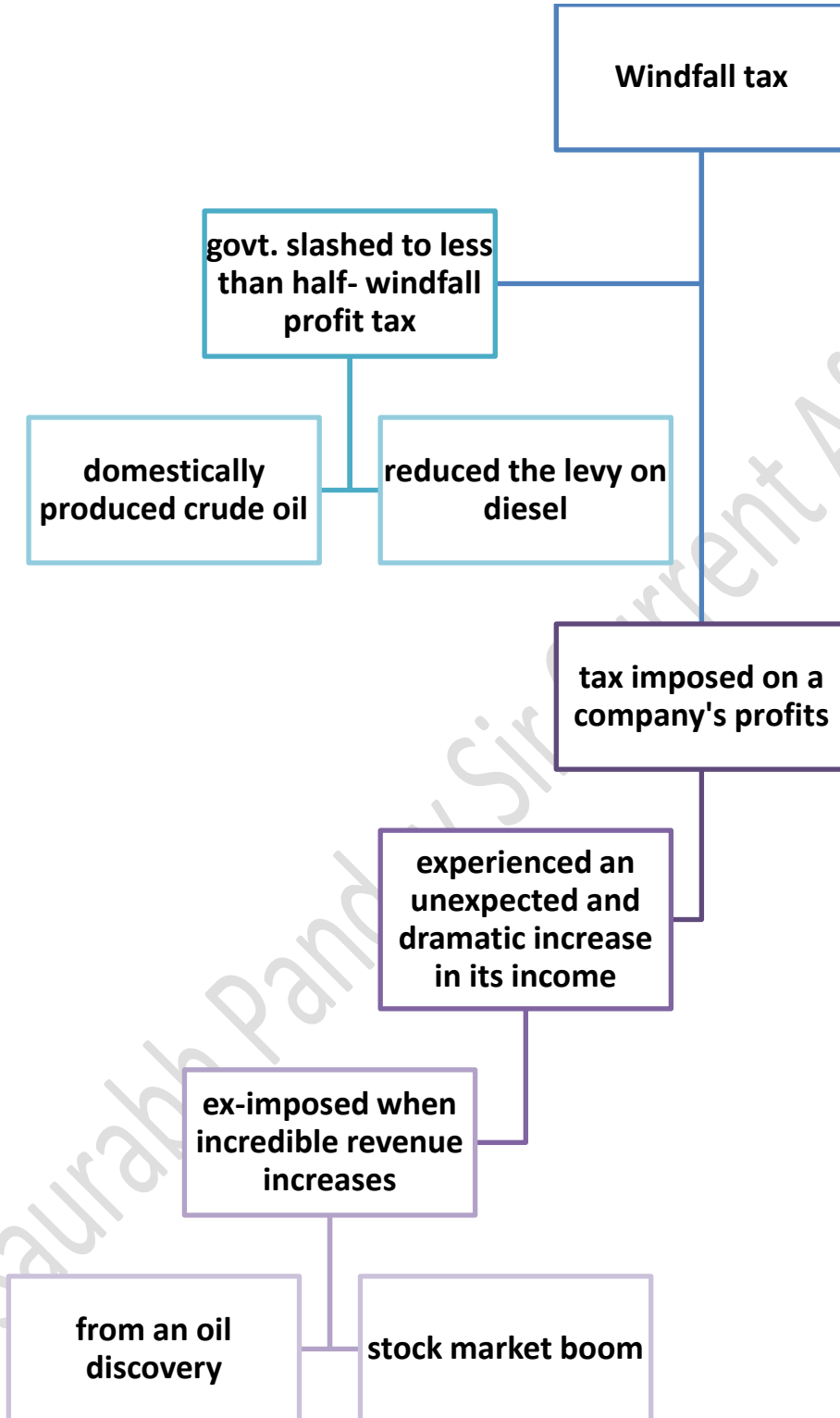
passes off their goods or services to other party



Digi yatra



Windfall tax



Shipping industry

Shipping industry

India-reduce pain of high freight rates

subsidies- atleast 50 new vessels can be built

for the nation's manufacturers

offer cash subsidies, lower taxes

granting 'infrastructure status' to the industry

help with financing from banks

other incentives to bolster its shipbuilding industry

local tax rules deter investment in shipping industry

cost of ship making- up to 20% lower in India

compared with the tax regimes

compared with Indonesia and Philippines

Singapore, Malta, Cyprus and Panama

India- save at least \$25 billion a year-foreign exchange

most of the of global carriers registered

if govt. incentives helped private firms

develop local shipping industry

TRAFFIC and turtle protection

TRAFFIC and turtle protection

India-29 species of freshwater turtles (24) & tortoises (5)

More than half of turtle species-threatened

turtles-primarily aquatic

tortoises-terrestrial

11 protected under Schedule I

of The Wildlife Protection Act

red crowned roofed turtle

Turtles-smuggled primarily for three reasons

WCCB-statutory body with the mandate

NCGWS spread across Rajasthan, M.P. and U.P.

found only National Chambal Gharial Wildlife Sanctuary

meat, as pets, extract their calipee

prevent wildlife trafficking in country

as 25 most threatened freshwater turtles in world

efforts by forest departments and WCCB

carried out a pan India crackdown on turtle smuggling

along with northern river terrapin (only in Subderbans)

keeping the illegal trade in check

TRAFFIC

'Operation Turtshield-I', 'Operation TurtshieldII'

TRAFFIC renowned globally for its expertise

to tackle illegal trade of live turtles

influence in wildlife trade & conservation arena

provider of objective & reliable info.

org. established in 1976 by WWF and IUCN

independent non-profit org. in 2017

wildlife trade monitoring network

WWF & IUCN sitting on its Board of Directors

data collection, analysis, provision of recommendations

with independent Board members

inform decision making on wildlife trade

Road safety and environment

Road safety and environment

2021, India reported 4,03,116 crashes

adversely impacted environment

Most vehicles contain toxic metals

lead, mercury, cadmium or hexavalent chromium

detrimental to the environment

road crashes lead to automobile wreckage

India's National Automobile Scrapage Policy, 2021

Vegetation on or very close to the road stretches

part of unusable end of life vehicles

still in its nascent stages

prey to road widening initiatives

rise to scrappage

govt. globally reduced speed limits

India-about 22.5 million endoflife vehicles by 2025

prevent crashes and lower air pollution

Road safety and environment

guarding natural hard structures

Missing or inadequate signages

using crash barriers to prevent direct collisions

installing retro reflective signage on trees

leading cause of road crashes

road users being unaware of a stretch's unique features

common standard practice to use asbestos

one of the most sustainable and recyclable materials

for creating these signages

Aluminium Composite Panels

asbestos has an adverse impact on environment

employed for signages

**The Hindu through Mind Maps
(Saurabh Pandey Sir)**

December 3
2022

The Hindu Mind
Maps

flue gas desulphurisation (FDG)

flue gas
desulphurisation
(FDG)

Not a single coal based
thermal power plant,
West Bengal

country's first
emission norms

installed flue gas
desulphurisation

tech. to eliminate
sulphur compounds
from exhaust
emissions

for control of
sulphur dioxide,
nitrogen oxide, and
mercury

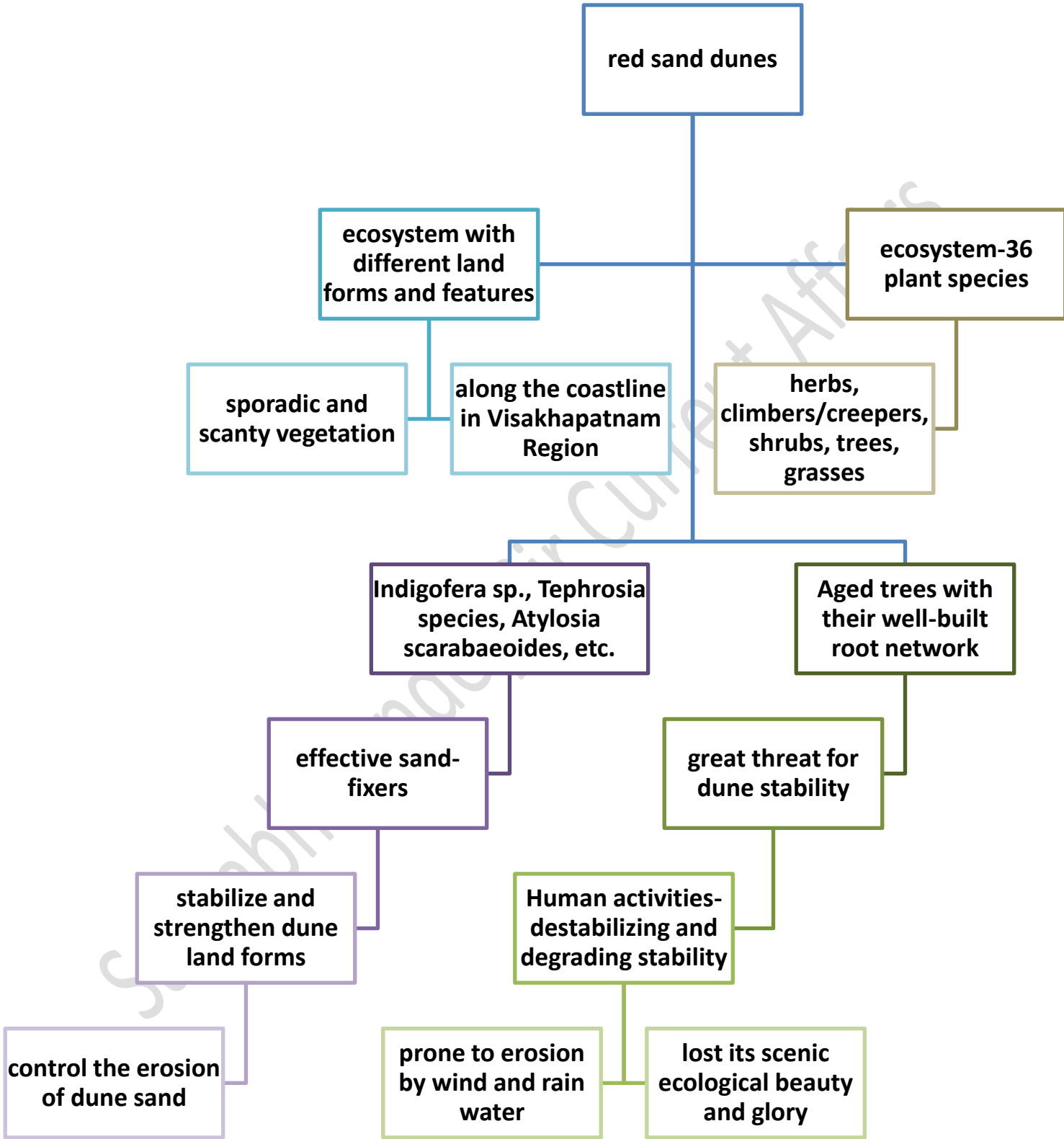
from coal fired
power plants-
notified in Dec.
2015

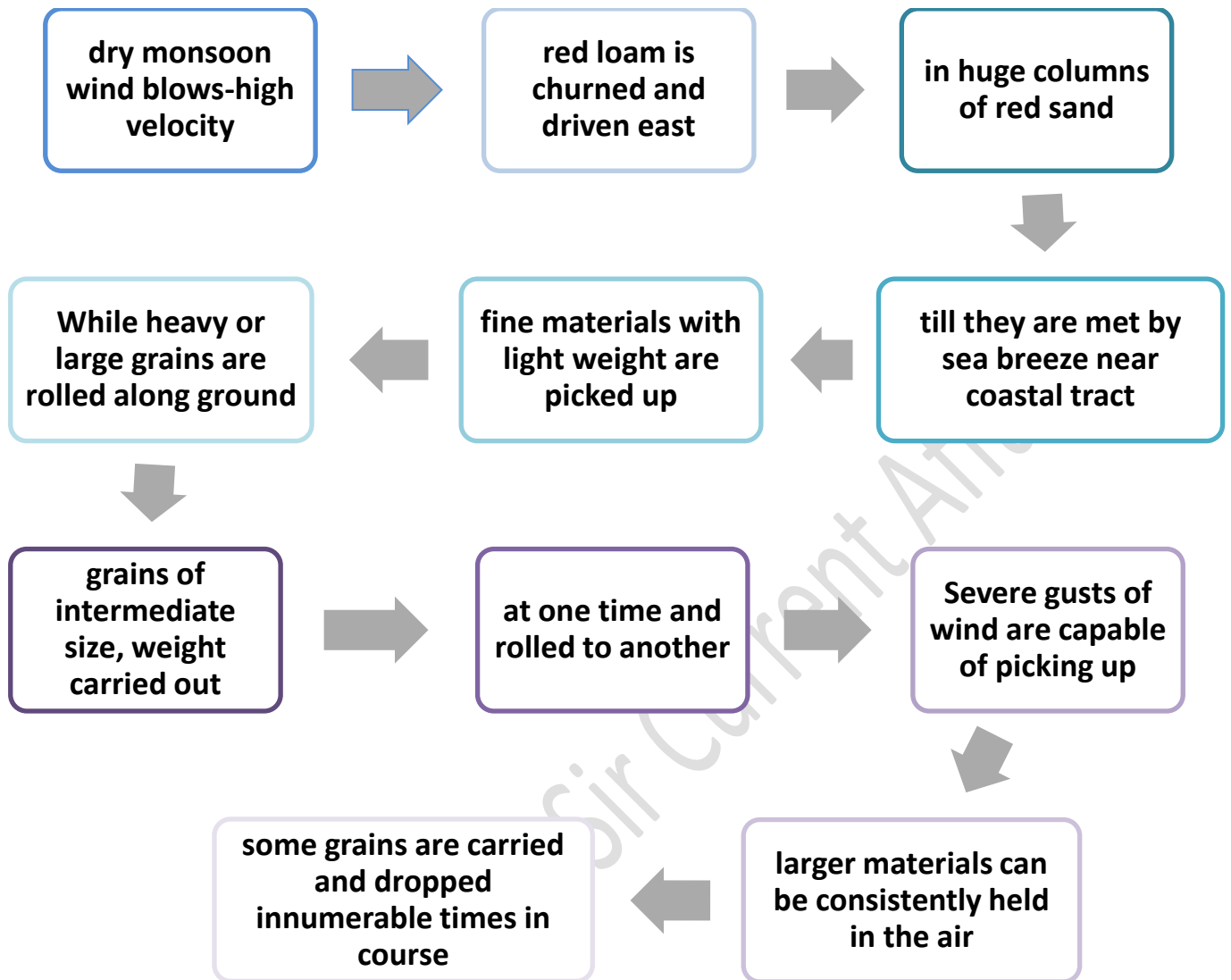
FGD material is a
product of a
process

typically used for
reducing SO₂
emissions

from the exhaust
gas system of a
coal-fired boiler

How red sand dunes created?





How red sand dunes created?

processes of erosion, transport and deposit of sediments

formation of a sand dune

caused by wind at or near the surface of earth

called Aeolian processes

most characteristic and conspicuous process

lead to continual sand redistribution

When the high velocity wind blowing sand

above the ground

meets any obstruction like a fence post, bush

force of the wind is checked

sand is deposited on the leeward side

North East and Indo Pacific region

North East and Indo Pacific region

seven 'sisters' and one 'brother'

smuggling, drug trafficking, transnational border crime, etc.

Sikkim-witnessing transformation

better security conditions and development

represented serious non traditional threats

China viewed as 'constant player' behind these

Manipur's R&D facilities

region's 'unity in diversity'

vigilance and strict action by the Assam Rifles

leverage region's biodiversity-to be expanded

through music, dance, drama, etc.

Manipur needs to be promoted

requires increased investment

reach of cultural diplomacy , etc.

hub of medical tourism for other Indian States

by Indian corporates and foreign investors

through greater educational exchanges, tourism

North East and Indo Pacific region

focus on " geo cultural dimension" of IndoPacific

Diplomats from the region

agree on importance of expanded people related cooperation

wider acceptance of the Indo Pacific & QUAD

growing significance of the Bay of Bengal

member states need to invest more

implementing India's Indo Pacific strategy

permeates the thinking of scholars

in Bay of Bengal Initiative

voices from Northeast and eastern India

concept of IndoPacific seems distant

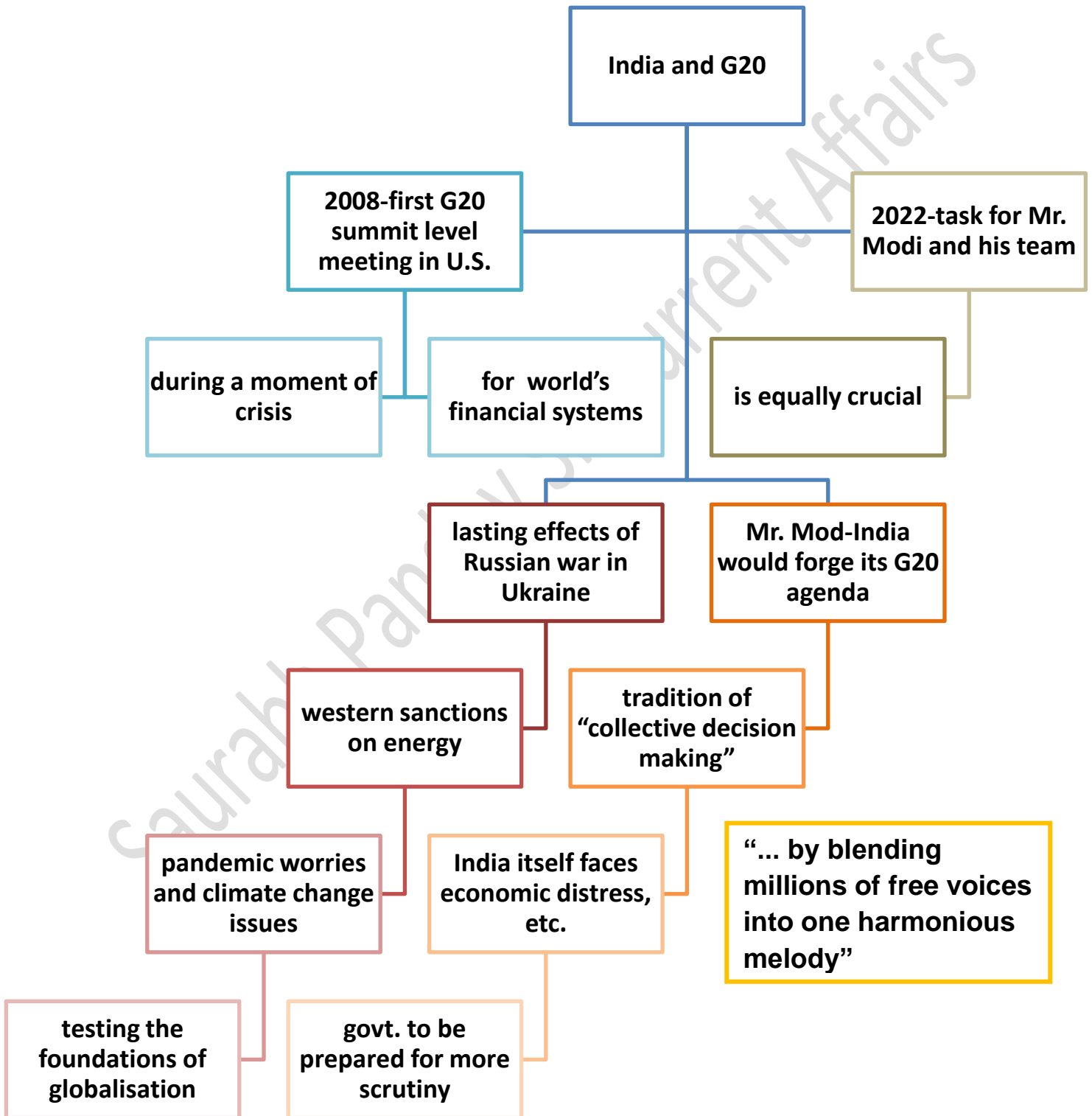
for BIMSTEC to enhance its effectiveness

must be heard

outer circle of Bay of Bengal and its littorals-comes closer

India and G20

Symbolism and logistical coordination aside, the Government has a tough task ahead in conducting substantive negotiations to bring together a comprehensive G20 agenda, where officials said they would focus on counterterrorism, supply chain disruptions and global unity

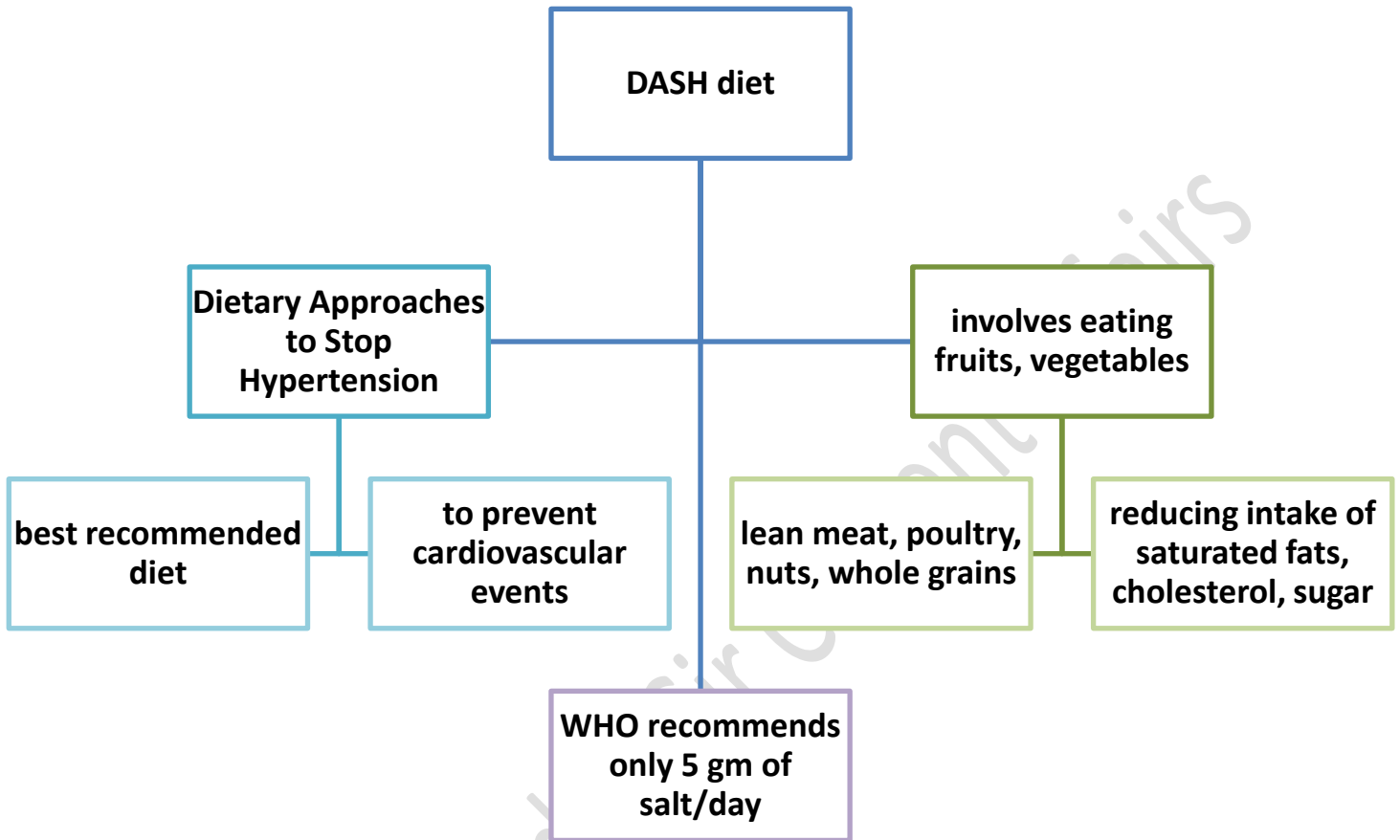


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(Saurabh Pandey Sir)**

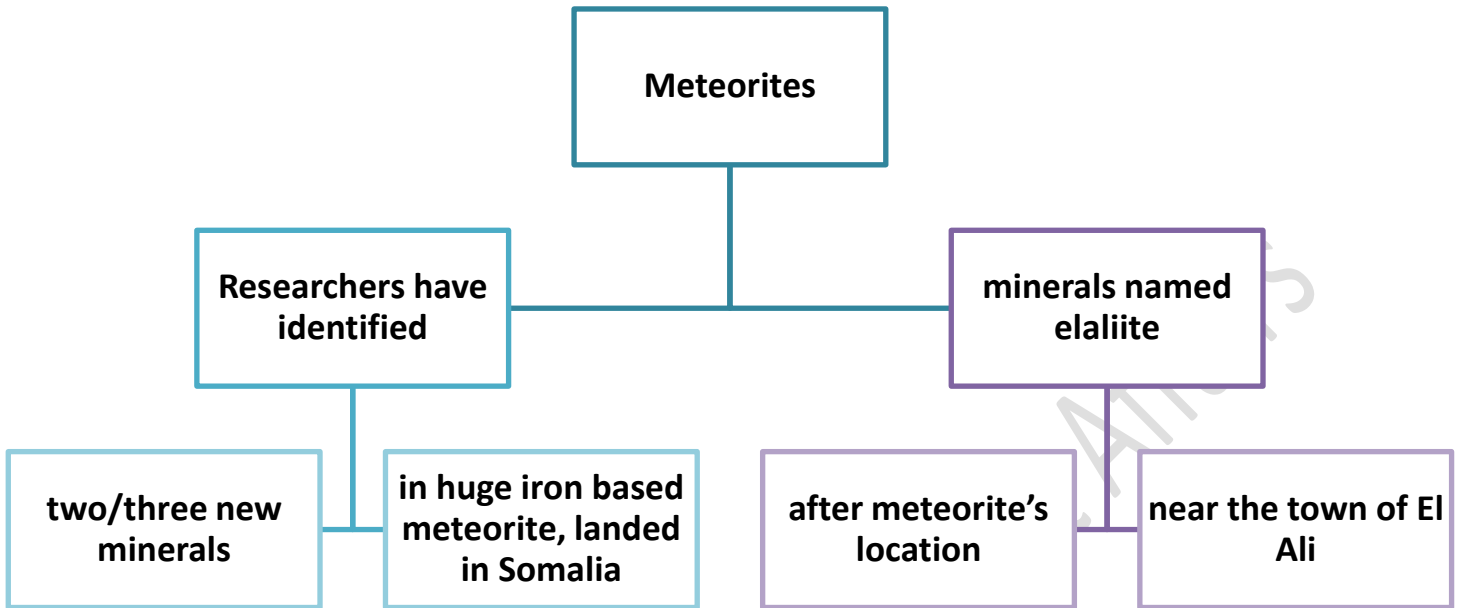
December 4
2022

The Hindu Mind
Maps

DASH diet







Meteorites



Types of Meteorite

stony, iron or stony-iron...



Stony	→	 Chondrite
Iron	→	 Iron Octahedrite
Stony-iron	→	

This section displays three types of meteorites with corresponding images and labels. The background is black. On the left, the text 'Types of Meteorite' is in white, followed by 'stony, iron or stony-iron...'. A circular icon of a briefcase is in the bottom left. Three rows are shown, each with a label, an arrow, and an image of a meteorite. The first row is 'Stony' pointing to a 'Chondrite' meteorite. The second row is 'Iron' pointing to an 'Iron Octahedrite' meteorite. The third row is 'Stony-iron' pointing to a stony-iron meteorite.

Meteors and Meteorites

Meteor

Streak of light seen when a meteoroid heats up in the atmosphere

Comet

Icy body that releases gases as it orbits the Sun



Asteroid

Rocky body smaller than a planet that orbits the Sun



Meteoroid

Rocky or metallic fragment of an asteroid, comet, or planet

Meteorite

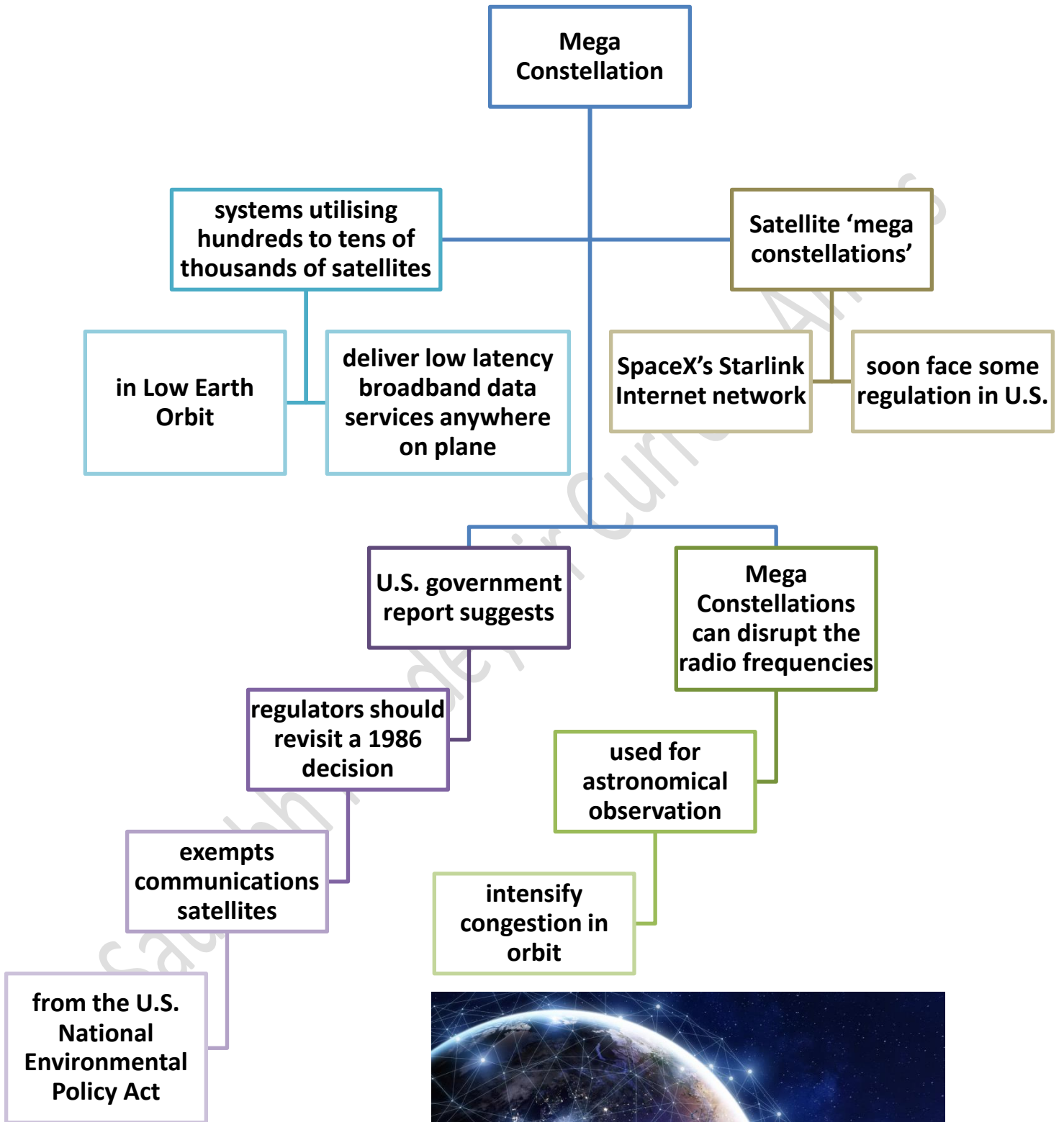
Meteor fragment that reaches the ground



sciencenotes.org

Saurabh Pandey

Mega Constellation



Nanofibrous sheet and blood shelf life

**Nanofibrous sheet
and blood shelf life**

blood bag technology

**millions of blood units
discarded**

**enhance quality, shelf
life of stored blood**

**decline in quality
during storage**

**stored cells produce
extracellular
components**

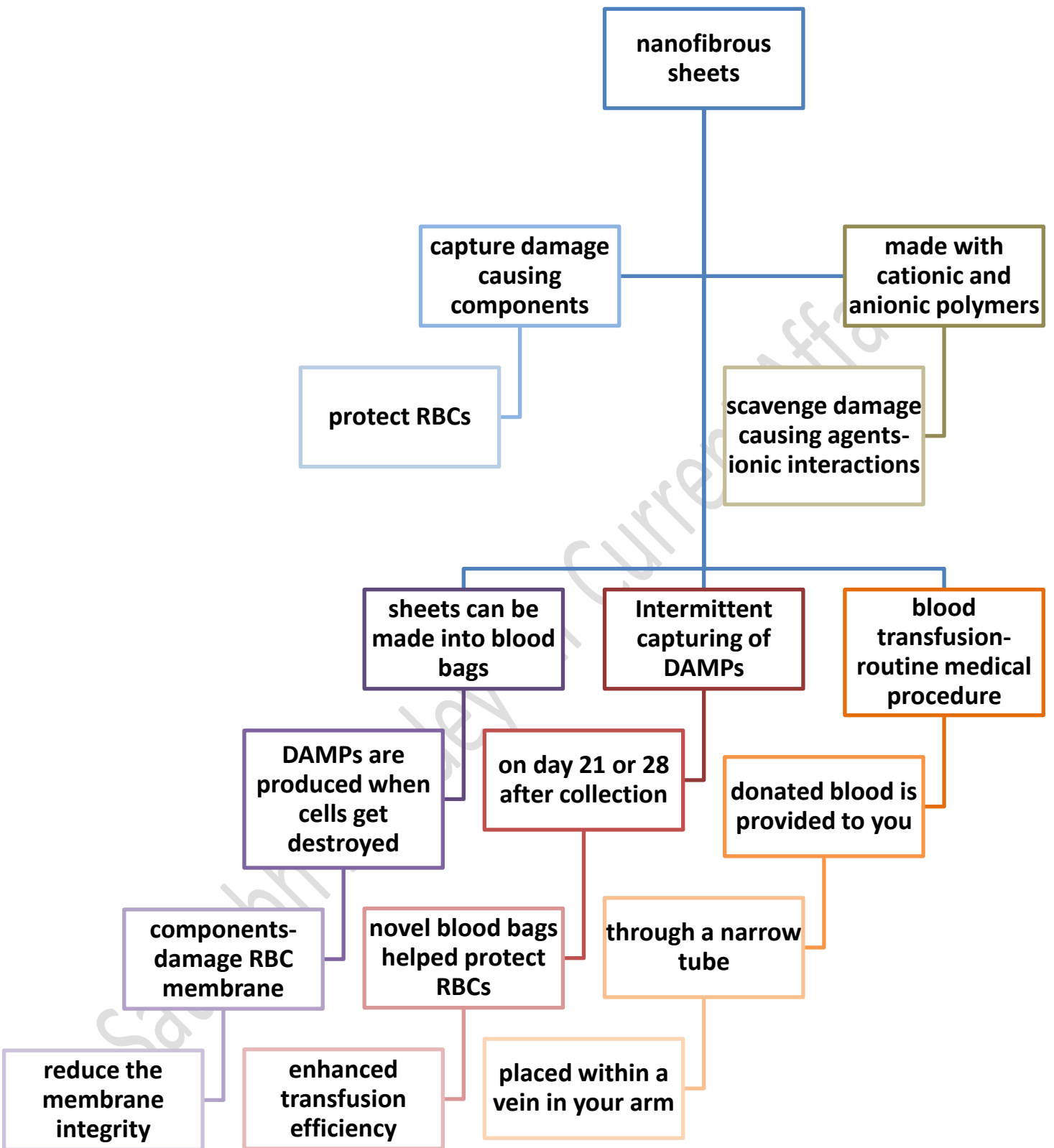
**extracellular
components**

**damage associated
molecular patterns**

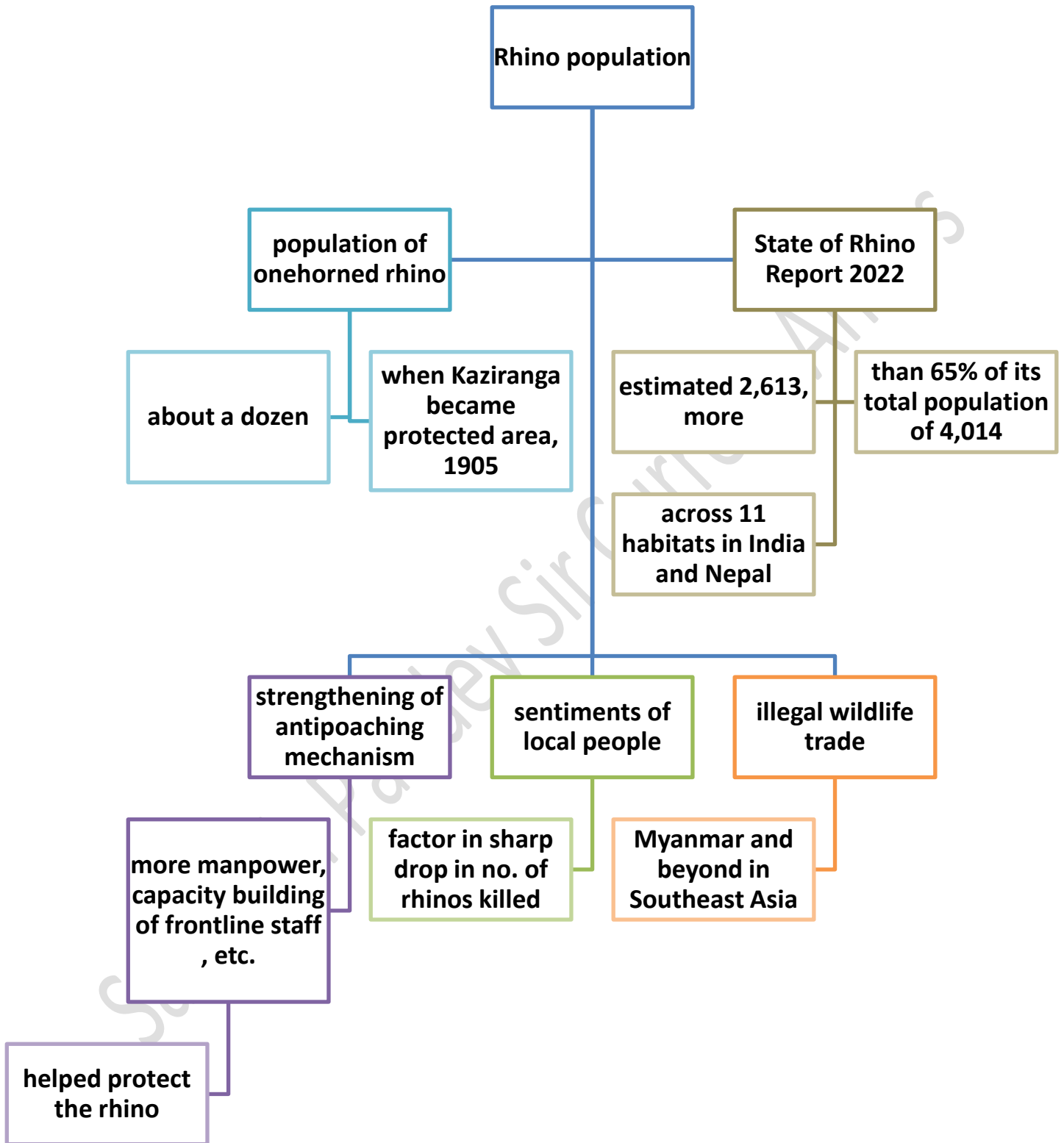
**free iron and free
hemoglobin, bioactive
lipids**

**damage the blood
cells during storage**

**interact and damage
RBCs**



Rhino population



Are elephants endangered?

India-home to nearly 60% Asian elephants

listed as 'Endangered' on IUCN Red List

2017 -29,964

increased in past few years

of threatened species

Schedule I of The Wildlife Protection Act

continuous threat of poaching

Fragmentation of elephant habitats

population not evenly distributed in country

construction of linear, power infrastructure

Karnataka, Kerala, Andhra Pradesh, Tamil Nadu

led to many elephant deaths

home to 44% of India's elephant population

Are elephants endangered?

change of land use

**Ministry of Environment,
Forest and Climate
Change**

**erstwhile forested
areas under
agriculture**

**aggravated the
conflict**

**launched Project
Elephant in 1992**

**longterm survival
of elephants in
their natural
habitats**

**no. of elephant
reserves in India-
32**

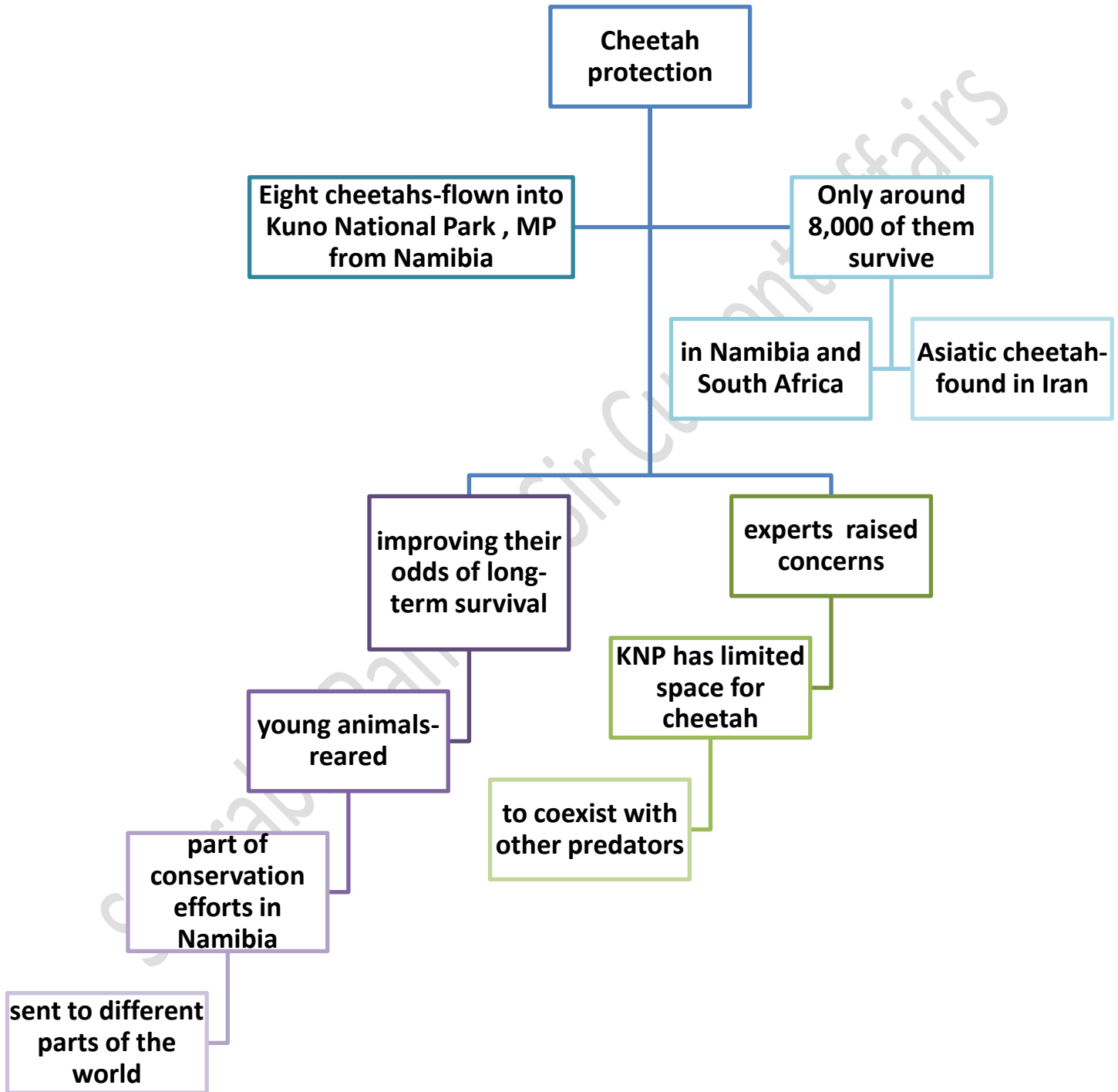
**latest addition-
Agasthyamalai
Elephant Reserve in
2022**

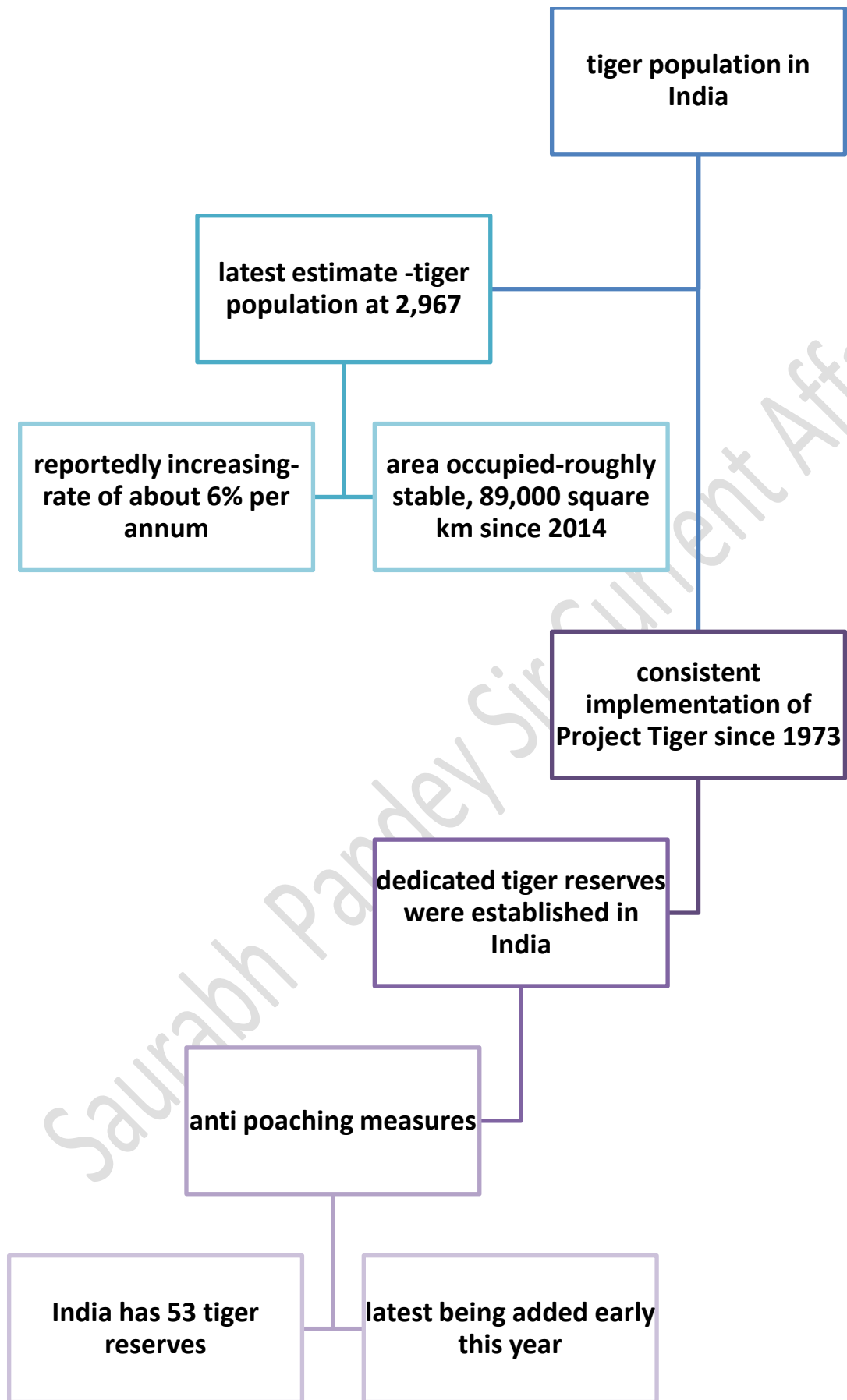
**Elephant corridors,
linear narrow
habitat linkages**

**allow elephants to
move between
secure habitats**

Cheetah protection

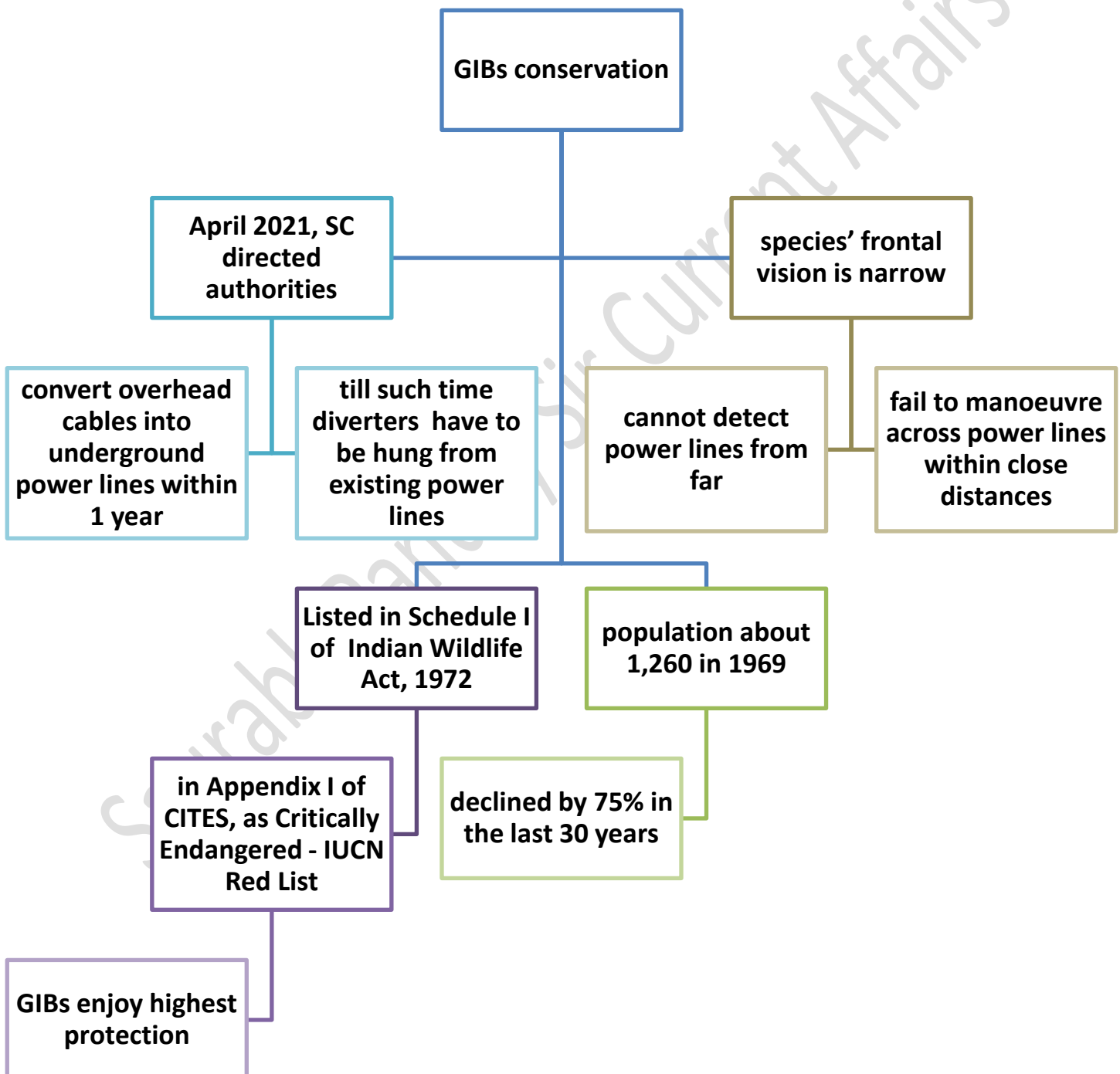
This year marked the arrival of Namibian cheetahs to India, the first intercontinental transfer of wild cats into the country since independence.





GIBs conservation

petitions highlighting deaths of GIBs due to power transmission lines, a special bench of the apex court led by Chief Justice D.Y. Chandrachud directed Chief Secretaries of Gujarat and Rajasthan to undertake and complete a comprehensive exercise within four weeks to find out the total length of transmission lines in question and the number of bird diverters required



other threats to the GIB

GIBs are slow breeders

subjected to hunting, egg collection in past

build their nests on the ground

decline in prevailing habitat loss

dry grasslands diverted for other use

Experts warn of pesticide contamination

most of the population of GIBs

increase of free ranging dogs, pigs, predators

confined to Jaisalmer Desert National Park

putting pressure on nests and chicks

more areas outside the protected area

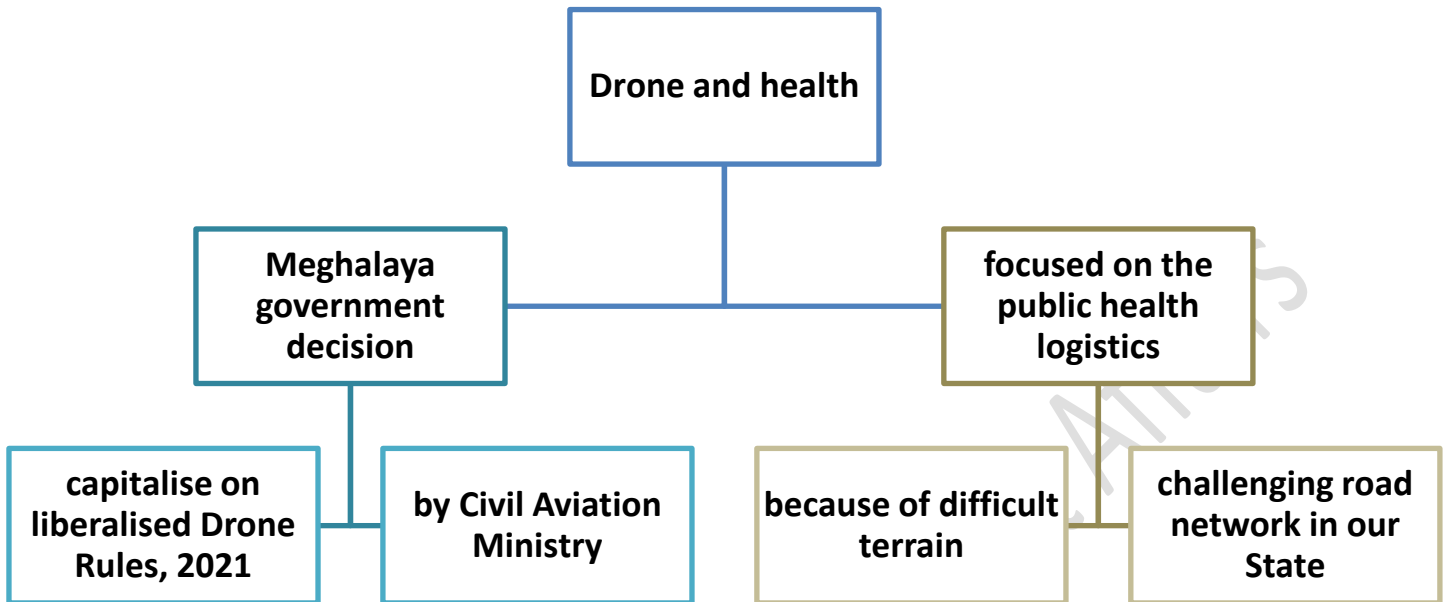
must be made suitable for the species

**The Hindu through Mind Maps
(Saurabh Pandey Sir)**

December 5
2022

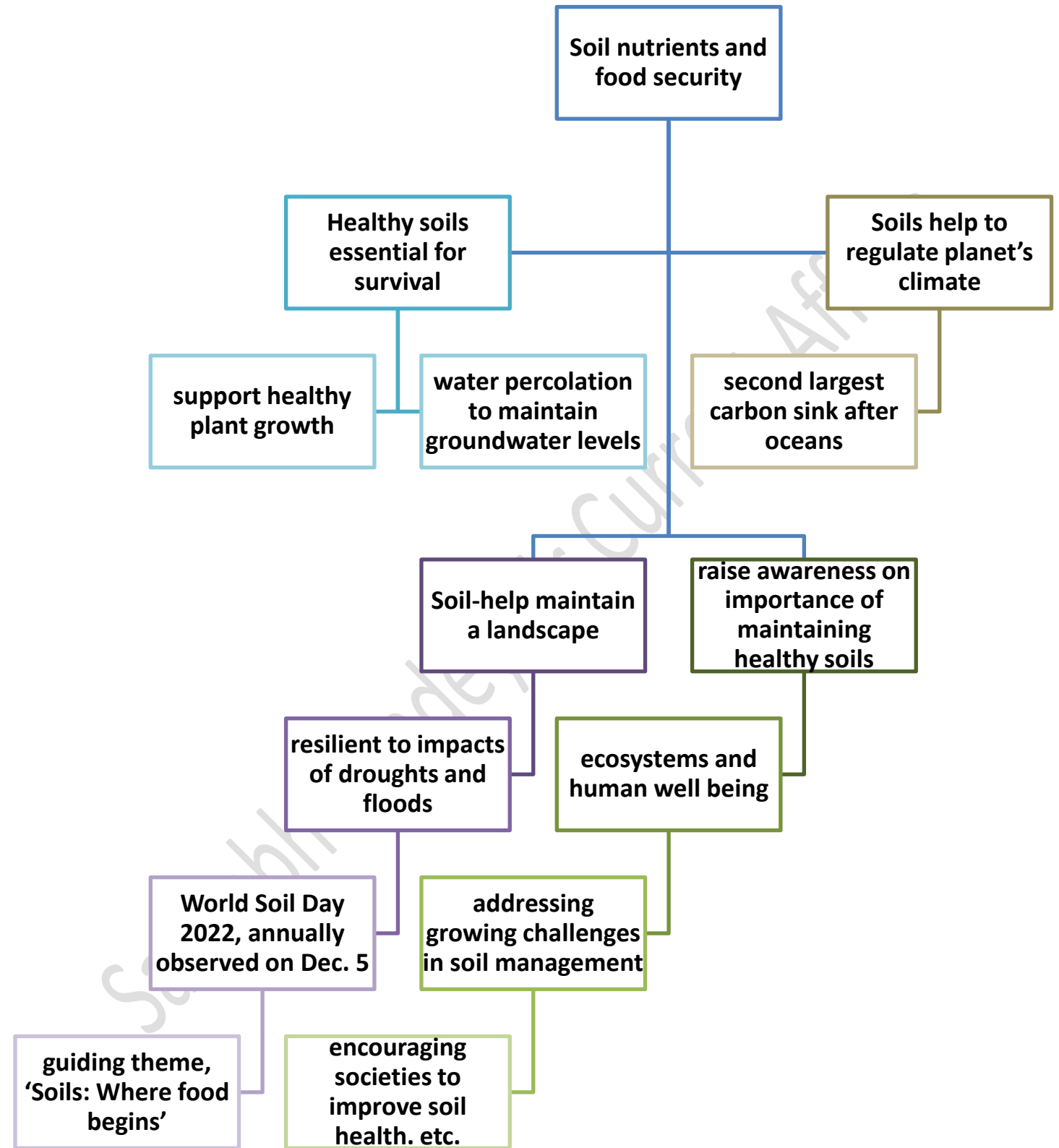
The Hindu Mind
Maps

Drone and health



Saurabh Pandey Sir Curious Minds

Soil nutrients and food security



Soil nutrients and food security

main drivers contributing to soil degradation

industrial activities, mining, waste treatment

agriculture, fossil fuel extraction, etc.

reasons behind soil nutrient loss

soil erosion, runoff

leaching, burning of crop residues

Soil degradation

Nearly 3.7 million hectares

affects around 29% of India's total land area

suffer from nutrient loss in soil

threatens agricultural productivity

excessive use of fertilizers, pesticides polluting soil

in situ biodiversity conservation. etc.

India's conservation strategy

Gol implementing a five pronged strategy

To address issues

making soil chemical free

saving soil biodiversity

Gol launched the Soil Health Card, 2015

assess current status of soil health

enhancing SOM, maintaining soil moisture

mitigating soil degradation, preventing soil erosion

determine changes in soil health

Pradhan Mantri Krishi Sinchayee Yojana

National Mission for Sustainable Agriculture

FAO collaborating with National Rainfed Area Authority, MoA&FW

prevent soil erosion

promoting traditional indigenous practices

develop forecasting tools

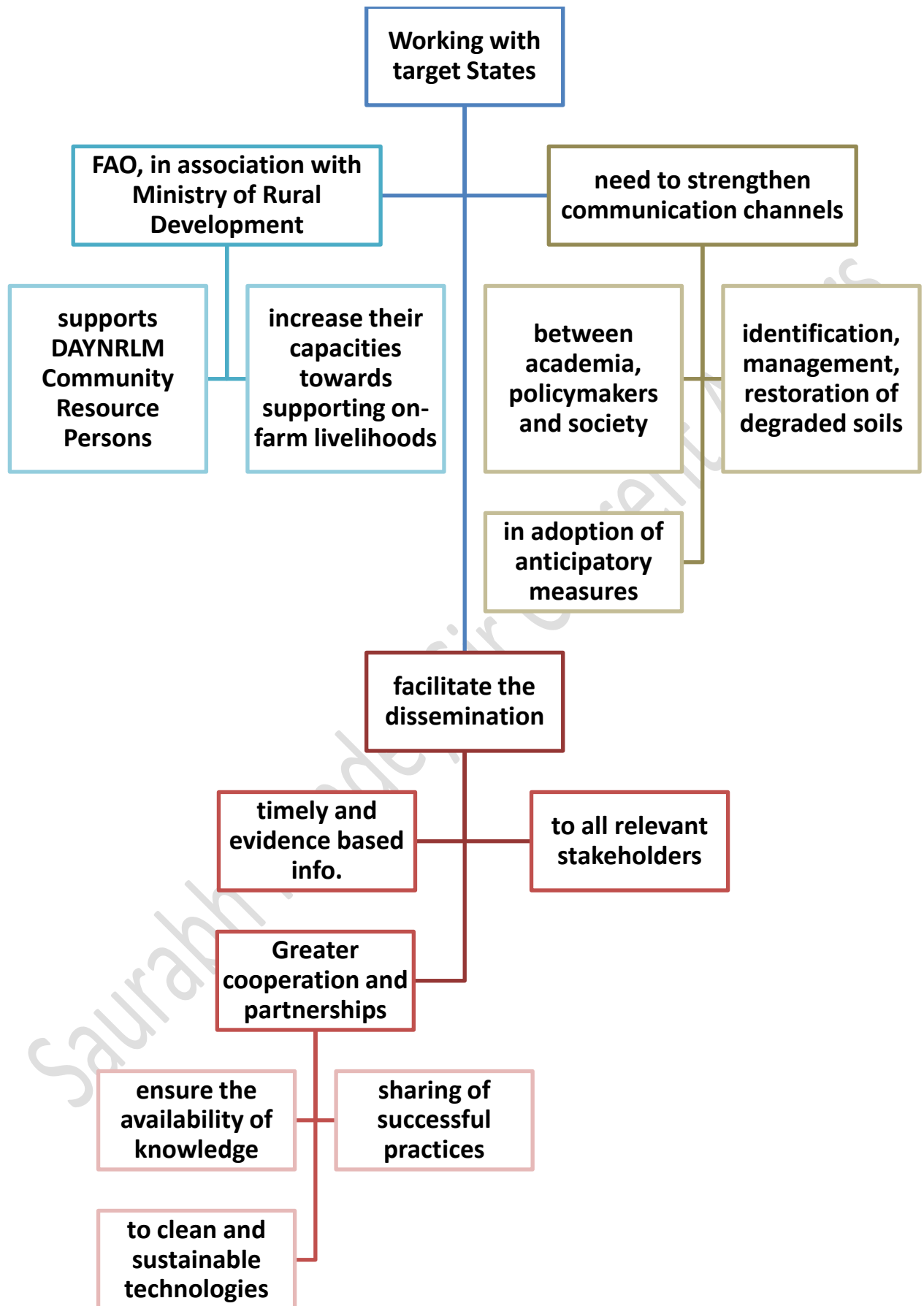
regeneration of natural vegetation, etc.

reducing dependency on chemicals

aid vulnerable farmers

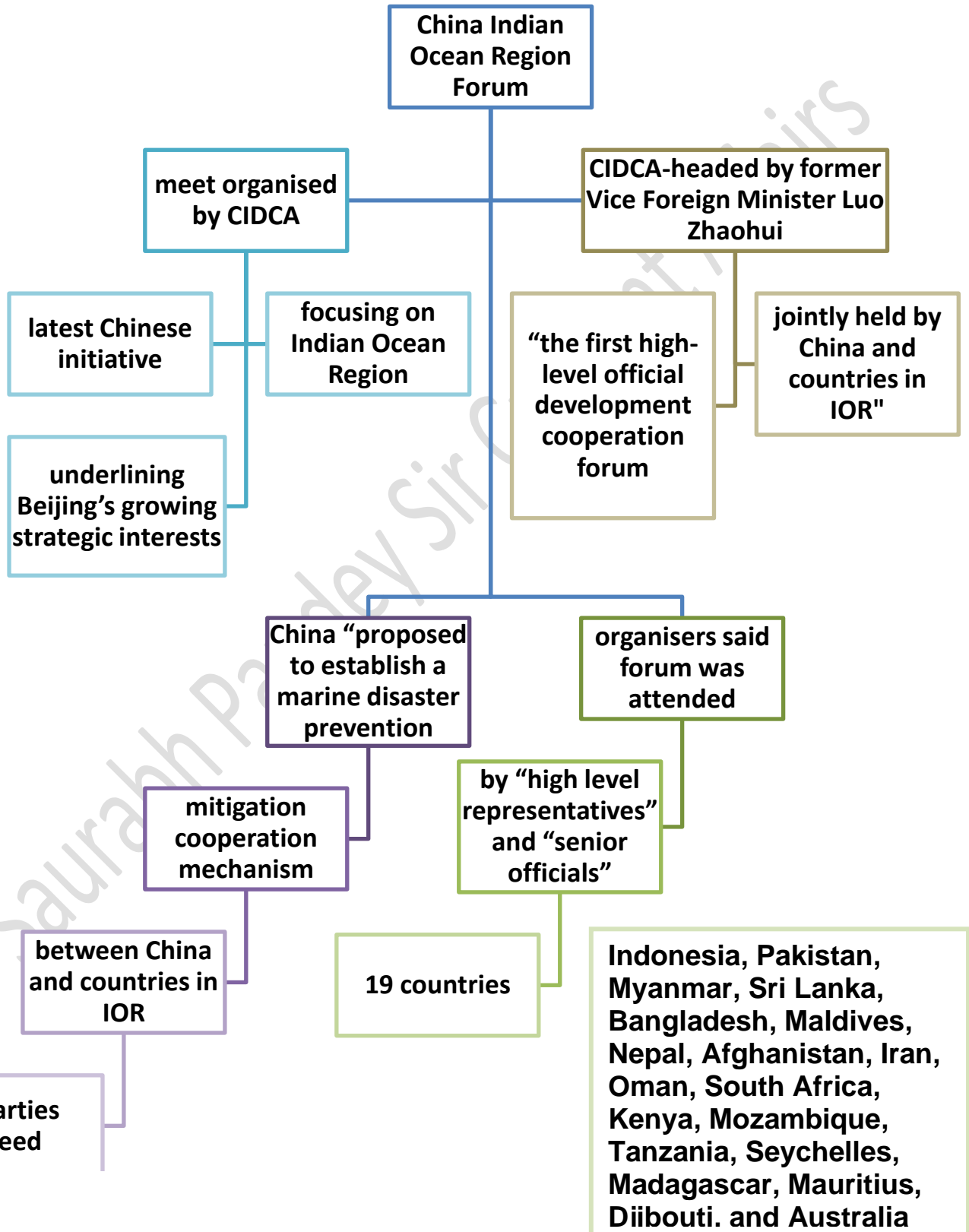
decreasing monetary burden

informed decisions on crop choices



China Indian Ocean Region Forum

On November 21, China's top development aid agency convened the first "China Indian Ocean Region Forum" in the southwestern Chinese city of Kunming.



Where does India stand?

Xu Wei,
spokesperson for
CIDCA

New Delhi viewed
China's recent
moves in region
warily

said India as "a
major country in
IOR, was invited to
this forum

China "looks
forward to meeting
India at the next
forum"

Yuan Wang 5, to Sri
Lanka

India sees the IORA

already established
platform for the
region

23 members,
including Australia
and Maldives

10 dialogue
partners

including China,
Japan, Russia, the
U.K. and the U.S.

What are China's plans for the IOR?

forum underlined China's stepped up interest in IOR

China's Foreign Minister Wang Yi

major trading partner for most countries

sea routes vital to China's economic interests

proposed creating a forum

"on development of Indian Ocean island countries"

"build consensus and synergy"

promote common development"

called on Sri Lanka to "play an important role"

Beijing's first ever overseas military facility

China establishing a more frequent military presence

set up in Djibouti near the Horn of Africa

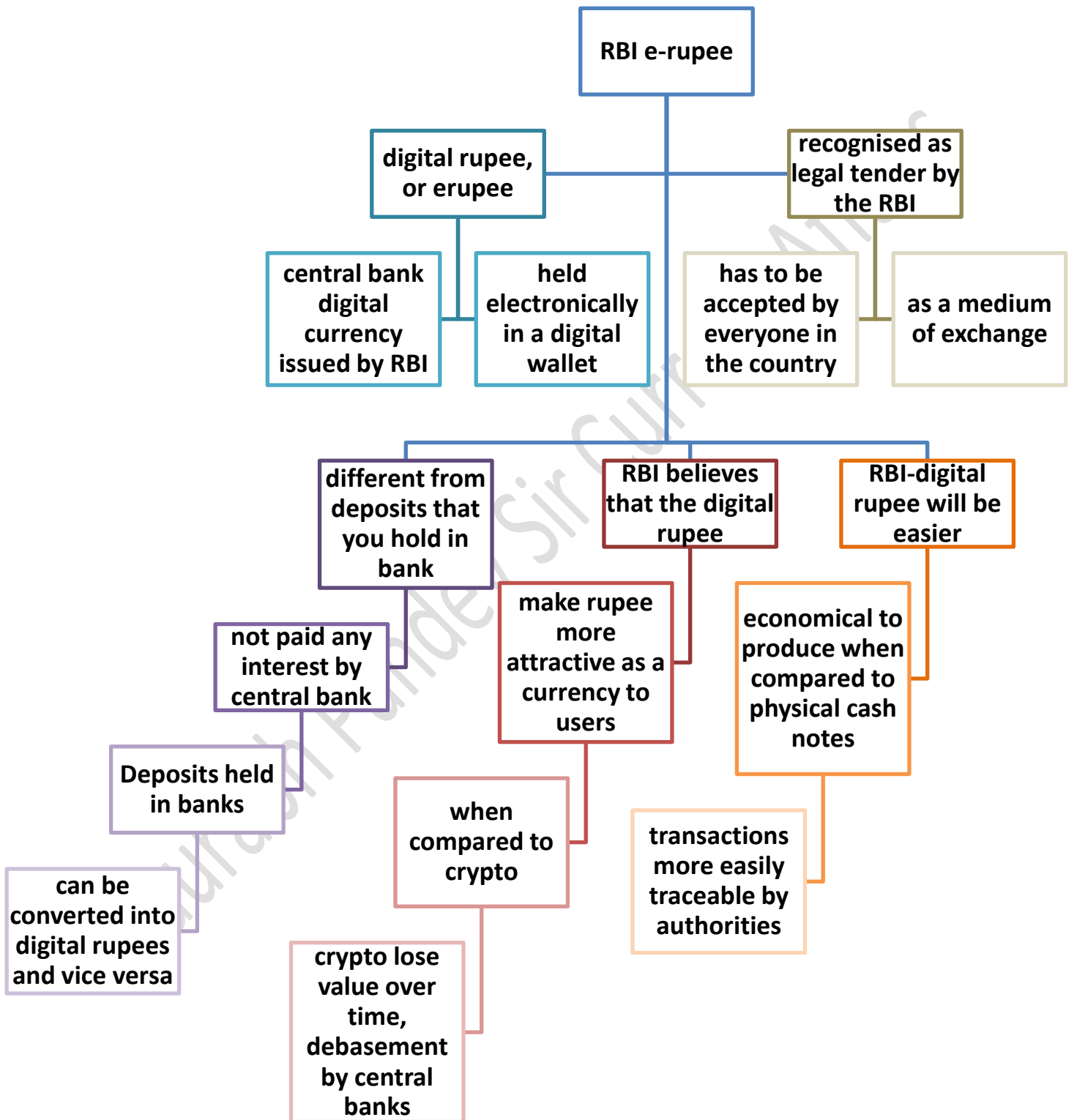
in the waters of IOR

Chinese military ships, tracking vessels

visiting ports in region with greater frequency

RBI e-rupee

The RBI this week launched the digital rupee on a pilot basis



What are the risks?

when interest rates offered by banks are low

cause cash holdings of banks to drop

people more prone to converting their bank deposits

into digital currencies

hinder banks' capacity to create loans

not lose out much

in the way of interest income

India's transition towards a cashless society

critics-act as a deterrent to economic growth

free banks from having to maintain

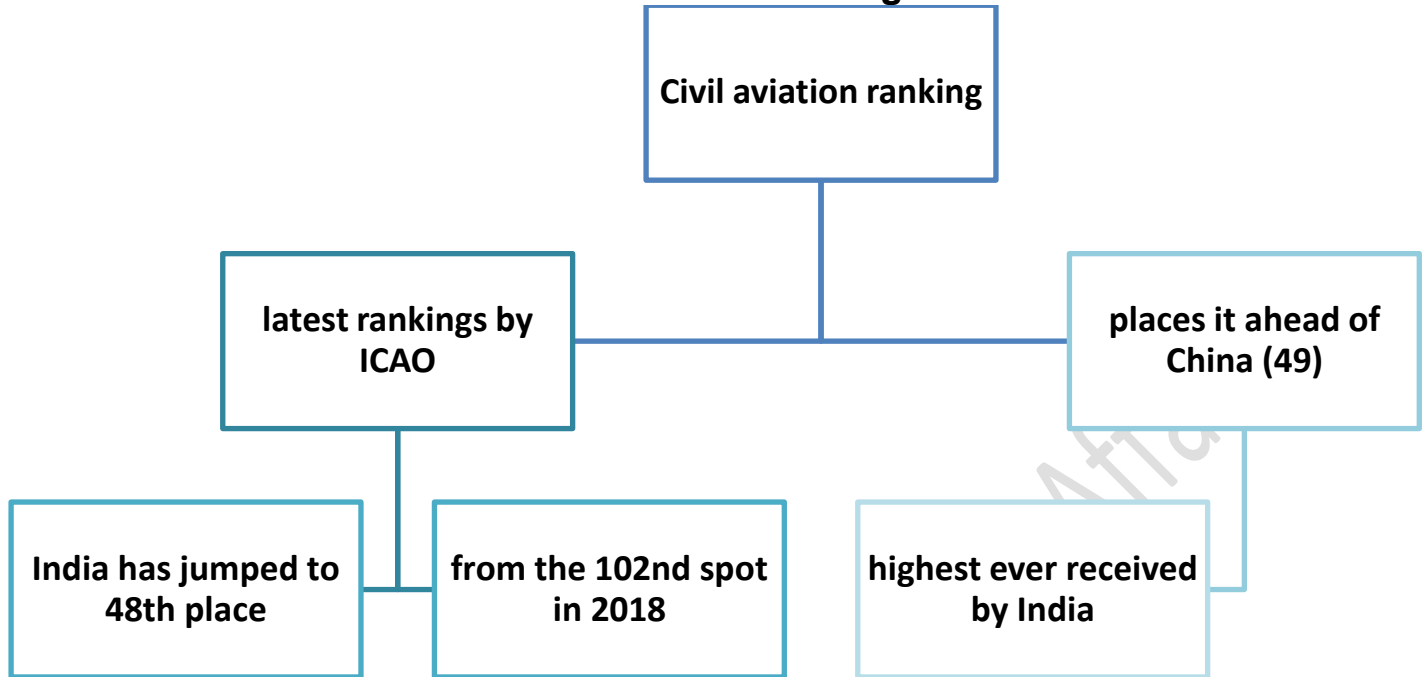
if economic activities are deemed illegal by govt.

sufficient cash deposits before they expand their loan books

Private cryptocurrencies - demand among certain investors

better stores of value, stable purchasing power

Civil aviation ranking



officials say. "A robust safety oversight system certified and acknowledged by the experts is a sine qua non for flight safety and very assuring for the flying public."

Saurabh Panigrahi

OPEC

Organization of the Petroleum Exporting Countries

OPEC plus countries

Azerbaijan, Bahrain, Brunei, Kazakhstan

Malaysia, Mexico, Oman, Russia, South Sudan and Sudan

permanent, intergovernmental org.

created at Baghdad Conference in 1960

by Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela

manage the supply of oil

headquartered in Vienna, Austria

TO set the price of oil in the world market

total of 14 Member Countries

avoid fluctuations-affect the economies

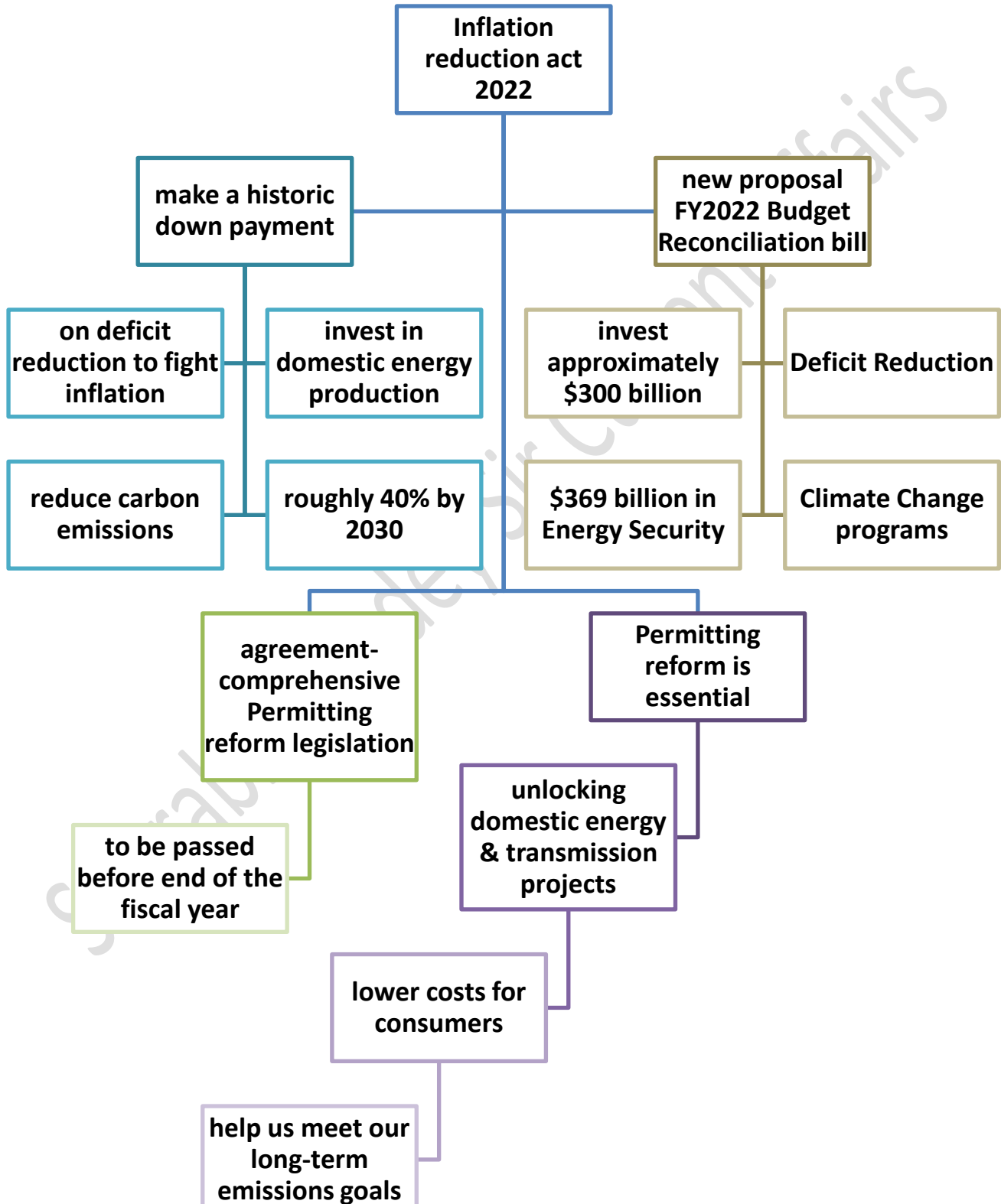
Iran, Iraq, Kuwait, United Arab Emirates, Saudi Arabia, Algeria

producing and purchasing countries

Libya, Nigeria, Gabon, Equatorial Guinea, Republic of Congo, Angola, Ecuador and Venezuela

Inflation reduction act 2022

27country bloc fears that the U.S. \$430 billion Inflation Reduction Act with its generous tax breaks may lure away EU businesses and disadvantage European companies, from car manufacturers to makers of green technology



The Hindu through Mind Maps
(Saurabh Pandey Sir)

December 6
2022

The Hindu Mind
Maps

Climate talks

Climate talks

three problems with current negotiating process

2-process ignores that global wellbeing

1-citizens in developed countries not aware

two thirds of their national emissions of CO₂

follow urbanisation of the developing country's population

fossil fuels for infrastructure and energy

come from their diet, transport, residential, commercial sectors

constitute the major share of their GDP

3-vast quantities of cement and steel

infrastructure — constituting essential emissions

Paris Agreement (2015)

Glasgow, 2021- negotiators zeroed in on coal

agreed to 1.5°C global temperature goal

Intergovernmental Panel on Climate Change, 2018

“urbanization has changed the nation with seventy five percent of its people living in the urban area ...we must see ourselves not only as victims of environmental degradation but as environmental aggressors and change our patterns of consumption and production accordingly

net emissions needed to zero out around 2050

Points to be considered

1-process adopted structure of international law

rejected historical responsibility for problem

steadily shifted burden to China and India

2-agenda was set around globalised material flows

described as global warming

not wasteful use of energy

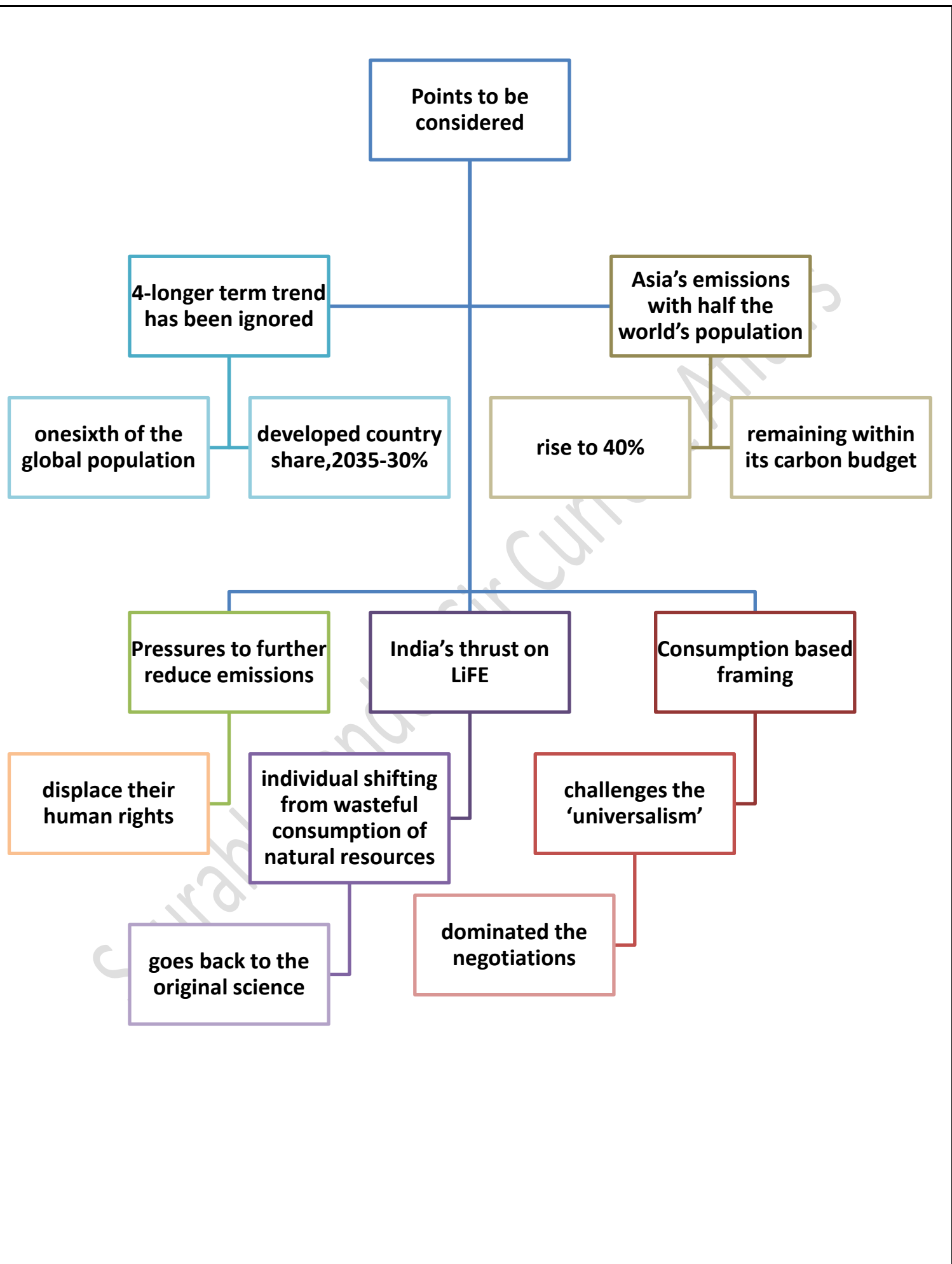
3-public finance-means to secure a political objective

new funding for 'Loss and Damage'

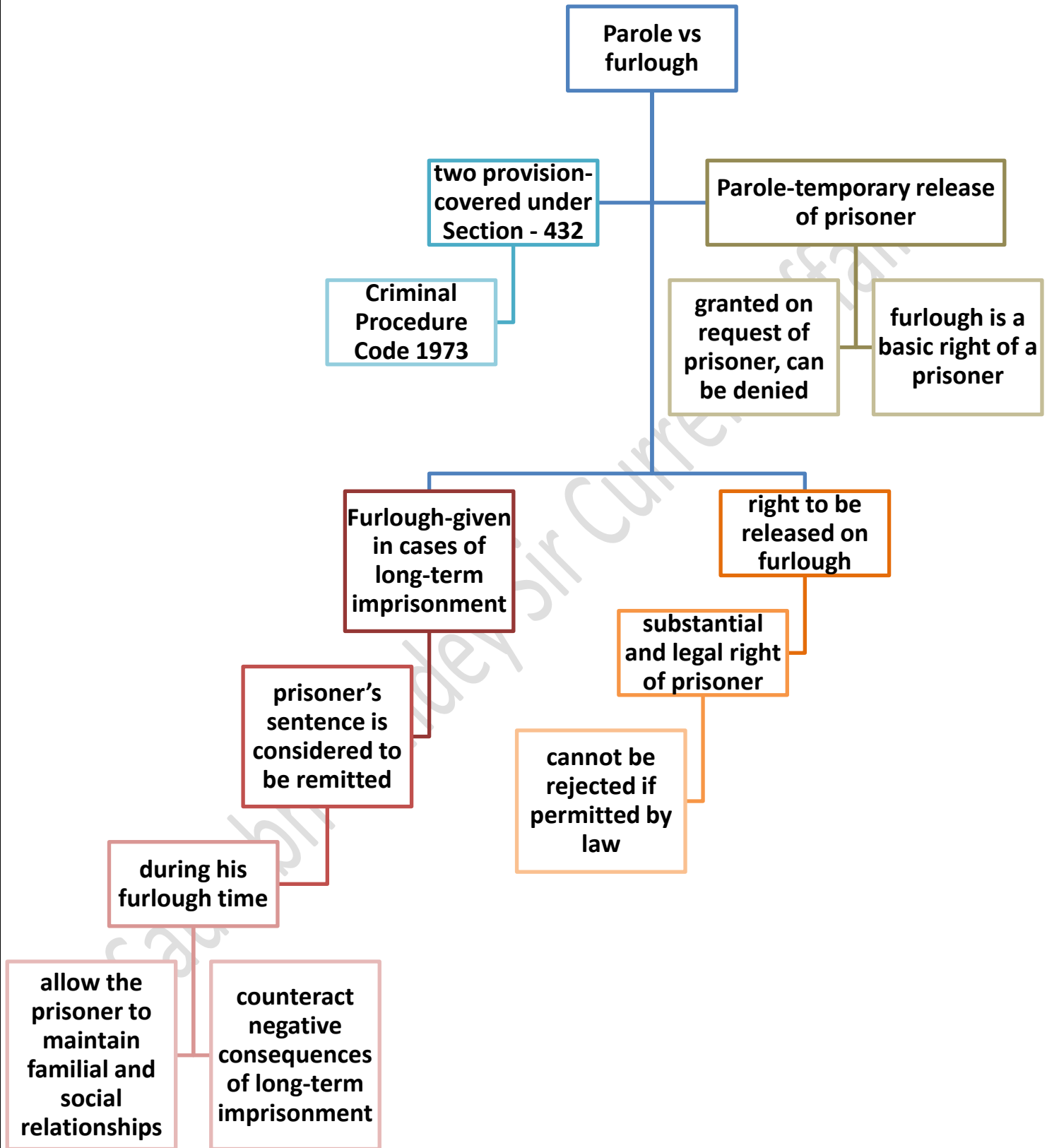
\$100 billion promised at Paris, pre 2020 commitments

constituting a breach of trust

not materialised



Parole v/s furlough



Parole v/s furlough

**Prisons Act, 1894,
Prisoners Act, 1900**

**Section 59 of the
Prisons Act**

**no specific
provision pertaining
to parole and/or
furlough**

**empowers States to
make rules inter
alia**

**"shortening of
sentences" and "for
rewards for good
conduct"**

**"prisons,
reformatories..."
fall in the State List**

**parole or leave is
mostly a
suspension of
sentence**

**Seventh Schedule
of the Constitution**

**Emergency parole
or leave -granted
for specified
emergencies**

**States legislate on
issues related to
prisons**

**death, serious
illness or marriage**

Parole v/s furlough

most States consider only close relatives

spouse, parents, son, daughter, brother and sister as close family

Kerala-long list of more than 24 relatives in case of death

and 10 in case of marriage

regular parole or leave is granted

Each State has a different yardstick

after serving minimum sentence (1-4 years)

to punish a prisoner

some States include other familial and social obligations

who doesn't surrender after parole/furlough in time

sowing or harvesting of agricultural crops, etc.

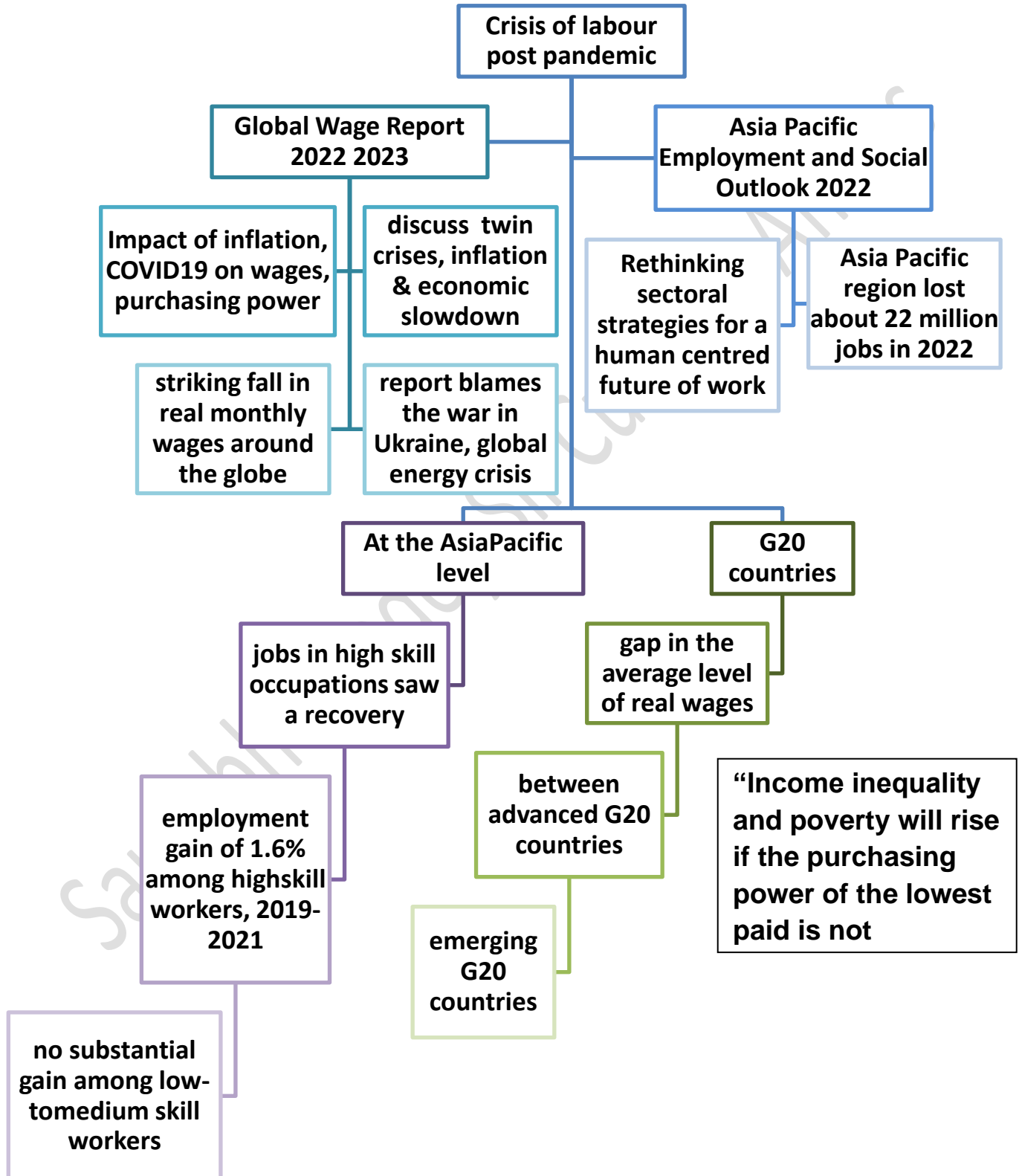
Difference between parole and furlough

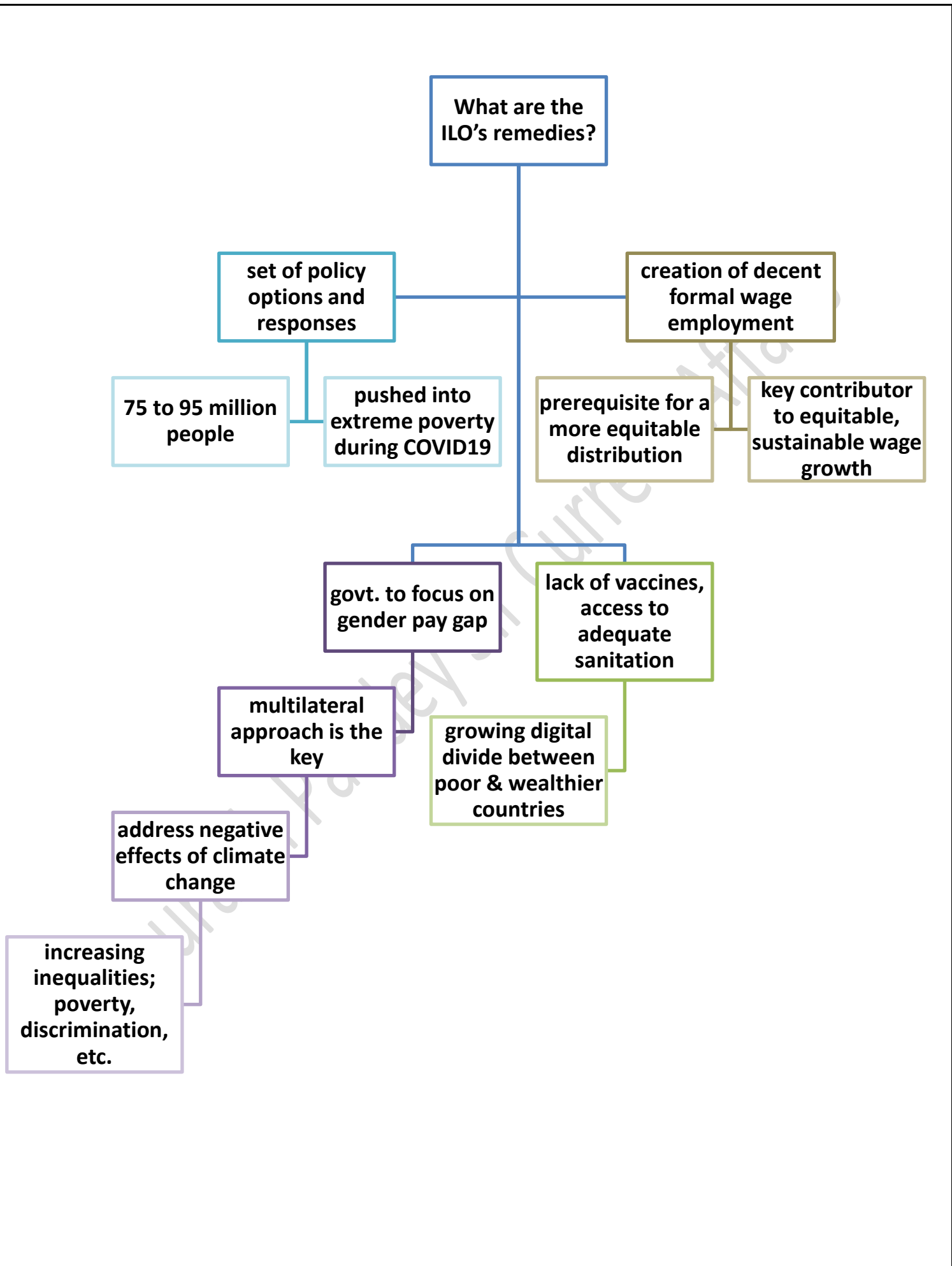
Serial no.	Parole	Furlough
1.	It is not a right of the prisoner.	It is the right of the prisoner.
2.	It is releasing a prisoner with a suspension of the sentence.	It is releasing a prisoner with remission of his sentence.
3.	In the case of short-term confinement, parole may be granted.	In the case of long-term confinement, Furlough may be granted.
4.	It can be granted a number of times.	There is a limitation to grant furlough.
5.	Parole lasts for one month.	Furlough lasts for fourteen days maximum.
6.	A specific justification is necessary.	It is to break the monotony of punishment so no justification is needed.
7.	The days of leave aren't included within the sentenced period.	The sentence of convict goes along with the furlough period.
8.	It is granted by the Divisional Commissioner.	It is granted by the Deputy Inspector General of Prisons.

Saurabh

Crisis of labour post pandemic

The International Labour Organisation (ILO) recently released two reports that gave an indication of the global employment scenario post pandemic





What are the ILO's remedies?

set of policy options and responses

creation of decent formal wage employment

75 to 95 million people

pushed into extreme poverty during COVID19

prerequisite for a more equitable distribution

key contributor to equitable, sustainable wage growth

govt. to focus on gender pay gap

lack of vaccines, access to adequate sanitation

multilateral approach is the key

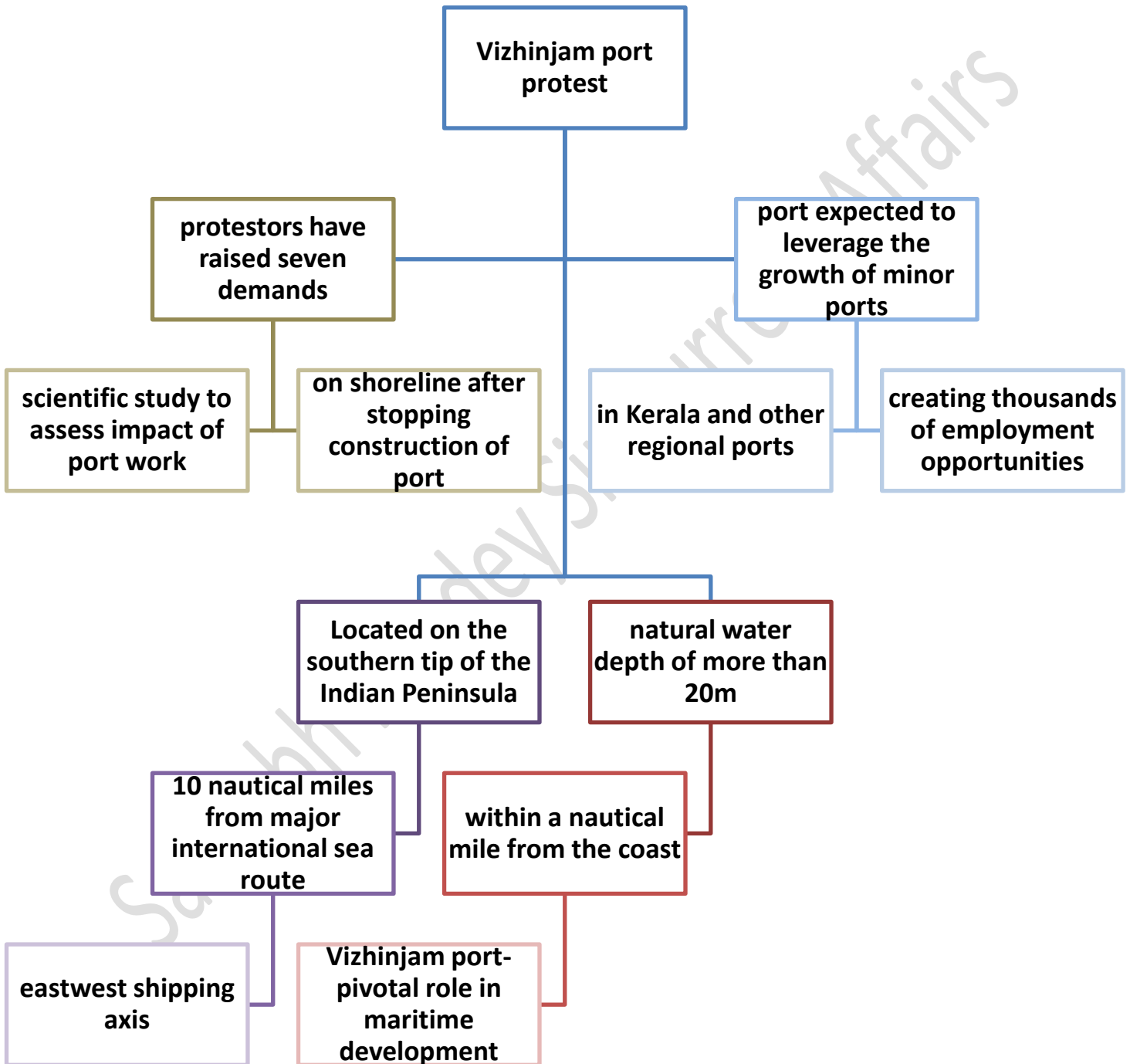
growing digital divide between poor & wealthier countries

address negative effects of climate change

increasing inequalities; poverty, discrimination, etc.

Vizhinjam port protest

Vizhinjam has been on the boil for the past four months with protesters mainly fisherfolk and their families laying siege to the under construction Vizhinjam port



Has it aggravated coastal erosion?

All types of construction work along a coast

relatively high no. of cyclones formed over Arabian sea

aggravate sea erosion, accretion

after cyclone Ockhi in 2017

main reason for recent erosion and accretion

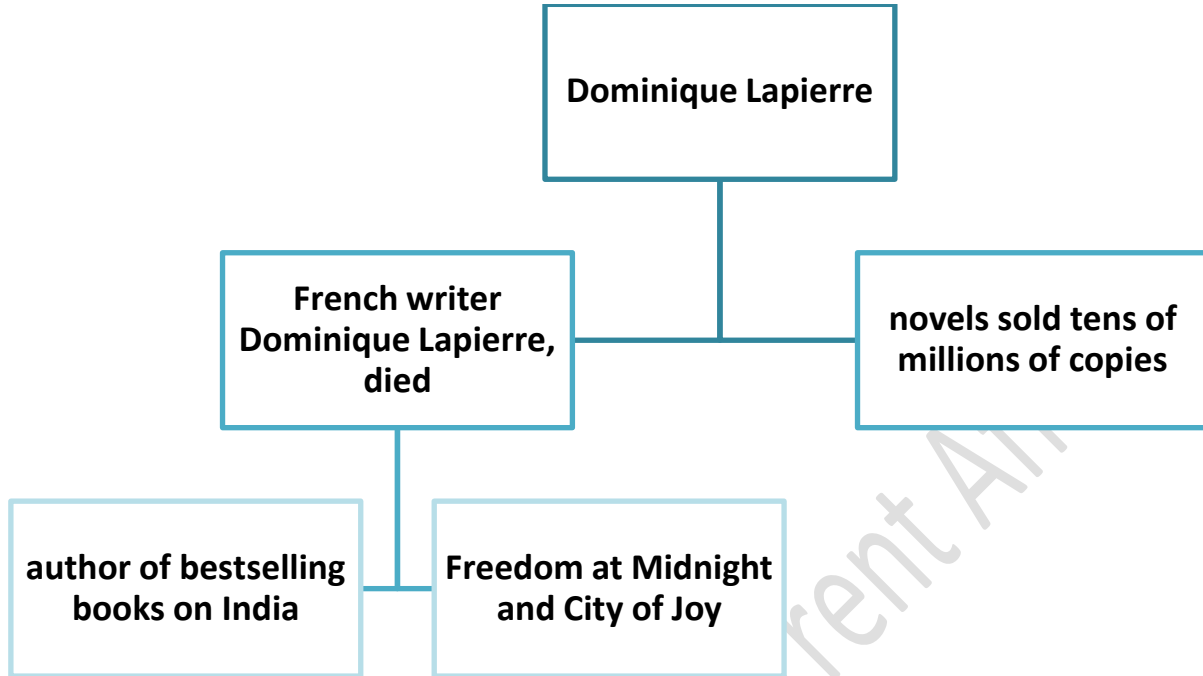
impact of the port activity

on either side of the coast had less significance

Saurabh

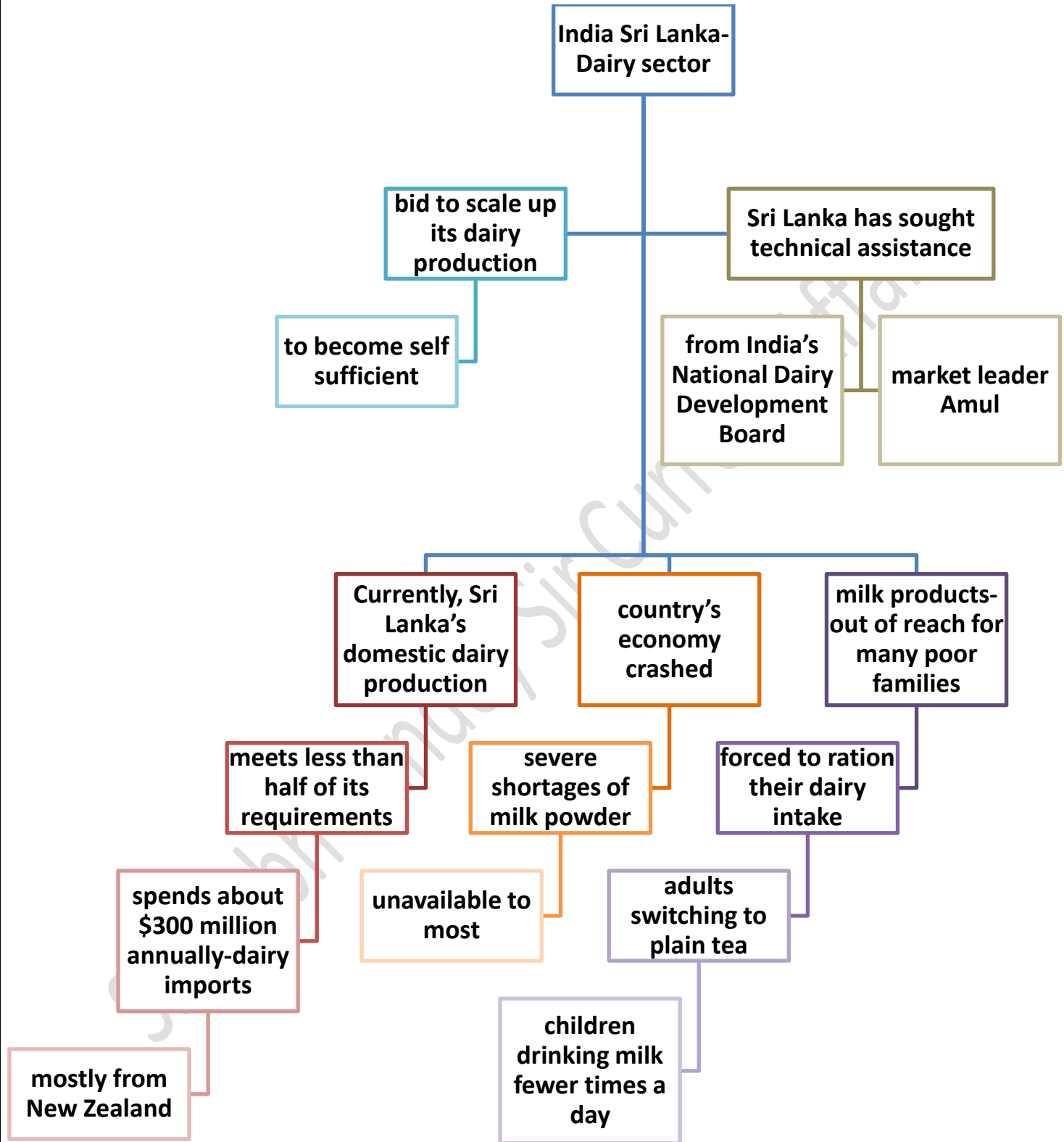
Cum gratias

Dominique Lapierre



Saurabh Pandey Sir Current Affairs

India Sri Lanka- Dairy sector



The Hindu through Mind Maps
(Saurabh Pandey Sir)

December 7
2022

The Hindu Mind
Maps

Happy seeder

Happy seeder

burning of biomass
in and around Delhi

fundamental shift
in agricultural
patterns required

same as stubble
burning in other
States

Delhi chokes on its
own dust &
industrial activities

Vehicles are
another source of
pollution

tractor-mounted
machine

Happy Seeder-
based systems

cuts and lifts rice
straw

sows wheat into
the soil

most profitable,
scalable residue
management
practice

10%–20% more
profitable than
burning

deposits straw over
the sown area as
mulch

reduce
environmental
footprint-on-farm
activities

eliminate air
pollution

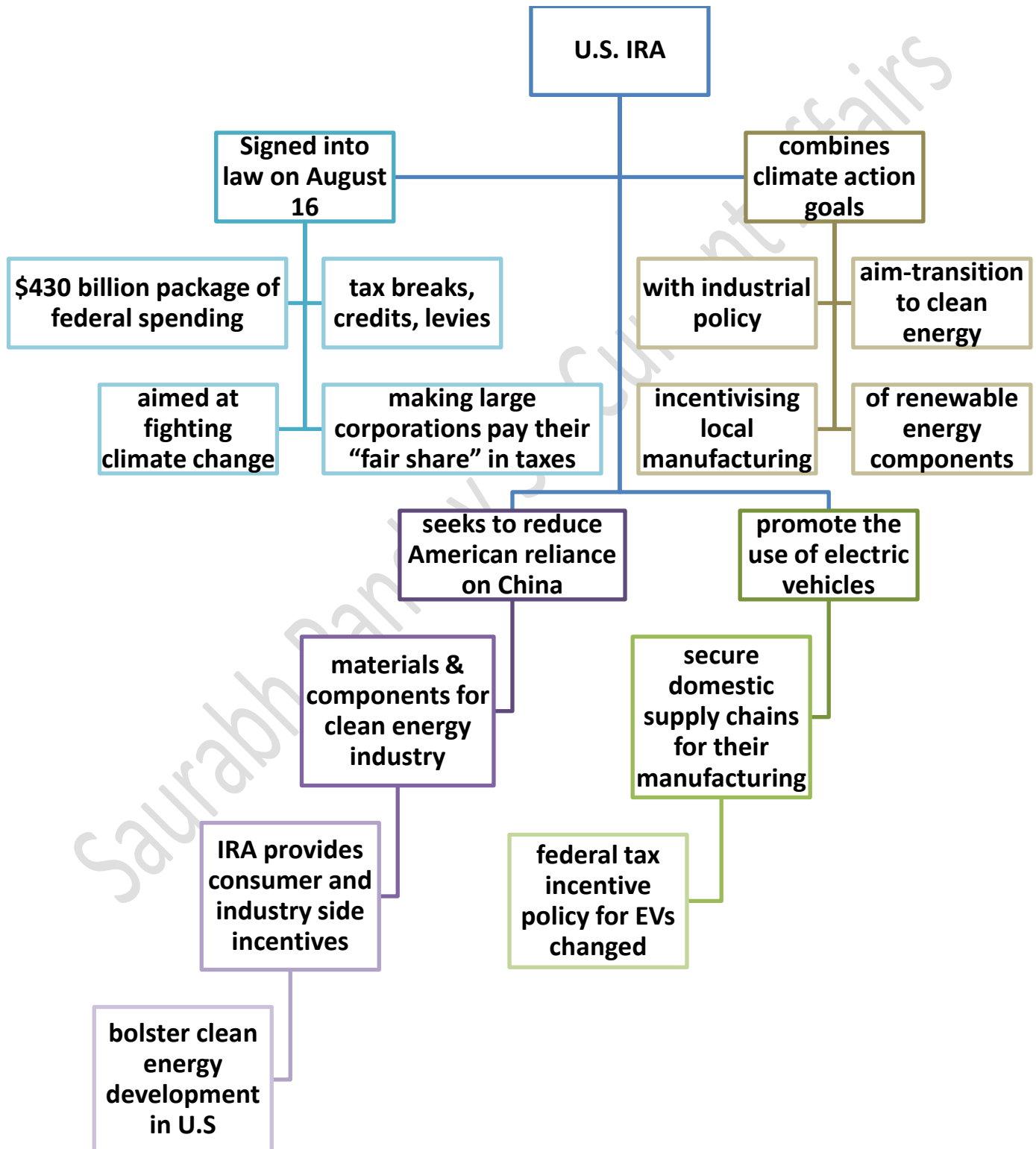
reduce greenhouse
gas emissions per
hectare

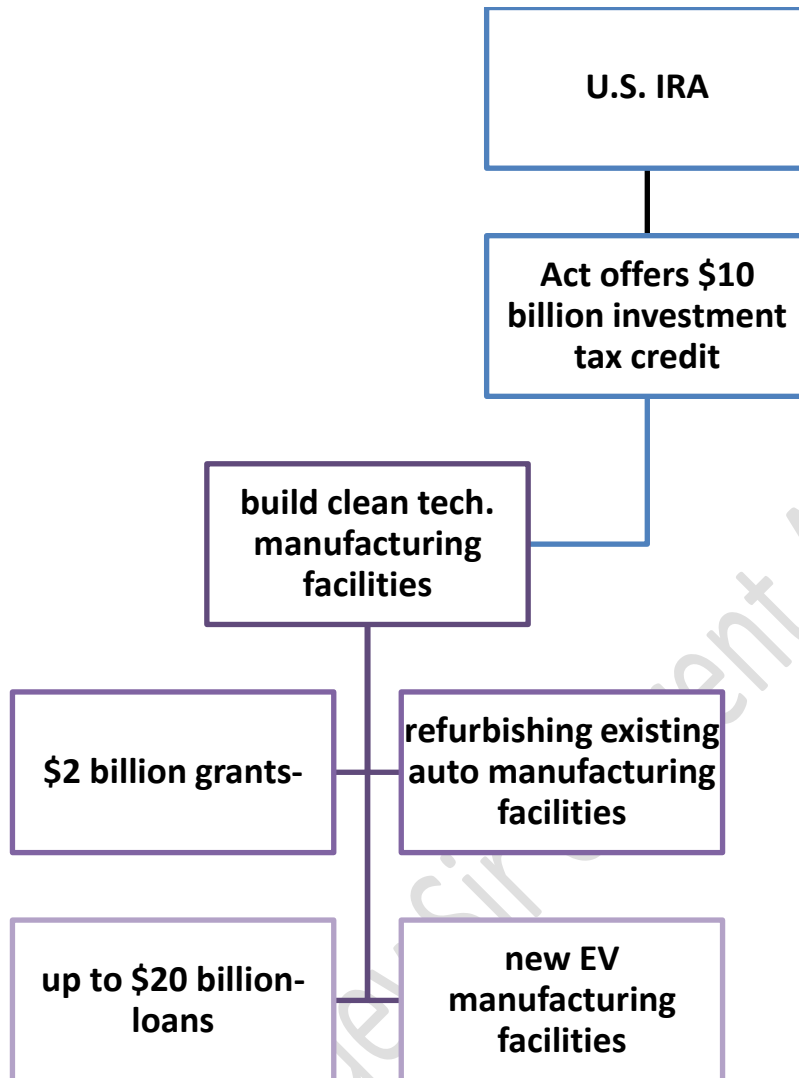
by more than 78%,
relative to all
burning options



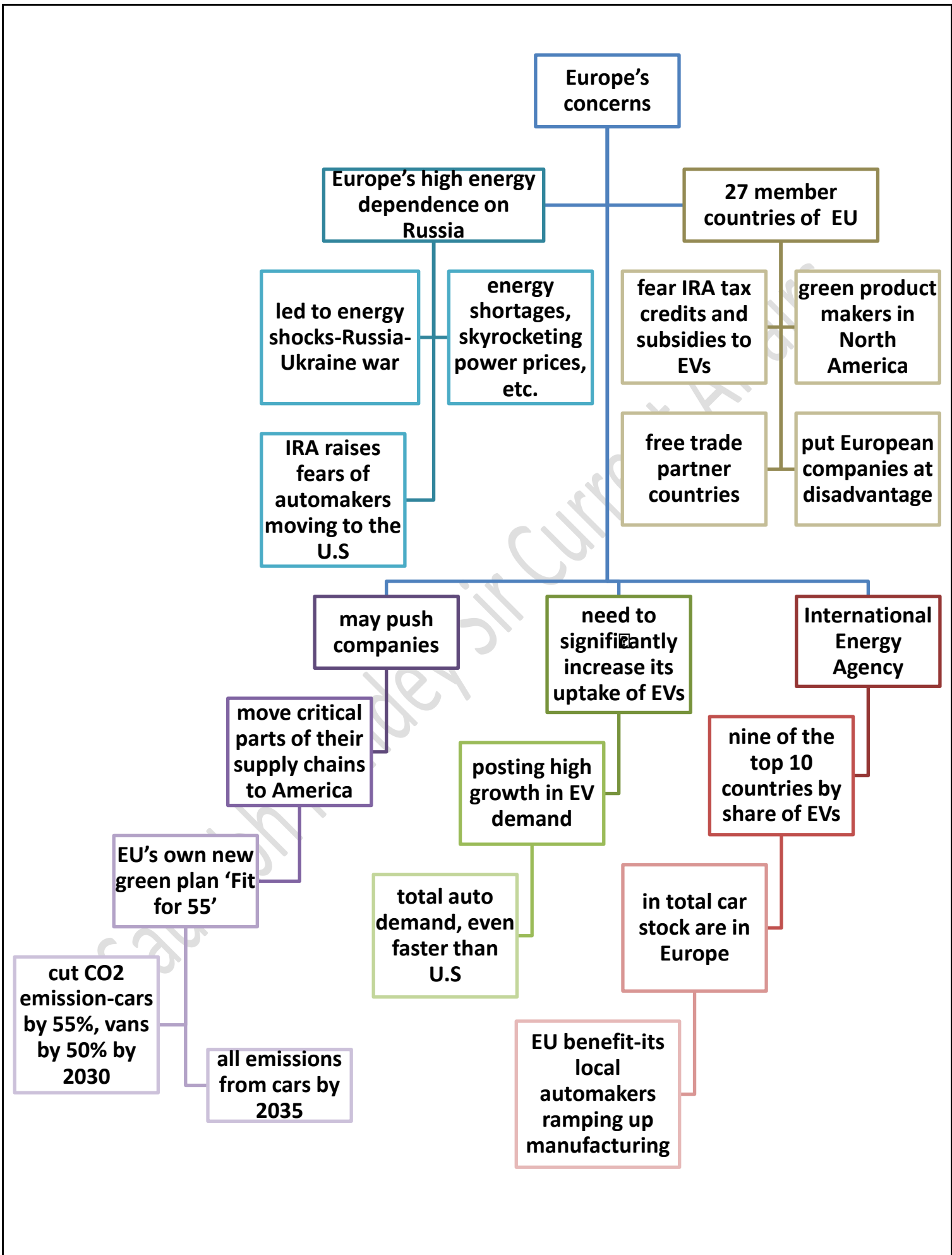
EU concern on US IRA

French President Emmanuel Macron during his two day visit to the U.S. questioned Joe Biden about clean energy subsidies in the new Inflation Reduction Act (IRA), which European countries believe are discriminatory to non-American companies



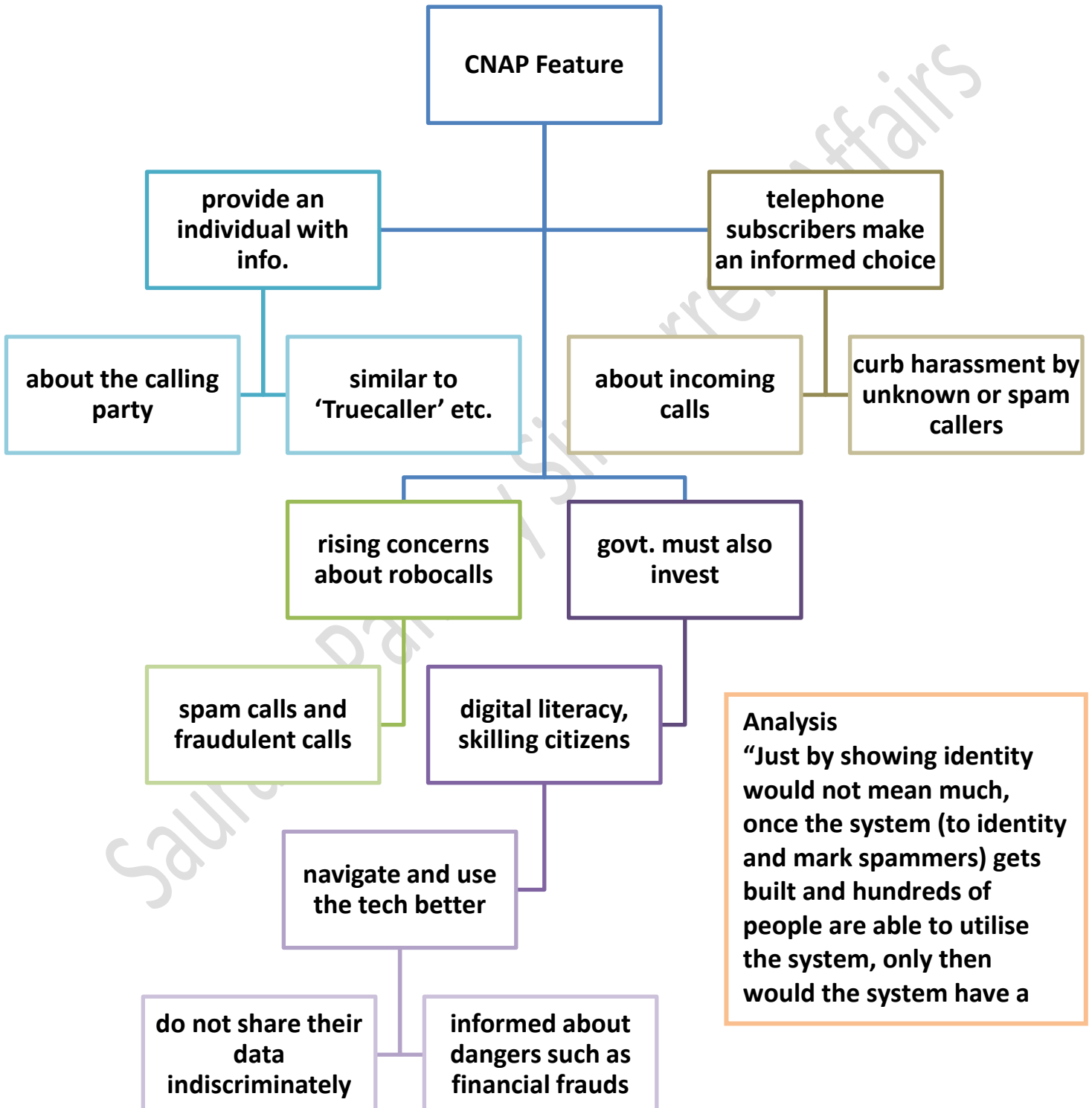


Saurabh Parmar
Government Affairs



CNAP Feature

Telecom Regulatory Authority of India (TRAI) floated a consultation paper seeking comments about the potential introduction of a Calling Name Presentation (CNAP) feature



ChatGPT

AI bot ChatGPT

prototype dialogue-based AI chatbot

latest evolution of GPT

capable of understanding natural human language

generating impressively detailed human-like written text

Generative Pre-Trained Transformer

family of text-generating AIs

latest chatbot from the Elon Musk-founded

independent research body OpenAI foundation

YUAN WANG 5

YUAN WANG
5

Chinese research
and survey vessel

last month-
Yuan Wang 6

reentered the
Indian Ocean

coincides with
planned Indian long
range missile test
Dec15/16

entered
Indian Ocean
Region

coinciding
with planned
Indian missile
launch

research activities
are allowed on
international
waters

Chinese presence in
Indian Ocean began
in 2008

set up a
military base
in Djibouti

data
generated
had a dual
nature

antipiracy
operations in
Gulf of Aden

developed
several dual
use ports

motive of
Chinese
vessels
seemed
doubtful

maintained
continuous
presence in
the region

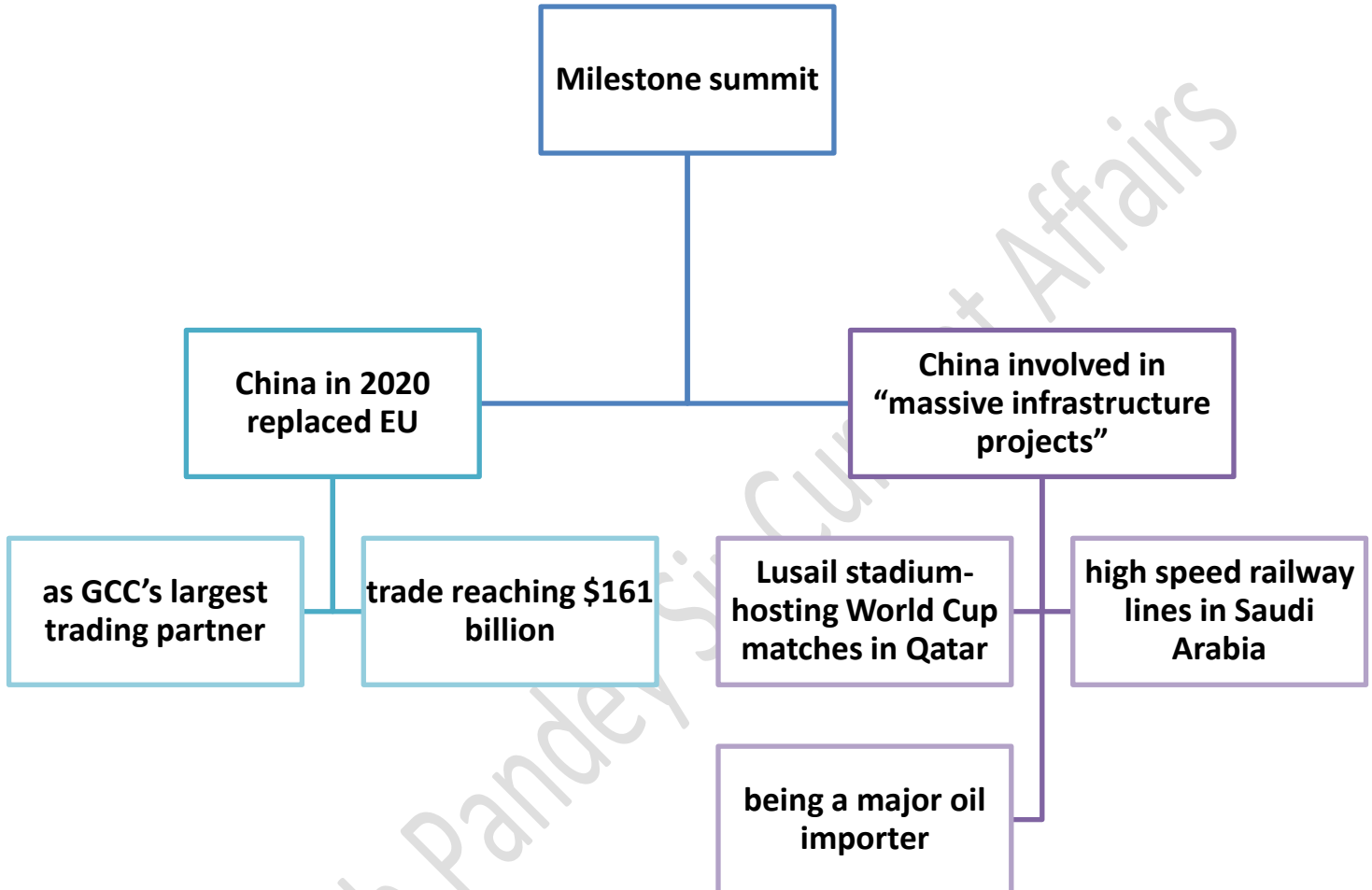
in IOR-Sri
Lanka,
Myanmar,
Pakistan and
other
countries

steady rise in
their
deployment
in IOR

deploying
nuclear attack
submarines
on occasions

Milestone summit

Chinese President Xi Jinping will visit Saudi Arabia this week for what Beijing is calling a “milestone” first ever China Arab summit to boost relations and already deep economic ties.



**The Hindu through Mind Maps
(Saurabh Pandey Sir)**

December 8
2022

The Hindu Mind
Maps

Maharashtra-Karnataka dispute

Maharashtra-Karnataka dispute

Maharashtra and Karnataka sparred over

Act-based on findings of the Justice Fazal Ali Commission

inclusion of some towns , villages along the state border

since State Reorganisation Act passed by Parliament in 1956

appointed in 1953

submitted its report two years later

Nov. 1, 1956, Mysore state -later renamed Karnataka-formed

Maharashtra view

differences between state & Maharashtra erupted

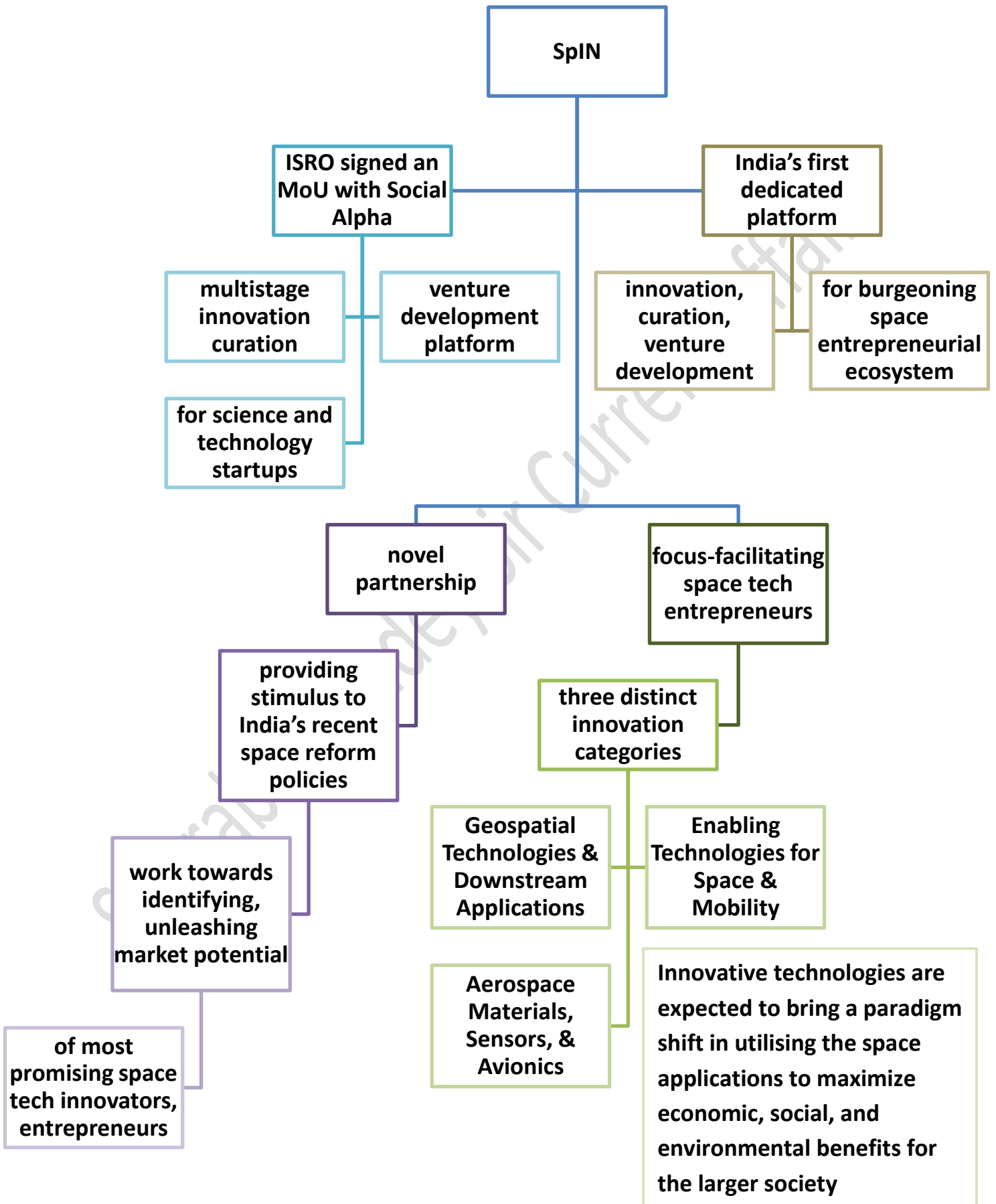
northwestern district of Karnataka, Belagavi

should be part of the state

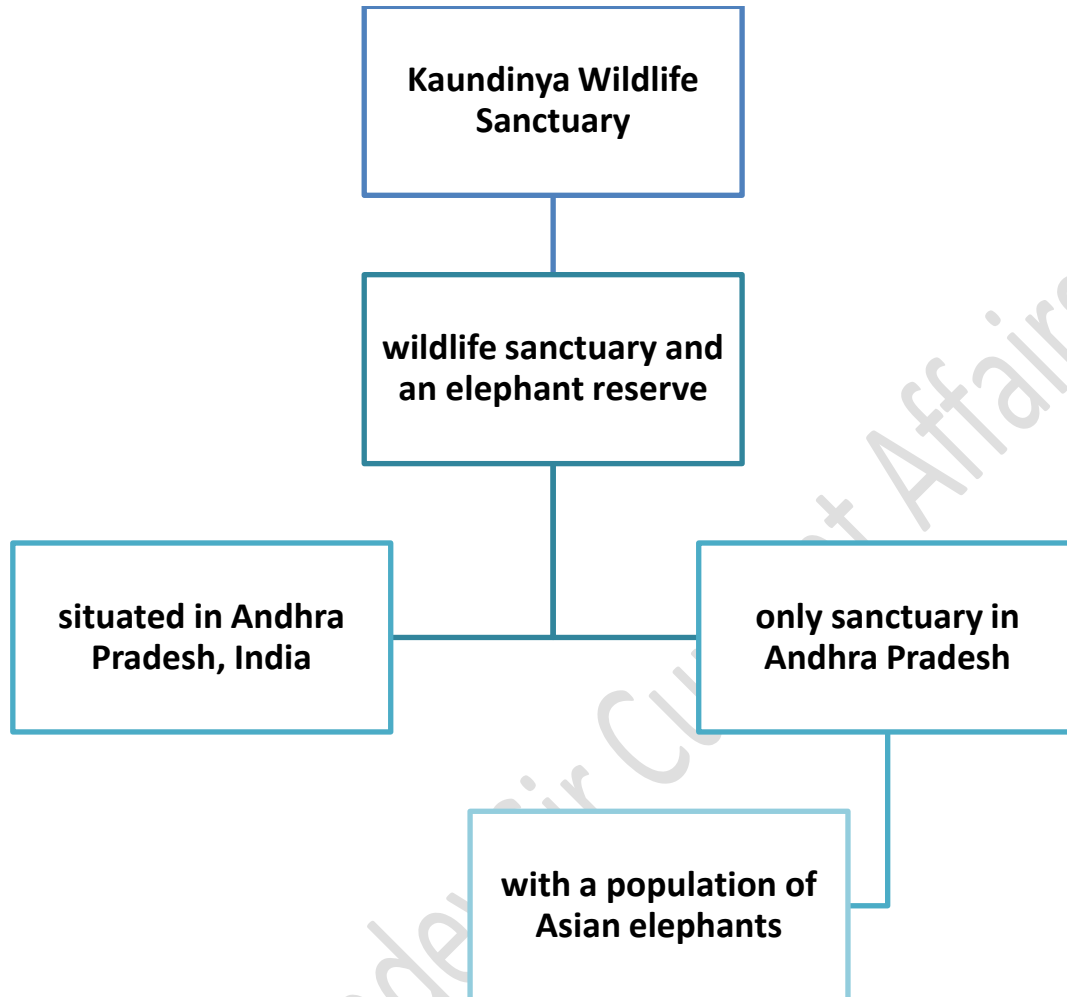
decade-long violent agitation

formation of Maharashtra Ekikaran Samithi

SpaceTech Innovation Network (SpIN)



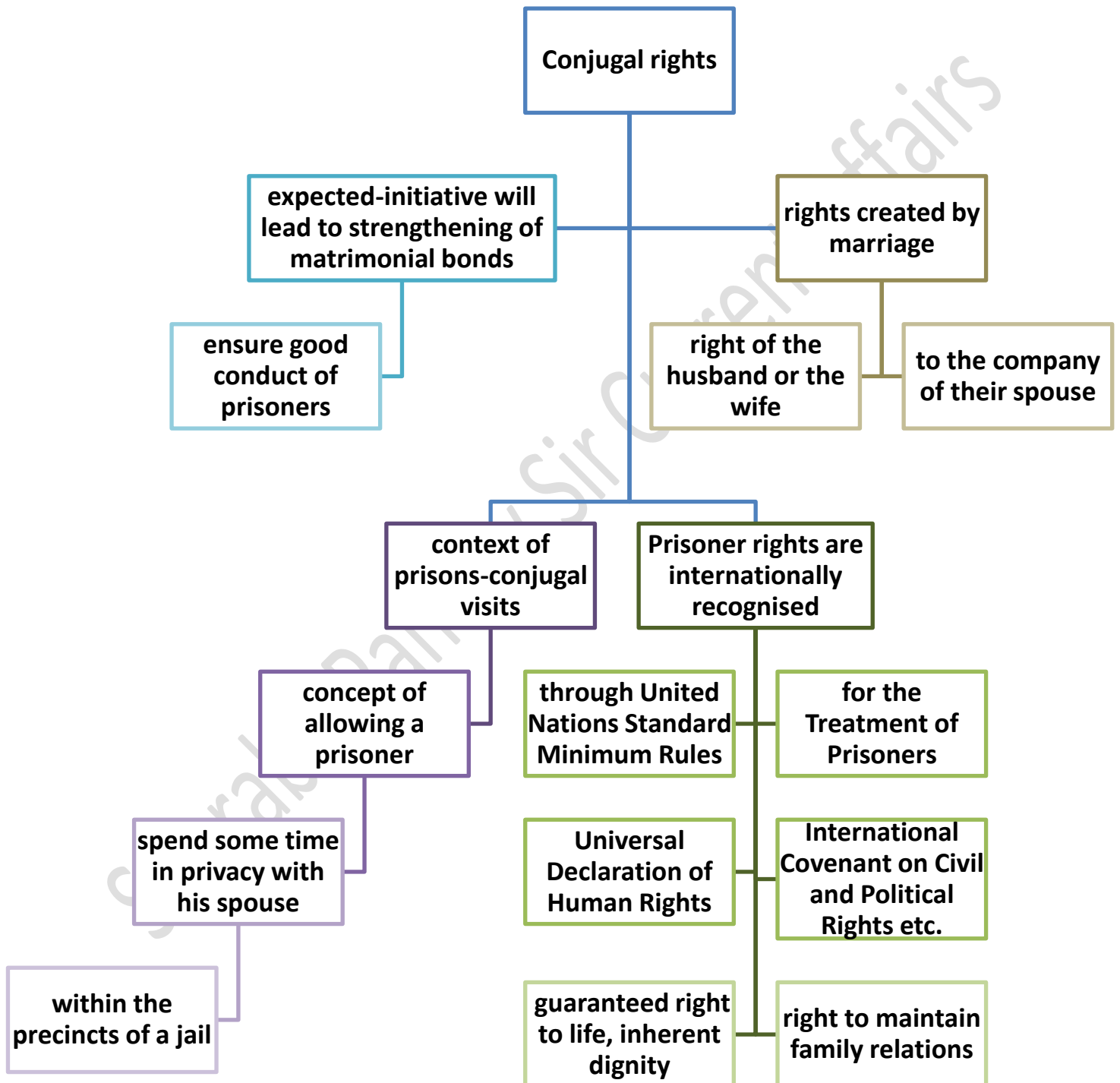
Kaundinya Wildlife Sanctuary



Saurabh Pande
Wildlife Conservation Affairs

Conjugal rights

The State of Punjab has furthered the cause of right to life and personal liberty of prisoners by allowing conjugal visits for inmates.



Judicial views

visit to prisoners by family & friends are solace in isolation: and only a dehumanised system can derive vicarious delight in depriving prison inmates of this humane amenity

Sunil Batra vs Delhi Administration (1979, SC)

Justice Iyer observed

High Court-right to conjugality is available to prisoners

under Article 21, subject to restrictions

Meharaj vs State (2022)

Court observed-conjugal visits could not be held as fundamental right

Madras HC considering the question

prisoner would still be eligible

conjugal rights form part of right to life & personal liberty

avail leave for conjugal visits

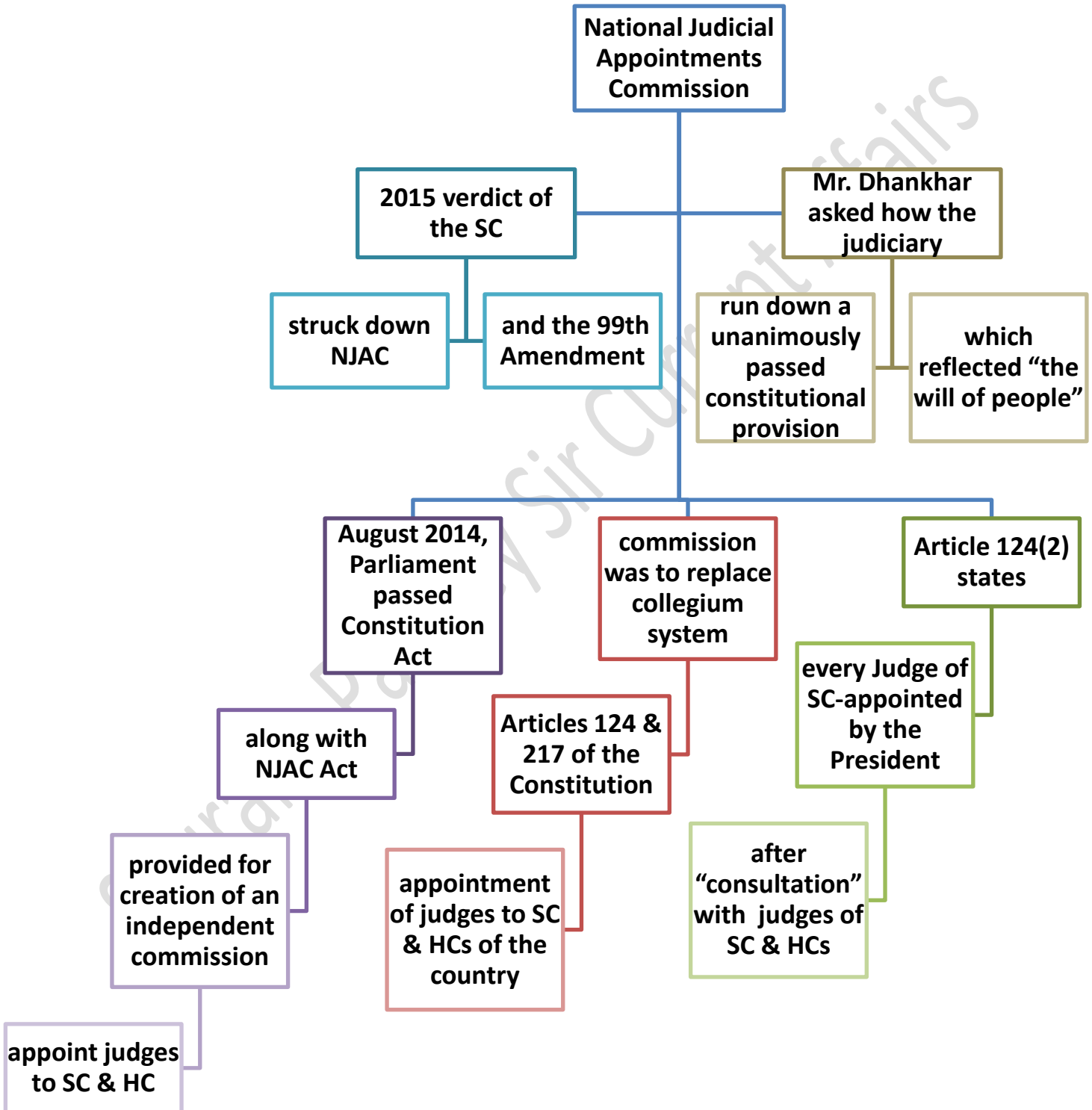
there have to be differential standards

enforcement of Article 21 for law abiders & law violators

for 'extraordinary reasons' such as 'infertility treatments

NJAC

Last week, Vice President Jagdeep Dhankhar commented on the ongoing heated debate between the Central government and the Supreme Court over the matter of judicial appointments.



National Judicial Appointments Commission

collegium legal basis is found in three SC judgments

In order to replace this system

referred to as the 'Judges Cases'

received criticism for its lack of transparency

the Constitution Act, introduced three primary Articles

1-Article 124A which created the NJAC

3-Article 124C which accorded express authority

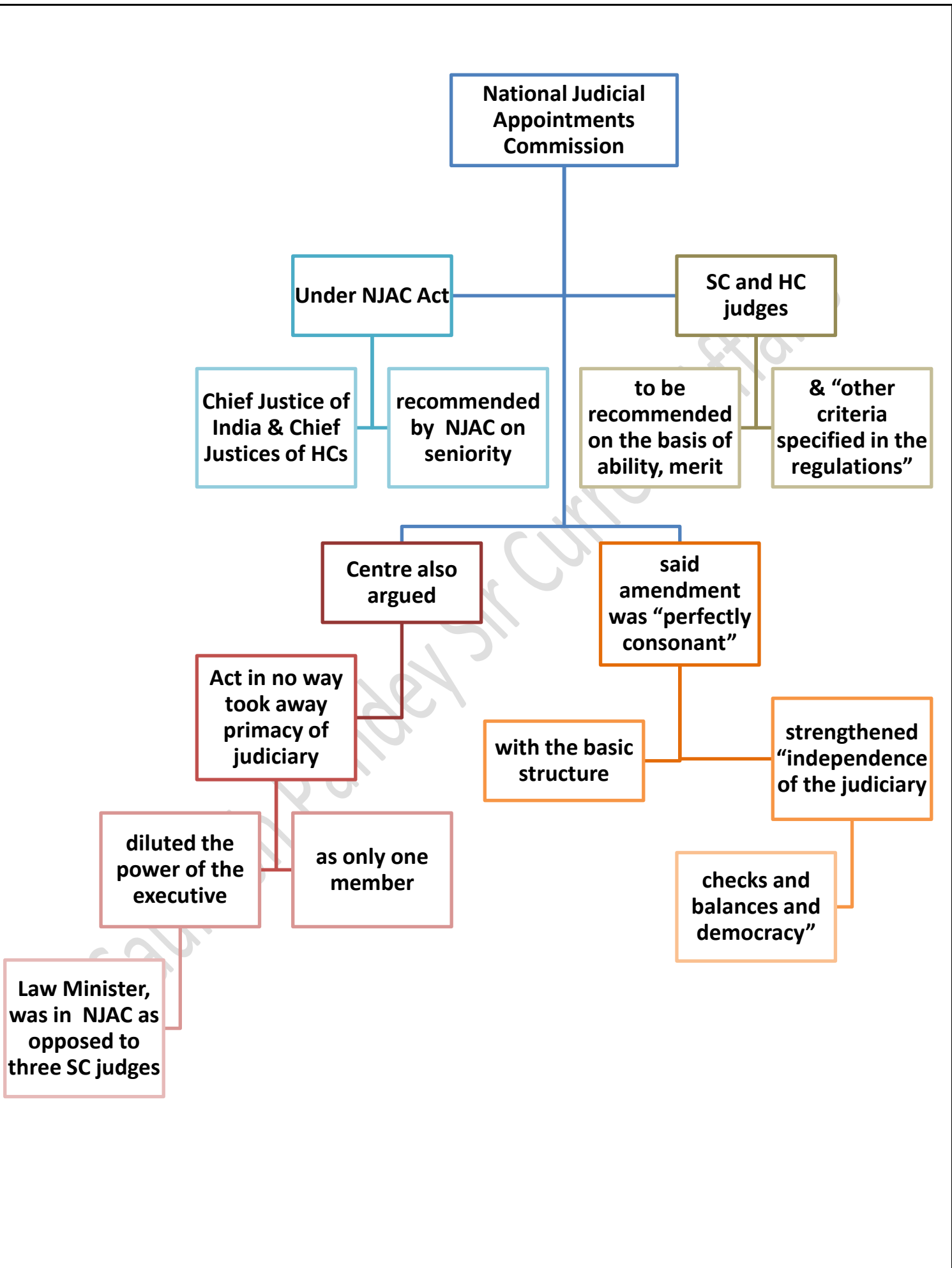
constitutional body to replace the collegium system

Parliament to make laws

2-Article 124B which conferred NJAC

regulating the manner of NJAC's functioning

with power to make appointments to Courts



BIMSTEC v/s SAARC

SAARC

Dec 8- commemorated as SAARC Charter Day

Afghanistan acceded to SAARC later

37 years ago, South Asian Association for Regional Cooperation

intergovernmental organisation

established by Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka

promote economic growth in South Asia

SAARC failed accomplishing most of its objectives

intraregional trade and investment in South Asia

Pakistan adopted obstructionist attitude with SAARC

South Asia continues to be an extremely poor

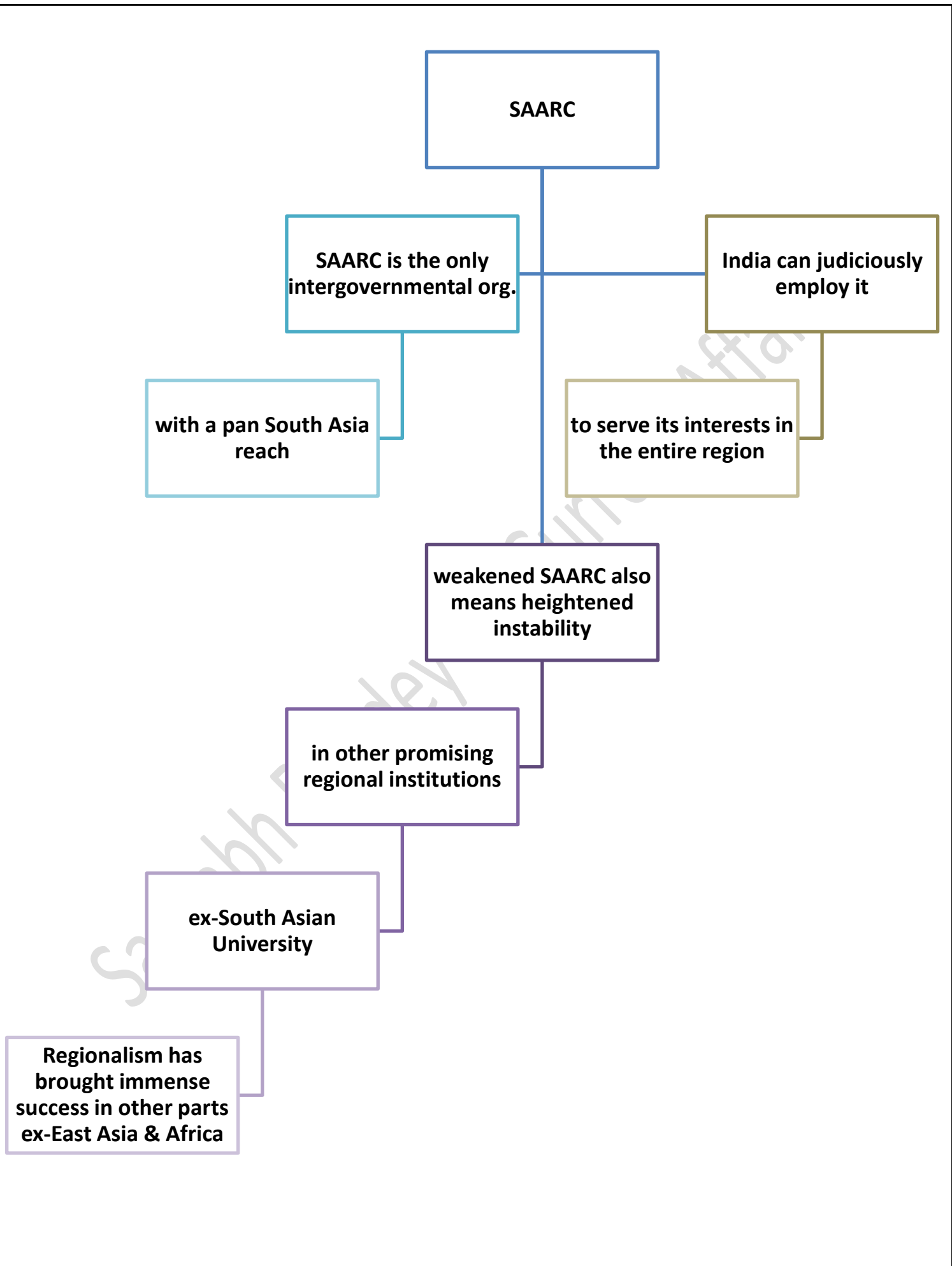
very low when compared to other regions

blocking several vital initiatives

least integrated region in the world

Association of South East Asian Nations & Sub-Saharan Africa

aimed at bolstering regional connectivity



SAARC

SAARC is the only intergovernmental org.

India can judiciously employ it

with a pan South Asia reach

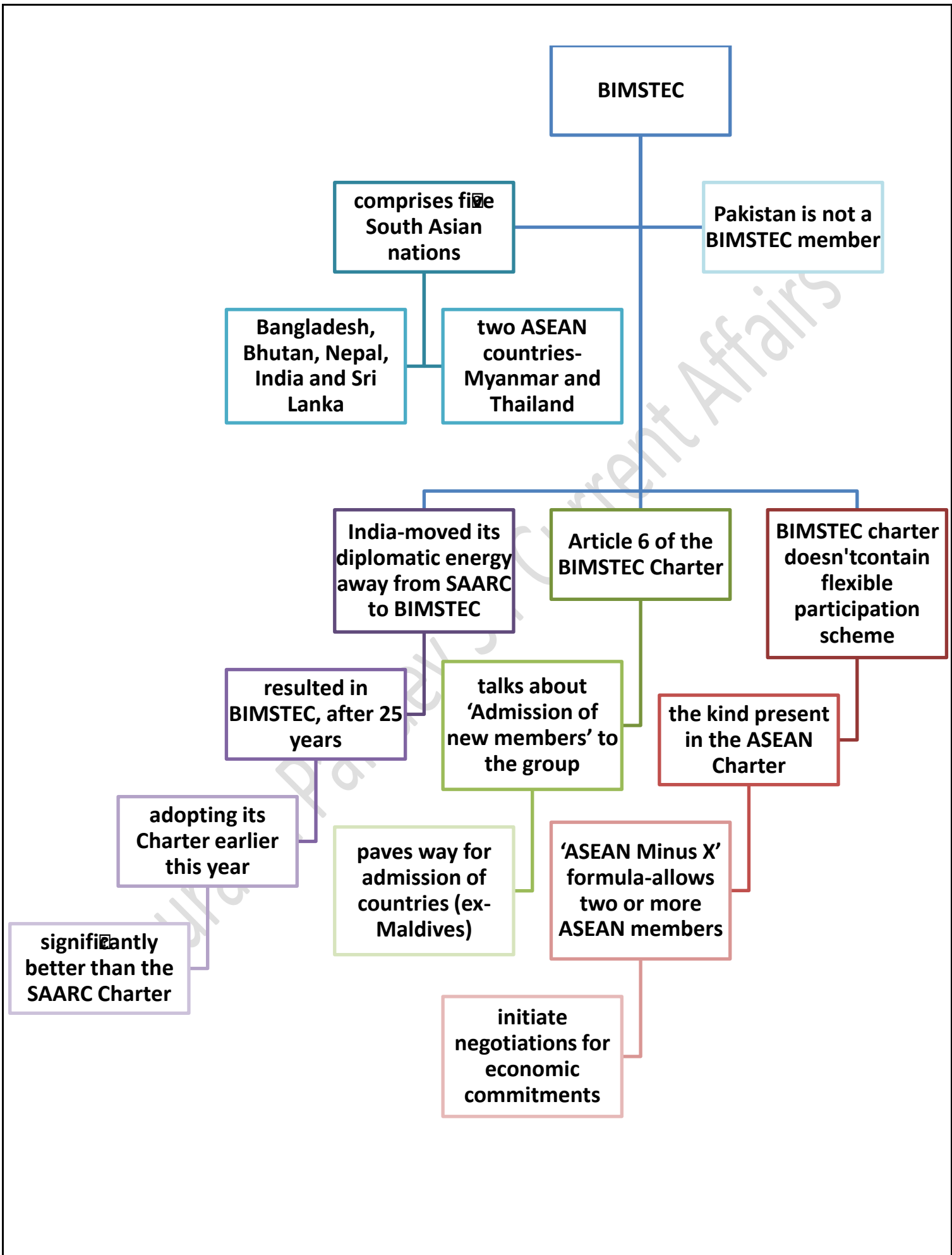
to serve its interests in the entire region

weakened SAARC also means heightened instability

in other promising regional institutions

ex-South Asian University

Regionalism has brought immense success in other parts ex-East Asia & Africa



BIMSTEC

comprises five South Asian nations

Pakistan is not a BIMSTEC member

Bangladesh, Bhutan, Nepal, India and Sri Lanka

two ASEAN countries- Myanmar and Thailand

India-moved its diplomatic energy away from SAARC to BIMSTEC

Article 6 of the BIMSTEC Charter

BIMSTEC charter doesn't contain flexible participation scheme

resulted in BIMSTEC, after 25 years

talks about 'Admission of new members' to the group

the kind present in the ASEAN Charter

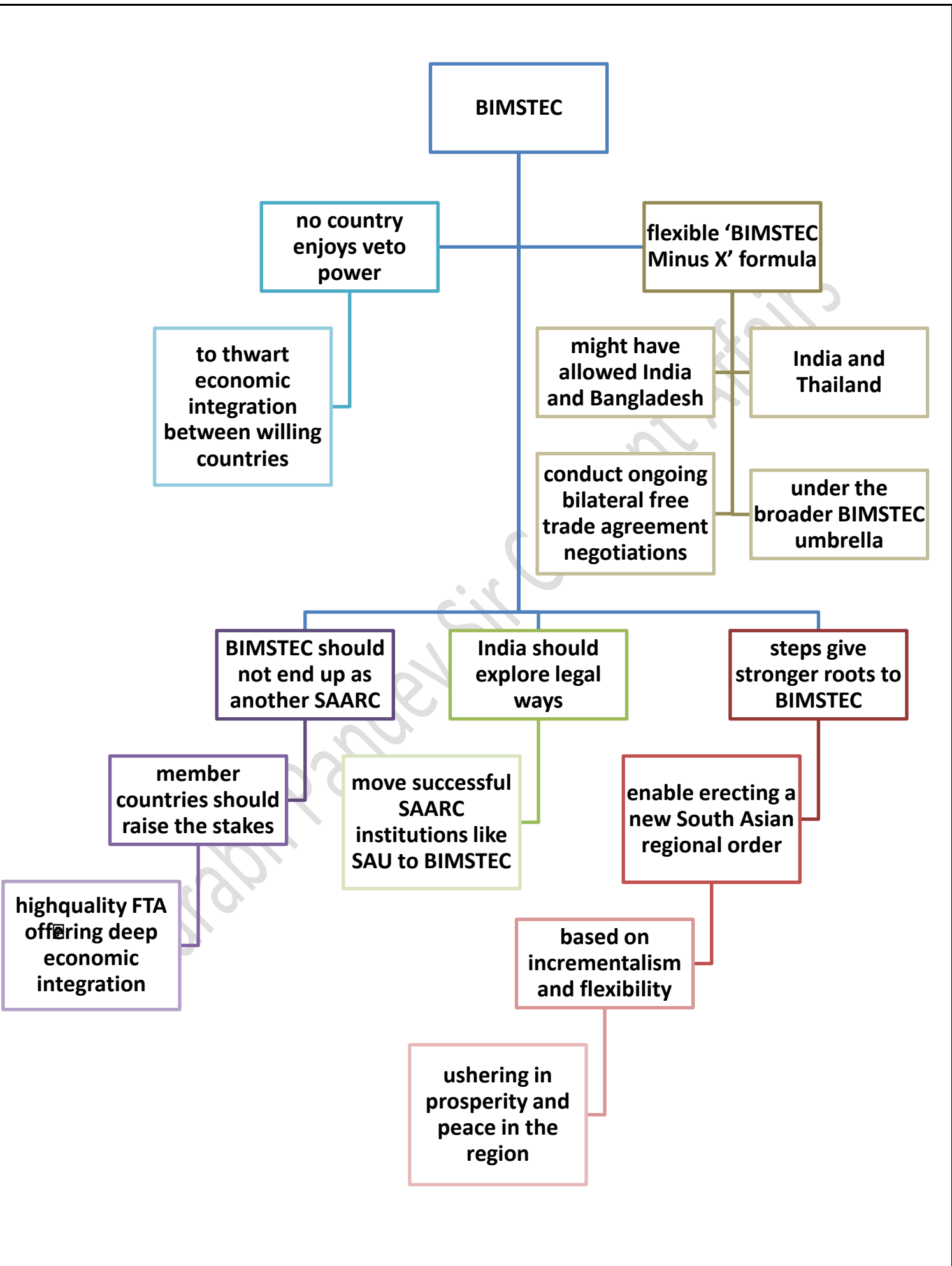
adopting its Charter earlier this year

paves way for admission of countries (ex-Maldives)

'ASEAN Minus X' formula-allows two or more ASEAN members

significantly better than the SAARC Charter

initiate negotiations for economic commitments



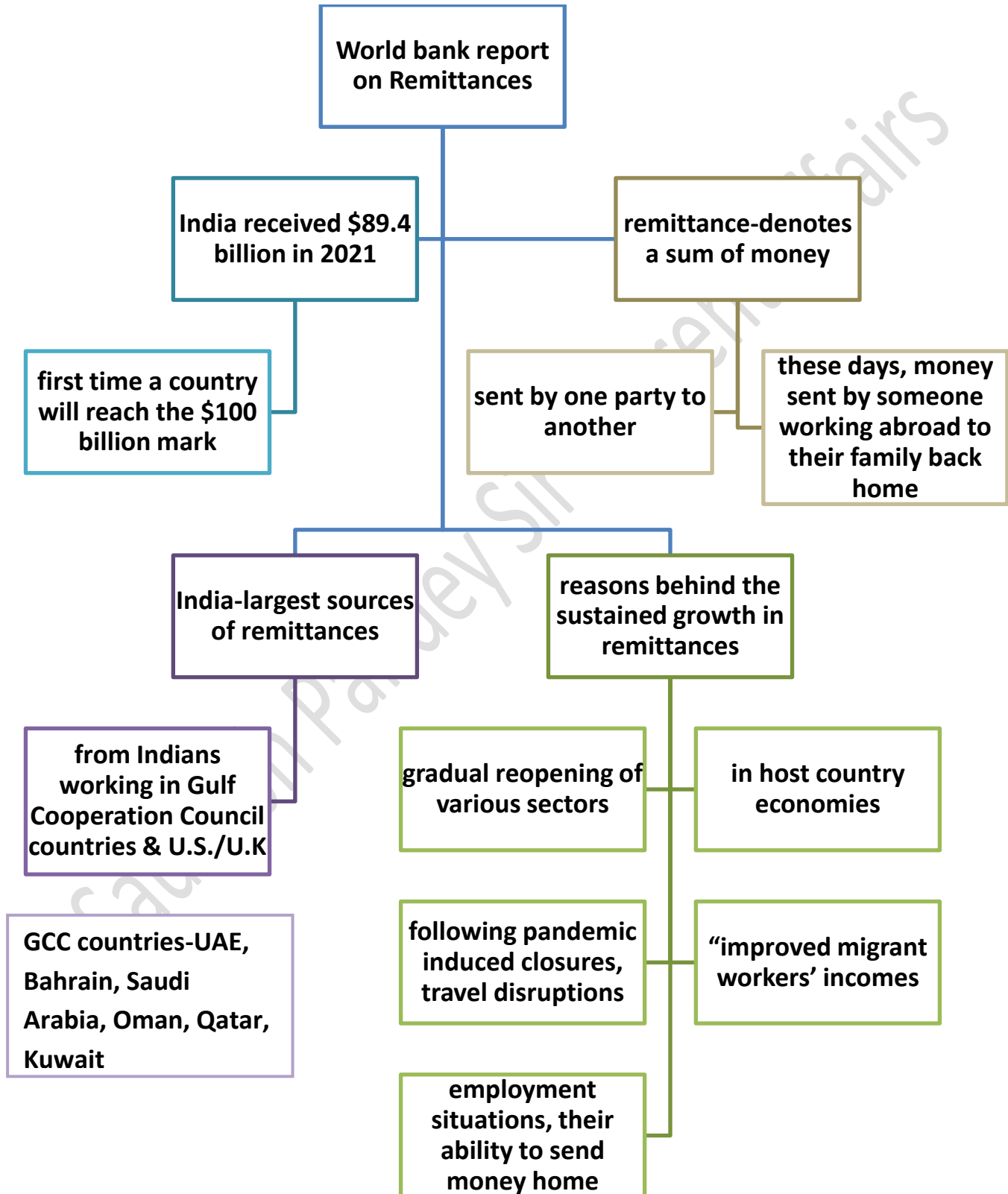
**The Hindu through Mind Maps
(Saurabh Pandey Sir)**

December 9
2022

The Hindu Mind
Maps

World bank report on Remittances

Remittances to India are set to touch a record \$100 billion in 2022, according to the World Bank's latest Migration and Development Brief titled, 'Remittances Brave Global Headwinds'



reasons behind the resilience of India's inward remittance flows

structural shift in India's remittance economy

20% of India's emigrants in U.S. & U.K.

top destination countries

nature of the jobs held by migrants

structural shift in qualifications and destinations

accelerated growth in remittances tied to high salaried jobs

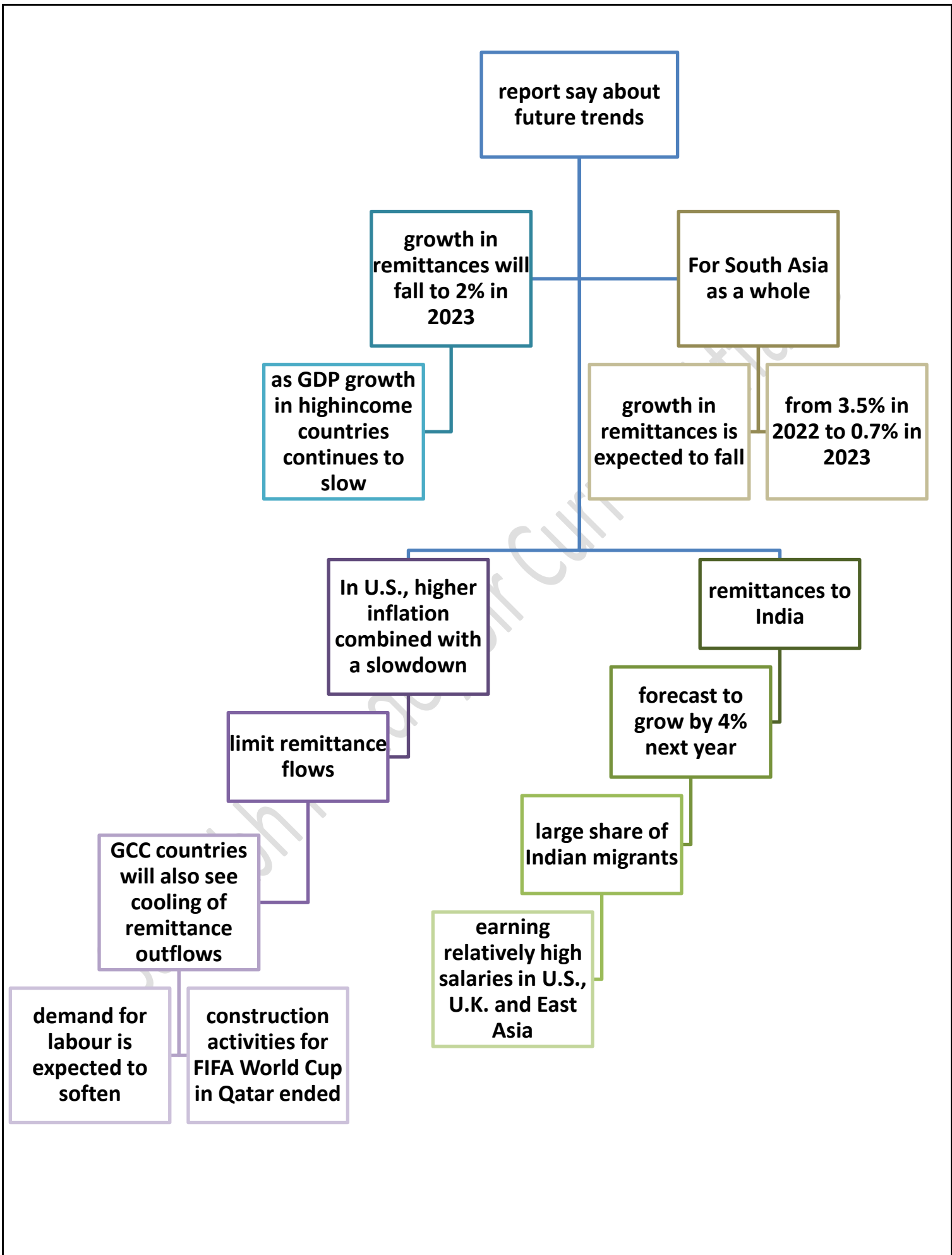
in GCC countries Indian migrants benefited

from governments' direct support measures

Indian migrants may also have "taken advantage"

depreciation of Indian rupee visàvis U.S. \$

remittances have benefitted from a gradual structural shift in Indian migrants' key destinations from largely lowskilled, informal employment in the Gulf Cooperation Council (GCC) countries to a dominant share of high skilled jobs in high income countries such as the U.S., the U.K., and East Asia (Singapore, Japan, Australia, New Zealand)



report say about future trends

growth in remittances will fall to 2% in 2023

For South Asia as a whole

as GDP growth in highincome countries continues to slow

growth in remittances is expected to fall

from 3.5% in 2022 to 0.7% in 2023

In U.S., higher inflation combined with a slowdown

remittances to India

limit remittance flows

forecast to grow by 4% next year

GCC countries will also see cooling of remittance outflows

large share of Indian migrants

demand for labour is expected to soften

construction activities for FIFA World Cup in Qatar ended

earning relatively high salaries in U.S., U.K. and East Asia

India as G20 Presidency

What does India's presidency mean?

G20 Summit is held annually

group does not have a permanent secretariat

rotating presidency

rests with India for 2023

supported by previous, current, future holders of post

together called the troika

2023's troika includes Indonesia and Brazil

India's presidency

India will host the 18th G20

many countries witness inflation, recession trends

Russia Ukraine war

Heads of State and Govt. Summit in Dec. 2023, New Delhi

standoff between the EU and Russia

India's own problems with China

plans on showcasing its philosophies of Vasudhaiva Kutumbakam

LiFE through theme & logo of the event

pose potential issue for effective functioning of forum

How does the G20 forum work?

processes divided into two parallel tracks

finance track is led by Finance Ministers

finance track

sherpa track

central bank governors of member nations

meet throughout the year

Sherpas, who are personal emissaries of leaders

Working groups designed around specific themes

Various international orgs.

oversee negotiations all through the year

operate within both tracks

United Nations, International Monetary Fund

discussing agenda items for summit

representatives from relevant ministries

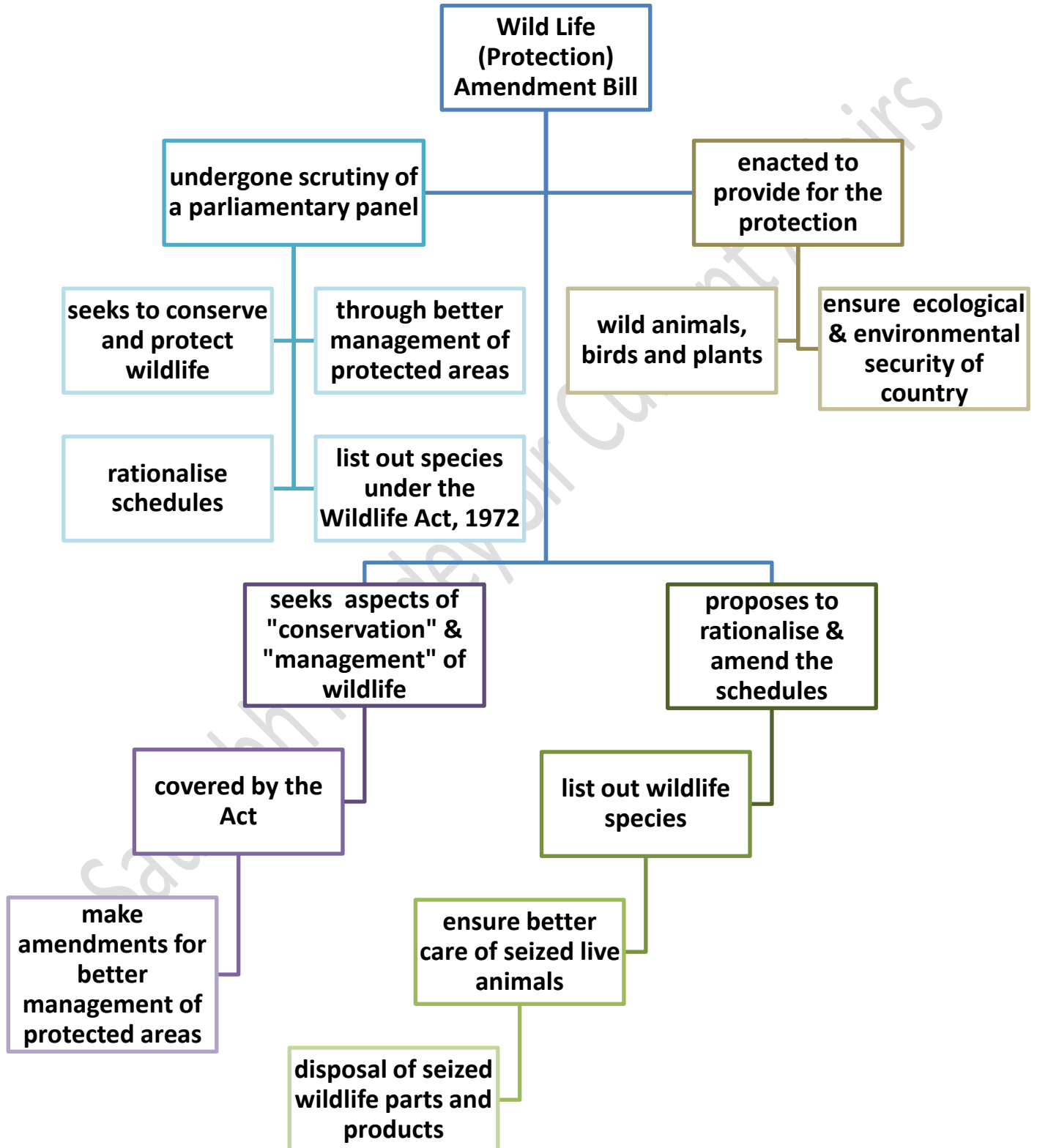
Orgs. for Economic Co-operation and Development

coordinating substantive work of G20

of member nations and invited/guest countries too

Wild Life (Protection) Amendment Bill

Wild Life (Protection) Amendment Bill which seeks better management of protected areas and also provides for certain permitted activities like grazing or movement of livestock and bona fide use of drinking and household water by local communities



**Wild Life
(Protection)
Amendment Bill**

**enable control of
invasive alien
species**

**proposes to insert
a new Chapter VB
in principal Act**

**allow for transfer
or transport**

**live elephants by
person having
ownership
certificates**

**for regulation of
international trade**

**in endangered
species of wild
fauna and flora**

**allow state boards
for wildlife**

**to constitute
standing
committees**

**India is a party to
the Convention**

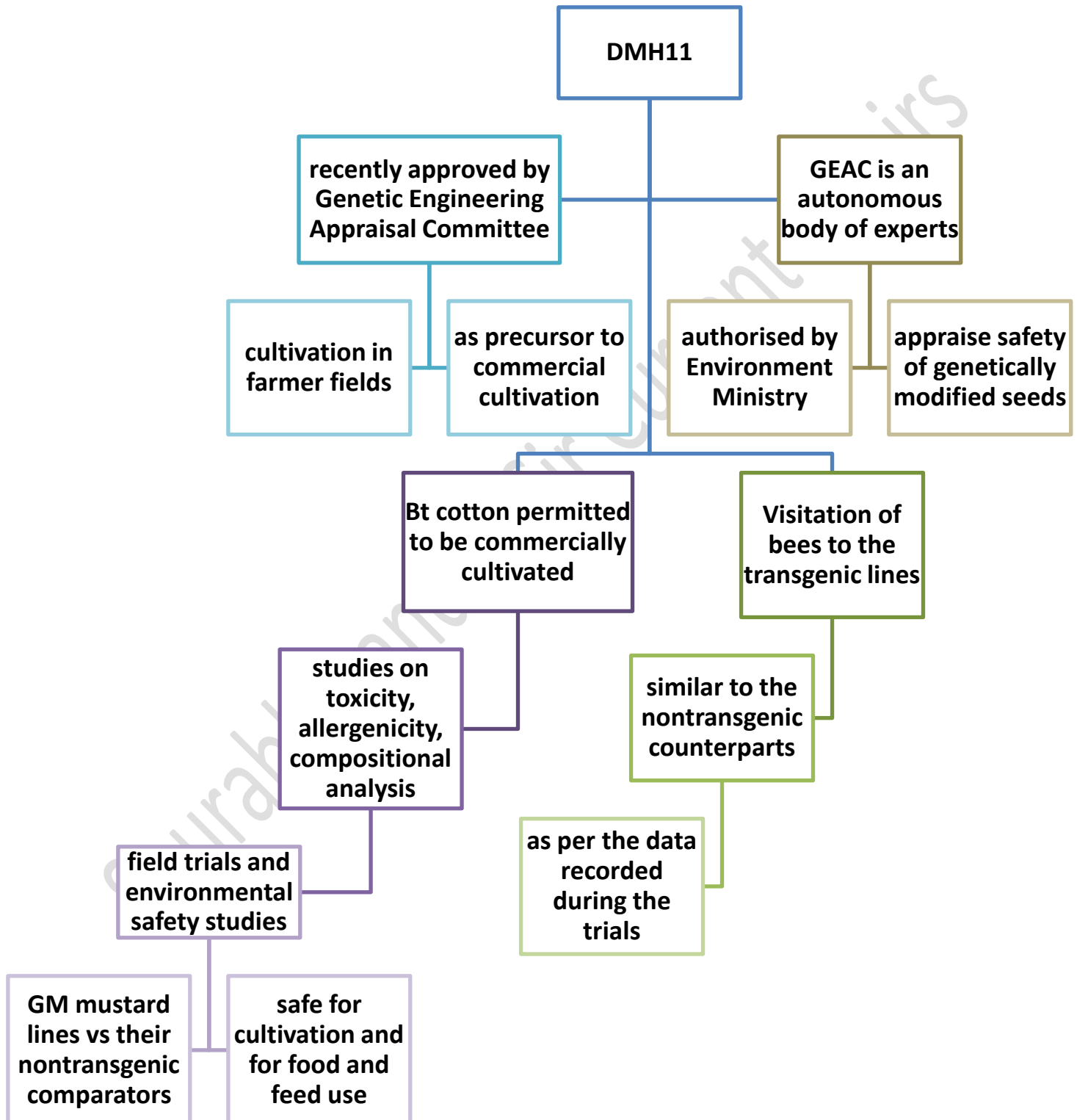
**International Trade
in Endangered
Species of Wild
Fauna and Flora**

**reuire-
appropriate
measures are taken**

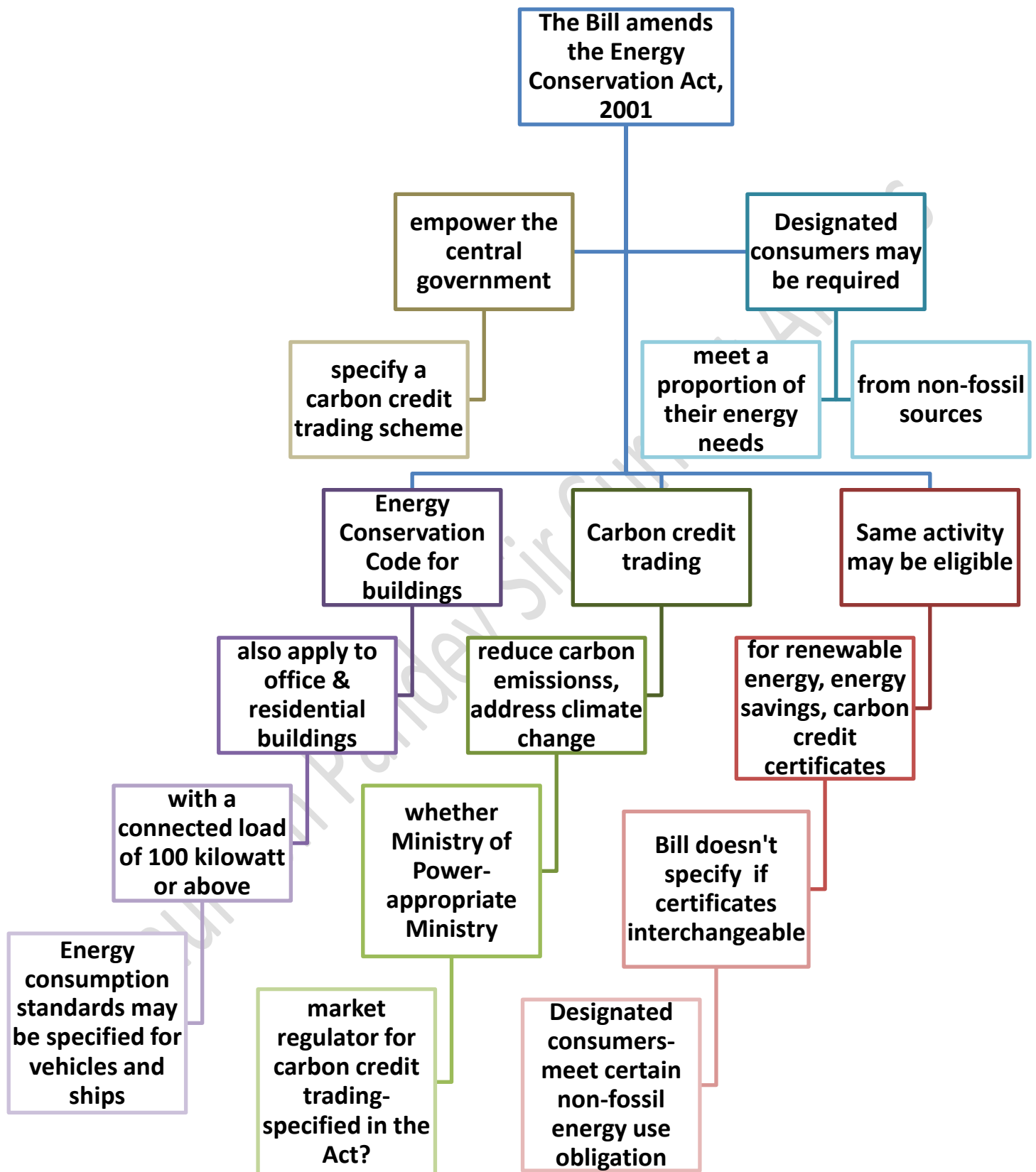
**to enforce the
provisions of the
convention**

Dhara Mustard Hybrid 11 (DMH11)

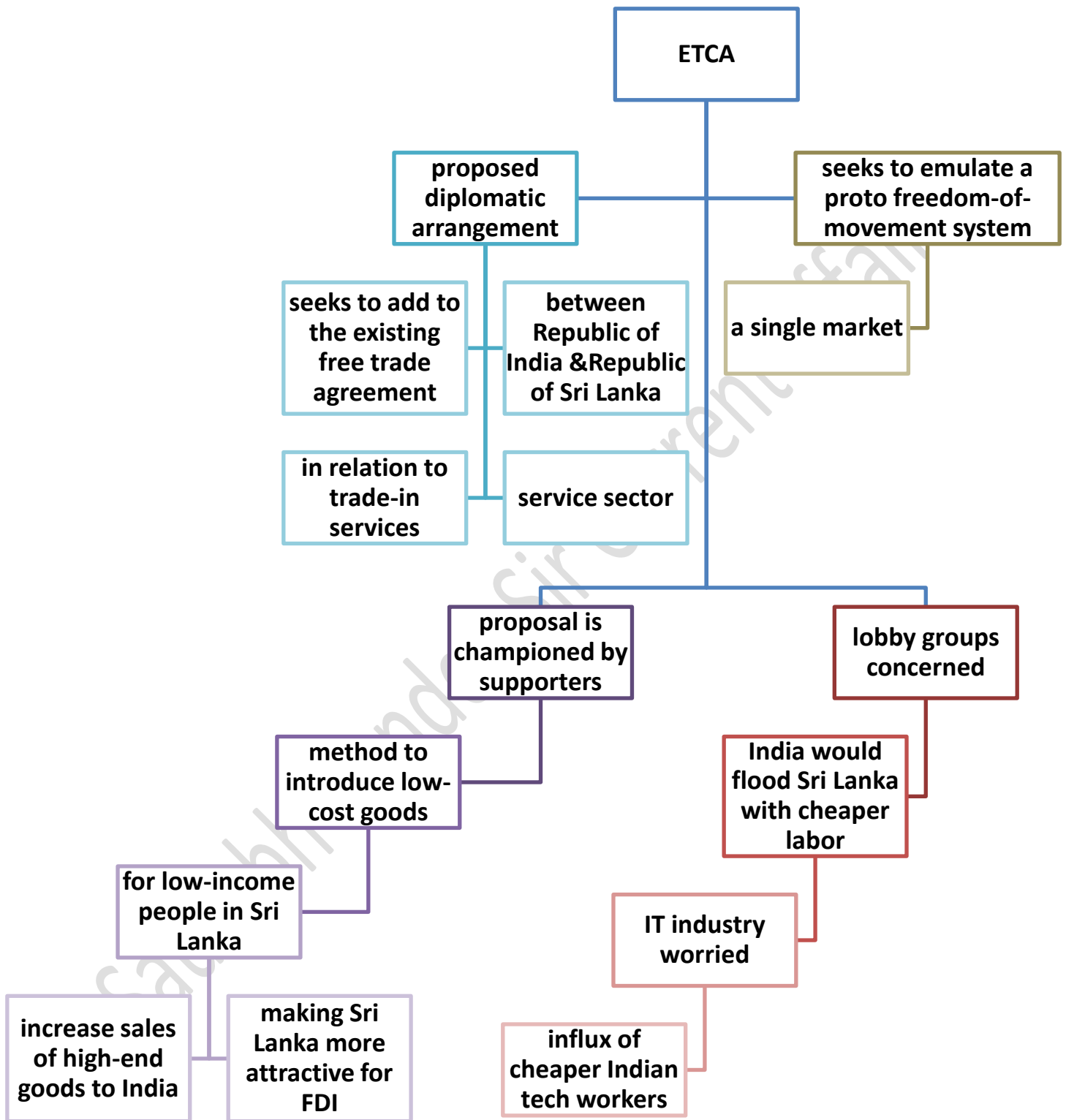
Field trials of the transgenic mustard variety, Dhara Mustard Hybrid 11 (DMH-11), revealed them to be higher yielding and they did not deter the pollination habits of honeybees



The Bill amends the Energy Conservation Act, 2001



The Economic and Technology Co-operation Agreement (ETCA)



objectives of ETCA

strengthen and
advance the
economic

trade, investment
and technology
cooperation

promote further
liberalization of trade
in goods

liberalizing trade in
services & gradually
establish fair

transparent &
facilitative trading

investment &
investment
protection
mechanisms

expand areas of
economic
cooperation

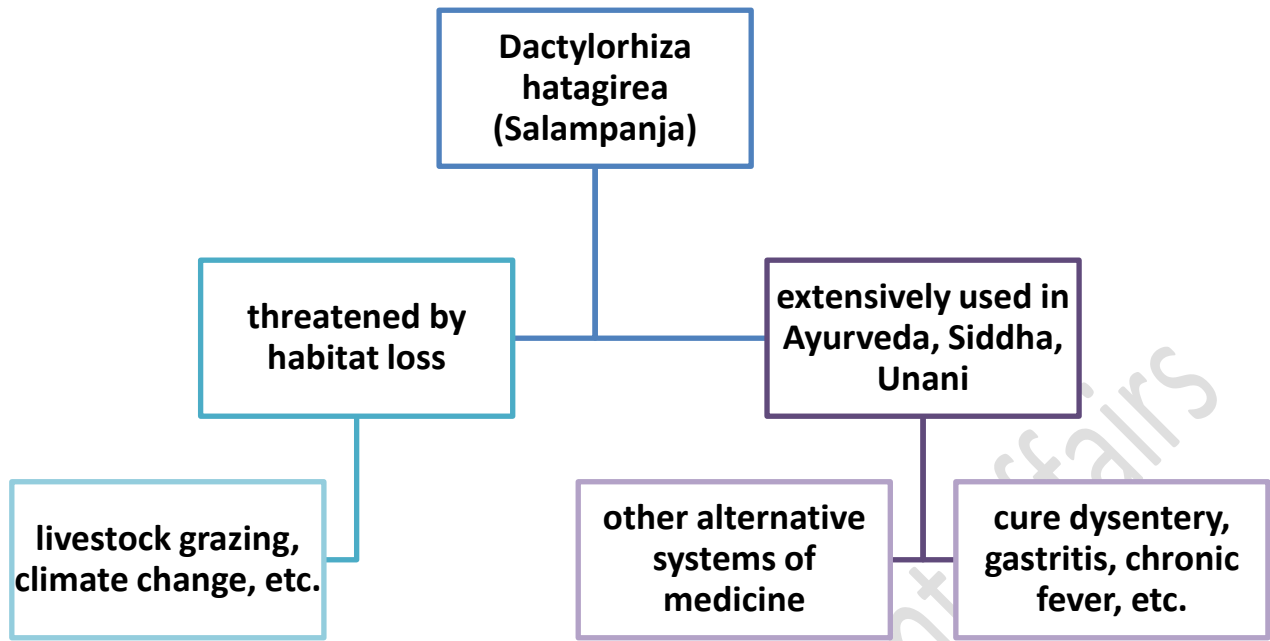
establish a
cooperation
mechanism

Saurabh Patil | Sr. International Trade Affairs

**The Hindu through Mind Maps
(Saurabh Pandey Sir)**

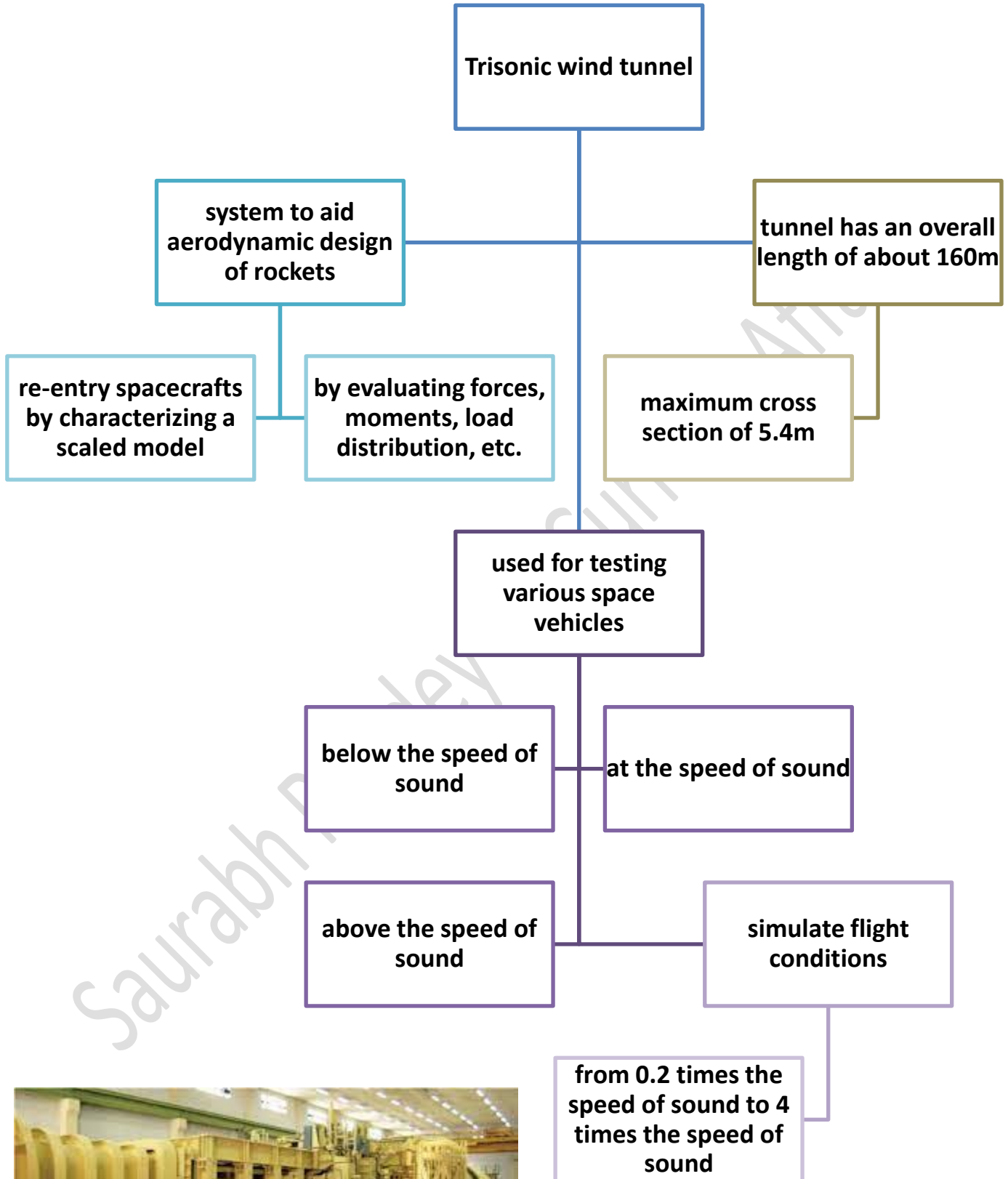
December 10
2022

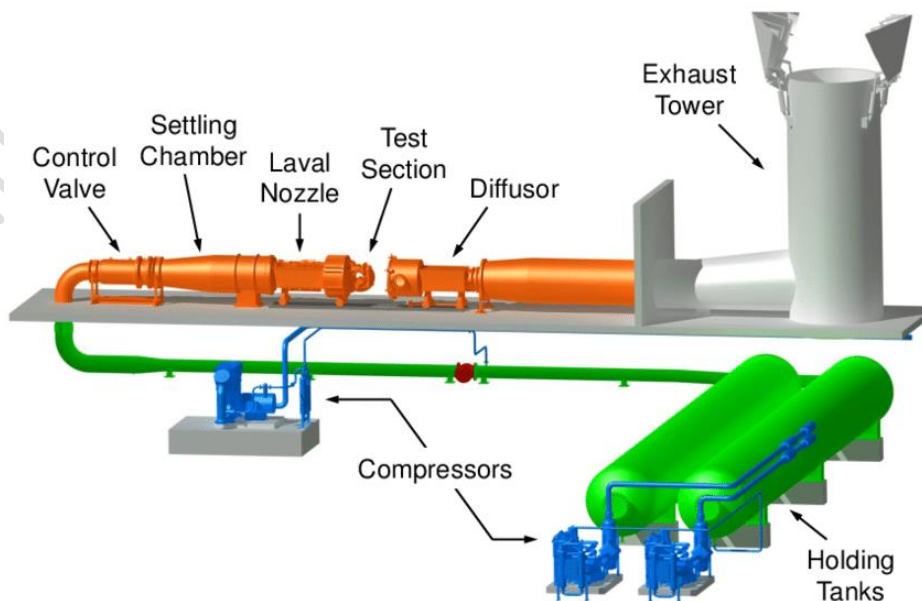
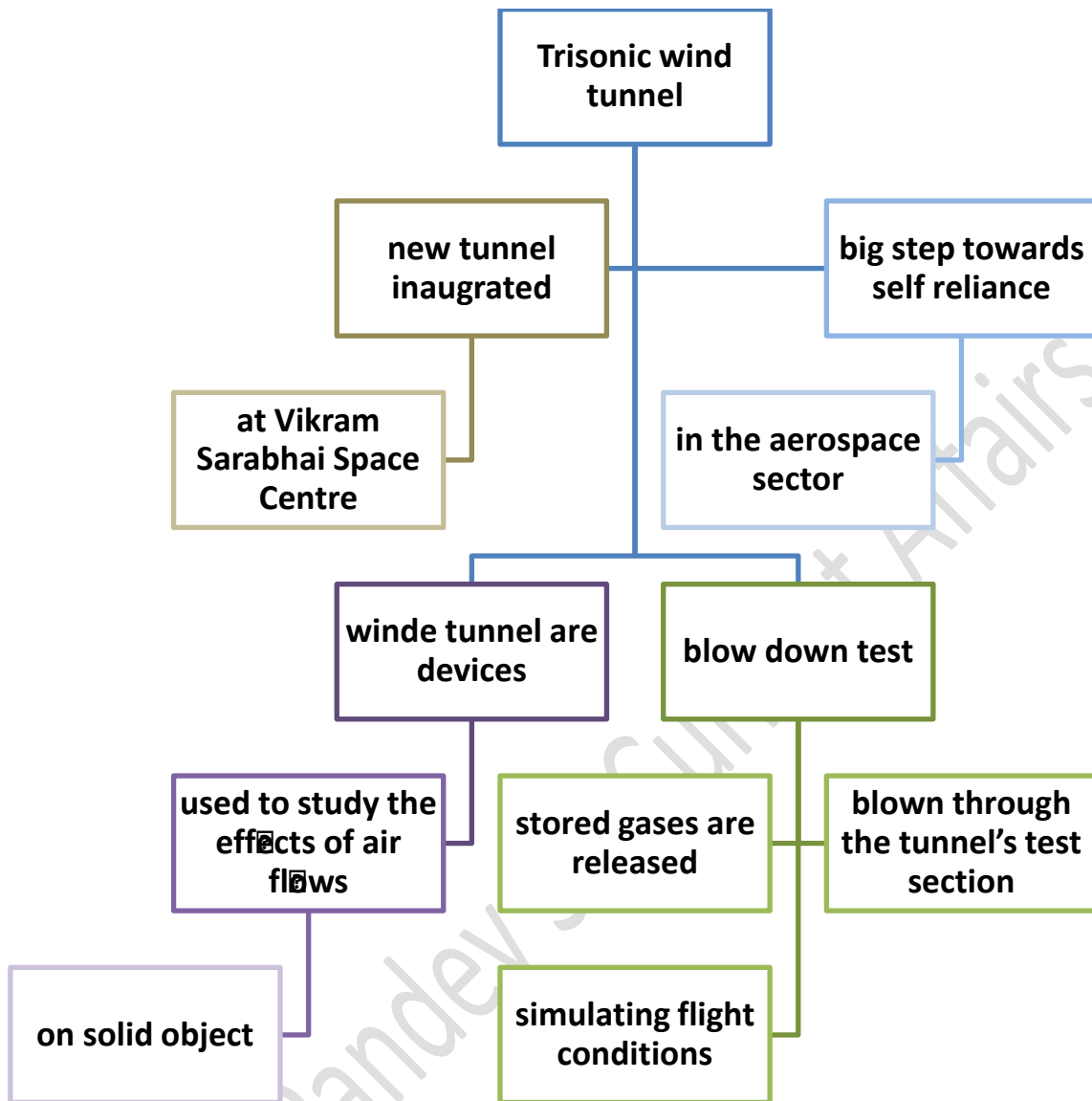
The Hindu Mind
Maps



Saurabh Pandey Sir Current Affairs

Trisonic wind tunnel





Scramjet engine- Hot test v/s cold test

Scramjet engine-
Hot test v/s cold
test

rocket carries its own
supply of oxygen for
combustion

rocket engine less
energy efficient
compared to Jet engines

while a jet engine
utilizes oxygen

from the
atmosphere for
combustion

A jet engine is a
machine

thrust from one
or more engines
pushes a plane
forward

Jet Engine has 3
main processes

converts energy-
rich, liquid fuel

forcing air past its
scientifically
shaped wings

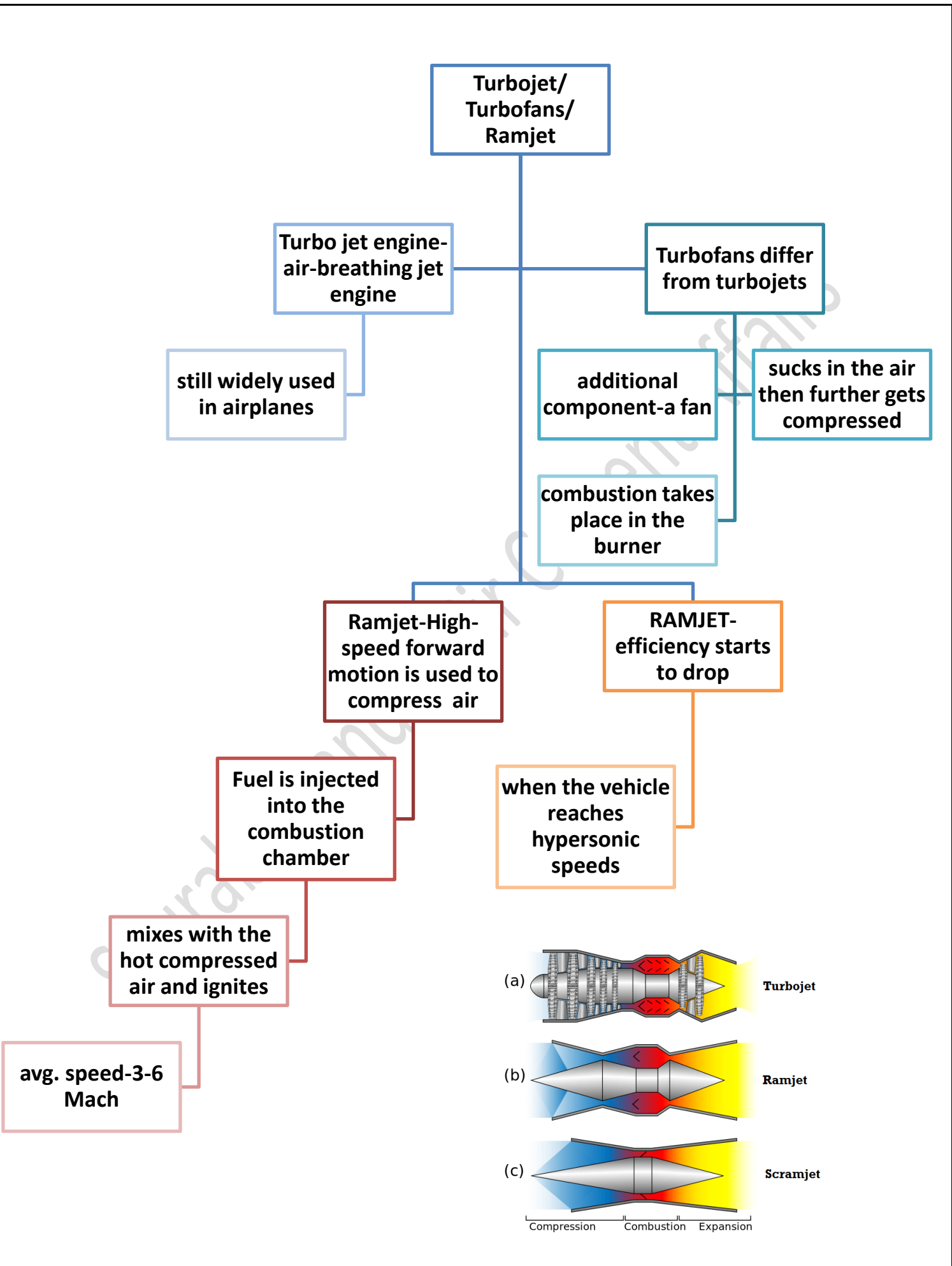
COMPRESSION- It
increases
pressure of air
trapped inside
the chamber

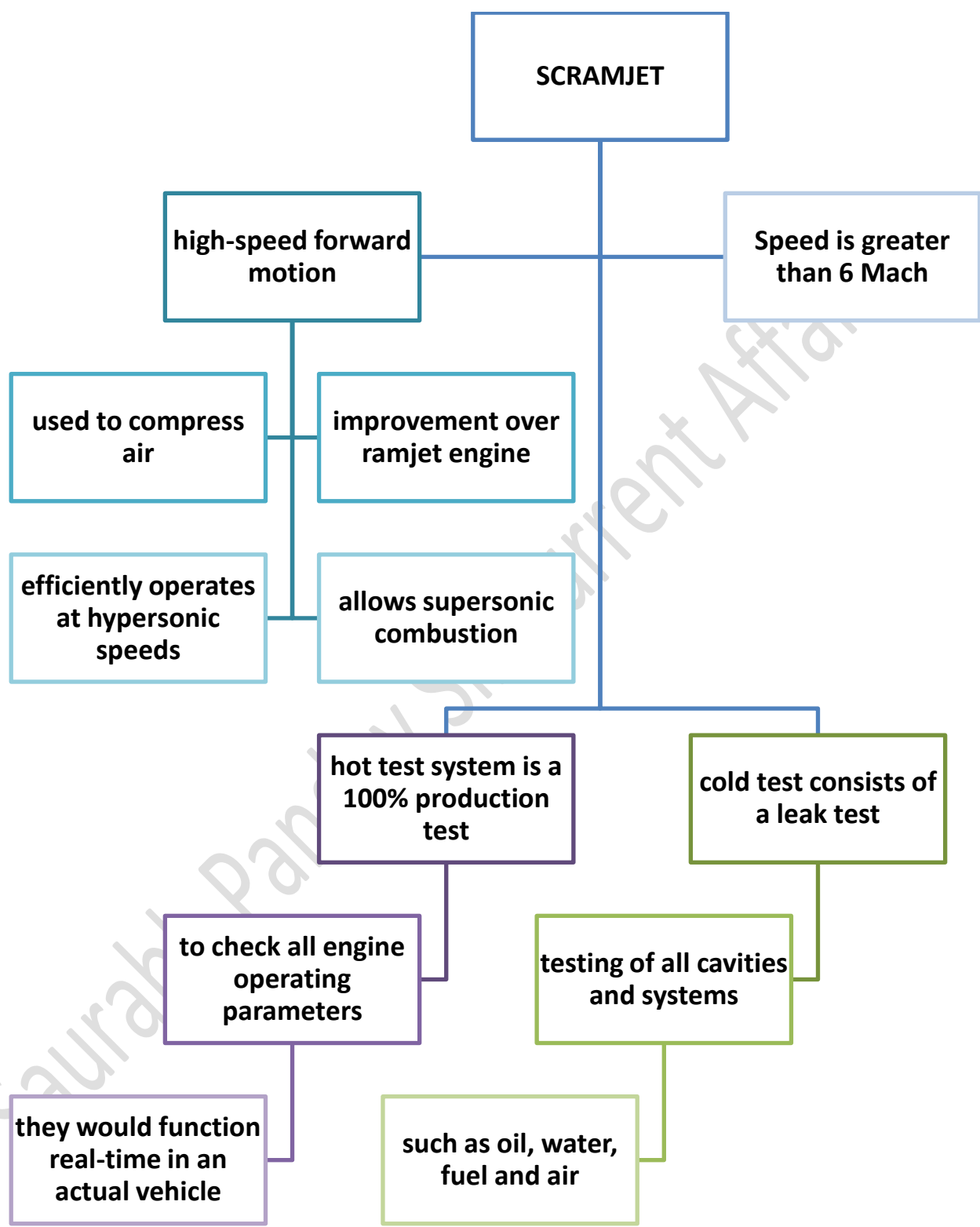
COMBUSTION-
increases
temperature of
air-fuel mixture
by releasing heat
energy from the
fuel

into a powerful
pushing force
called thrust

create an upward
force called lift
that powers it
into sky

EXHAUST-
increases velocity
of exhaust gases,
thereby powering
the vehicle





SCRAMJET

high-speed forward motion

Speed is greater than 6 Mach

used to compress air

improvement over ramjet engine

efficiently operates at hypersonic speeds

allows supersonic combustion

hot test system is a 100% production test

cold test consists of a leak test

to check all engine operating parameters

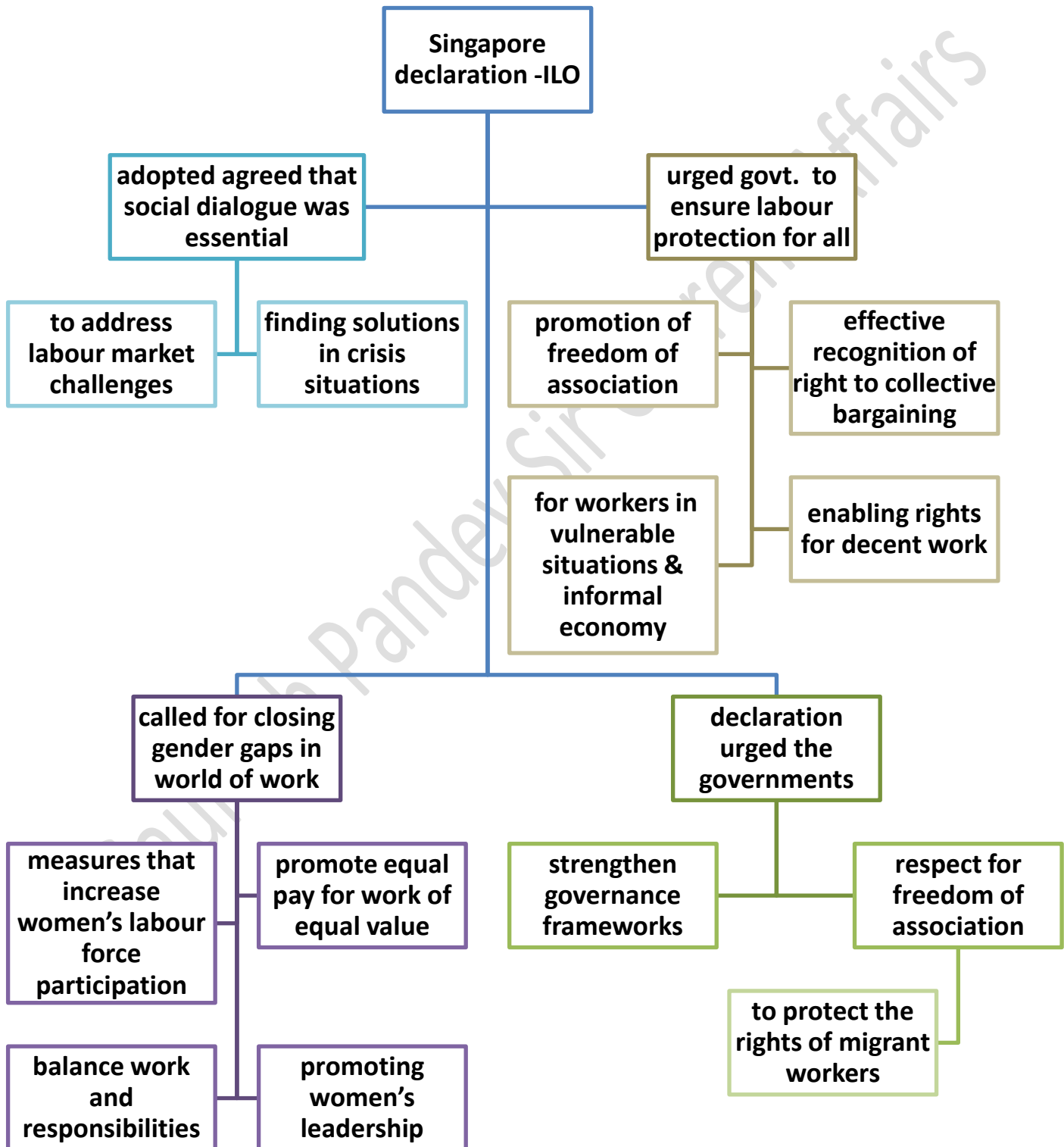
testing of all cavities and systems

they would function real-time in an actual vehicle

such as oil, water, fuel and air

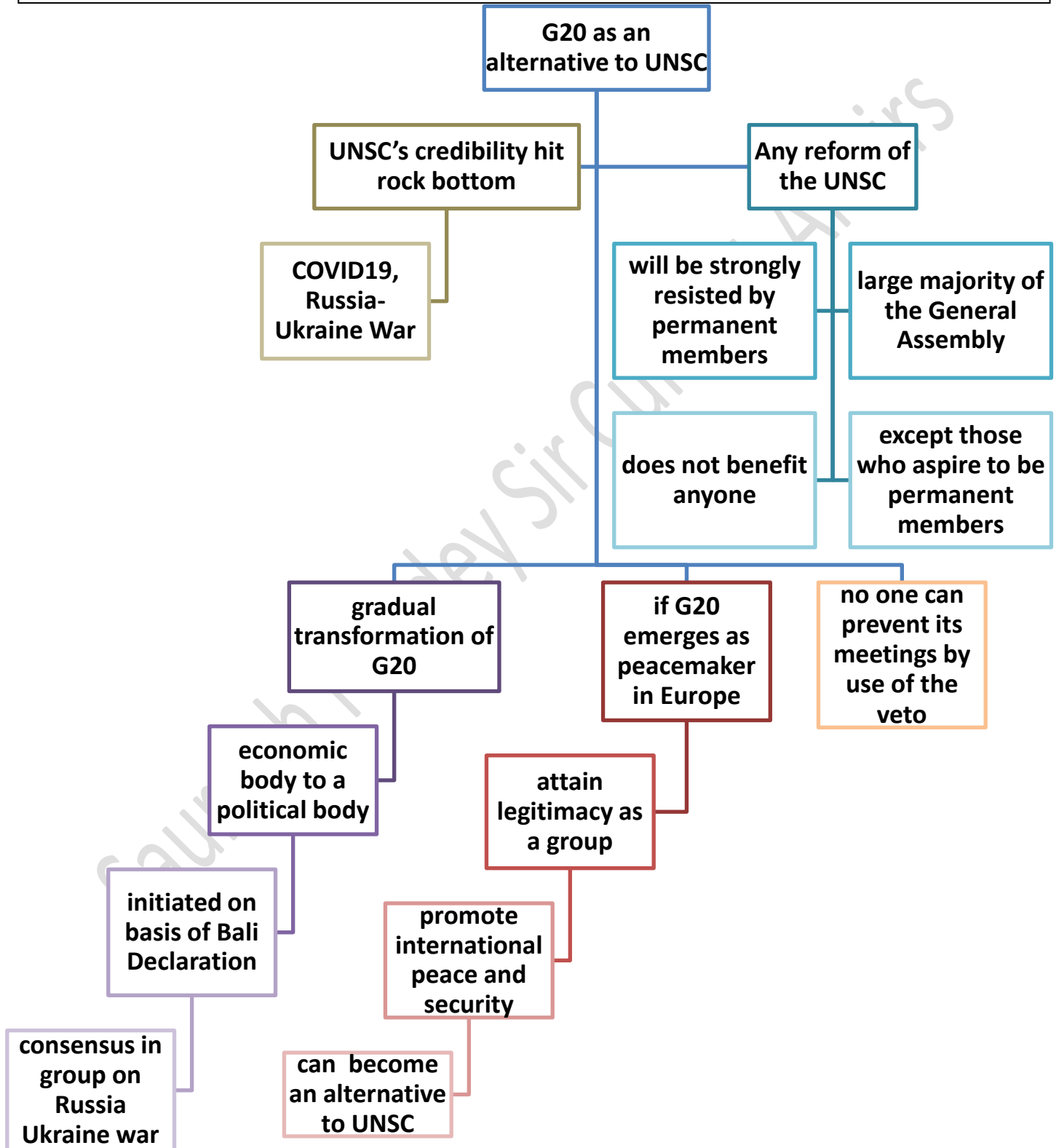
Singapore declaration –ILO

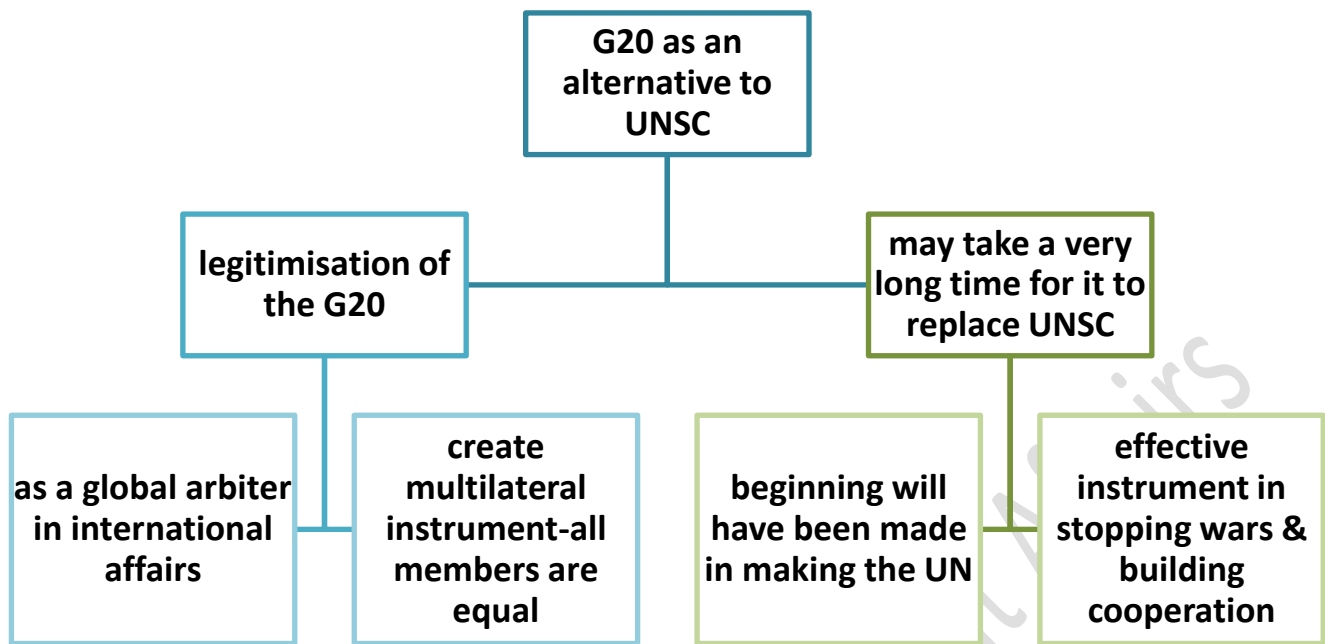
The 17th Asia and the Pacific Regional Meeting of the International Labour Organisation (APRM of ILO) set tenpoint priorities of national action for the member countries to deal with the issue of dwindling wages of workers, inflation and unemployment



G20 as an alternative to UNSC

The alphabetical rotation of the G20 presidency has brought India to the right place at the right time, especially when the world is looking for an alternative to the United Nations Security Council (UNSC), which has been paralysed by the veto

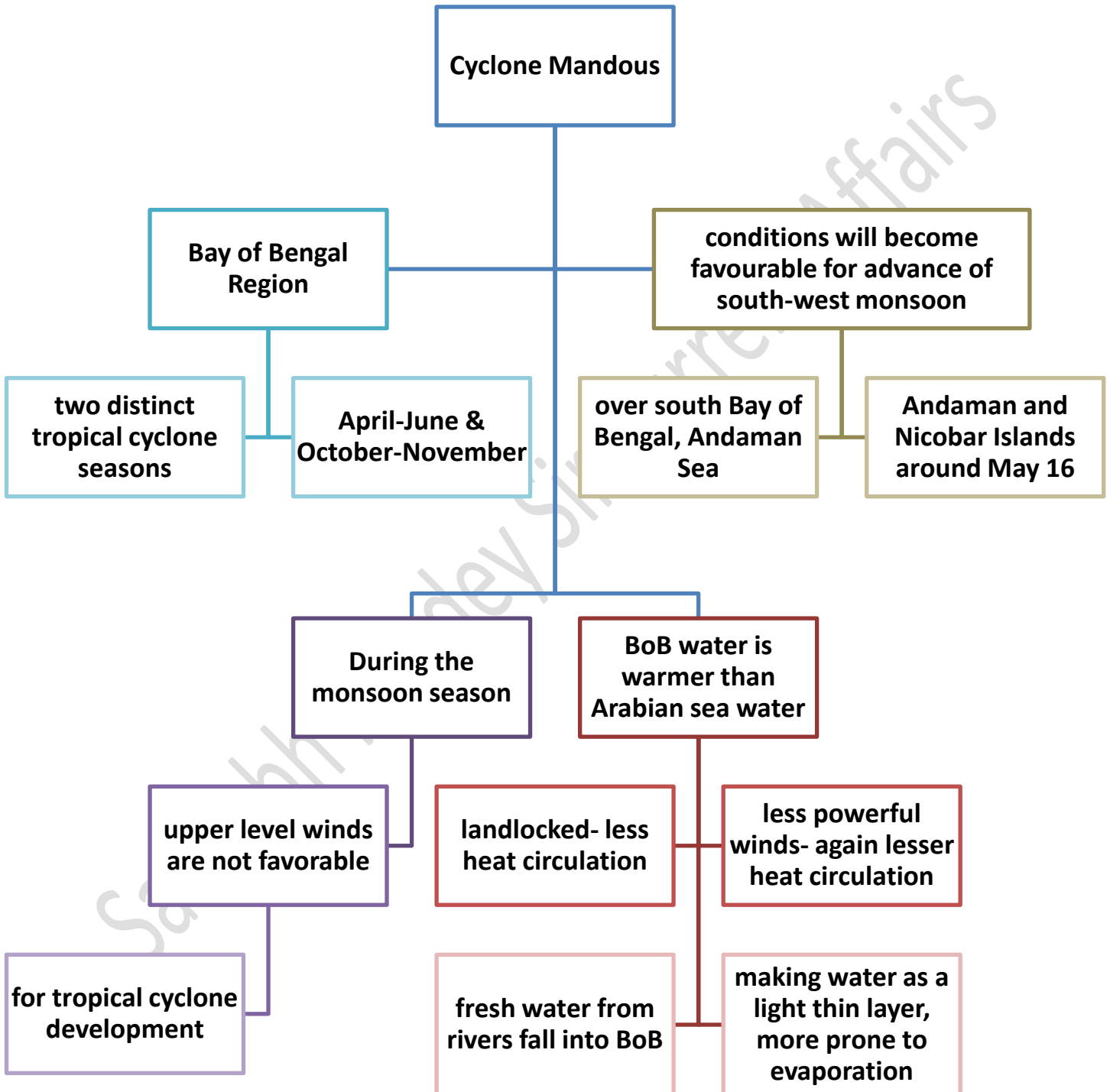




Saurabh Pandey Sir Current Affairs

Cyclone Mandous

The cyclonic storm will cross north Tamil Nadu, Puducherry, and adjoining south Andhra Pradesh coasts between Puducherry and Sriharikota



Cyclone Mandous

easterly jet-causing the windfall

in Arabian sea these winds will steer the windfall

eastern coastal States of India

towards eastern Africa not towards western coast of India

average, five to six significant cyclonic storms

difference between strengths of cyclones

emerge in Bay of Bengal every year

April-May-originate in situ in Bay of Bengal

few hundred kilometres from the landmass

prime seasons for tropical cyclones

October-December-remnants of cyclonic systems

that emerge in the Pacific Ocean but manage to come to Bay of Bengal

April & May just before the start of the monsoon

Oct. - Dec. immediately after end of monsoon

weakened after crossing southeast Asian landmass

near the South China Sea

Mandous

Cyclones are named as per guidelines

decided by World Meteorological Organisation

countries in affected region should name the cyclones

north Indian Ocean region

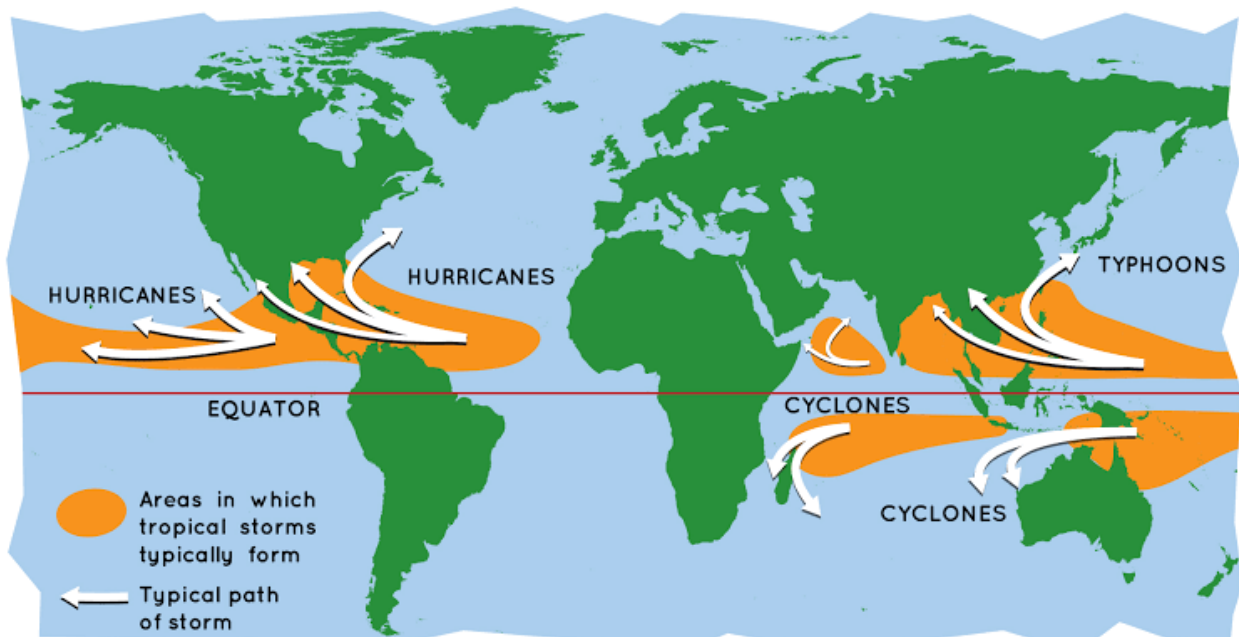
eight countries decide the names

India, Bangladesh, Maldives

Myanmar, Oman, Pakistan, Sri Lanka and Thailand

"Mandous" submitted by WMO member UAE

pronounced as 'Man-Dous'



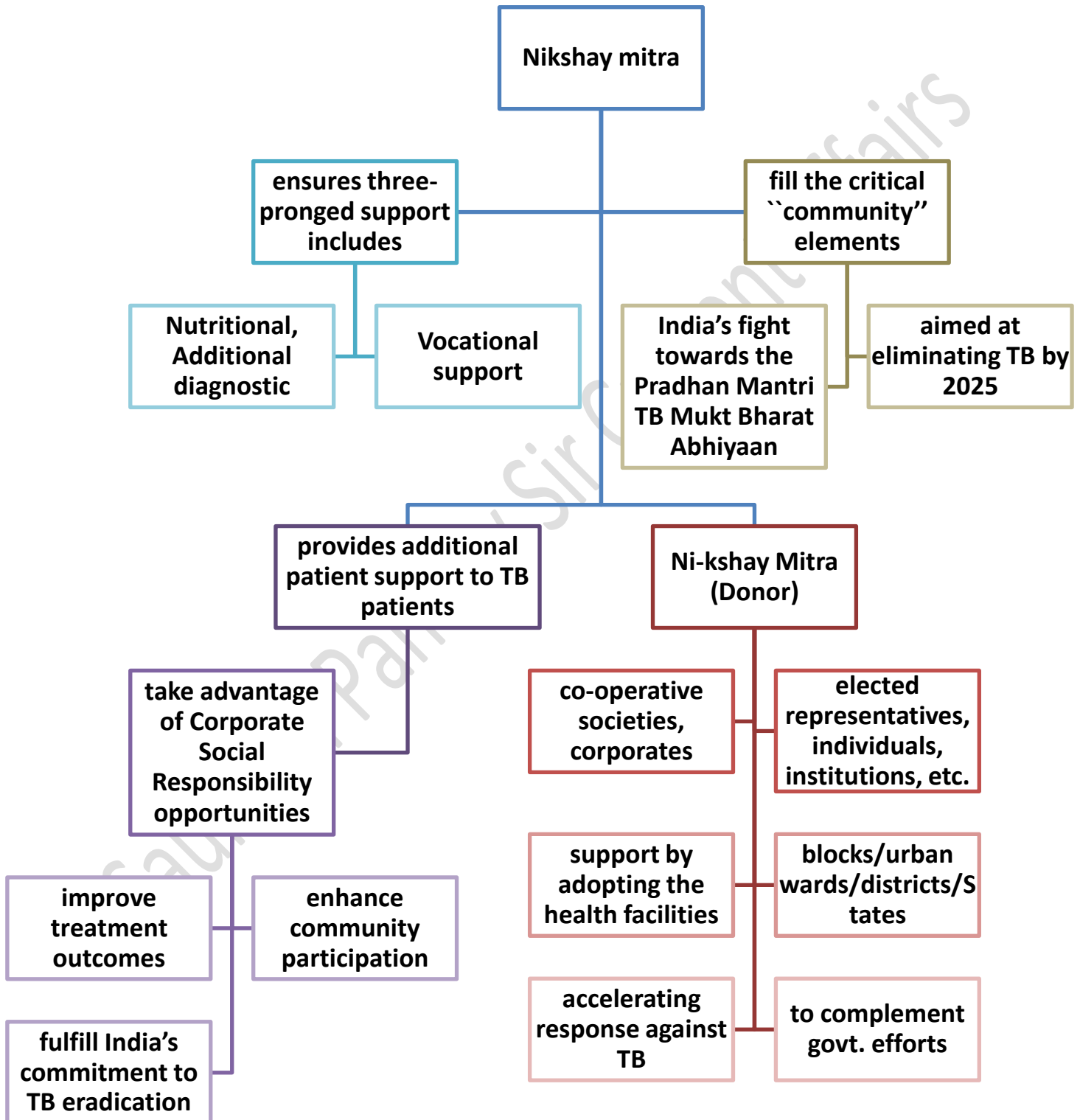
**The Hindu through Mind Maps
(Saurabh Pandey Sir)**

December 11
2022

The Hindu Mind
Maps

Nikshay mitra

The President has launched the 'Pradhan Mantri TB Mukh Bharat Abhiyan' and announced the Nikshay 2.0 portal to eliminate TB by 2025



Nikshay mitra

support provided to the patient

support to all the TB patients

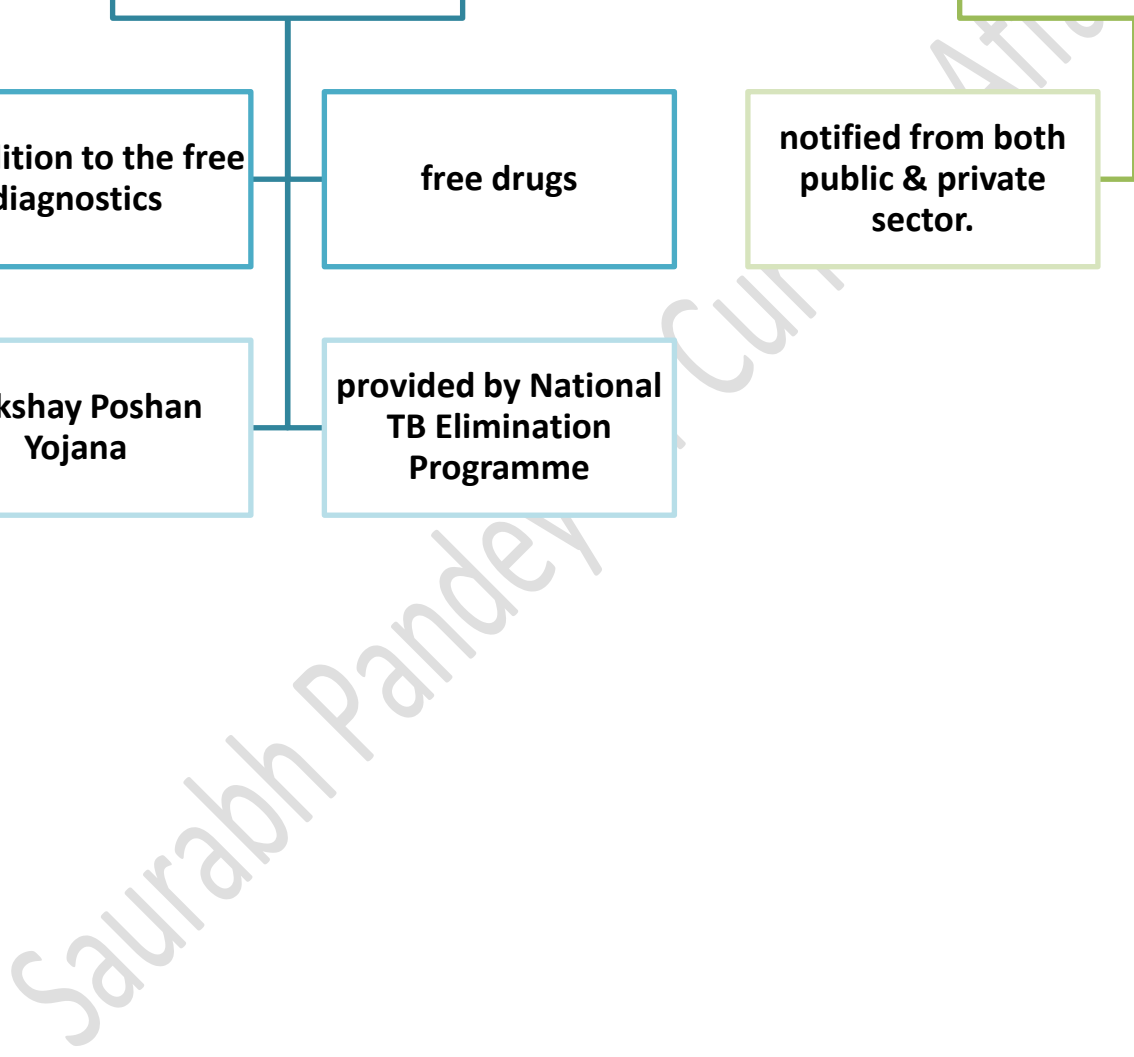
in addition to the free diagnostics

free drugs

notified from both public & private sector.

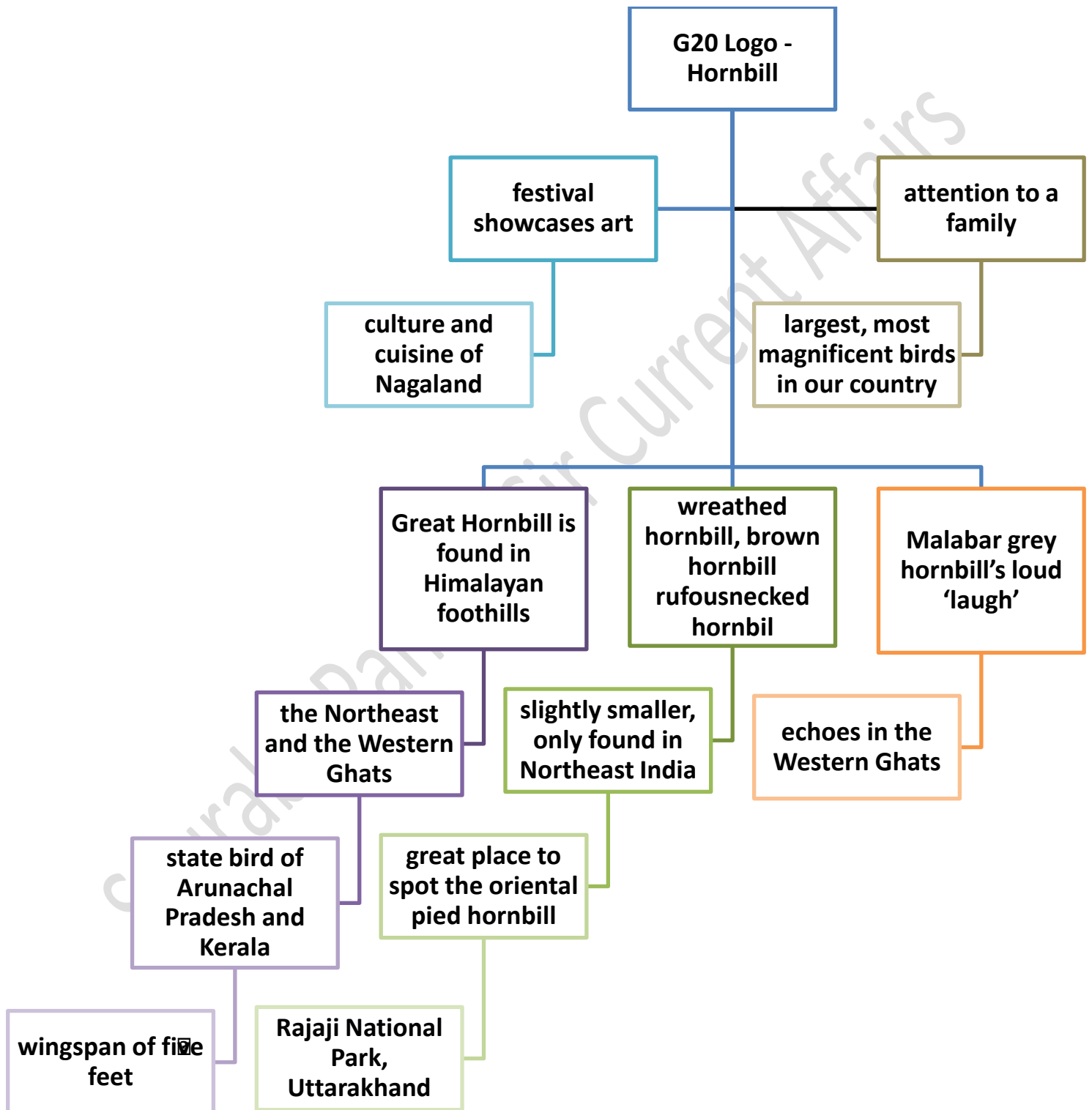
Ni-kshay Poshan Yojana

provided by National TB Elimination Programme



G20 Logo – Hornbill

The logo for India's upcoming G20 presidency was officially unveiled recently at the Hornbill festival in Nagaland.



G20 Logo - Hornbill

Indian grey hornbill

Hornbills prefer tall trees for their nests

smallest of the group

found all over

mutualism between these birds and trees

where they nest

often spotted in urban settings

Theosophical Society gardens in Chennai

large fruiteating birds

cupcalyx white cedar

tall trees-first targets of illegal logging

play a vital role in dispersing the seeds

suffer a 90% decline in seed dispersal

slow decline in hornbill numbers

about 80 rainforest trees

when hornbill populations decline

negatively impacting biodiversity of forests

CrCoNi

CrCoNi

subset of a class of metals

alloys in use today

called high entropy alloys

equal mix of each constituent element

contain a high proportion of one element

with lower amounts of additional elements

balanced atomic recipes

toughness of this material near liquid helium temperatures

bestow some of these materials

as high as 500 megapascals square root metres

extraordinarily high combination of strength

ductility when stressed

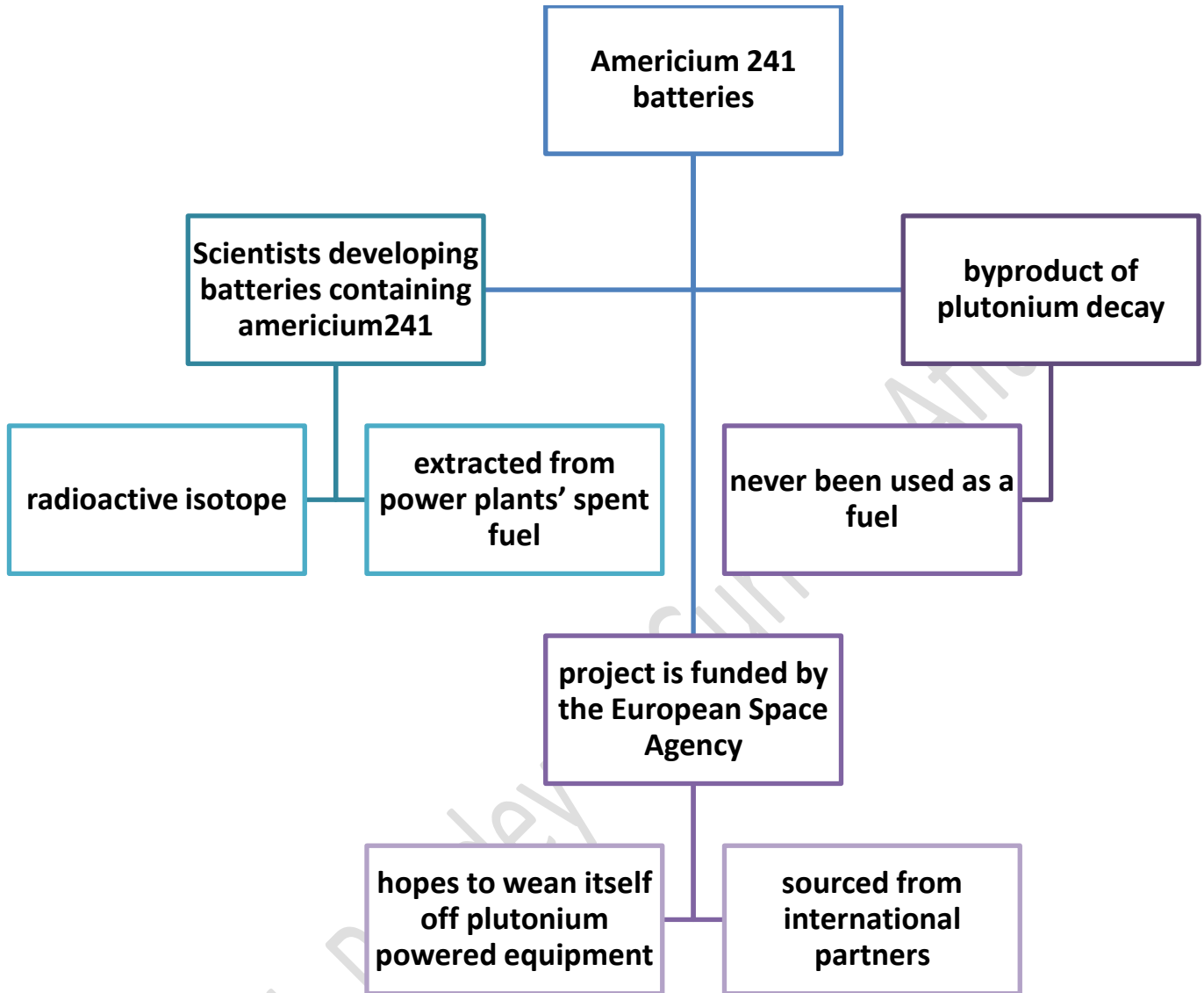
exceptionally strong and ductile

together make up "toughness"

highly malleable and impressively strong

strength and ductility improves as it gets colder

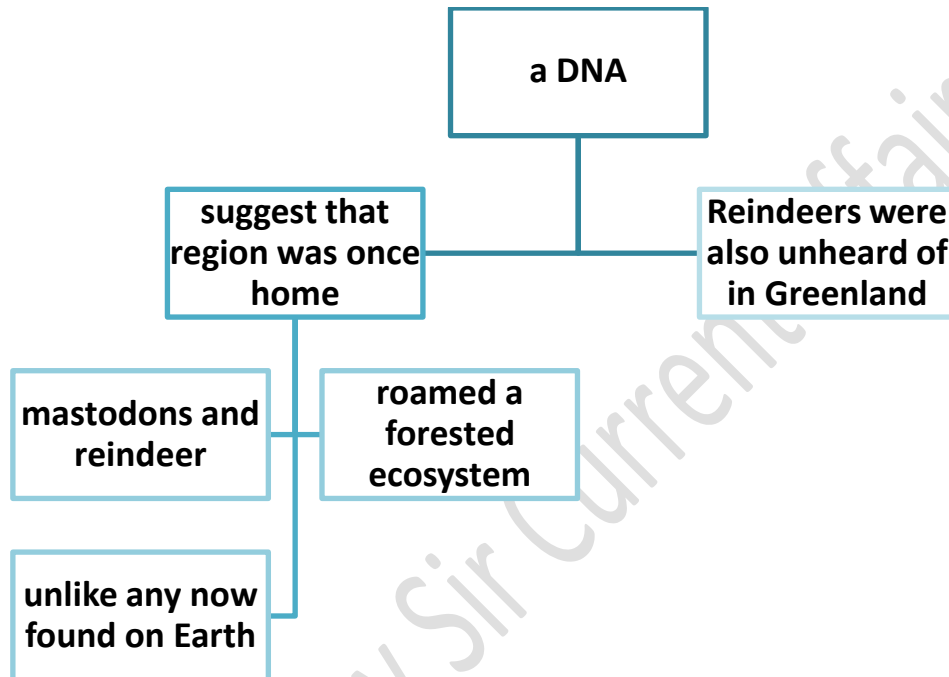
Americium 241 batteries



Nuclear waste could power space missions to the far reaches of the Solar System-places that are too dark for solar panel

a DNA

Two million year old DNA sequences -the oldest ever obtained-recovered from a 100m thick deposit of frozen mud and sand in the Northeastern tip of Greenland, shattering the record for ancient DNA preservation



Lecanemab

lecanemab

jointly developed
by pharma
companies

Biogen and Eisai

tested on
patients with
early Alzheimer's

Results of the
study

published in New
England Journal
of Medicine

modest effects in
arresting decline

of cognitive and
functional
aspects

in patients with
early disease

belongs to a class
of drugs

called
monoclonal
antibodies

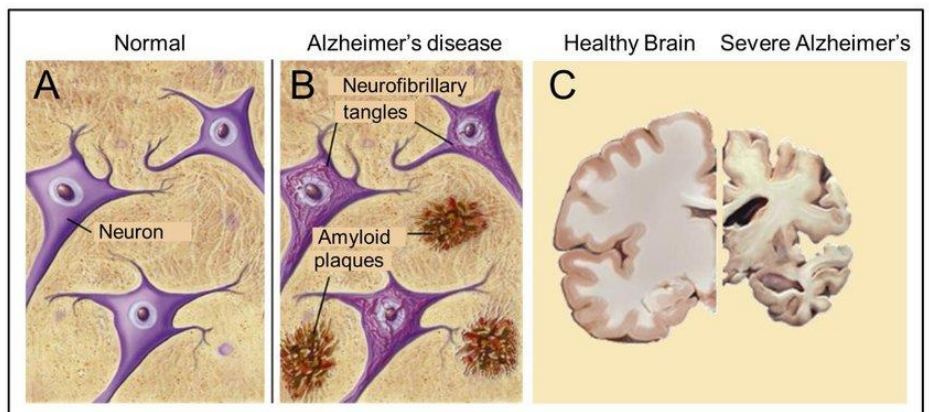
antibody -
mediated drugs
target beta
amyloid

protein
deposition

For years amyloid
plaques have
thought to be an
important target for
treatment in
Alzheimer's. This
class of drugs does
precisely that

seen in patients
with Alzheimer's
disease,

disrupts cells
function



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December 12
2022

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Maps

Section 125 of RPA

Section 125 in The Representation of the People Act, 1951

Promoting enmity between classes in connection with election

Any person who in connection with an election under this Act

promotes or attempts to promote

on grounds of religion, race, caste, community or language, feelings of enmity

between different classes of the citizens of India

shall be punishable with imprisonment

or a term which may extend to three years, or with fine, or with both

Saurashtra University
Law Department

China test

China test

consists of three distinct elements

2-assessment of whether India's decision

1-assessment of how a certain Indian decision

specific regional development

or certain regional development

require India to make modifications

squares with Chinese regional strategy or interests

at the level of secondary contradictions

3-an assessment of whether this would require

withdrawal from the region

lack of India U.S. strategic engagement

any major policy changes internally

Washington is seeking to re-engage southern Asia

help Beijing's long term objectives

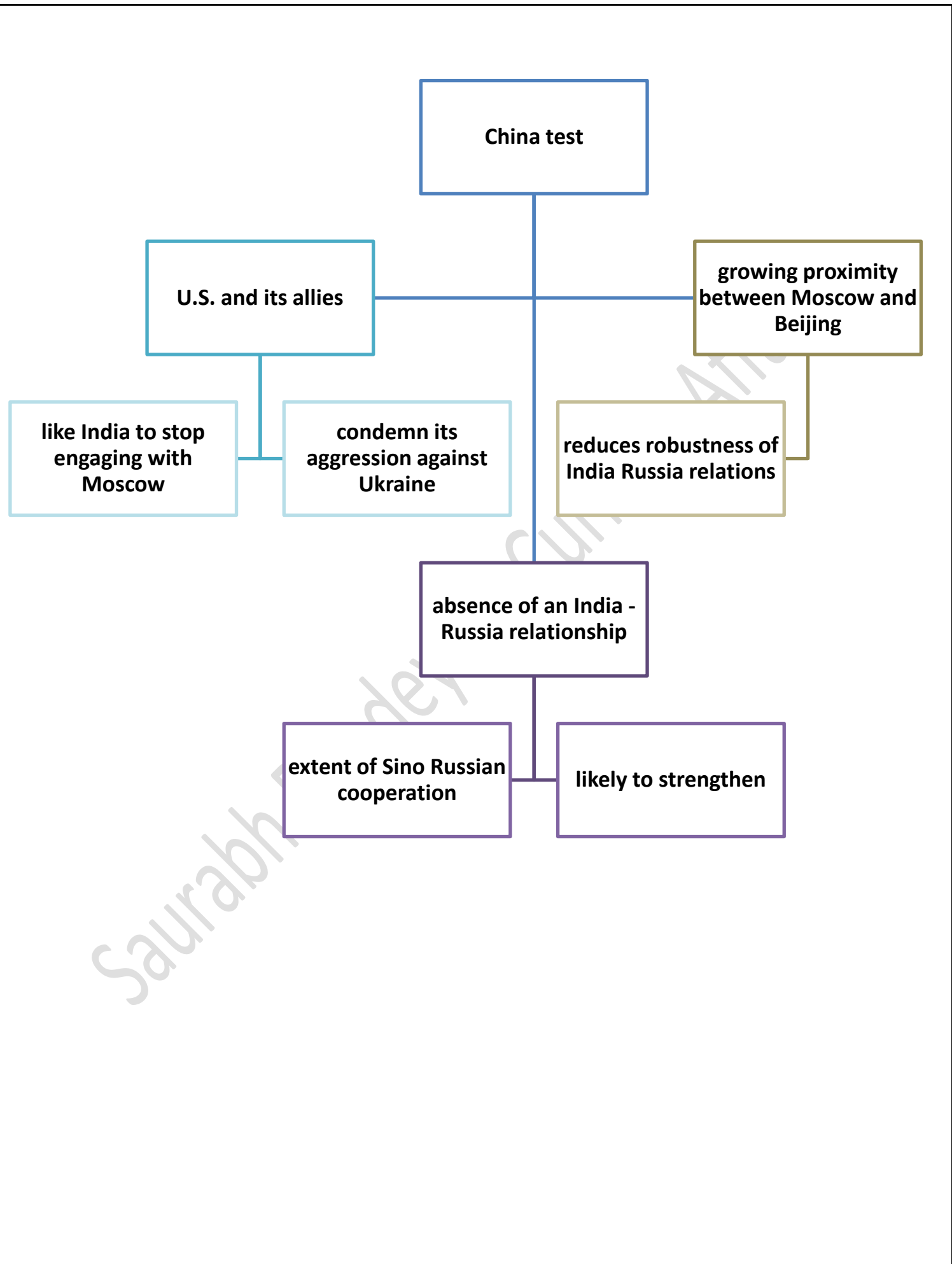
lessons New Delhi learnt (standoff with China)

New Delhi should not give into the short term temptation

Southern Asia-Pakistan, South Asia in general, the IndoPacific, and perhaps even the Taliban

consequence of India's growing proximity to the U.S

not being on the wrong side of China



China test

U.S. and its allies

**growing proximity
between Moscow and
Beijing**

**like India to stop
engaging with
Moscow**

**condemn its
aggression against
Ukraine**

**reduces robustness of
India Russia relations**

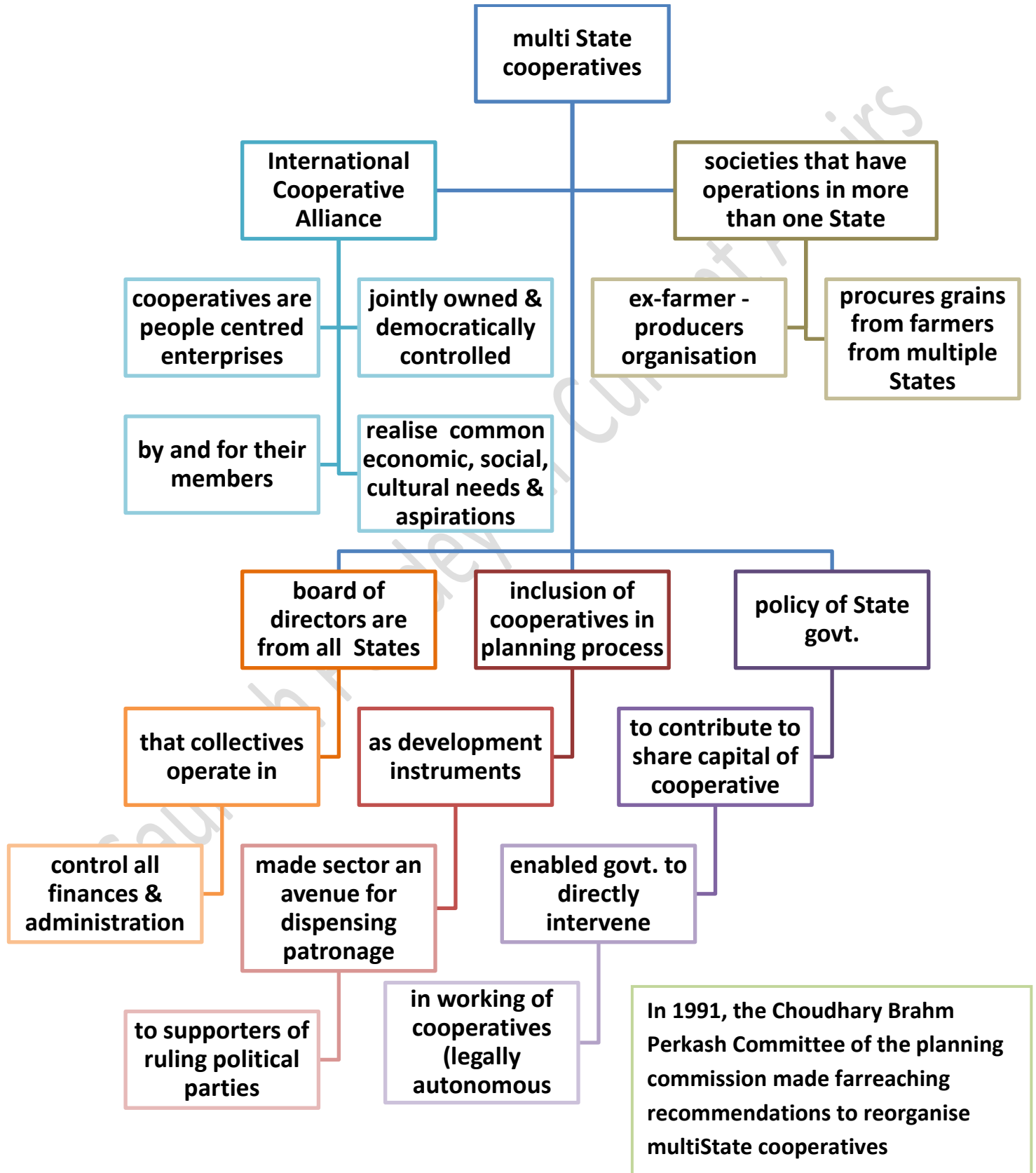
**absence of an India -
Russia relationship**

**extent of Sino Russian
cooperation**

likely to strengthen

Bill to amend the MultiState Cooperative Societies (MSCS) Act, 2002

The Bill to amend the MultiState Cooperative Societies (MSCS) Act, 2002, was introduced in the Lok Sabha



What does the Bill seek to change?

plug the "loopholes" in the MSCS Act

amendments-introduced to improve governance

Centre introduced a Bill

seeking to amend the 2002 law

reform the electoral process

strengthen monitoring mechanisms

more "transparency" "ease of doing business"

enhance transparency, accountability

seeks to improve composition of board

Bill provides for the creation

ensure financial discipline

central Co-operative Election Authority

enabling the raising of funds

supervise electoral functions of MSCSs

in multi State cooperative societies

chairperson, vice chairperson, three members appointed by Centre

What does the Bill seek to change?

envisages the creation of a Co-operative Rehabilitation

fund shall be financed

Reconstruction and Development Fund

for revival of sick multi State co-operatives societies

by existing profitable multi - State cooperative societies

deposit either ₹1 crore

or 1% of the net profit into the Fund

To promote equity & facilitate inclusiveness

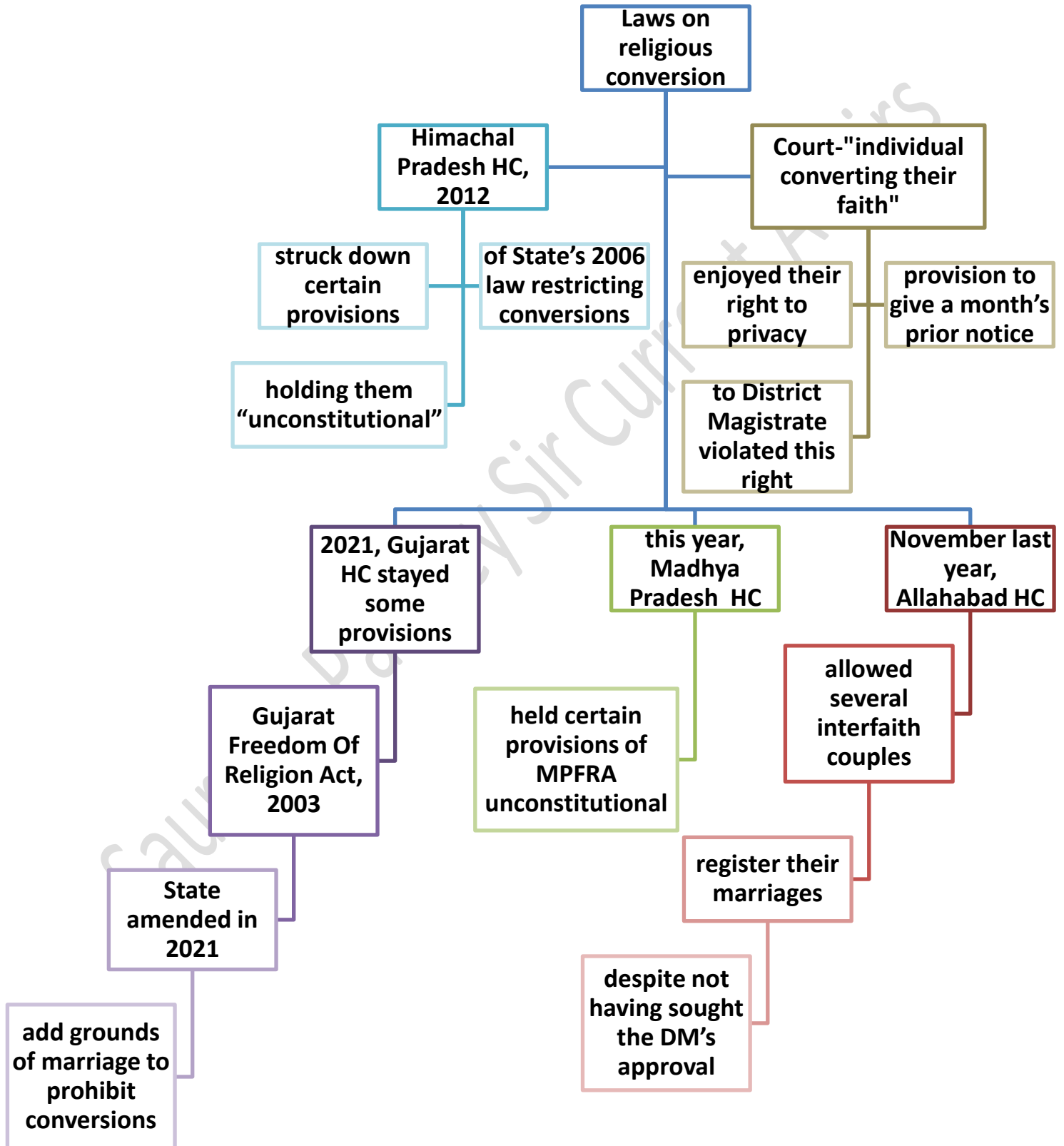
provisions relating to representation of women

SC/ST members

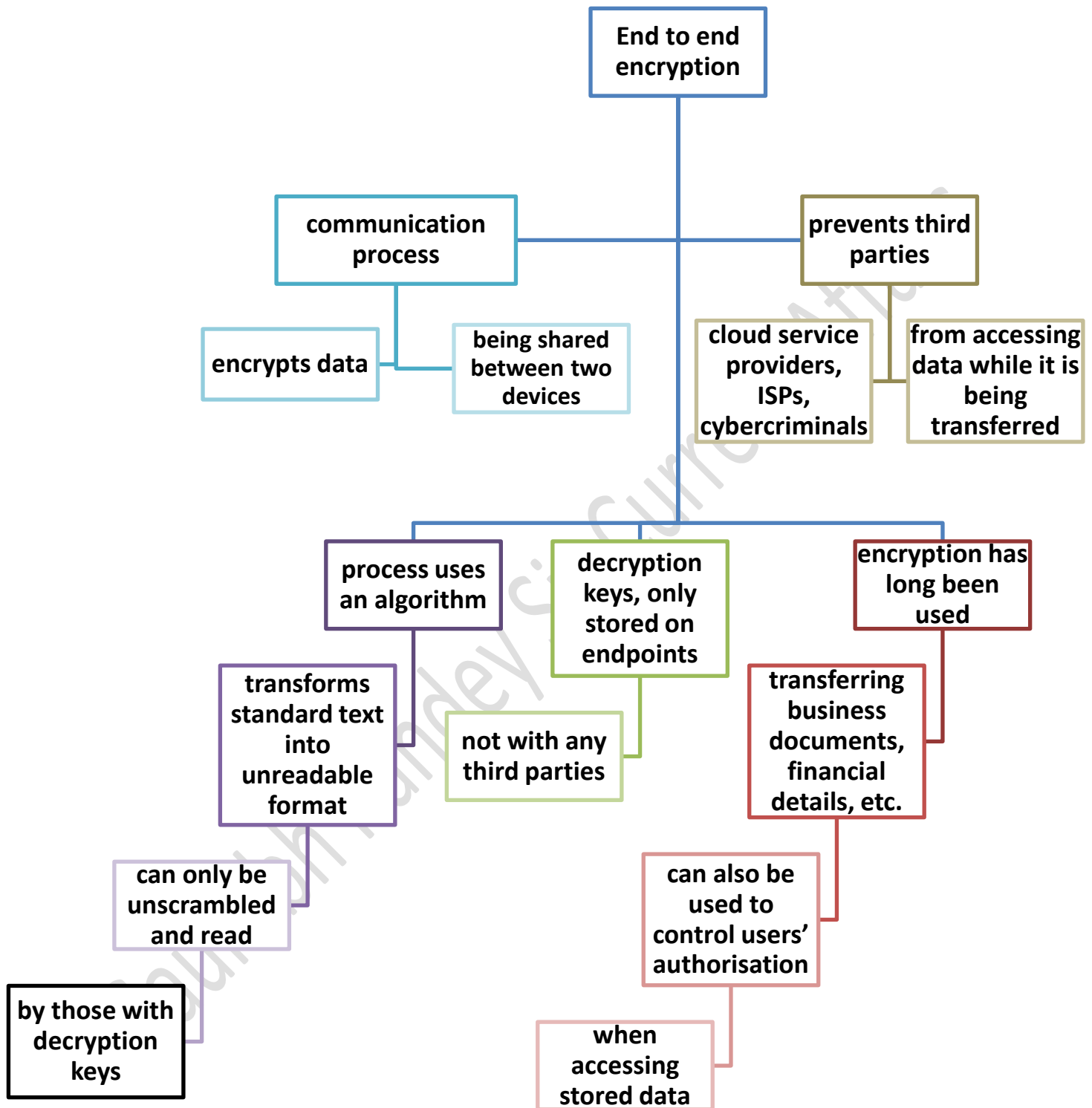
on boards of multi-State cooperative societies

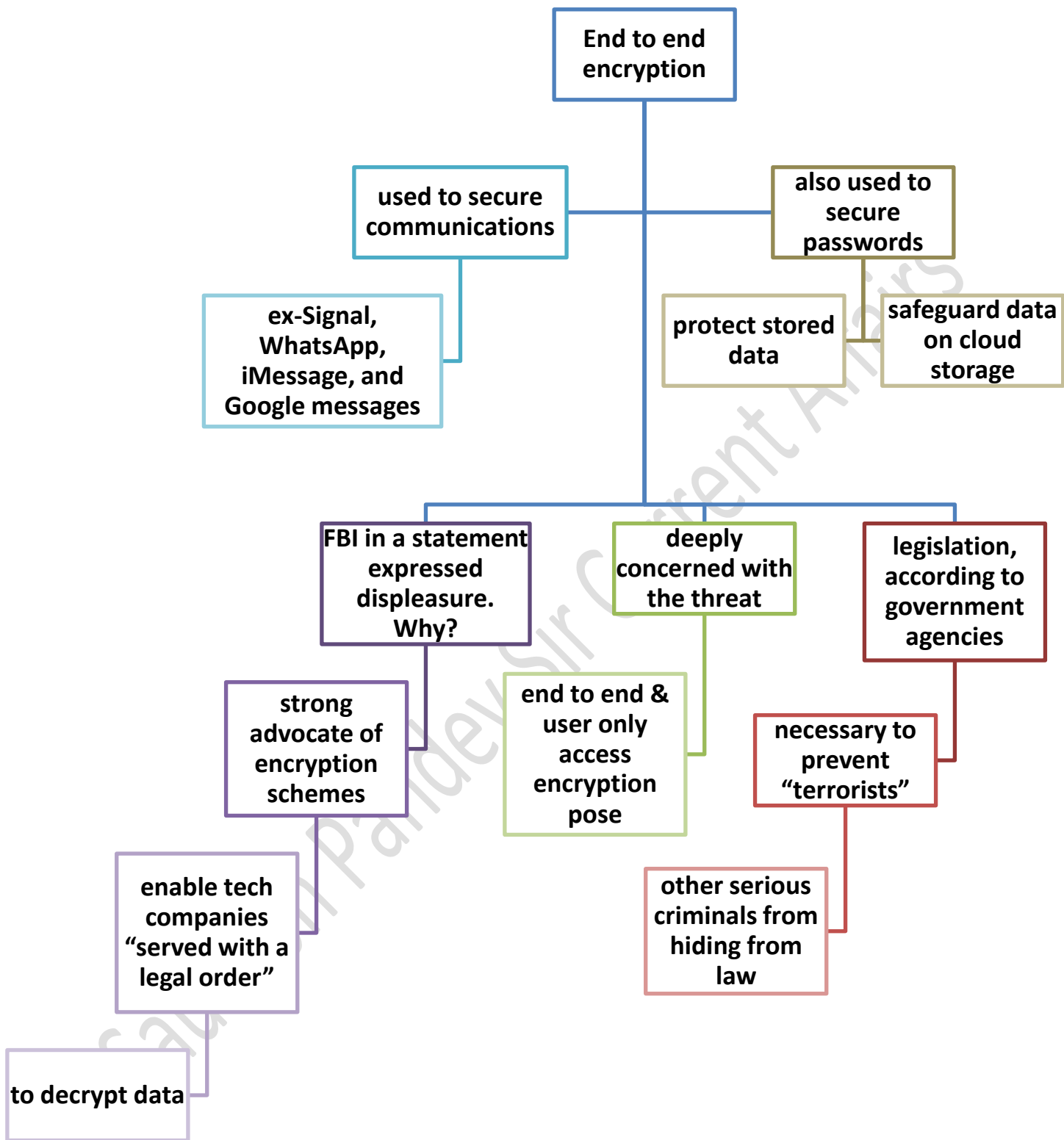
Laws on religious conversion

In post independent India, Odisha became the first State to enact a law restricting religious conversions, which later became a model framework for other States



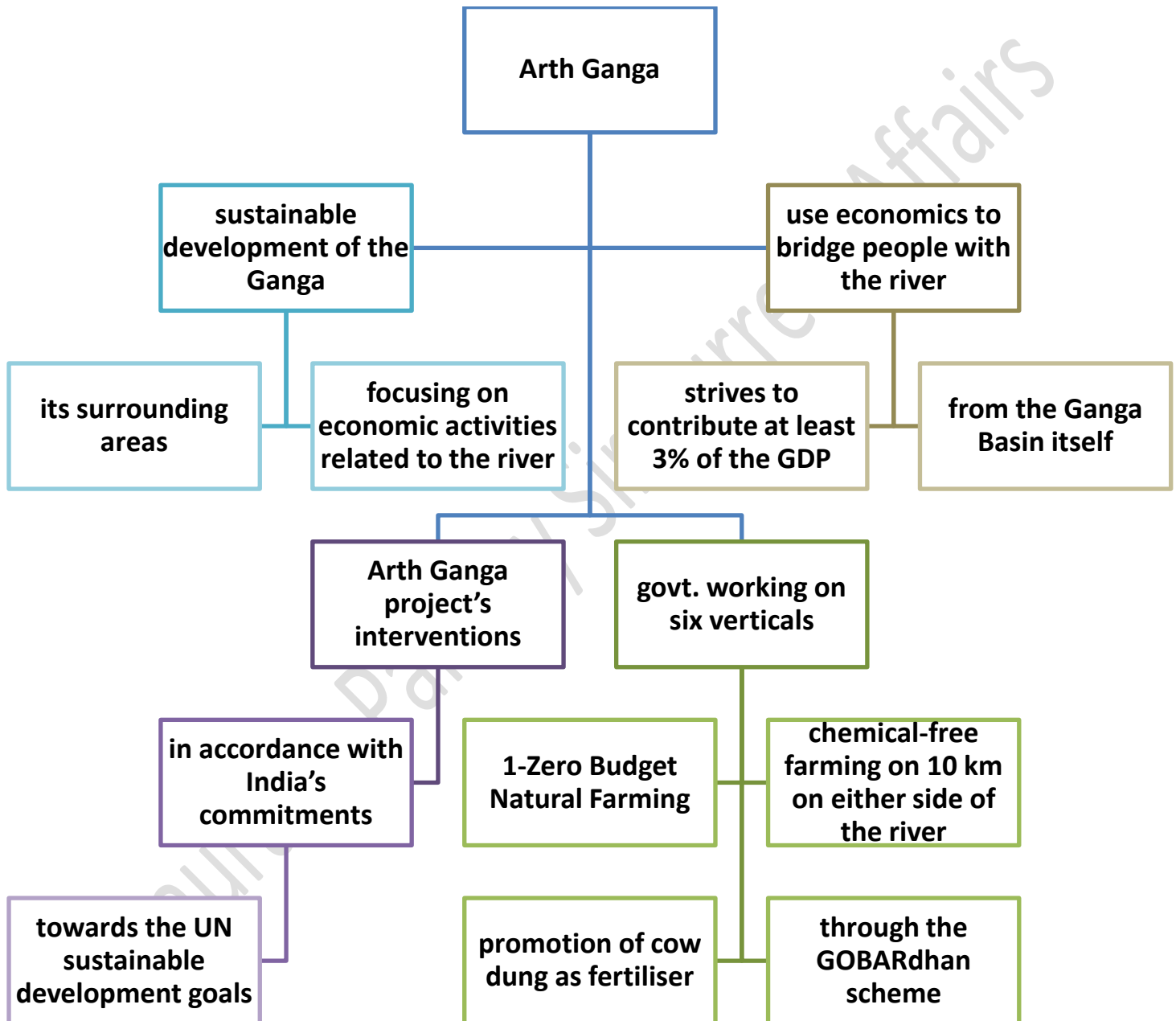
End to end encryption





Arth Ganga

PM first introduced the concept during the first National Ganga Council meeting in Kanpur in 2019, where he urged for a shift from Namami Gange, the Union Government's flagship project to clean the Ganga, to the model of Arth Ganga.



Arth Ganga

2-Monetization and Reuse of Sludge & Wastewater

reuse treated water for irrigation, industries

revenue generation for Urban Local Bodies

3-involve Livelihood Generation Opportunities

creating haats where people can sell local products, etc.

4-increase public participation

increasing synergies between stakeholders

involved with the river

5-promote the cultural heritage

tourism of Ganga and its surroundings

through boat tourism, adventure sports, etc.

6-promote institutional building

empowering local administration

for improved water governance

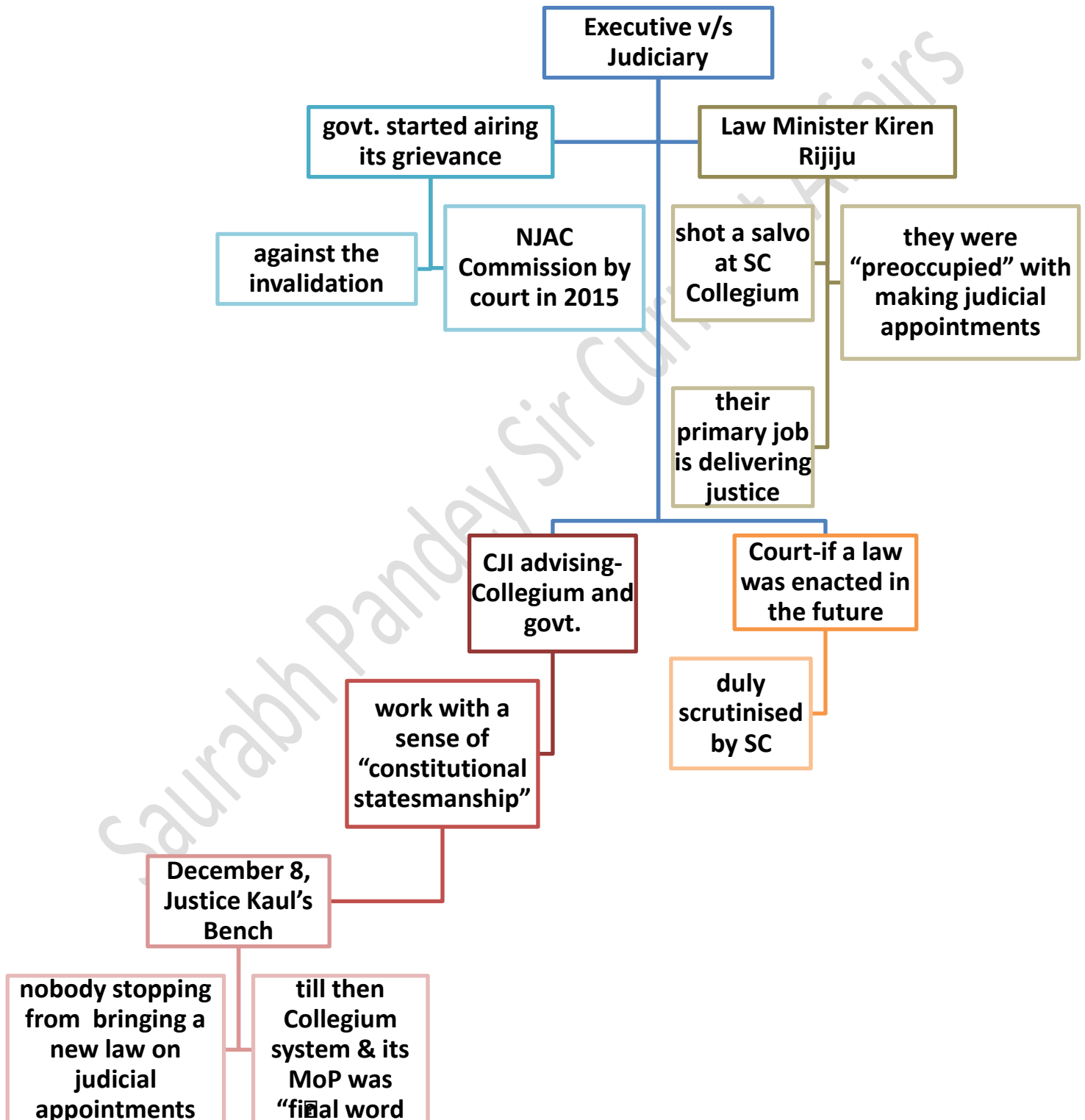
The Hindu through Mind Maps
(Saurabh Pandey Sir)

December 13
2022

The Hindu Mind
Maps

Executive v/s Judiciary

A major confrontation is on between the Union government and the Supreme Court over the former's resentment towards the Collegium system of appointments and its push to have a dominant say in judicial appointments and transfers.



**Executive v/s
Judiciary**

**parliamentary standing
committee on Law and
Personnel**

**both institutions
were not adhering to
the timeline**

**both the
judiciary and the
govt.**

**need to do some
"outofthebox"
thinking**

**given in the
Second Judges
case and MoP**

**MoP required
the Chief Justices
of HCs**

**deal with
"perennial"
judicial vacancies
in HCs**

**initiate the
proposals six
months prior to
vacancies**

**Constitution
(99th
Amendment) Act**

**procedure for
appointment of
judges to SCs & HCs**

**passed by
Parliament**

**laid down in the
MoP prepared in
1998**

**provide for a
National Judicial
Commission**

**initiation of a
proposal for
appointment of
SC judges**

HC judges

**vested with the
CJI**

**Chief Justice of
the High Courts
concerned**

**Executive v/s
Judiciary**

**October 12, 2015,
court struck down
NJAC Act**

**Centre argues
that the
Collegiums**

**Constitution
Amendment**

**give politicians
and civil society**

**at the SC and HC
levels**

**delaying judicial
appointments**

**final say in the
appointment of
judges to highest
courts**

**NJAC was a good
law thwarted by
the court**

**Nov. 30, 2022,
332 judicial
vacancies in HCs**

**HCs required to
make
recommendations**

**HCs are not making
recommendations**

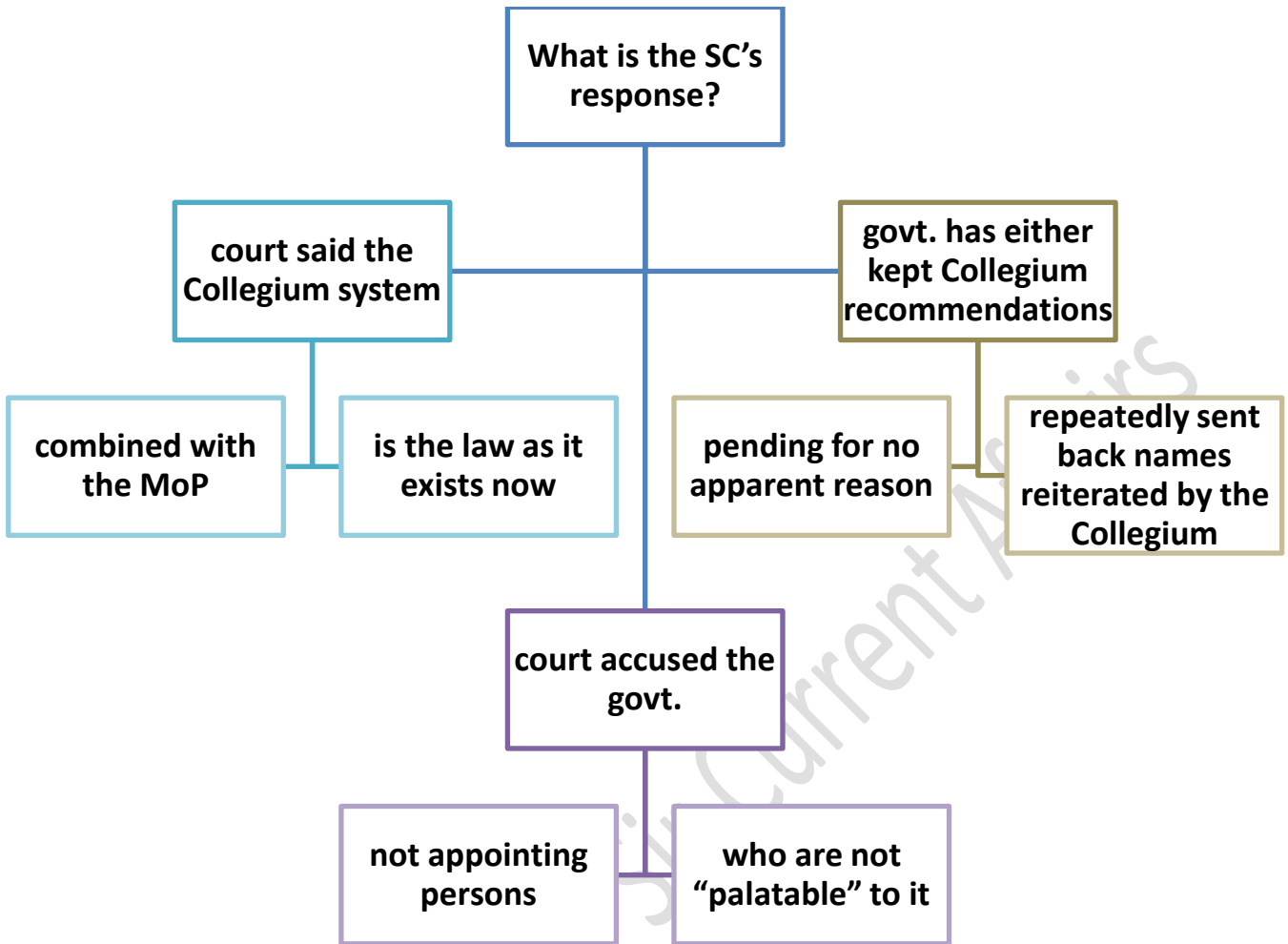
**out of a total
sanctioned
strength of 1,108
judges**

**for the
remaining 186
vacancies (56%)**

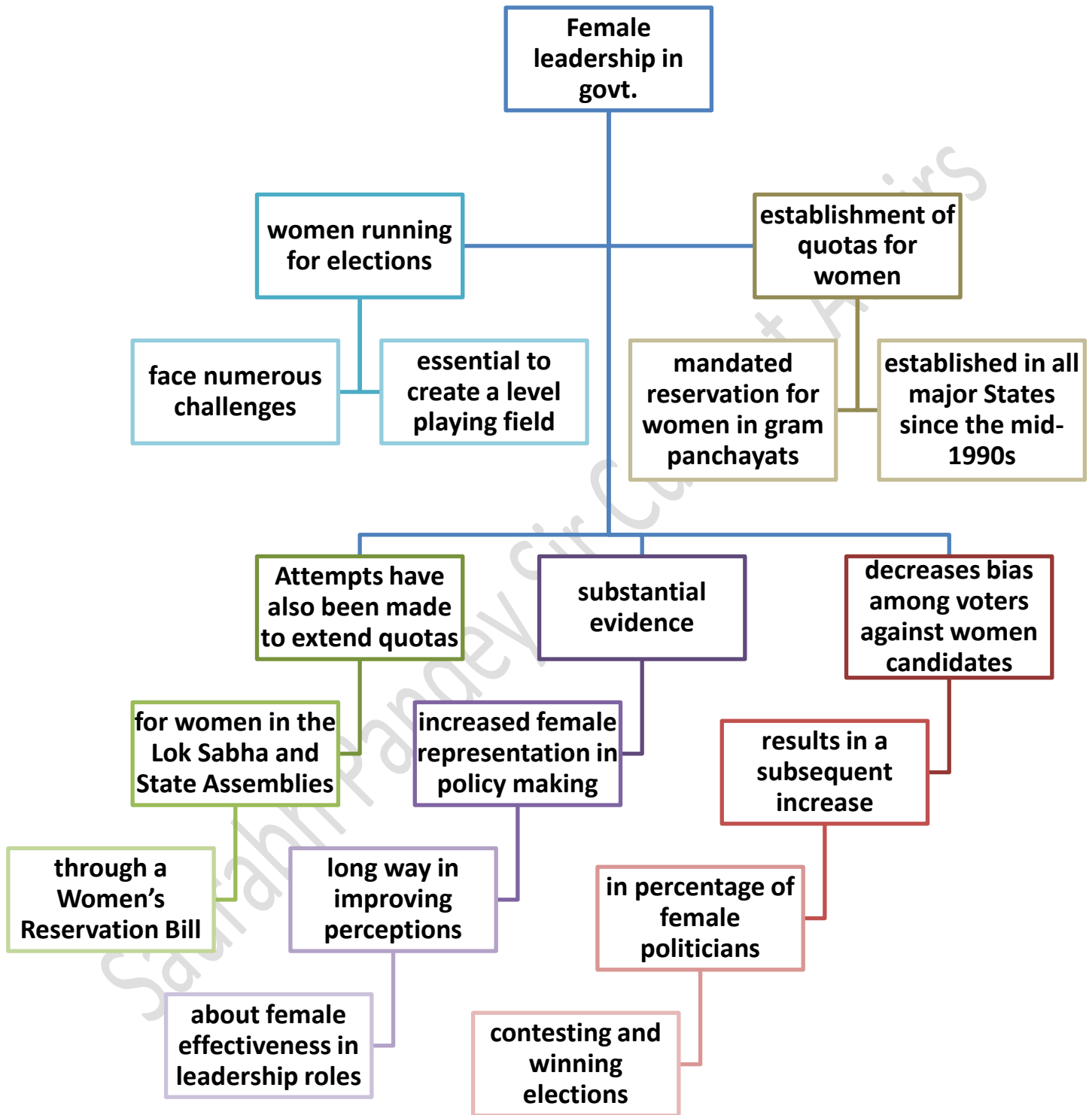
**six months in
advance of a
vacancy**

**HC made 146
(44%)
recommendations**

**under
consideration of
the govt. and SC**

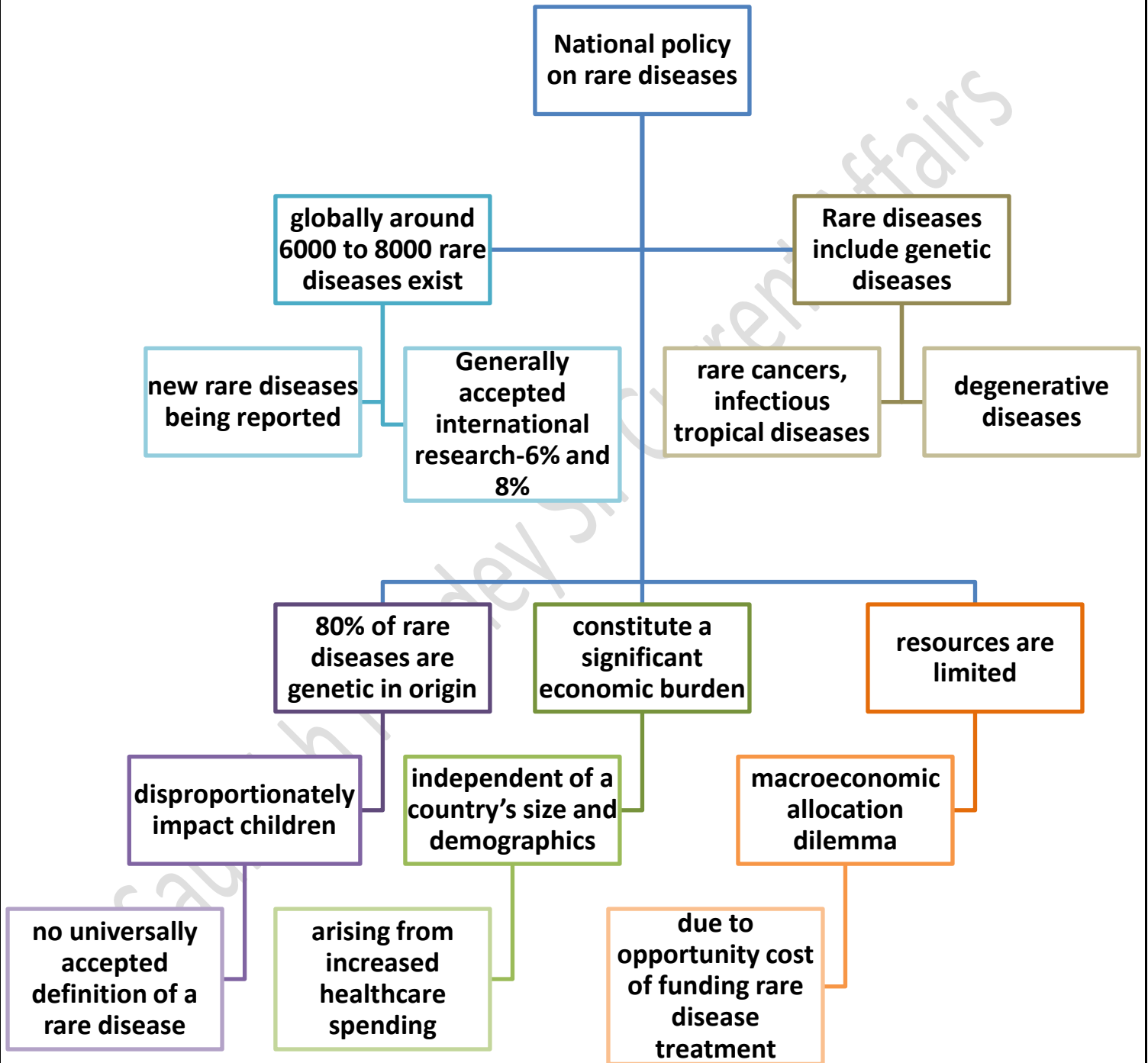


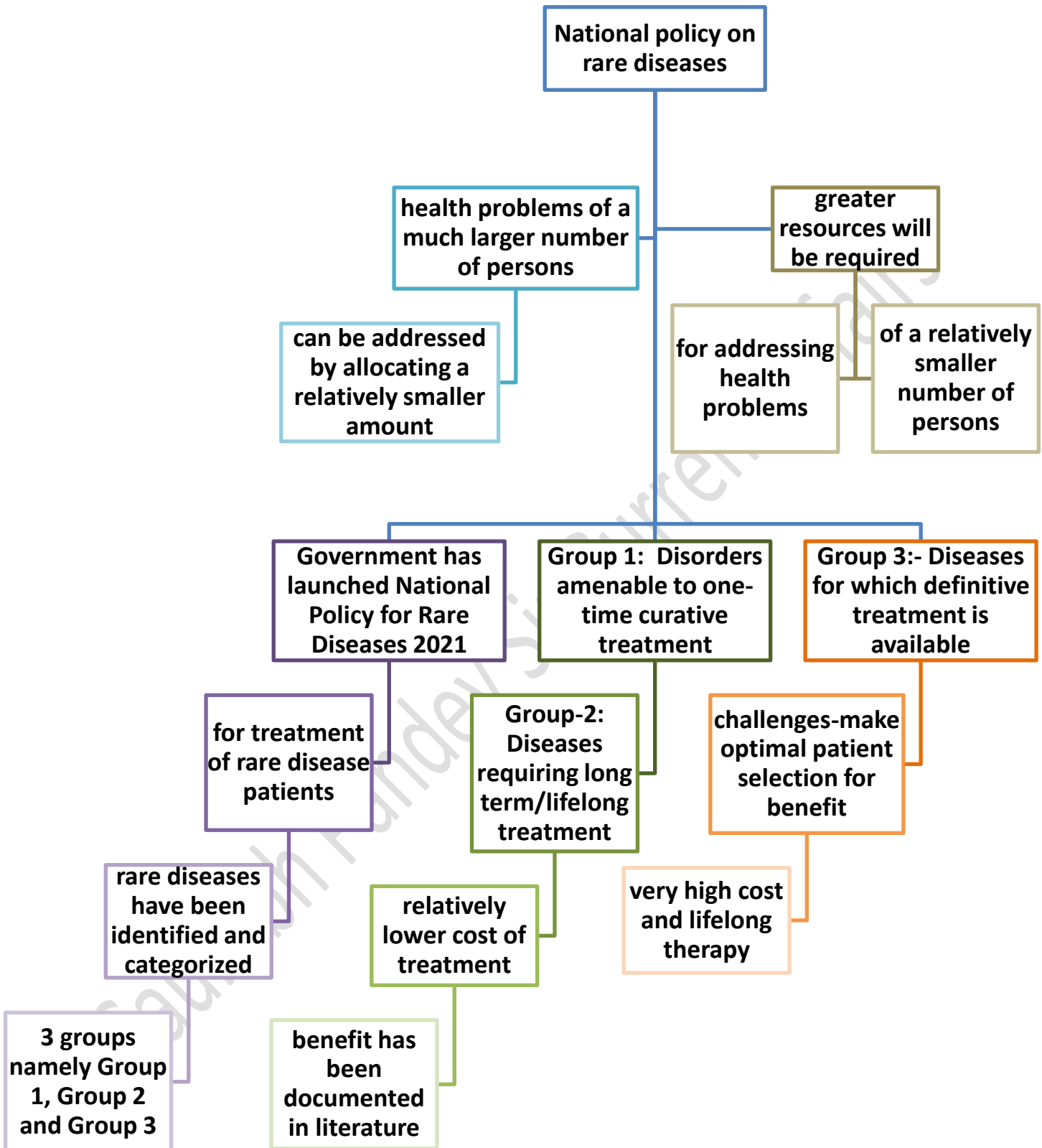
Female leadership in government



National policy on rare diseases

A rare disease is a health condition of low prevalence that affects a small number of people compared with other prevalent diseases in the general population





National policy on rare diseases

Provision for financial support of up to Rs. 50 lakhs

In order to receive financial assistance for treatment

to patients suffering from any category of the Rare Diseases

treatment in any of Centre of Excellence mentioned in NPRD-2021

patient of the nearby area

approach the nearest Centre of Excellence

get him assessed and avail benefits

outside Umbrella Scheme of Rashtriya Arogya Nidhi

Eight (08) CoEs identified

NPRD, 2021 has provisions

diagnosis, prevention and treatment of rare diseases

promotion of research

development for diagnosis and treatment of rare diseases

Five Nidan Kendras

promotion of local development & manufacture of drugs

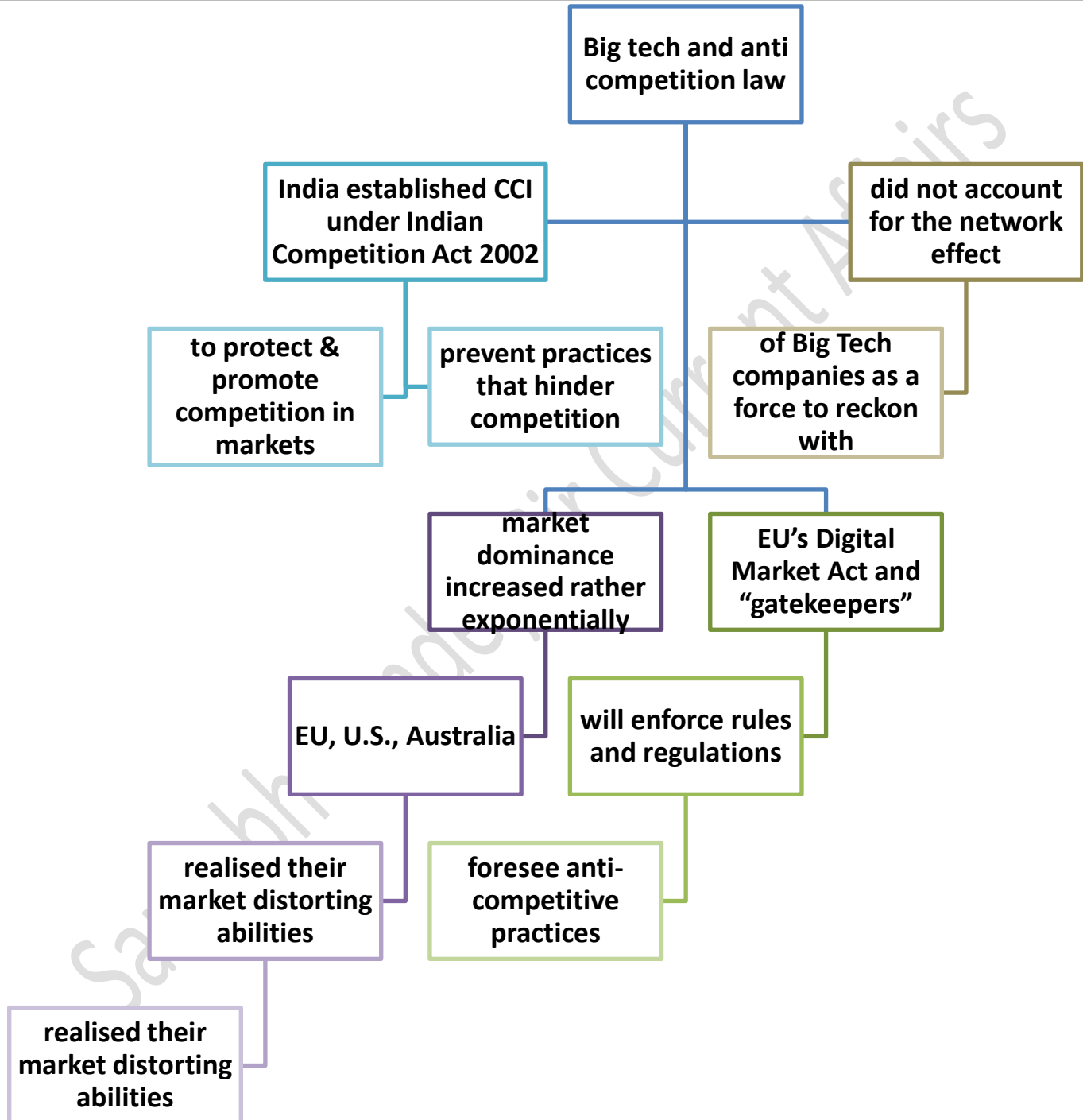
set up for genetic testing and counselling services

creation of conducive environment

indigenous manufacturing of drugs at affordable price

Big tech and anti competition law

The Indian antitrust body, the Competition Commission of India (CCI)'s move, in October, to impose a penalty of ₹1,337.76 crore on Google for abusing its dominant position in the android mobile device ecosystem



Market dominance issue

CCI says, intent of Google's business

network effects, status quo bias

make users on its platforms

abide by its revenue earning service

created significant entry barriers for competitors

enter or operate in markets concerned

directly affect sale of their online advertising services

By the time an order is passed

pricing plays a fundamental role

Government's Open Network for Digital Commerce

dominant player has gained an edge

defining position of any digital platform in marketplace

reliable option for these small players

urgent need for ex ante legislation

establish an ex-ante framework

prevent market failures, mitigate possible anti competitive conduct

ensure a level playing field for local sellers

Use of data, issue of consumer protection

sensitive data stored on these platforms

Predatory pricing entails lowering of prices

Big corporations have asserted ownership

right to use or transfer this data without restriction

forces other firms to be out competed

Amazon and Flipkart were accused of deep discounting

CCI raided their offices in anti competition probe

market distortion lead to poorer quality of services

new law should include a mechanism

Amazon being forced to cut its ties with Cloudtail

data monopoly, and stifle innovation

ensure fair compensation for consumers

storage and collection of women's and children's data

For a consumer, need to establish harmony

face brunt of anti-competitive practices

need to be dealt with more cautiously

of Competition law with new Consumer Protection Act 2020

Use of data, issue of consumer protection

urgent need to contextualise the law

ex-Kirana stores competing with - retailers- Big Basket

to digital marketplace and devise new provisions

EU has already noted need through Digital Markets Act

unfair competition

legacy businesses and their digital counterparts

Saurabh Pandey Sir Current Affairs

IR HEADLINES

- **Chinese hospitals caught off-guard as COVID cases surge after opening**
- **Iran publicly carries out second protest execution**
- **3 killed in attack on Kabul hotel popular with Chinese**
- **Protests against the ouster of Castillo turn violent in Peru; new President proposes moving up elections**

Economy Headlines

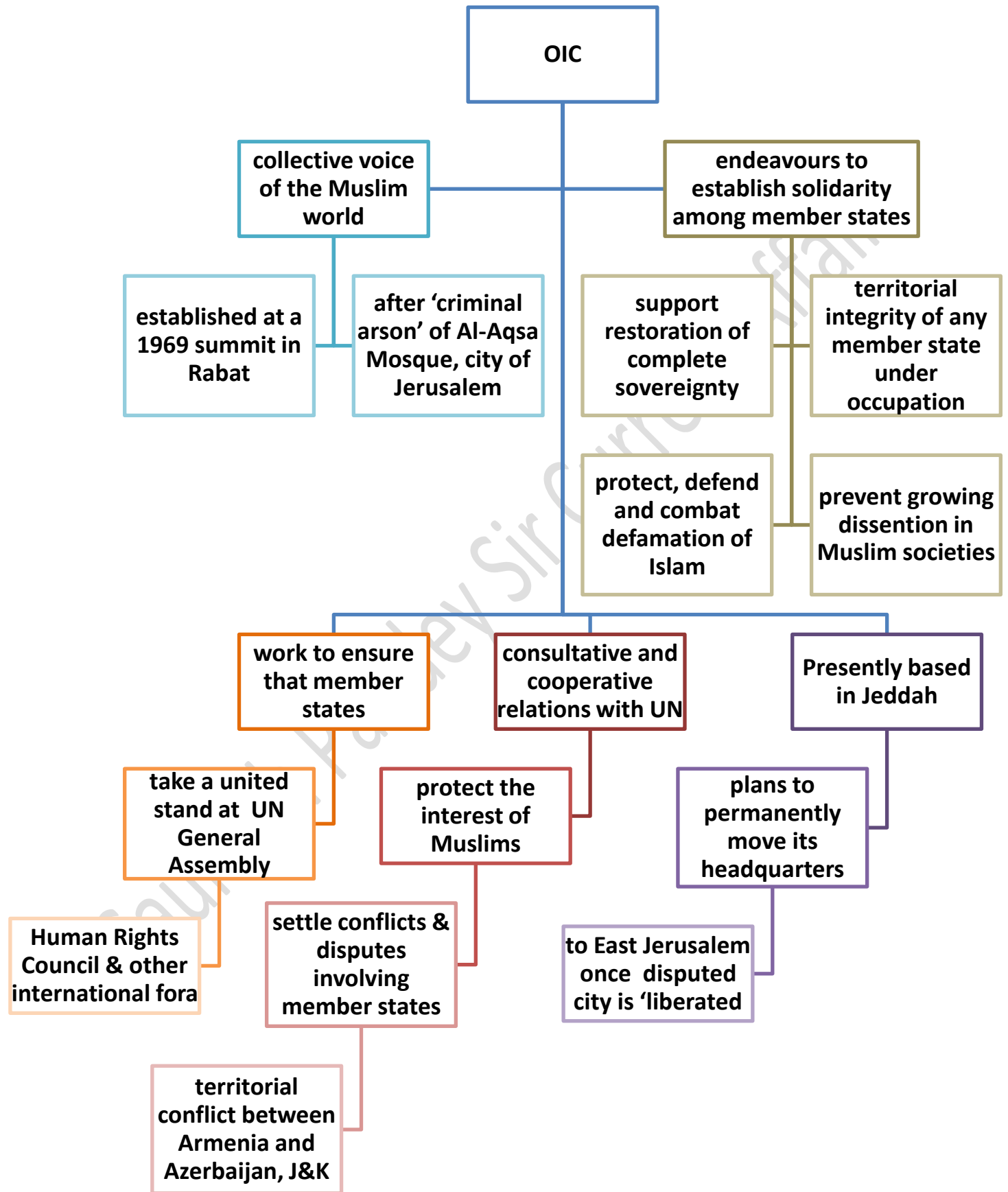
- **Oct. industrial output contracts 4%, slide seen second time in 3 months**
- **Net direct tax revenue growth accelerated to 24.3% by November**
- **India imported coal worth ₹2.3 lakh crore in April September**

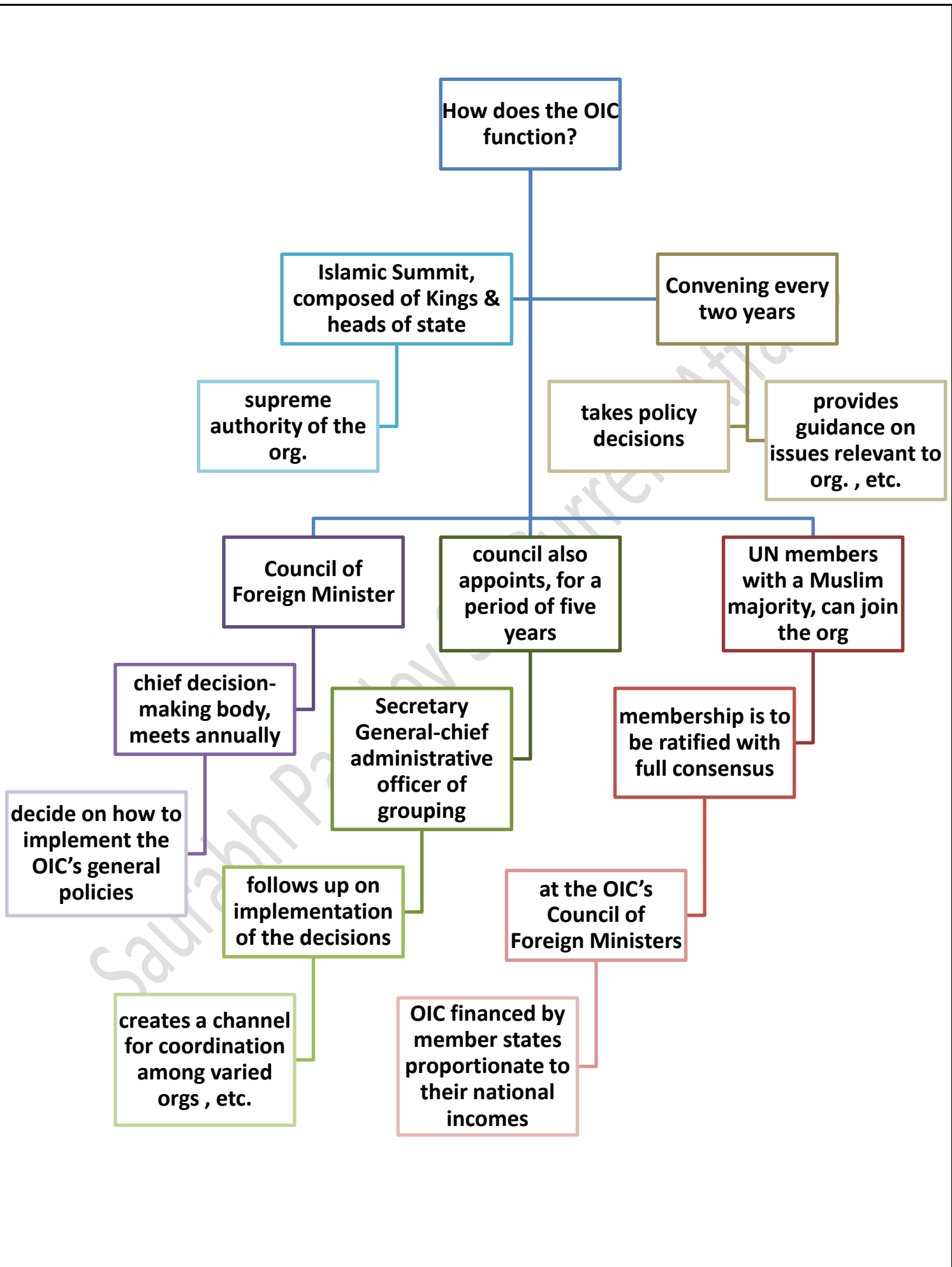
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December 14
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Maps

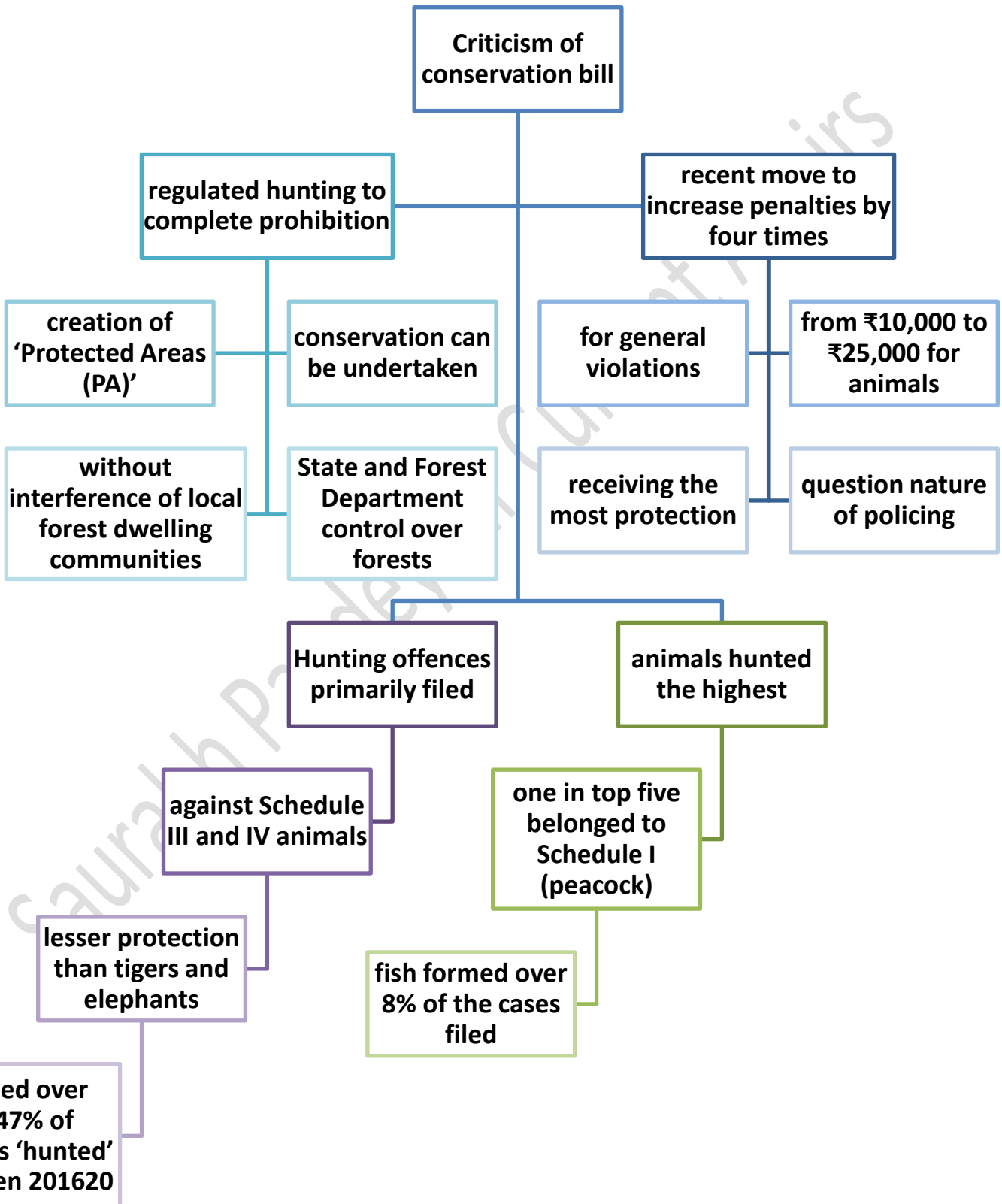
OIC

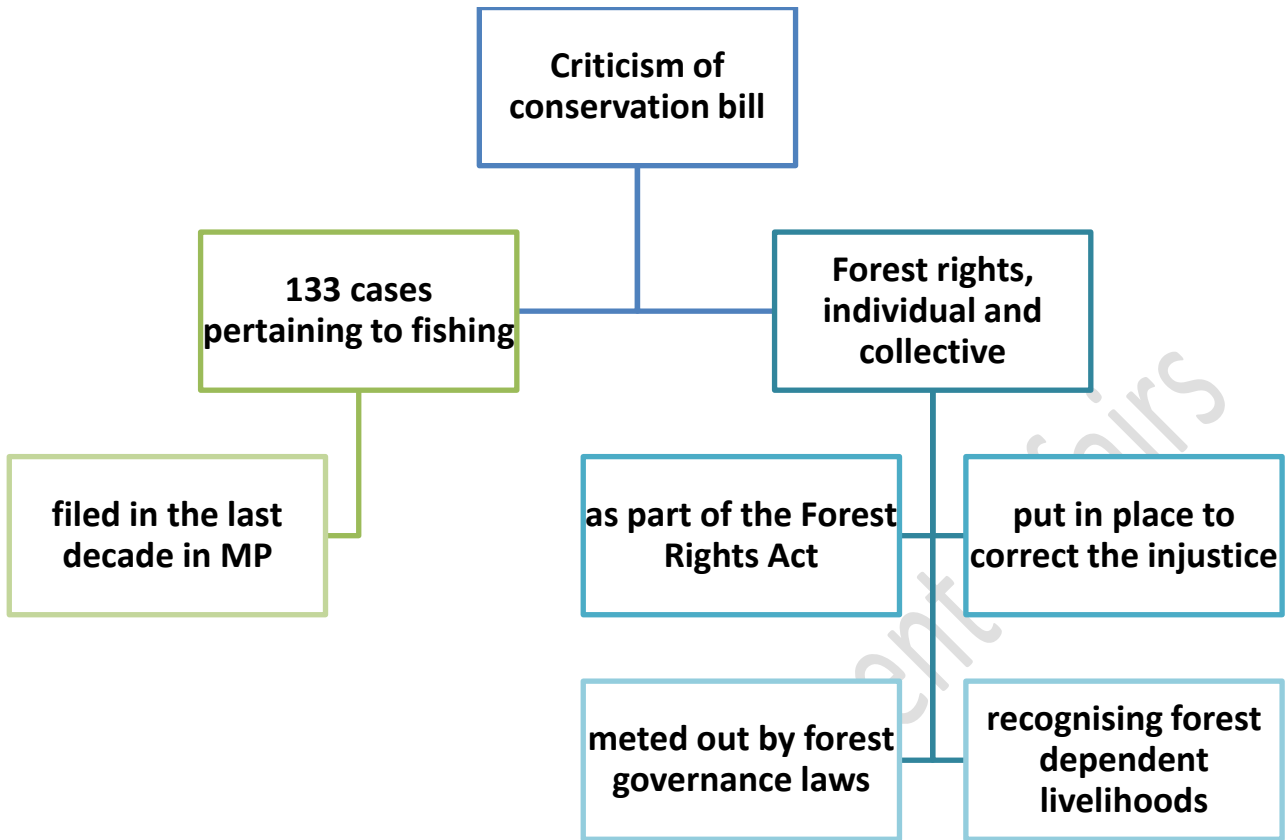




Criticism of conservation bill

The need for criminal laws to assist wildlife conservation has remained unchallenged since its conception.

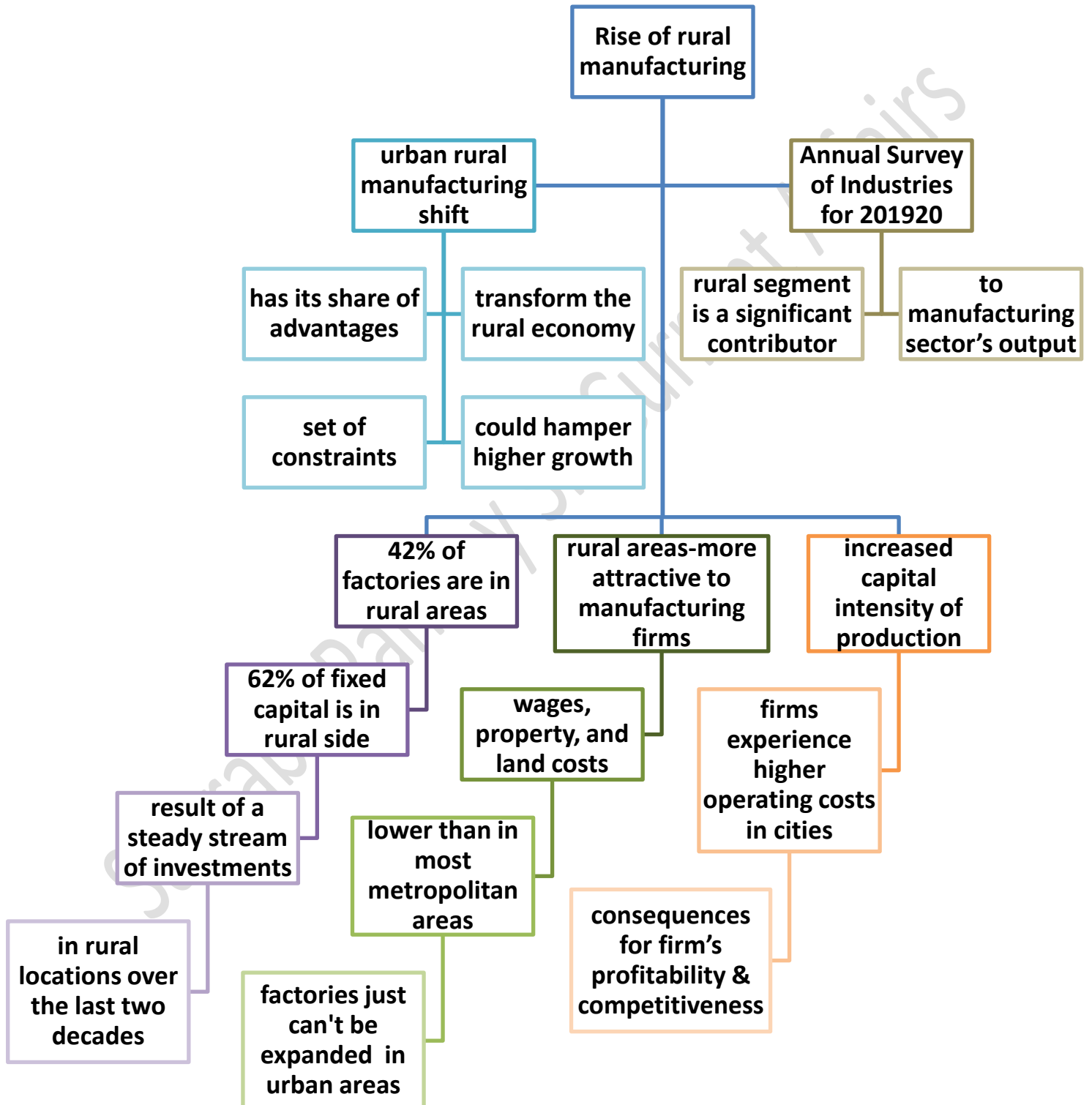




natural overlap of recognising forest rights in intended as inviolate PAs was quickly resolved by making the FRA subservient to the WPA, thereby impeding its implementation

Rise of rural manufacturing

There is growing evidence to suggest that the most conspicuous trend in the manufacturing sector in India has been a shift of manufacturing activity and employment from bigger cities to smaller towns and rural areas.



Rise of rural manufacturing

Big firms deliberately shift production

shift in manufacturing activities

take advantage of availability

less skilled, less unionised and less costly rural labour

helped maintain importance of manufacturing

source of livelihood diversification in rural India

faces two major challenges

cost of capital seems to be higher

issue of "skills shortage" in rural areas

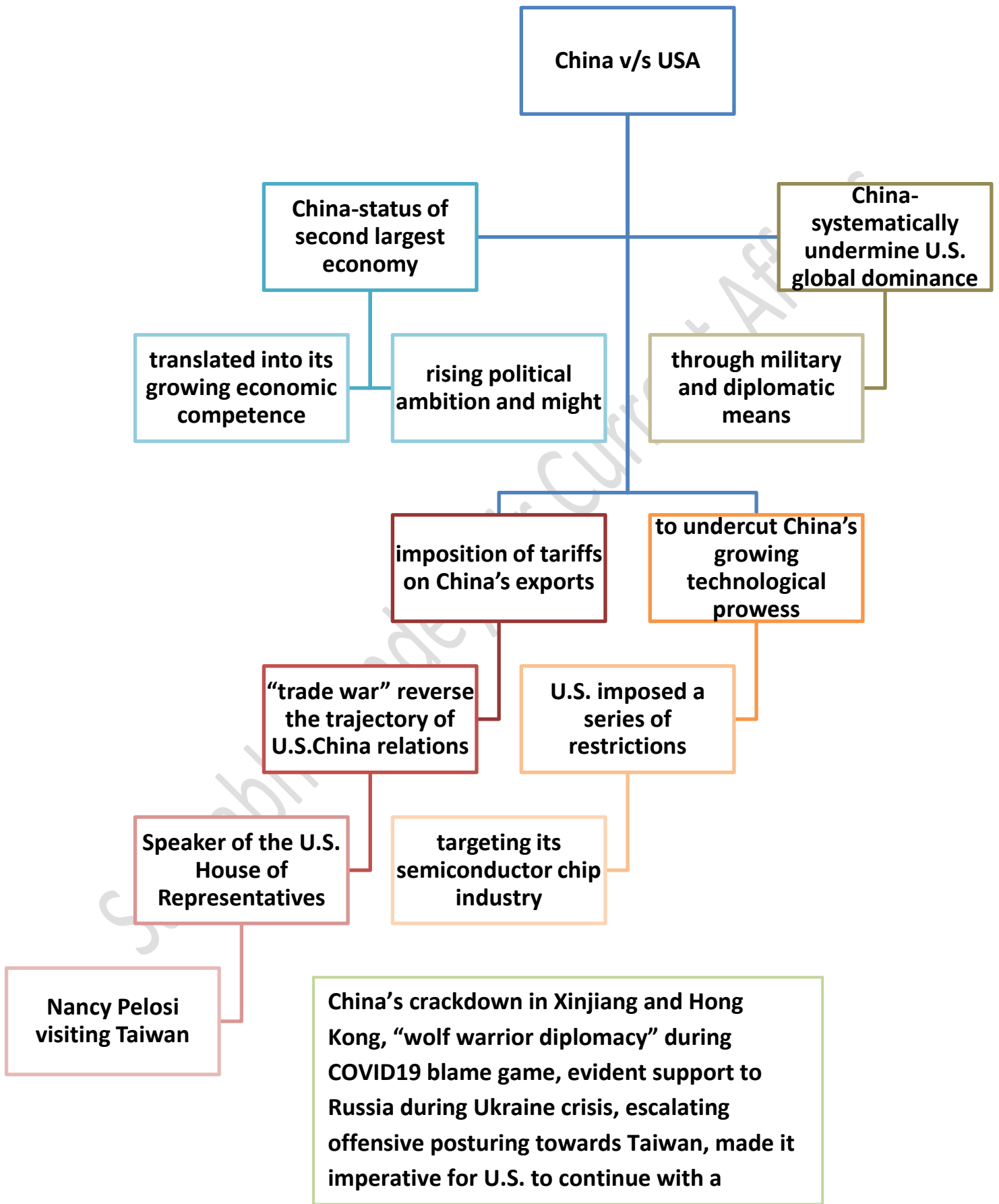
for firms operating on the rural sidez

evident from shares in rent and interest paid

manufacturing now needs higher skilled workers

compete in highly technological global 'new economy'

China v/s USA



China v/s USA

China has not moved away from its path

long term goal of centrality in international system

Xi Jinping underlined China's time bound aspiration

achieve through phased modernisation of the country

main obj.- reunification of Taiwan with mainland

Biden administration

utilised multilateral approaches

intensifying the U.S.'s rivalry with China

strengthening Quad in the Indo-Pacific

expanding it beyond trade

founding of Indo Pacific Economic Framework

avenues like technology and political freedoms

6th Schedule

6th SCHEDULE

contains provisions
Administration of
Tribal Areas

provides for the
administration

States of Assam,
Meghalaya, Tripura
and Mizoram

under Articles
244(2) and 275(1)
of the Indian
Constitution

certain tribal areas
as autonomous
entities

tribal areas in the
four states

different tribes in
an autonomous
district

Each Autonomous
District shall have a
District Council

constituted as
autonomous
districts

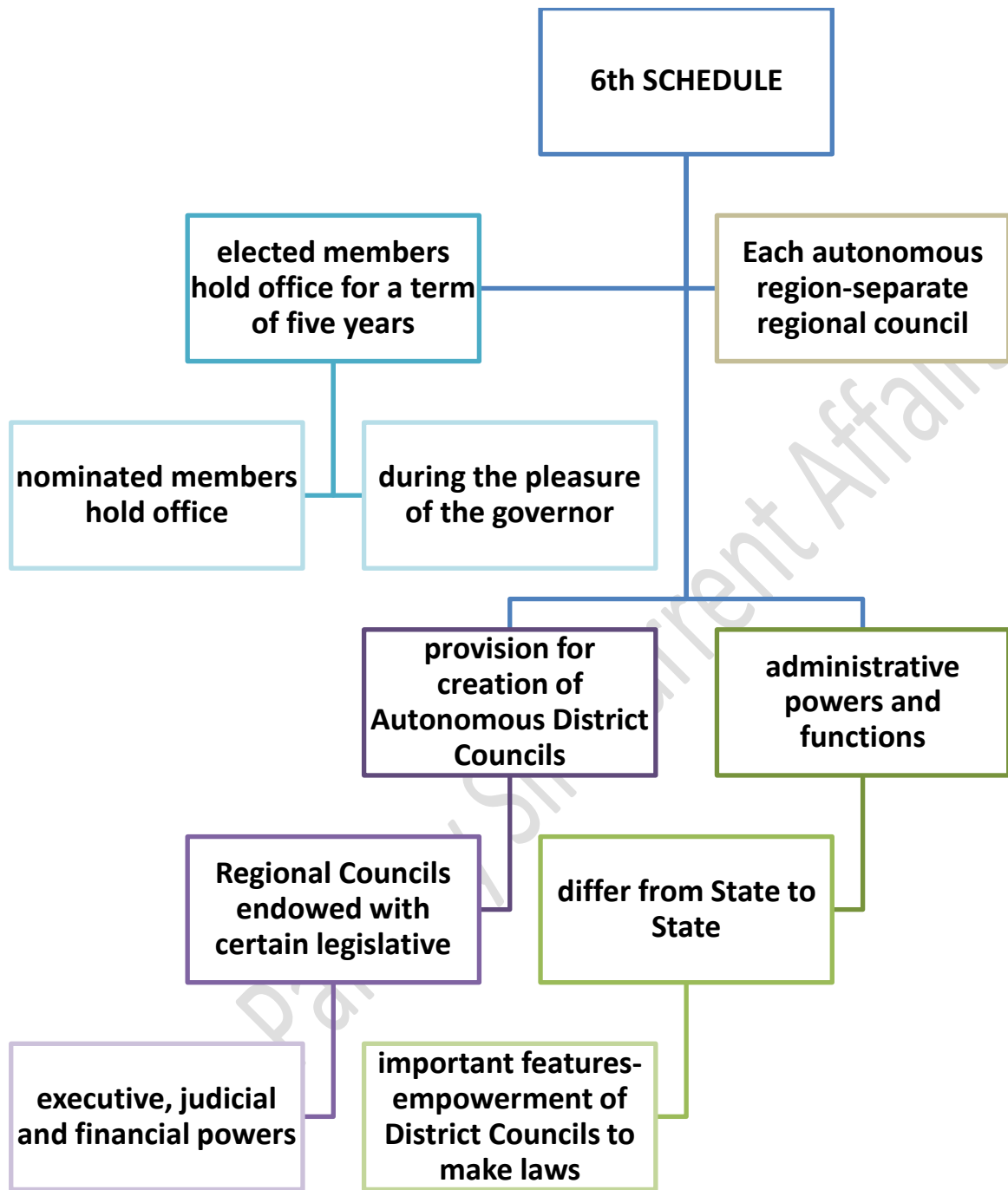
governor can divide
district into several
autonomous
regions

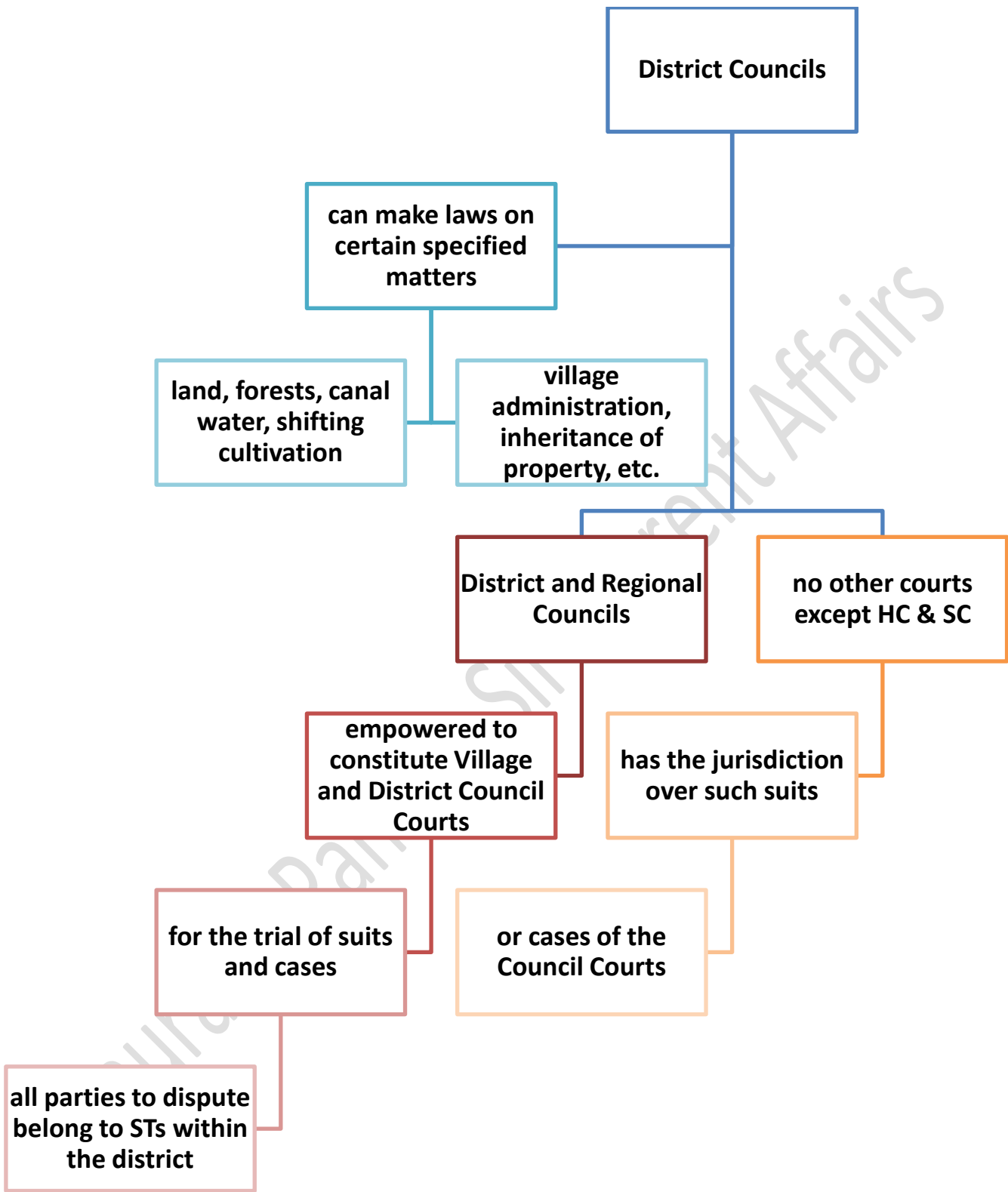
not more than
thirty members

do not fall outside
the executive
authority of state

four are nominated
by Governor

rest are elected on
basis of adult
franchise





Assam accord

Assam accord, 1985

Memorandum of Settlement

end to the Assam Agitation

signed between representatives of Gol

& the leaders of the Assam Movement

paved way for leaders of the agitation

form a political party

New Delhi on 15 August 1985

form a government in the state of Assam soon after

key demands

foreigners after 1971 were to be deported

All those foreigners who had entered Assam

between 1951 and 1961

entrants between 1961 and 1971

to be denied voting rights for ten years

given full citizenship, right to vote

but enjoy all other rights of citizenship

**Assam accord,
1985**

**parallel package for
economic development
of Assam**

**central
government also
promised**

**second oil
refinery, paper
mill**

**institute of
technology**

**provide 'legislative
& administrative
safeguards**

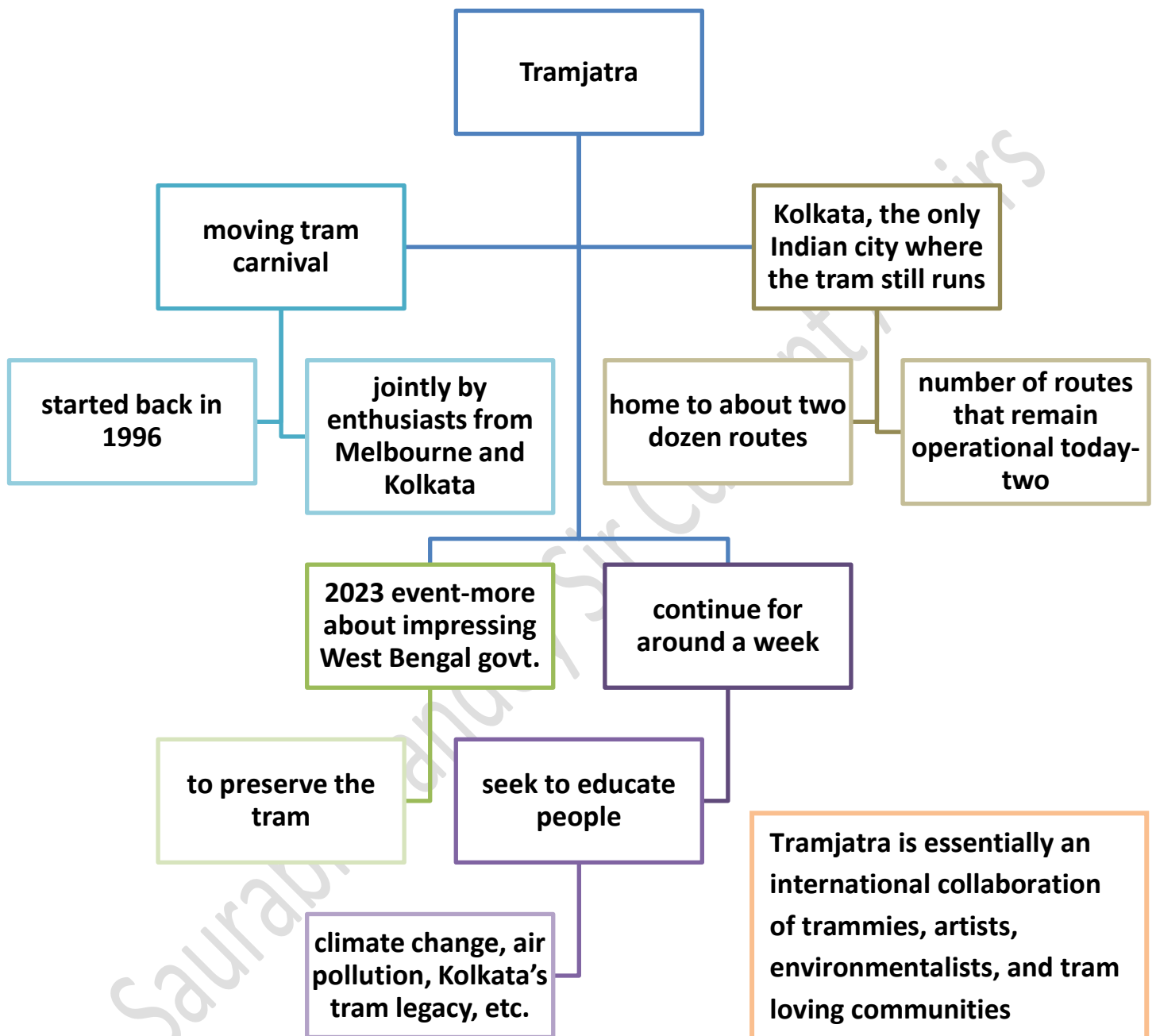
**protect cultural,
social, and
linguistic identity**

**heritage of the
Assamese people**

Saurabh Pandey Sir

Tramjatra

The theme of the 2023 Tramjatra will be Heritage, Clean Air and Green Mobility

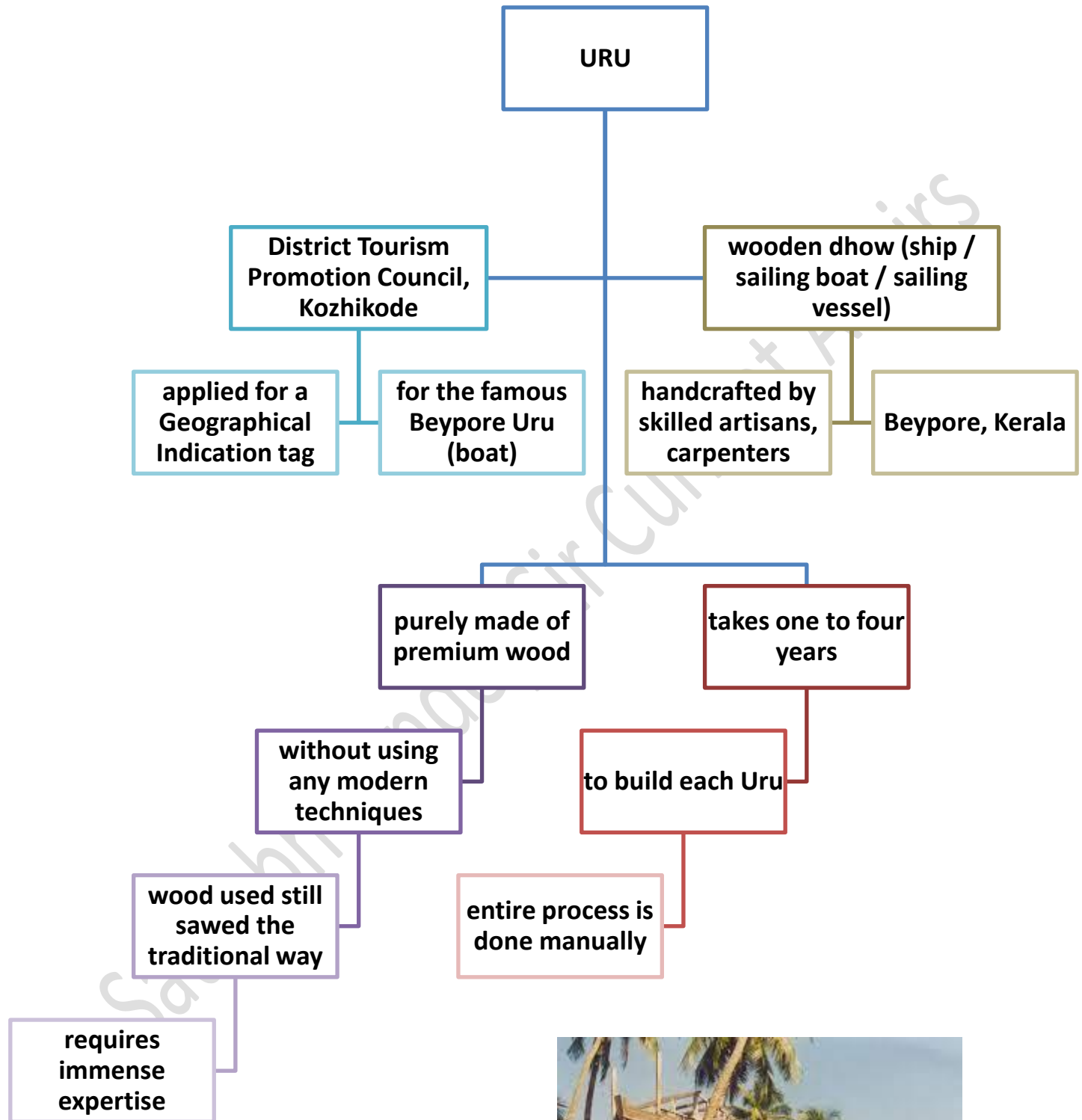


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2022

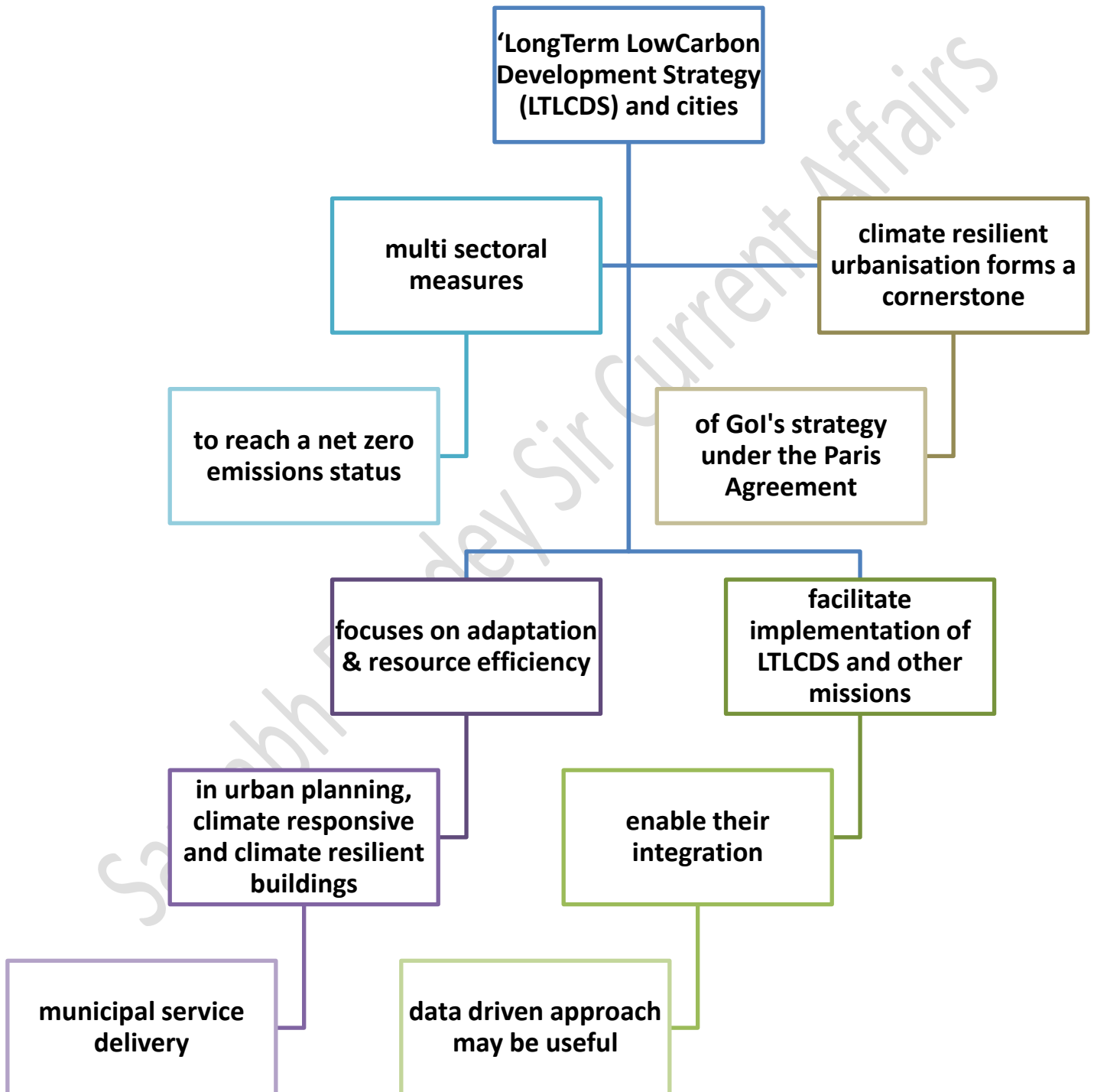
The Hindu Mind
Maps

URU



'LongTerm LowCarbon Development Strategy (LTLCDS) and cities

India unveiled its long term climate action plan at the 27th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27), held in Sharm el Sheikh, Egypt



LTLCDS

Urban Sustainability Assessment Framework

USAF enables cities to regularly capture

decision support tool of UN-Habitat

for municipal commissioners & urban practitioners

intersectoral data & corresponding analysis

on urban metrics

supports sustainable and resilient urban planning

management of Indian cities

designing 'shared streets'

streets can also be conduits

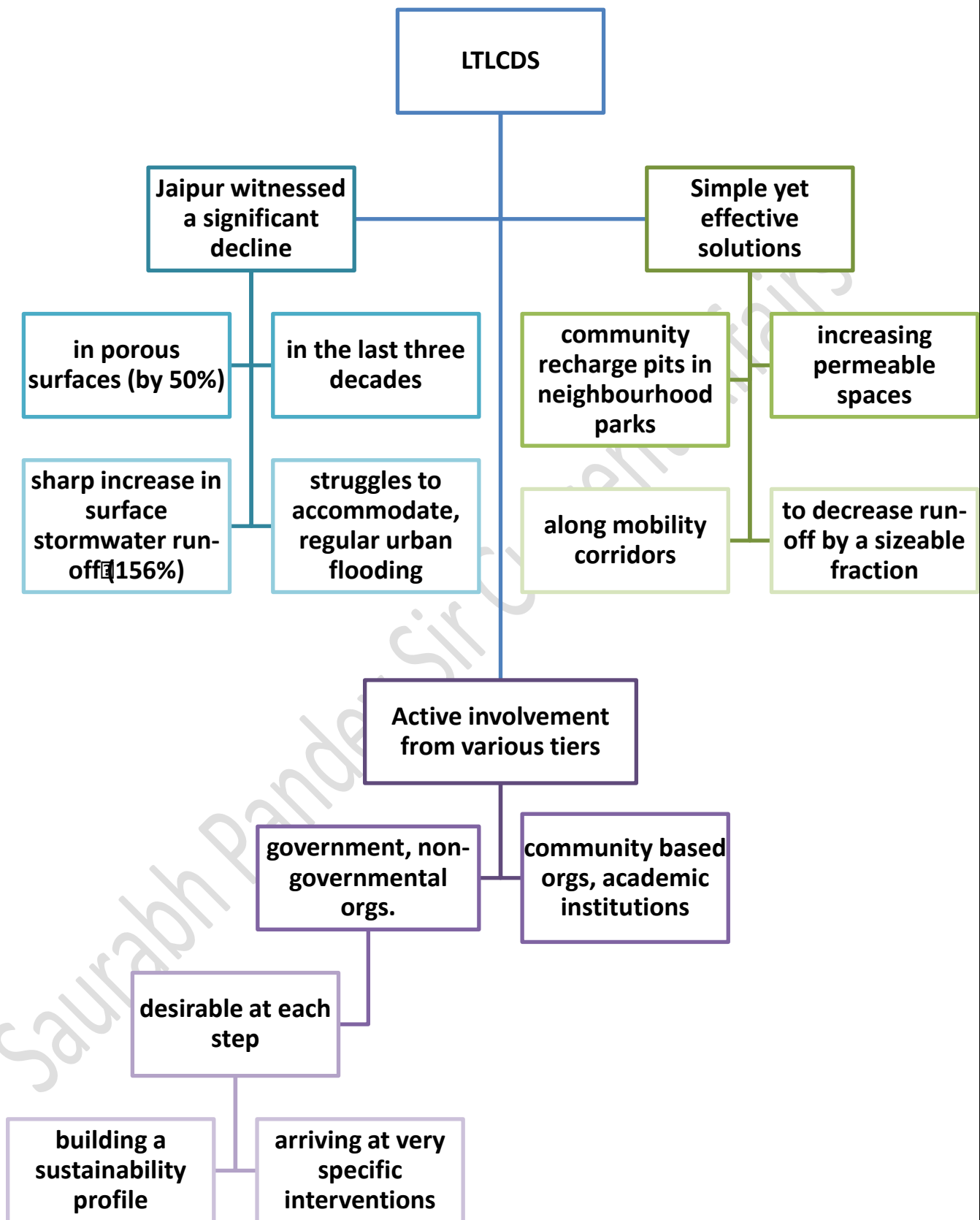
for personal vehicles, public transport, NMT transport etc.

for native plant species and groundwater recharge

linking them with future economic activity zones

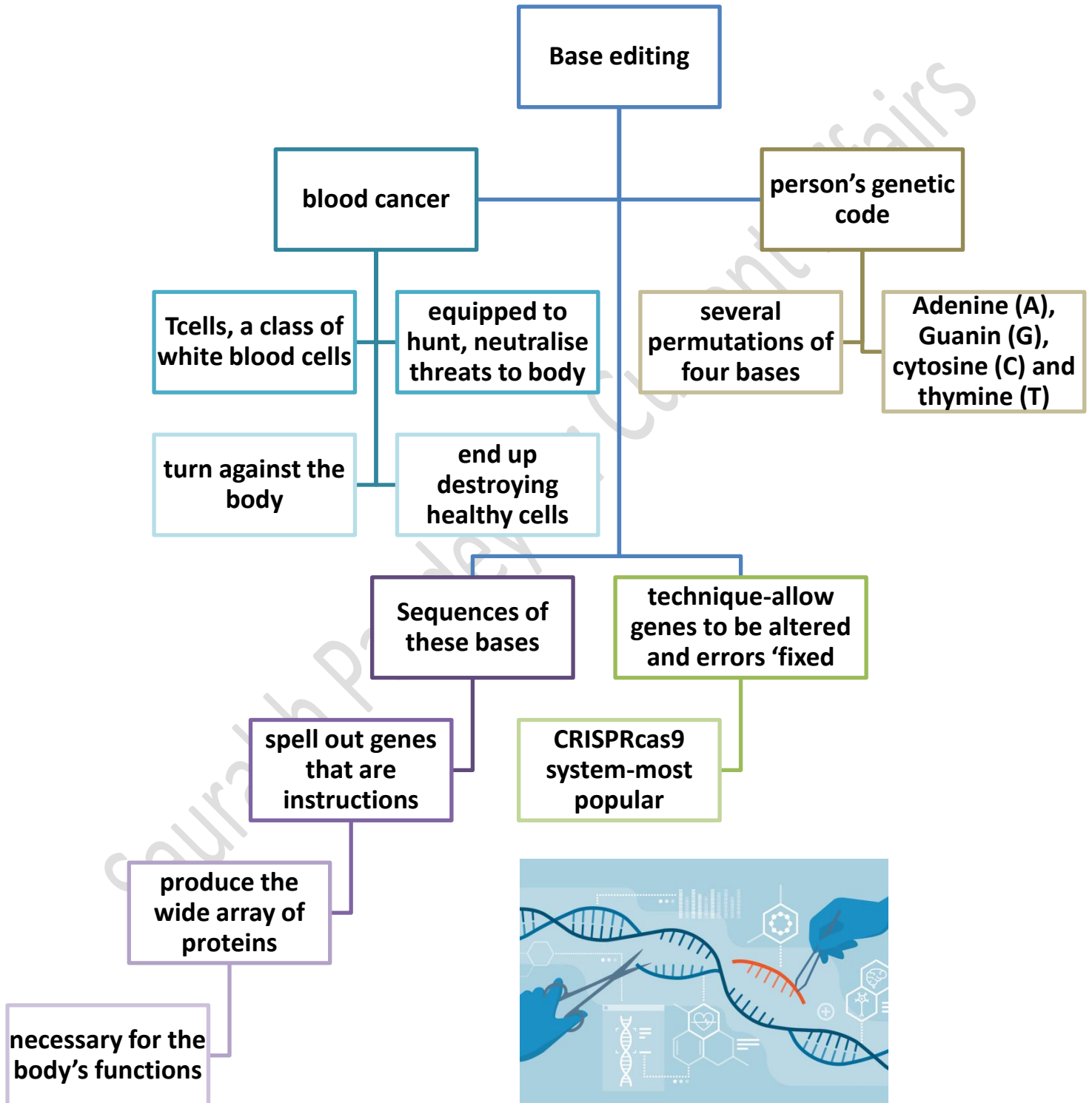
integrating water sensitive urban design features

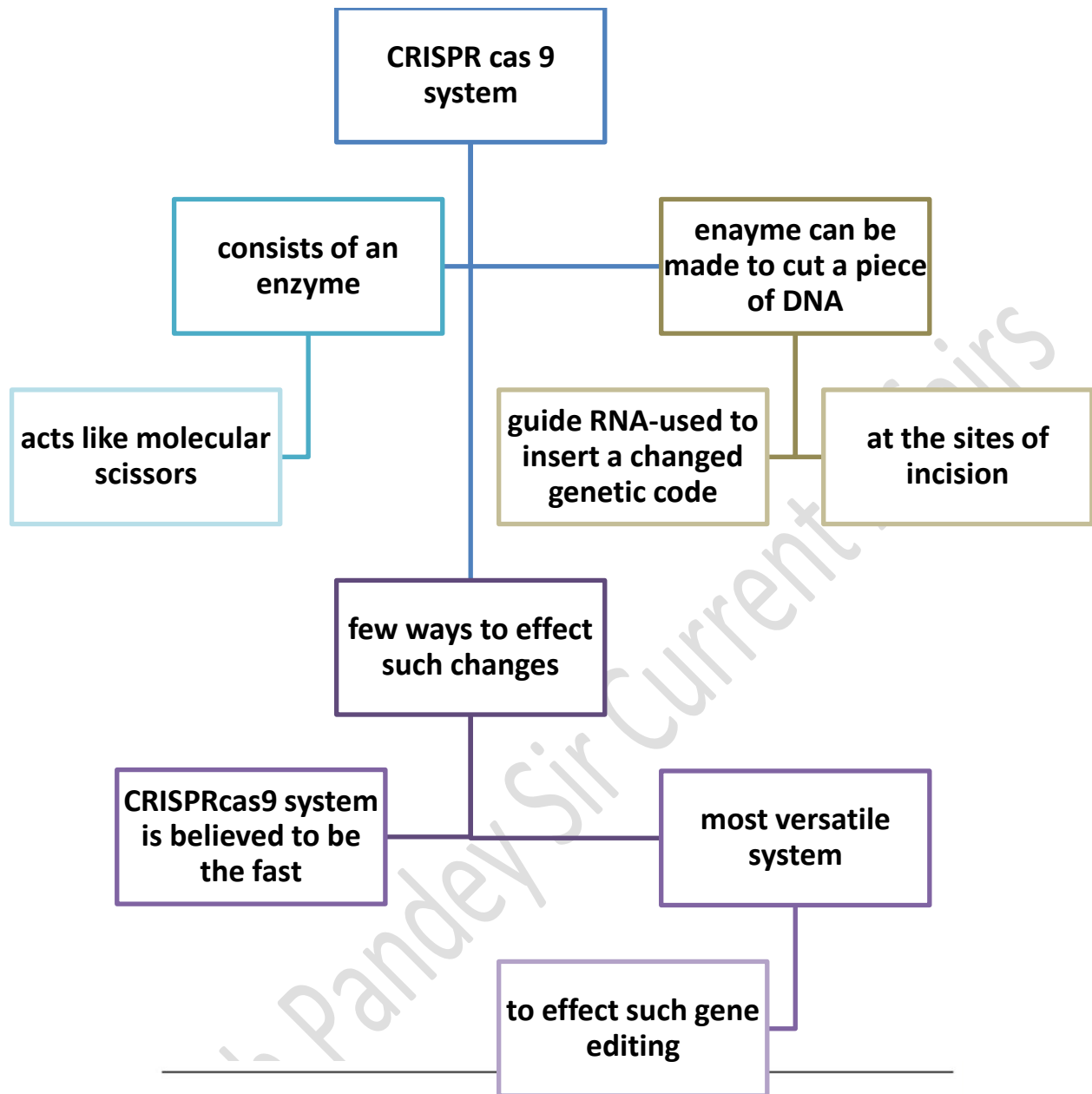
city has immense potential to reduce its carbon footprint



Base editing

Scientists in the United Kingdom testing a new form of cancer therapy, reported success in a teenaged girl, Alyssia, with a form of cancer called T cell acute lymphoblastic leukaemia.

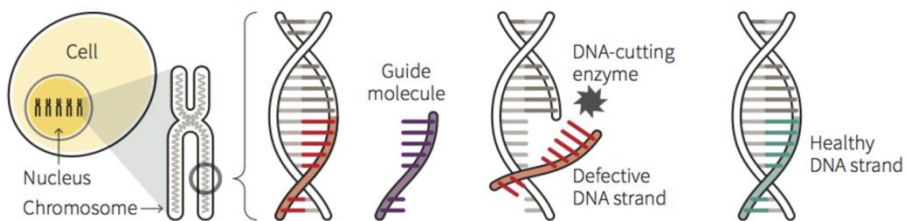




DNA editing

A DNA editing technique, called CRISPR/Cas9, works like a biological version of a word-processing programme's "find and replace" function.

HOW THE TECHNIQUE WORKS



A cell is transfected with an enzyme complex containing:

- Guide molecule
- Healthy DNA copy
- DNA-cutting enzyme

A specially designed synthetic guide molecule finds the target DNA strand.

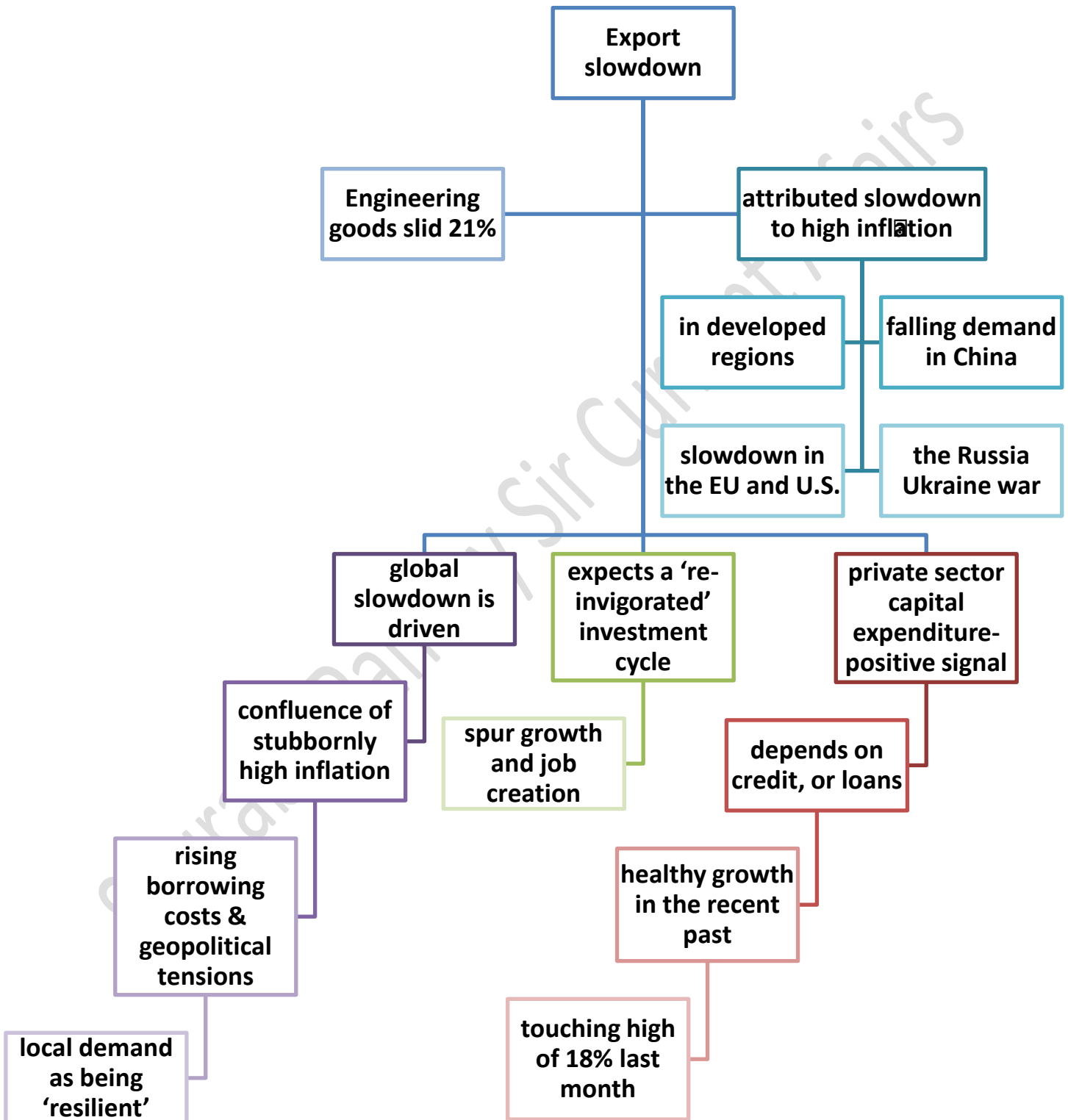
An enzyme cuts off the target DNA strand.

The defective DNA strand is replaced with a healthy copy.

Sources: Reuters; Nature; Massachusetts Institute of Technology

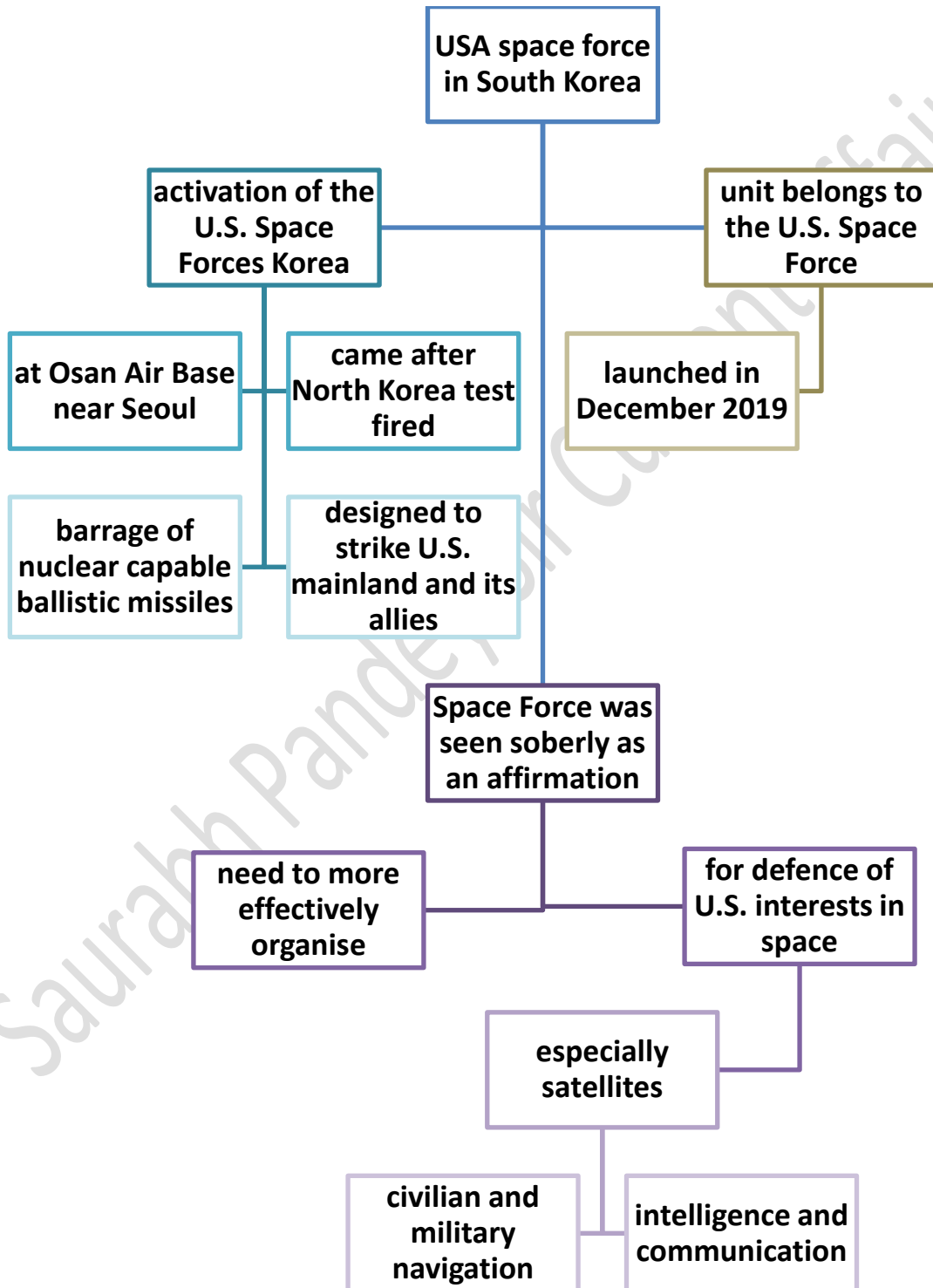
Export slowdown

India's exports declined about 16.7% in October compared with the year earlier period



USA space force in South Korea

The U.S. military formally launched a space force unit in South Korea, a move that will likely enable Washington to better monitor its rivals North Korea, China and Russia.



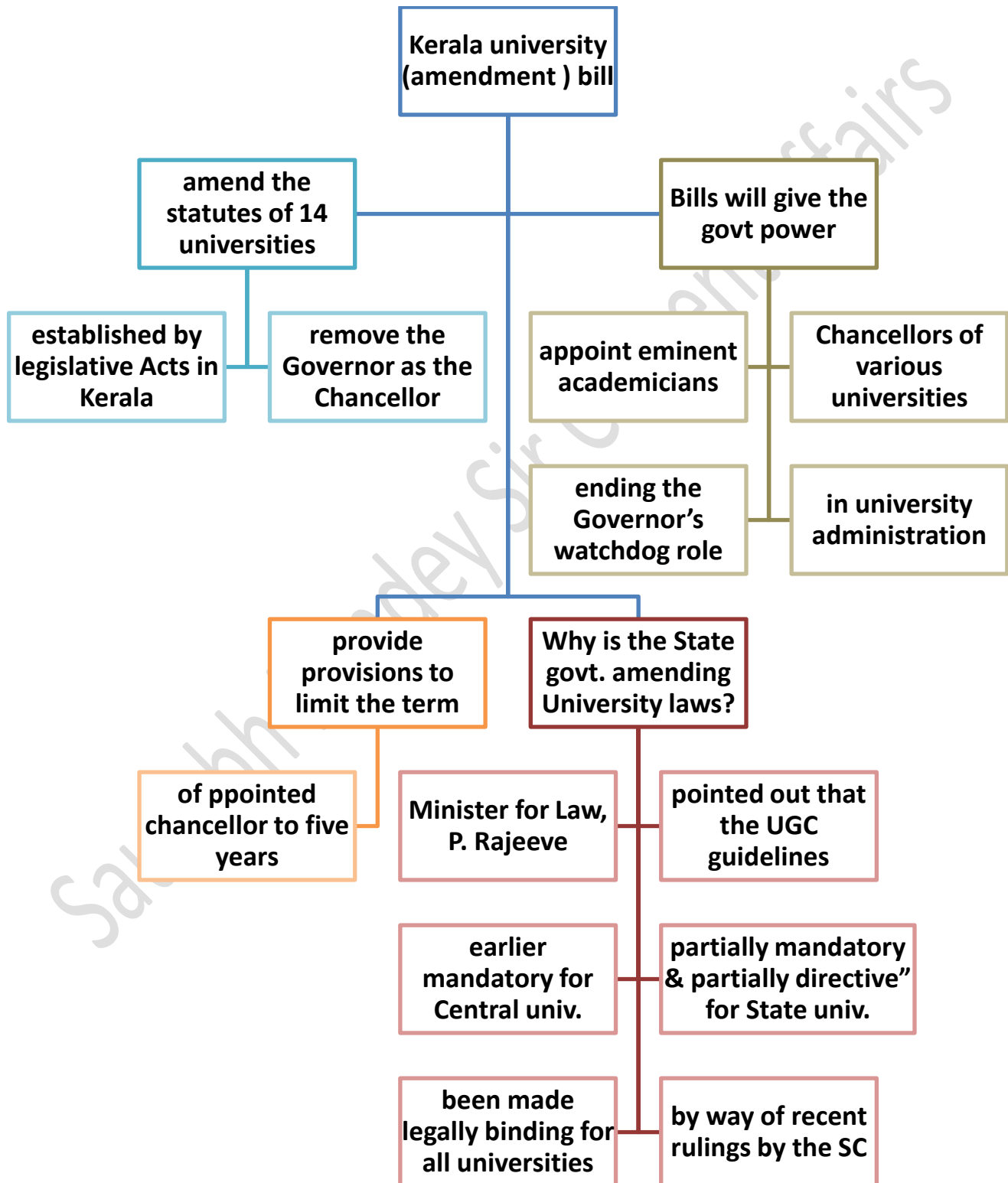
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December 16
2022

The Hindu Mind
Maps

Kerala university (amendment) bill

The Kerala government has passed the two University Laws (amendment) Bills in the State Assembly to amend laws relating to the governance of State universities and to remove Governor Arif Mohammed Khan as the Chancellor



Kerala university (amendment) bill

State govt has claimed recommendation

of Punchhi Commission on Centre State Relations

refrain from "burdening Governor with positions and powers"

not envisaged by the Constitution

may lead the office to controversies or public criticism

"Worryingly, such precedence pointed towards a scenario in which the legislative powers of the Assembly on all subjects on the Concurrent List (of the Constitution) could be undermined through a subordinate legislation or an executive order issued by the

arguments against the Bill

ruling front and the Opposition seem united

give State Govt. more leeway

stripping away the Governor's Chancellorship

appointing its own nominees as VCs of State Univs

Opposition fears that the State Govt.

transfer of power over university administration

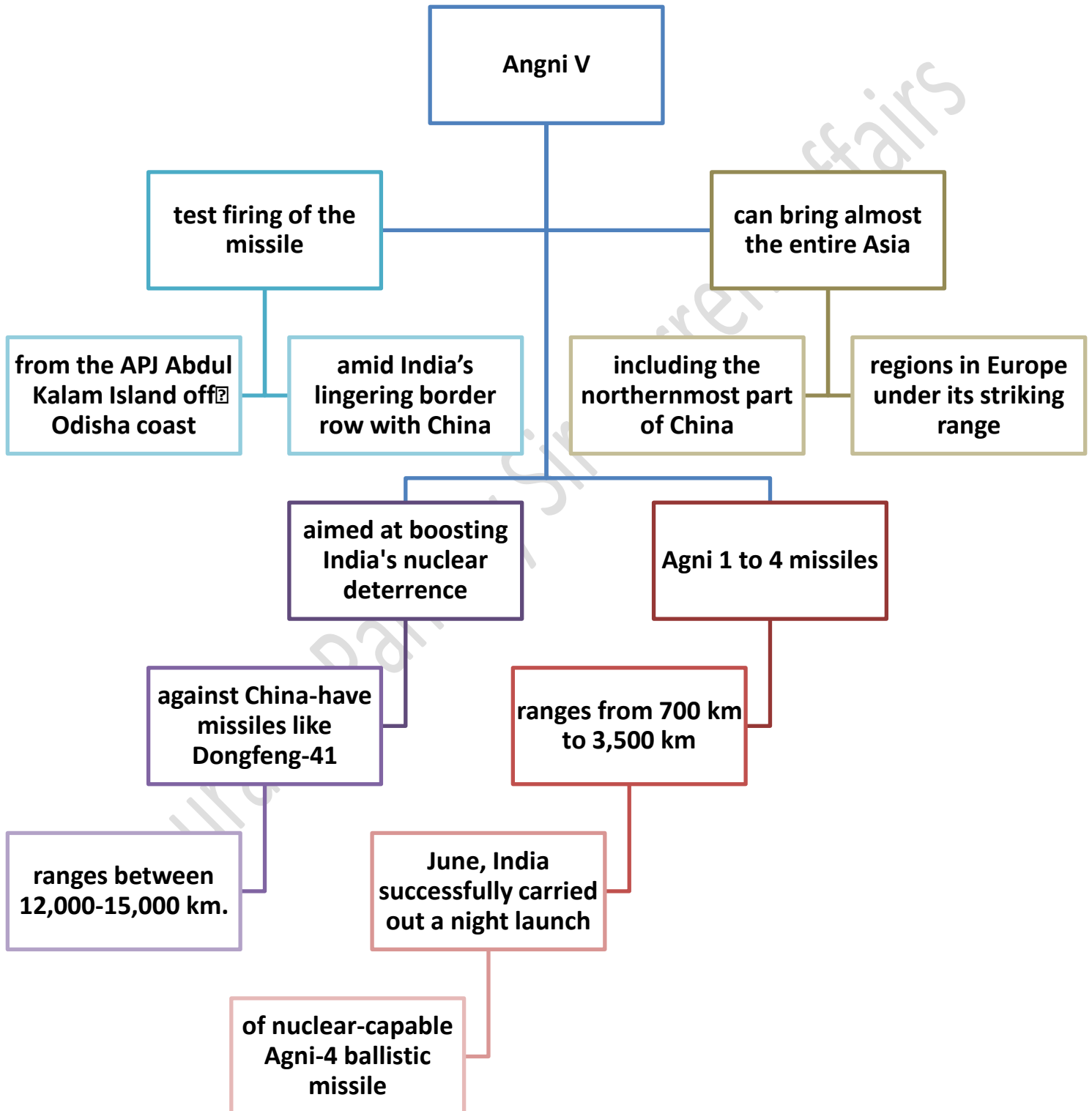
from Governor and UGC to State Govt.

try to turn State universities into its fiefdom

erosion of the autonomy universities enjoy

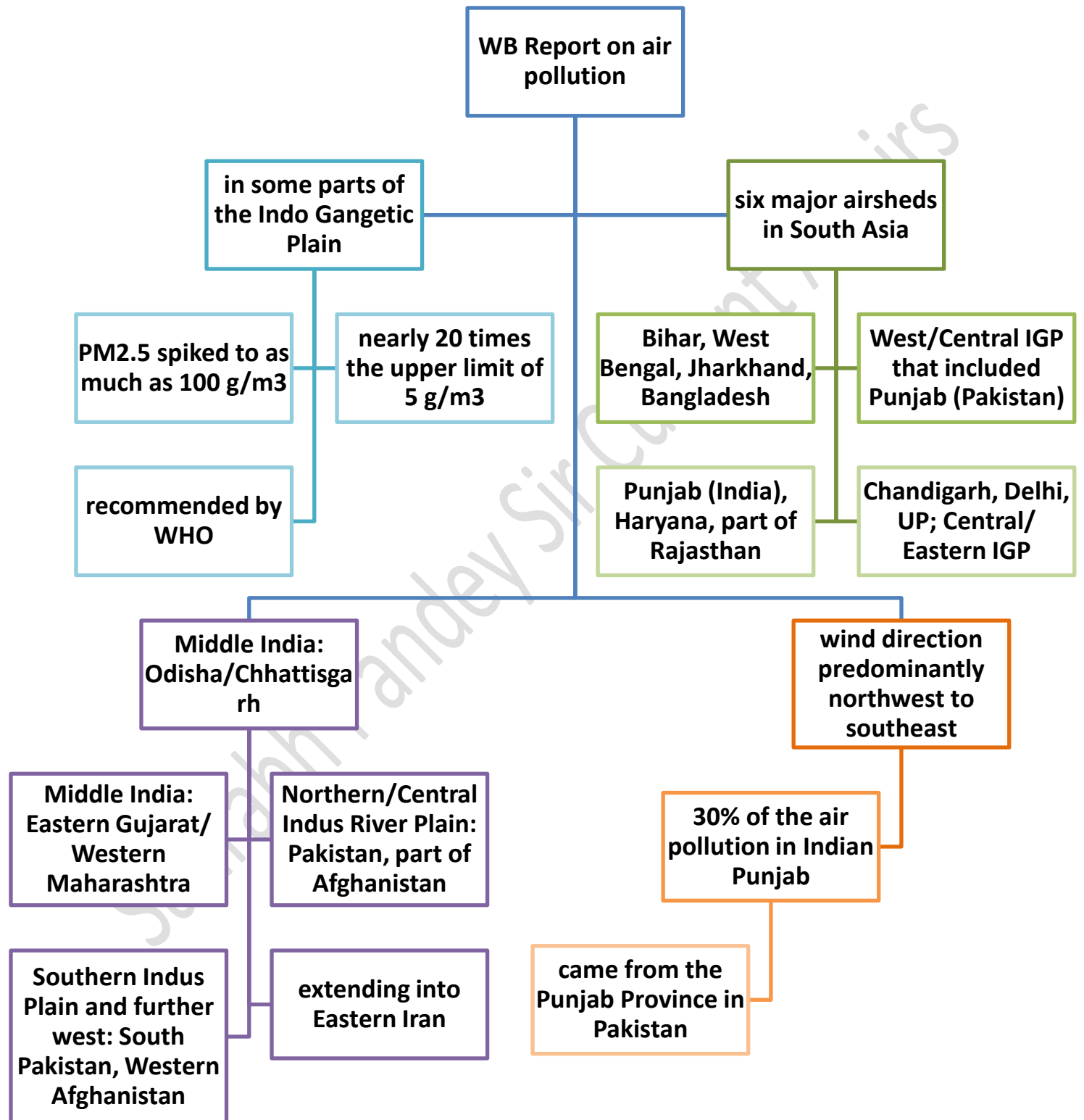
Angni V

India on successfully test fired nuclear capable ballistic missile Agni V that can strike targets at ranges up to 5,000 km, marking a significant boost to the country's strategic deterrence, people familiar with the development said



WB Report on air pollution

Currently over 60% of South Asians are exposed to an average 35 g/m³ of PM_{2.5} annually.



WB Report on air pollution

30% of the air pollution in largest cities of Bangladesh

if Delhi National Capital Territory

Dhaka, Chittagong, and Khulna

originated in India

fully implement all air pollution control measures by 2030

other parts of South Asia continued to follow current policies

it wouldn't keep pollution exposure below 35 g/m³

if other parts of South Asia

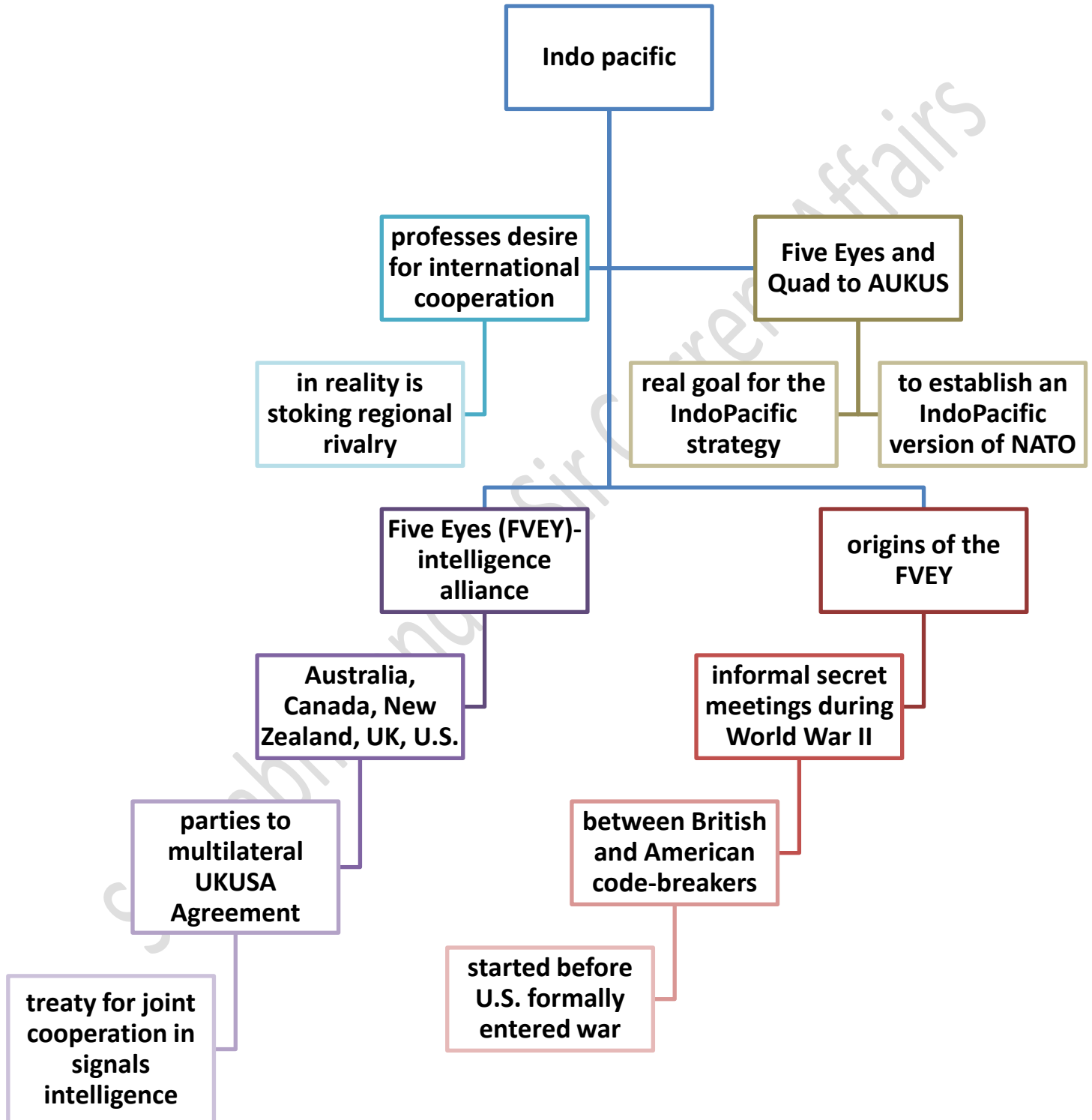
also adopted all feasible measures

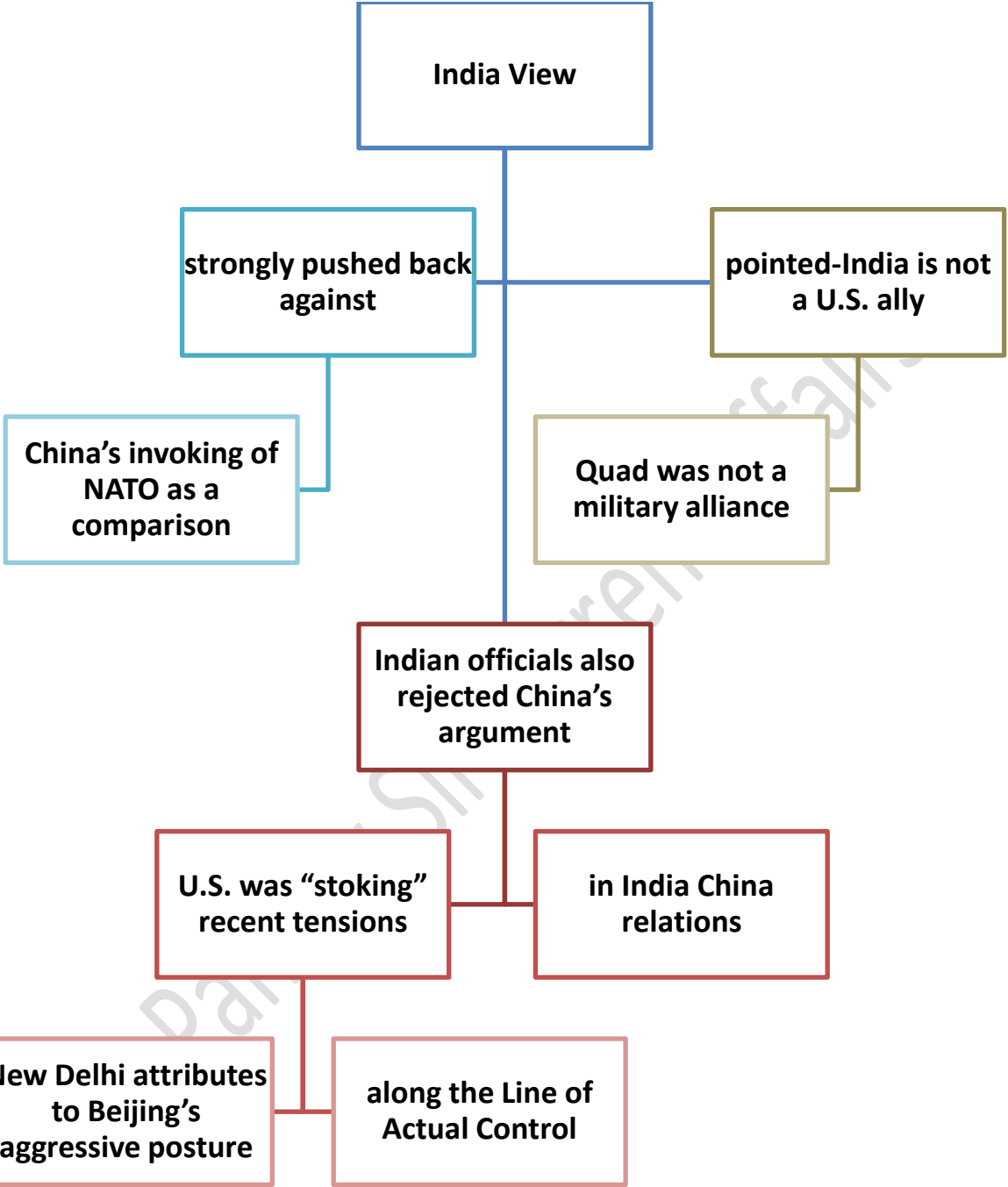
it would bring pollution below that number

Indo pacific

CHINA on INDO PACIFIC

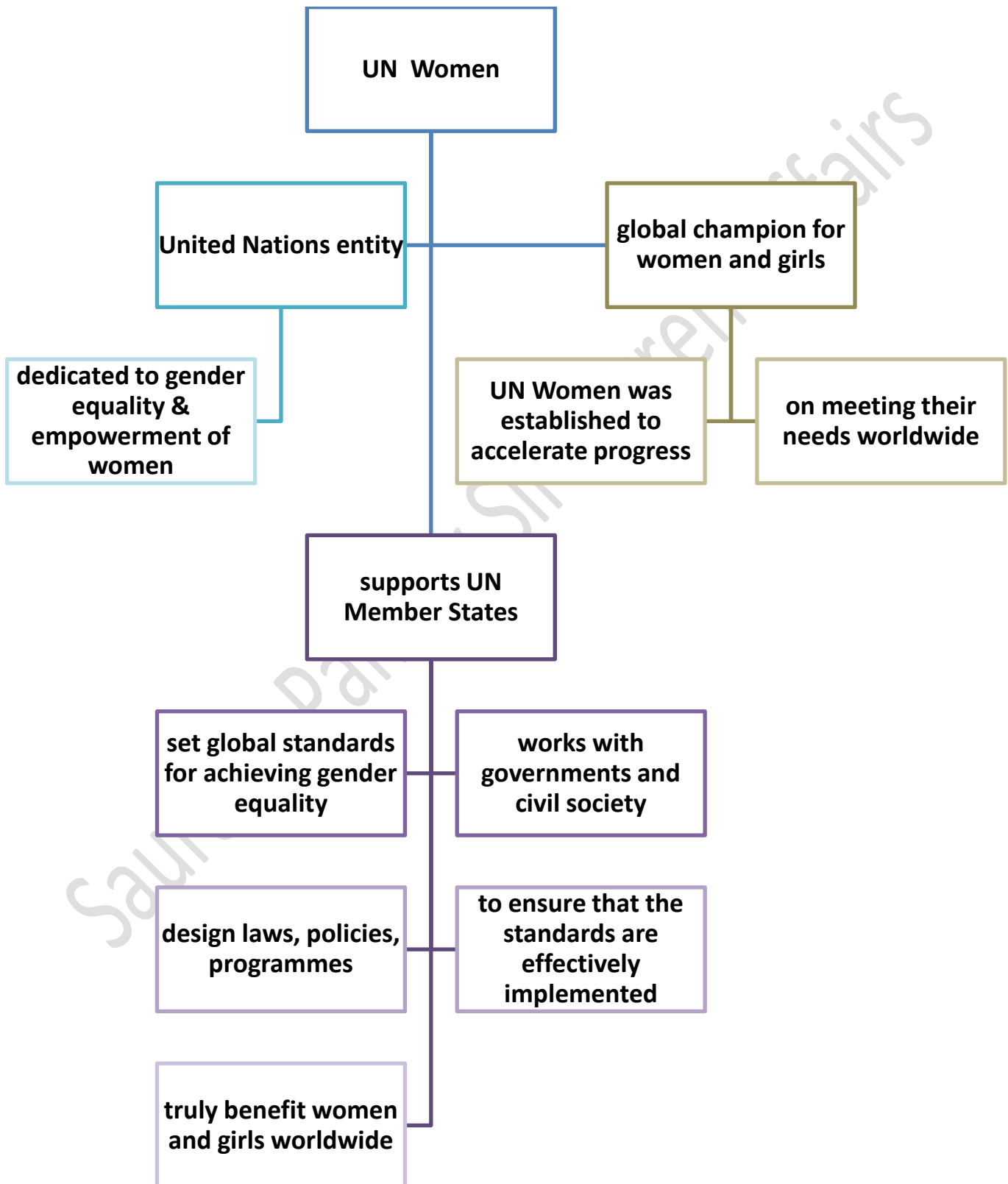
There "is no such concept as Indo Pacific" which was "created by the United States" to bring in partners such as India to "contain" China





UN Women

Iran accused the United States of orchestrating its removal from a UN women's rights body over its response to protests triggered



UN Women

works globally to make the vision

Sustainable Development Goals a reality for women

stands behind women's equal participation

focuses on four strategic priorities

Women lead, participate in and benefit equally

from governance systems

Women have income security

decent work and economic autonomy

All women and girls live a life

free from all forms of violence

Women and girls contribute to & have greater influence

in building sustainable peace and resilience

benefit equally from prevention of natural disasters

conflicts and humanitarian action

How fed rate works?

How fed rate works?

federal funds rate is the rate

Some banks have excess cash

banks charge each other

for lending their excess reserves or cash

other banks might have short-term liquidity needs

fed funds rate is a target rate set by Federal Reserve Bank

fed funds rate has a far more sweeping impact

usually the basis for the rate

on the economy as a whole

that commercial banks lend to each other

fed funds rate is a key tenet of interest rate markets

used to set prime rate-rate banks charge their clients for loans

How fed rate works?

mortgage and loan rates

Fed, through FOMC or Federal Open Market Committee

deposit rates for savings

impacted by any changes in the fed funds rate

adjusts rates depending on the economy's needs

if FOMC believes the economy is growing too quickly

if FOMC believes that the economy is struggling

Higher rates tend to slow lending and economy

likely that inflation or rising prices might occur

might dip into a recession

lower rates tend to spur lending & economic growth

FOMC will increase the fed funds rate

FOMC would lower the fed funds rate

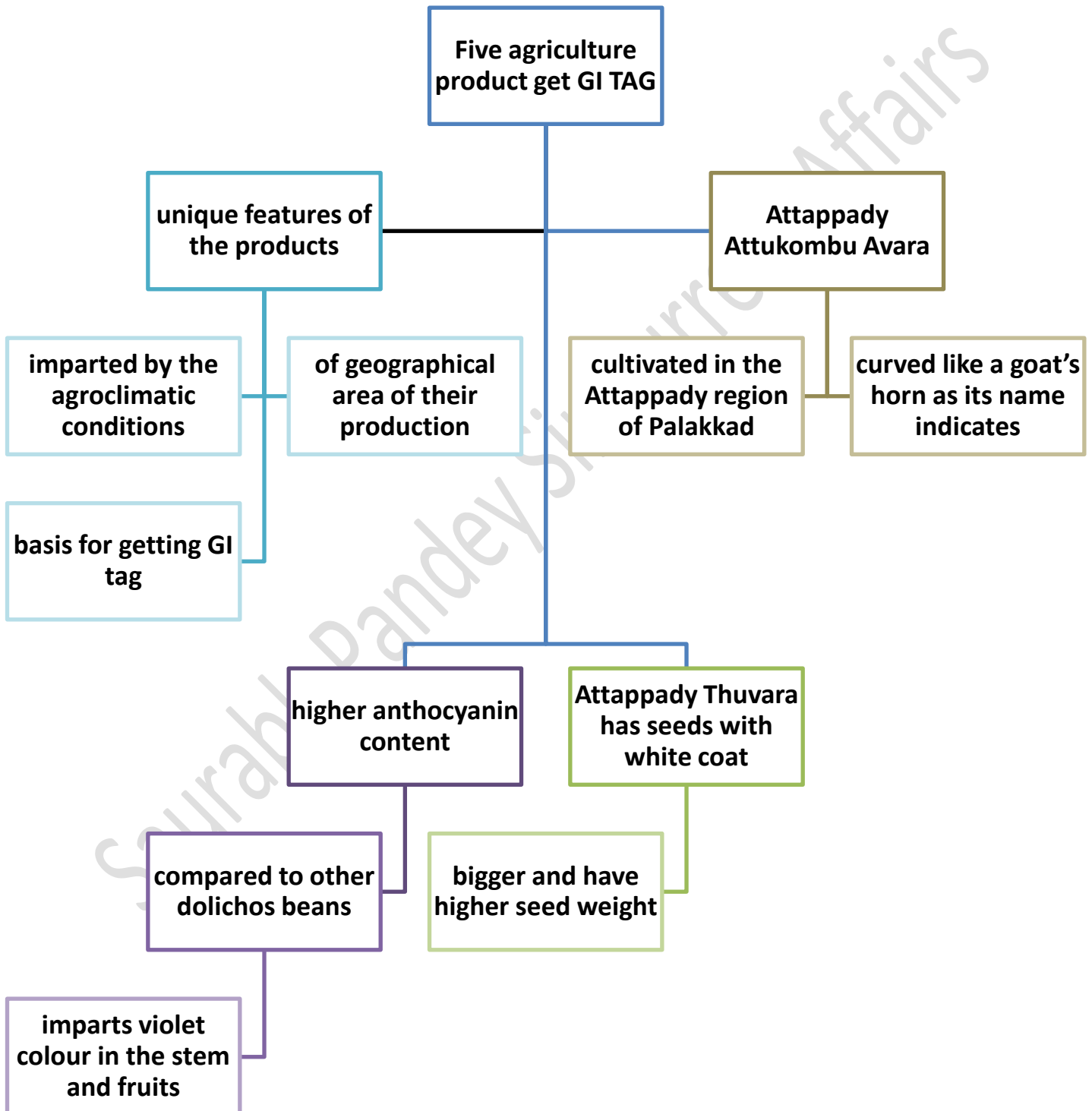
The Hindu through Mind Maps
(Saurabh Pandey Sir)

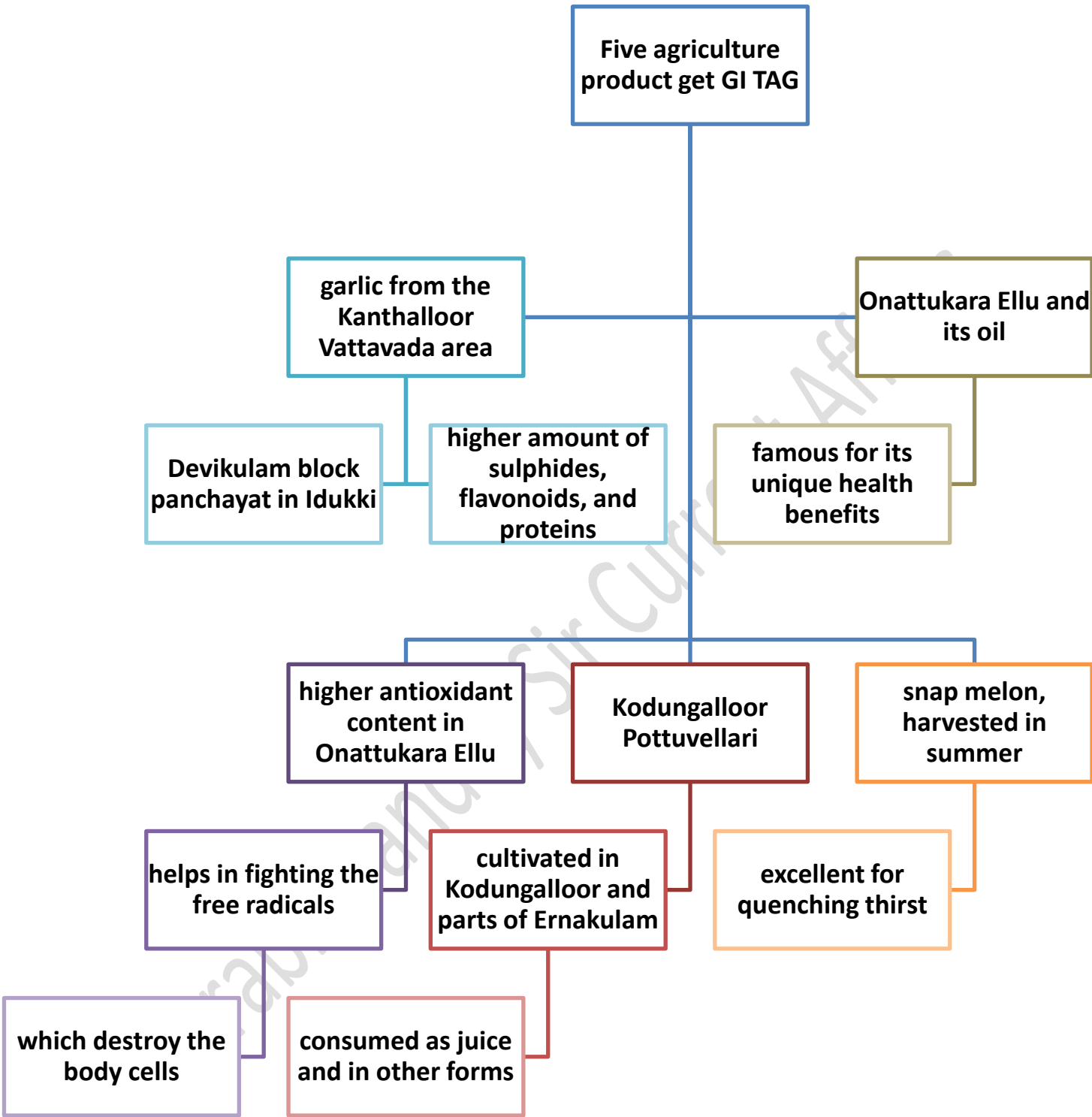
December 17
2022

The Hindu Mind
Maps

Five agriculture product get GI TAG

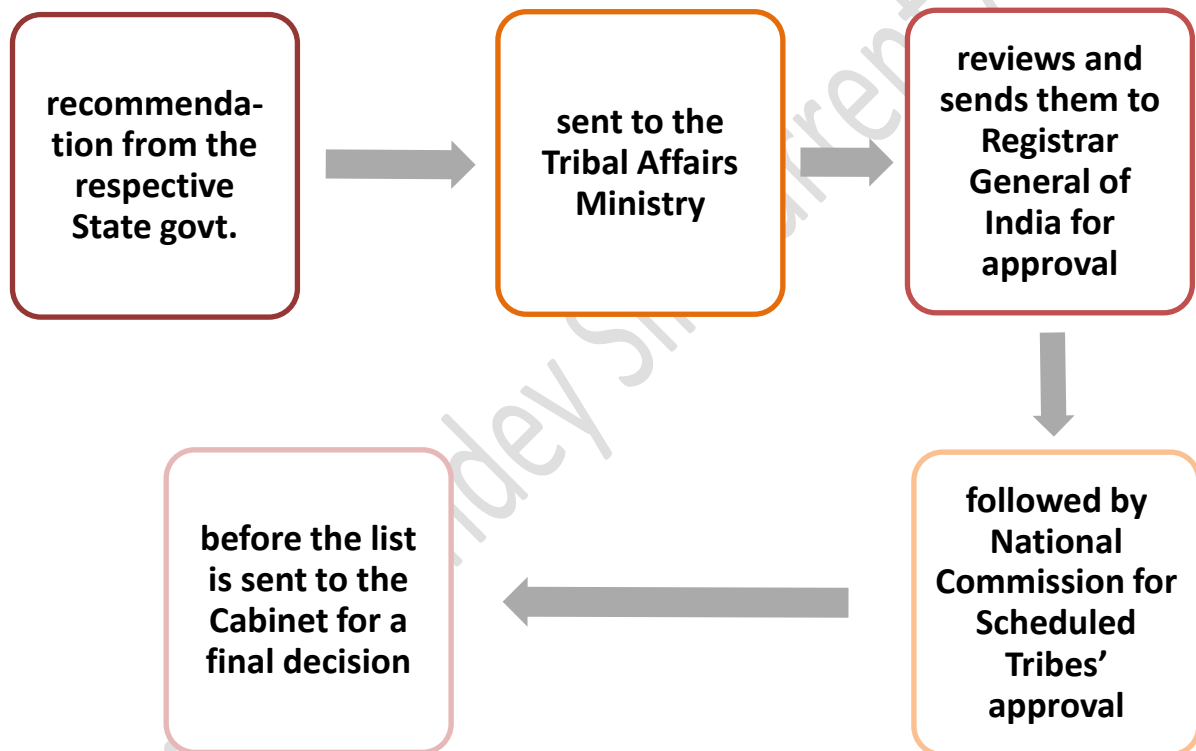
Five agricultural products of Kerala have been granted Geographical Indication (GI) status. Attappady Attukombu Avara (beans), Attappady Thuvara (red gram), Onattukara Ellu (sesame), Kanthalloor-Vattavada Veluthulli (garlic), and Kodungalloor Pottuvellari (snap melon) are the latest Geographical Indications that have been registered.





How ST LIST Updated

The Hatti tribe in the Trans-Giri area of Sirmour district in Himachal Pradesh, the Narikoravan and Kurivikkaran hill tribes of Tamil Nadu and the Binjhia in Chhattisgarh, who were listed as ST in Jharkhand and Odisha but not in Chhattisgarh, were the communities newly added to the list



The National Commission for Scheduled Tribes

established by amending Article 338

erstwhile National Commission for SC & ST

inserting a new Article 338A in the Constitution

through Constitution Act, 2003

replaced by two separate Commissions

(i) the National Commission for Scheduled Castes

(ii) the National Commission for Scheduled Tribes

w.e.f. 19 February, 2004

term of office

Chairperson - rank of Union Cabinet Minister

first NCST

of Chairperson, Vice-Chairperson and each member

Vice-Chairperson that of a Minister of State

constituted in March, 2004

three years from the date of assumption of charge

other Members ranks of a Secretary to the Government of India

2500yr old puzzle

2500yr old puzzle

**Rishi Rajpopat made the
breakthrough**

**decoding a rule taught
by Panini**

father of linguistics

**now encapsulated in his
thesis**

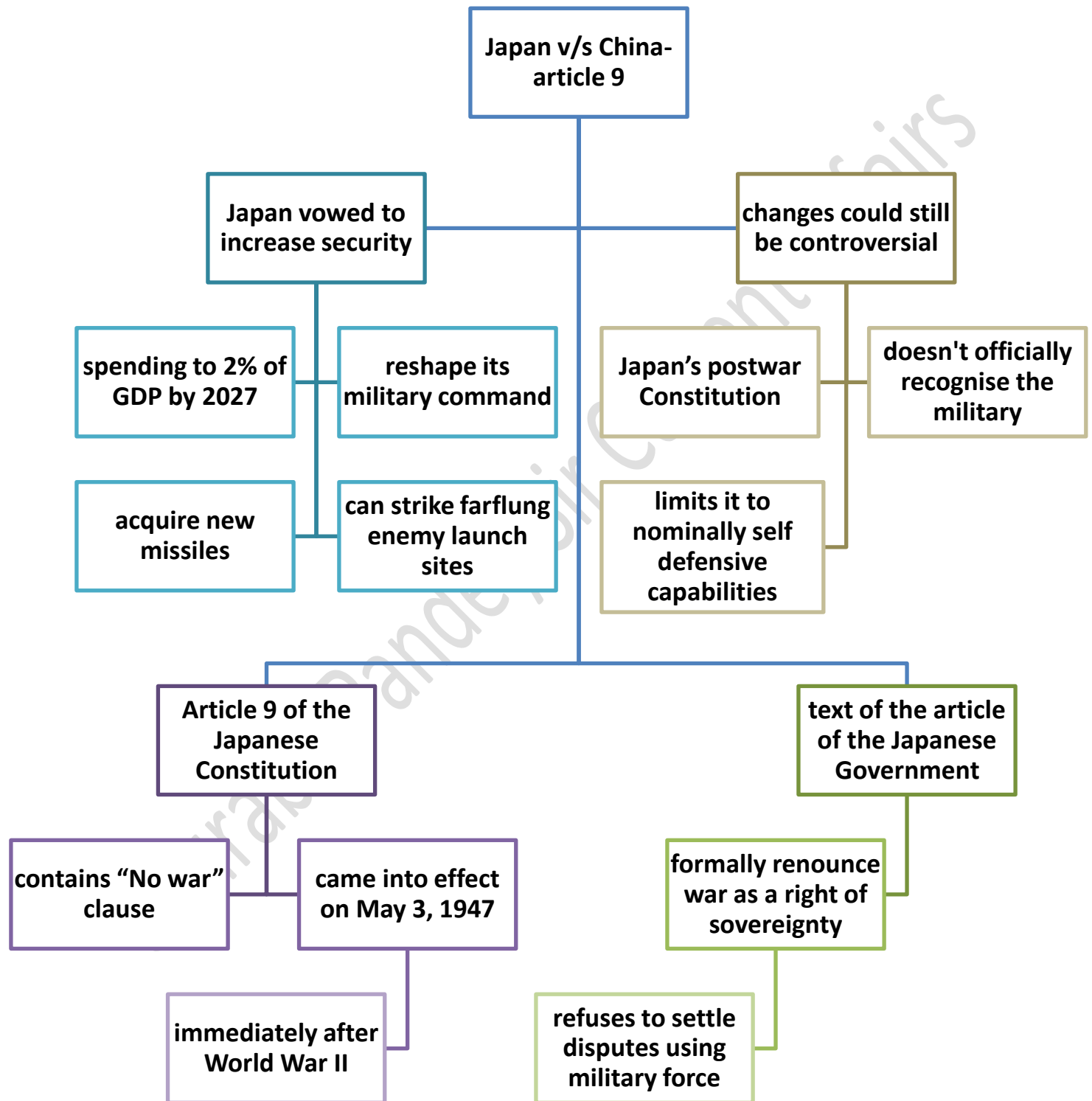
'In Panini, We Trust

**Discovering the
Algorithm for Rule
Conflict Resolution in
the Astadhyay**

Saurabh Panigrahi et Affairs

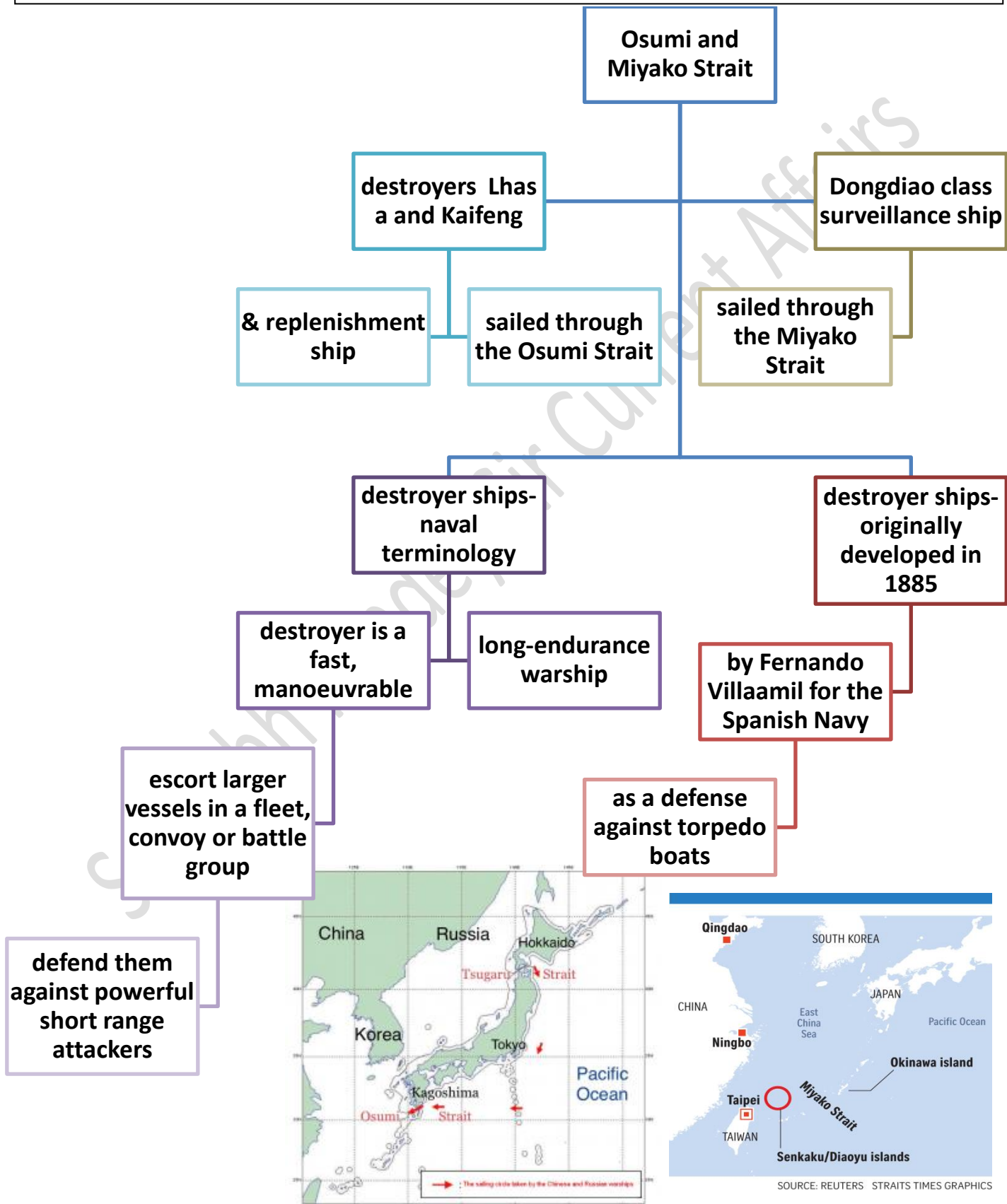
Japan v/s China-article 9

Japan's government approved major defence policy overhaul, including a significant spending hike, as it warned China poses "greatest strategic challenge ever" to its security



Osumi and Miyako Strait

A squadron of Chinese Navy ships sailed through straits near Japan into the Western Pacific, while Beijing blasted Tokyo's adoption of a new national security strategy putting itself on a more offensive footing



Windfall tax

windfall tax

windfall tax is a tax
levied by govt.

purpose is to
redistribute excess
profits in one area

against certain
industries

when economic
conditions allow
those industries

to raise funds for
the greater social
good

to experience
significantly above-
average profits

Saurabh Pandey Sir Current Affairs

Current account deficit

Current account deficit

higher CAD & steep movements in oil prices affect India

leads to weakening of Indian currency

India is the world's third-largest importer of crude oil

rise in oil prices increases India's import bill

importers rush to lock in dollar purchases

when they foresee crude prices rising

further rise in the country's CAD

steep rise in crude oil prices

fall in oil prices

leads to a sharp increase in fuel and gas prices

helps India cut down on its import bill

strengthen its local currency

directly dictate domestic pricing

help fuel retailers to limit losses

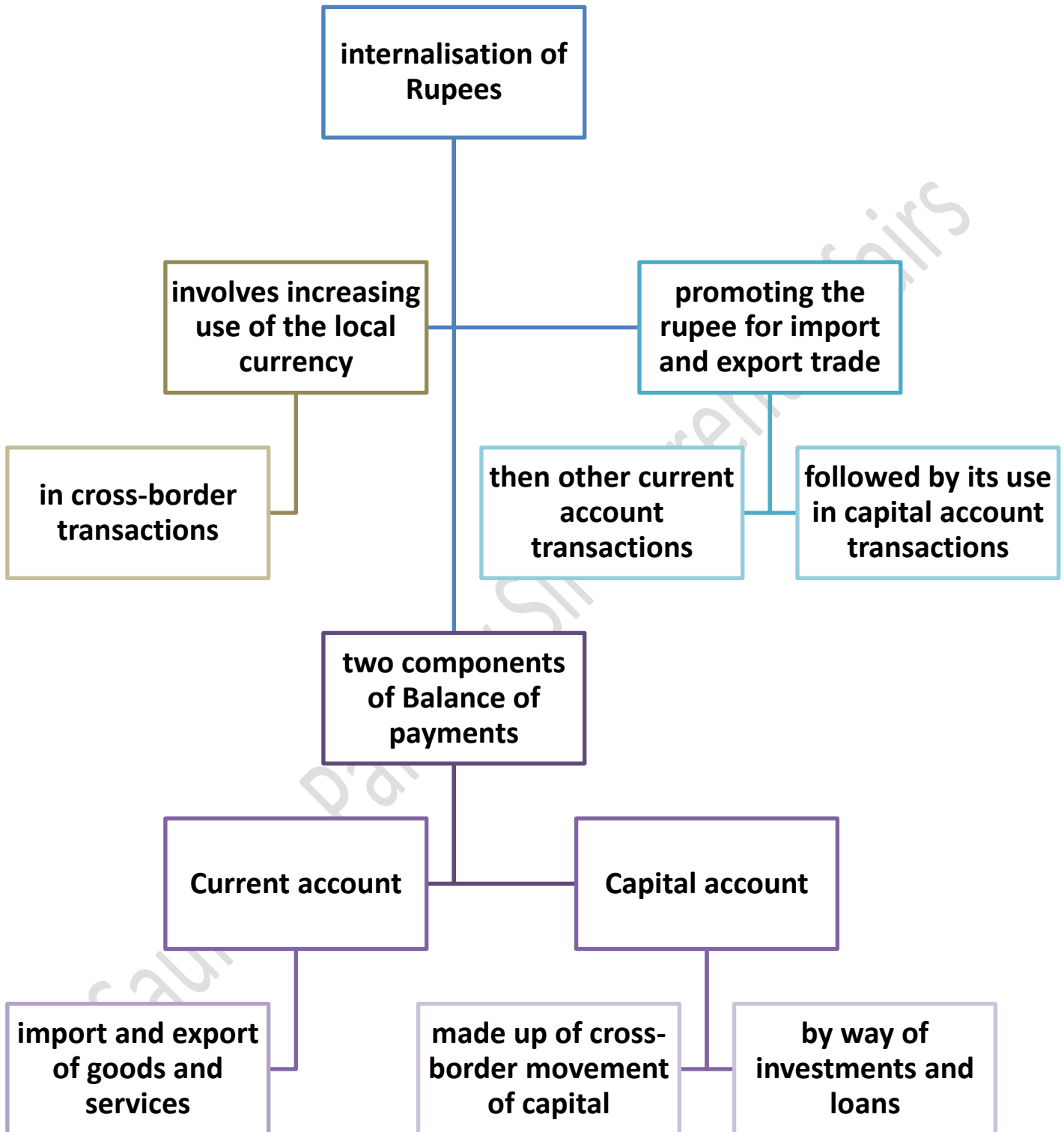
they incurred on selling petrol and diesel

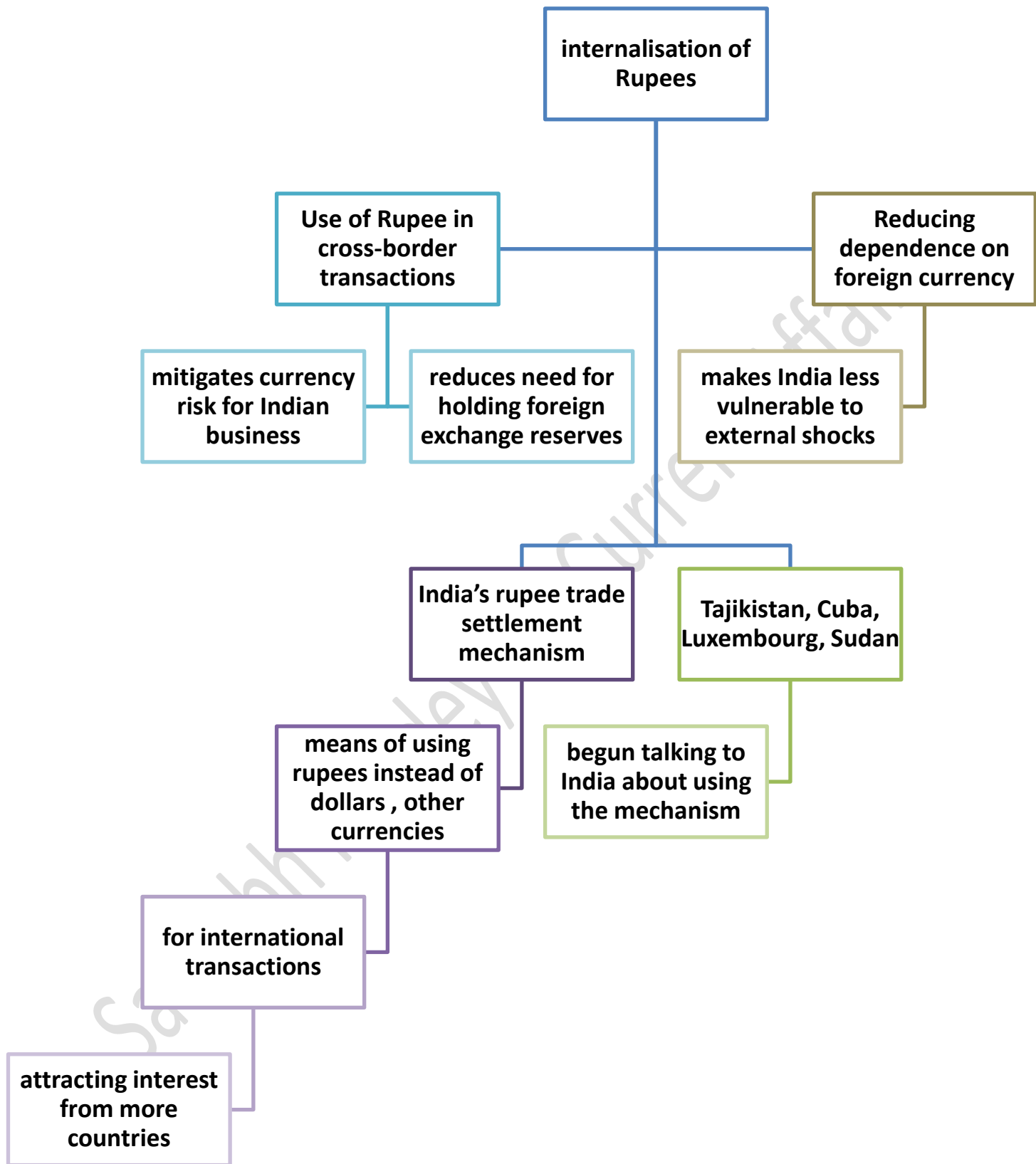
consumers to shell out more Indian rupees from their pockets

kept retail prices unchanged earlier

despite a steep rise in the crude oil price

Step towards internalisation of Rupees





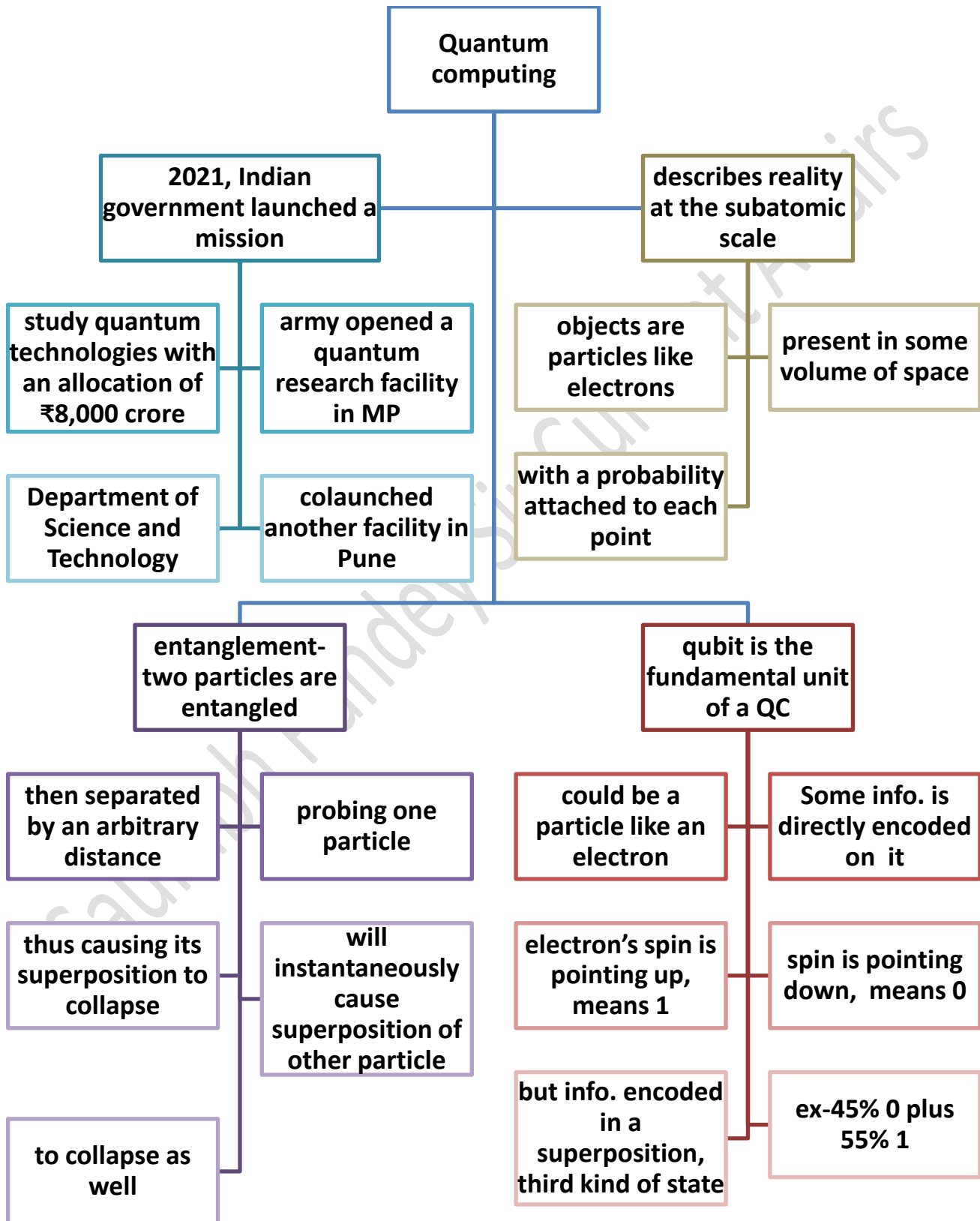
**The Hindu through Mind Maps
(Saurabh Pandey Sir)**

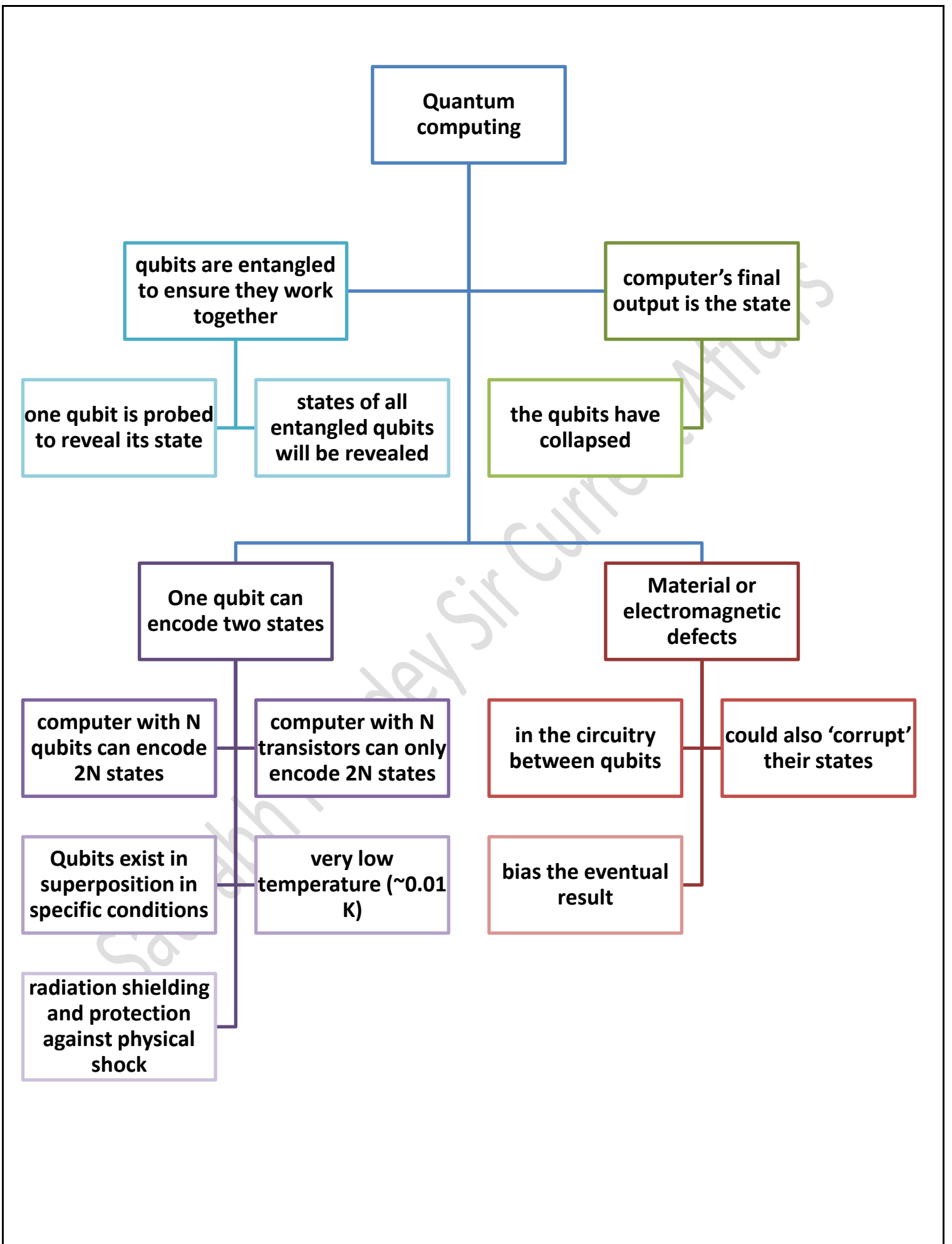
December 19
2022

The Hindu Mind
Maps

Quantum computing

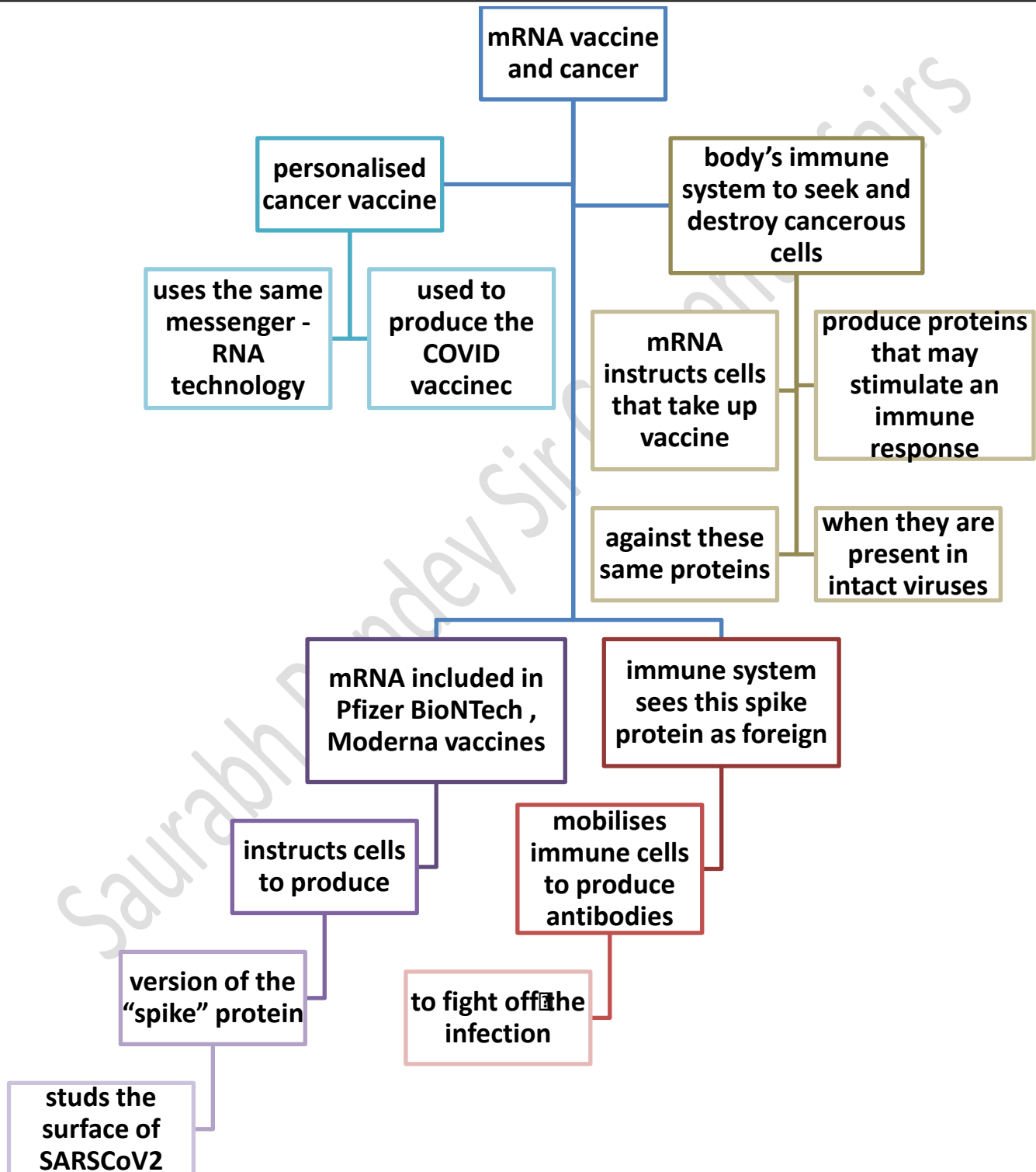
The allure of quantum computers (QC) is their ability to take advantage of quantum physics to solve problems too complex for conventional computer





mRNA vaccine and cancer

The results of a trial of an experimental cancer vaccine built on the mRNA (messenger ribonucleic acid) platform, made by Moderna and MSD (Merck&Co.), have shown promising results



mRNA vaccine and cancer

Listing out CAR-T cells and bi specific antibodies

in CAR-T treatment

Merck's Keytruda said

both approaches produced spectacular results in many cancers

scientists take the immune systems cells out

engineer them to target a specific cancer

then put them back in the body

to kill cancer cells

bispecific antibodies attach to immune system cells with one arm

cancer cells with the other

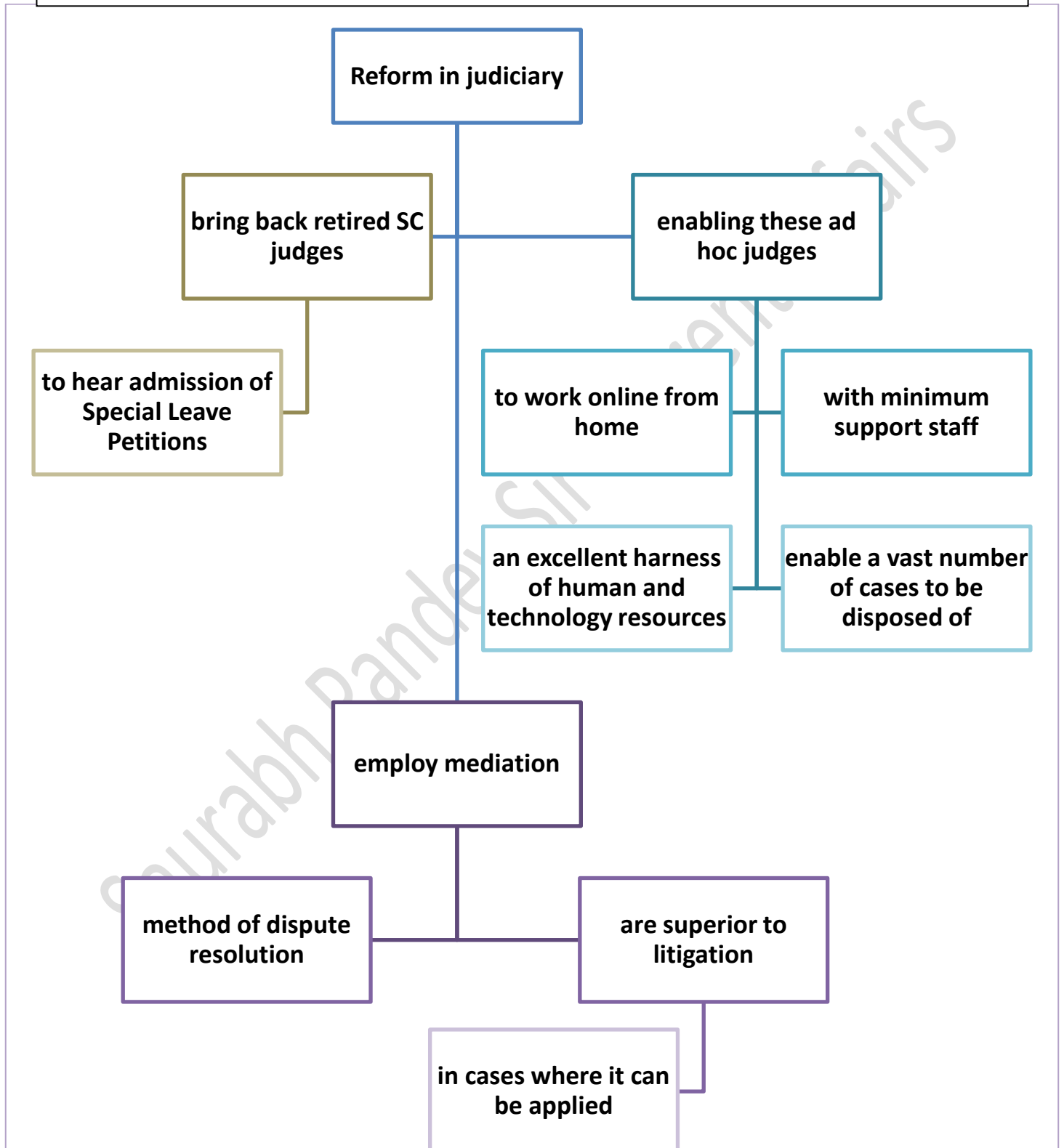
bringing powerful immune system killer cells

right next to the cancer cells

Reuters story on the breakthrough study explained that the personalised cancer vaccine works in concert with Merck's Keytruda, to disable a protein called programmed death 1, or PD1, that helps tumours to evade the immune system

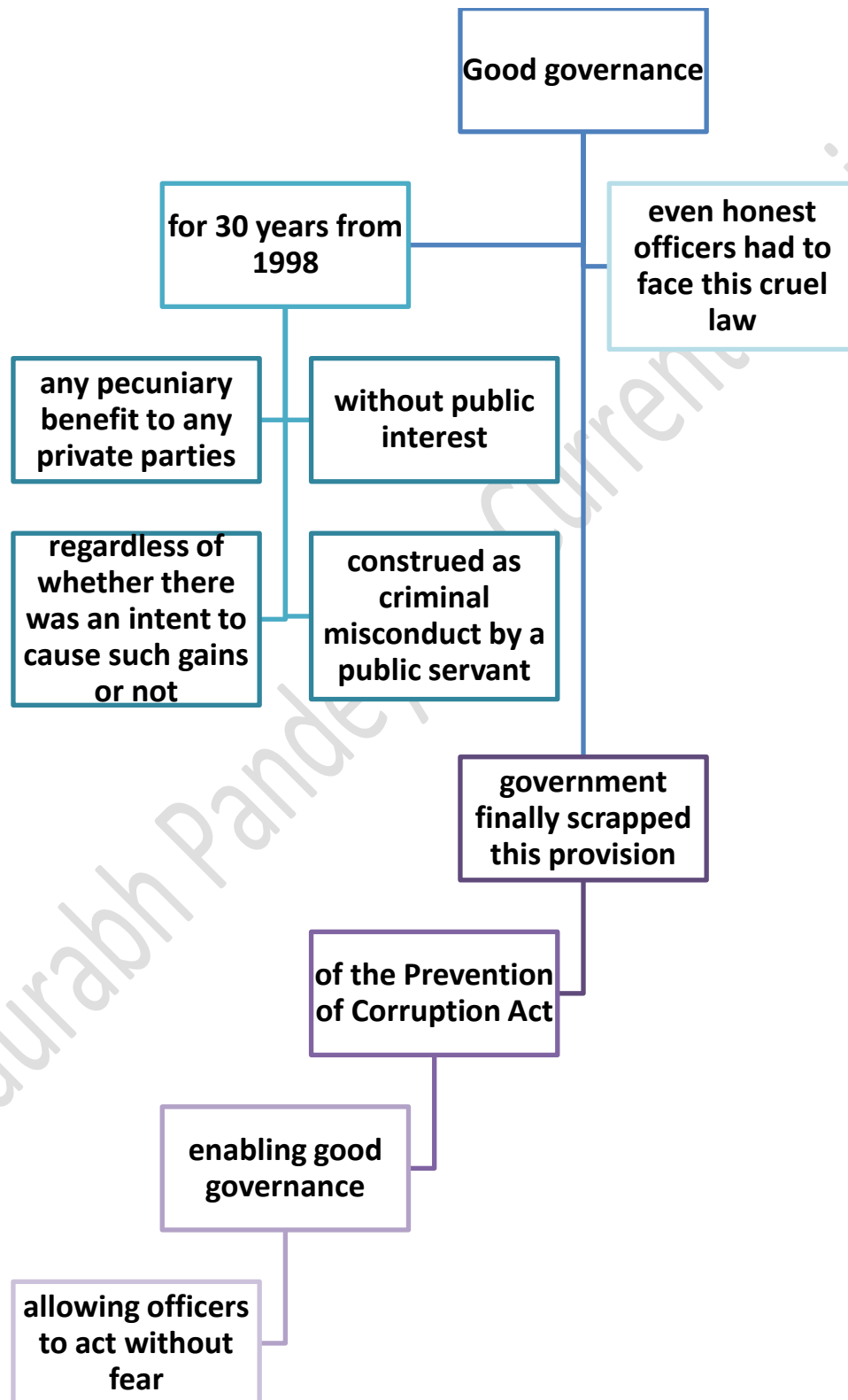
Reform in judiciary

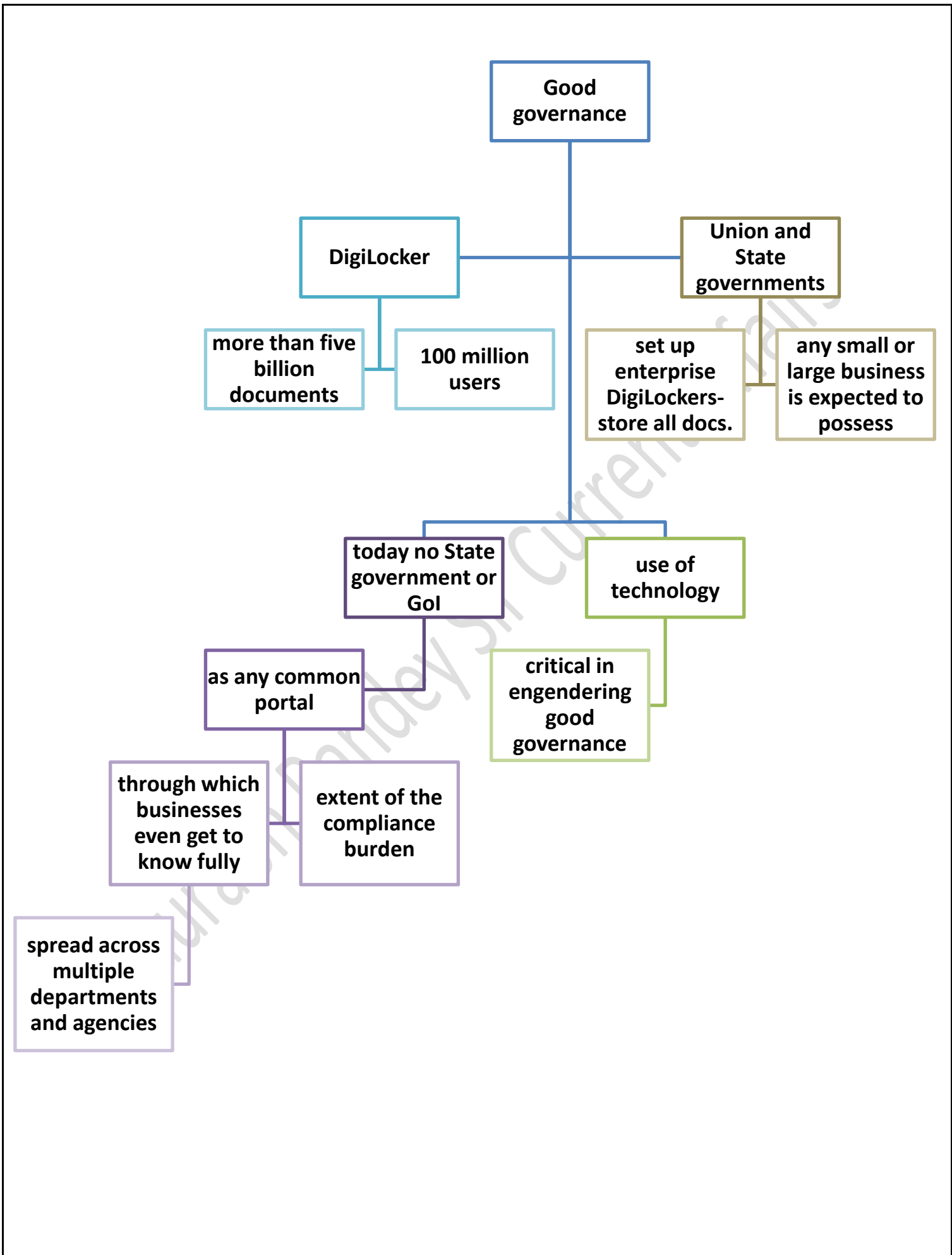
We have difficulty in finding good talent to be appointed as judges of the High Court, but year after year we see the spectacle of large numbers of experienced and fine judges retiring from the High Courts because they have reached the age of 62



Good governance

First, the Modi government (thanks to the stellar work of economist Bibek Debroy) has repealed an estimated 2,000 Acts, statuettes and subordinate legislation which include dozens of Appropriation acts, the Excise Act 1863





Good governance

DigiLocker

Union and State governments

more than five billion documents

100 million users

set up enterprise DigiLockers-store all docs.

any small or large business is expected to possess

today no State government or Gol

use of technology

as any common portal

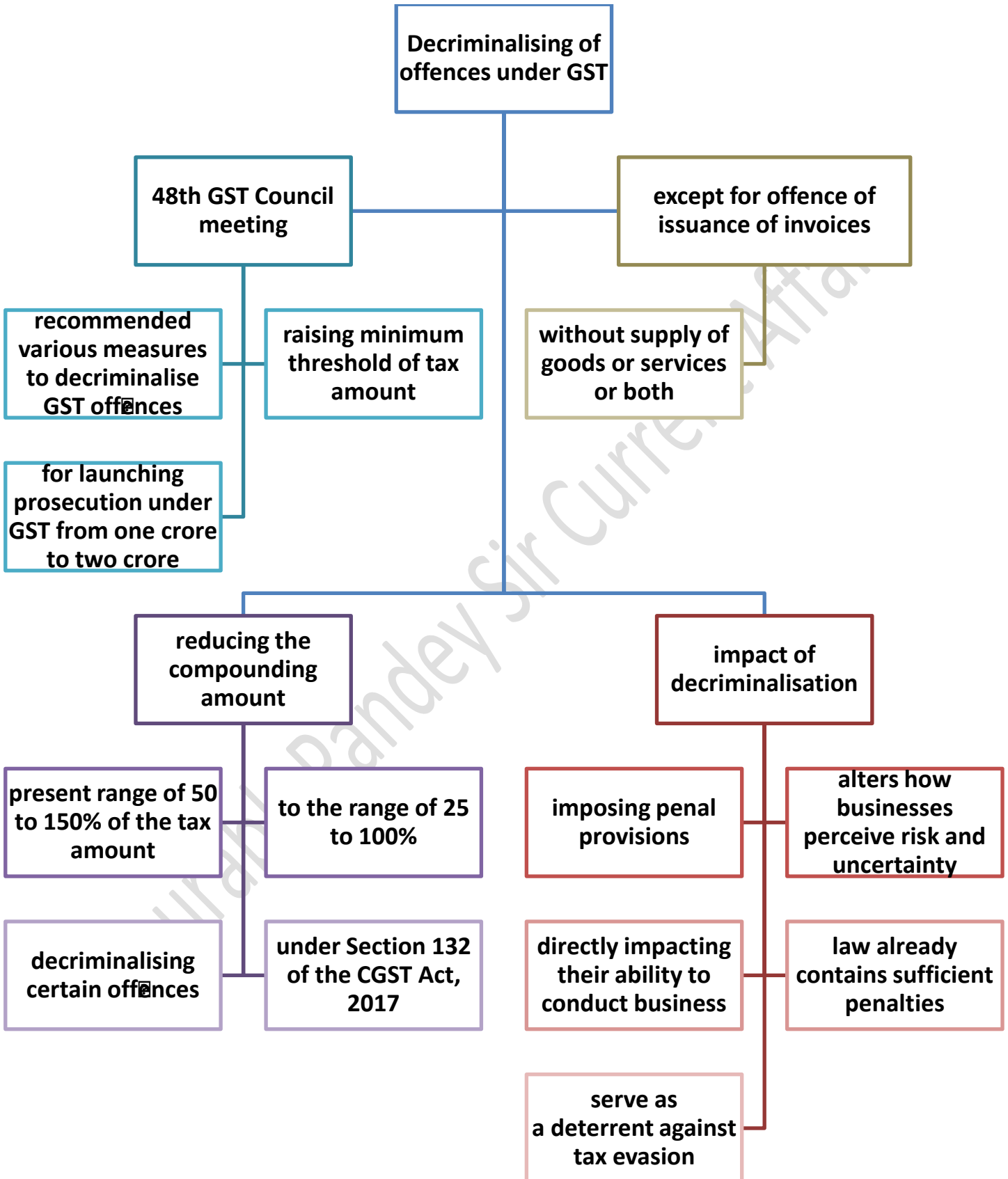
critical in engendering good governance

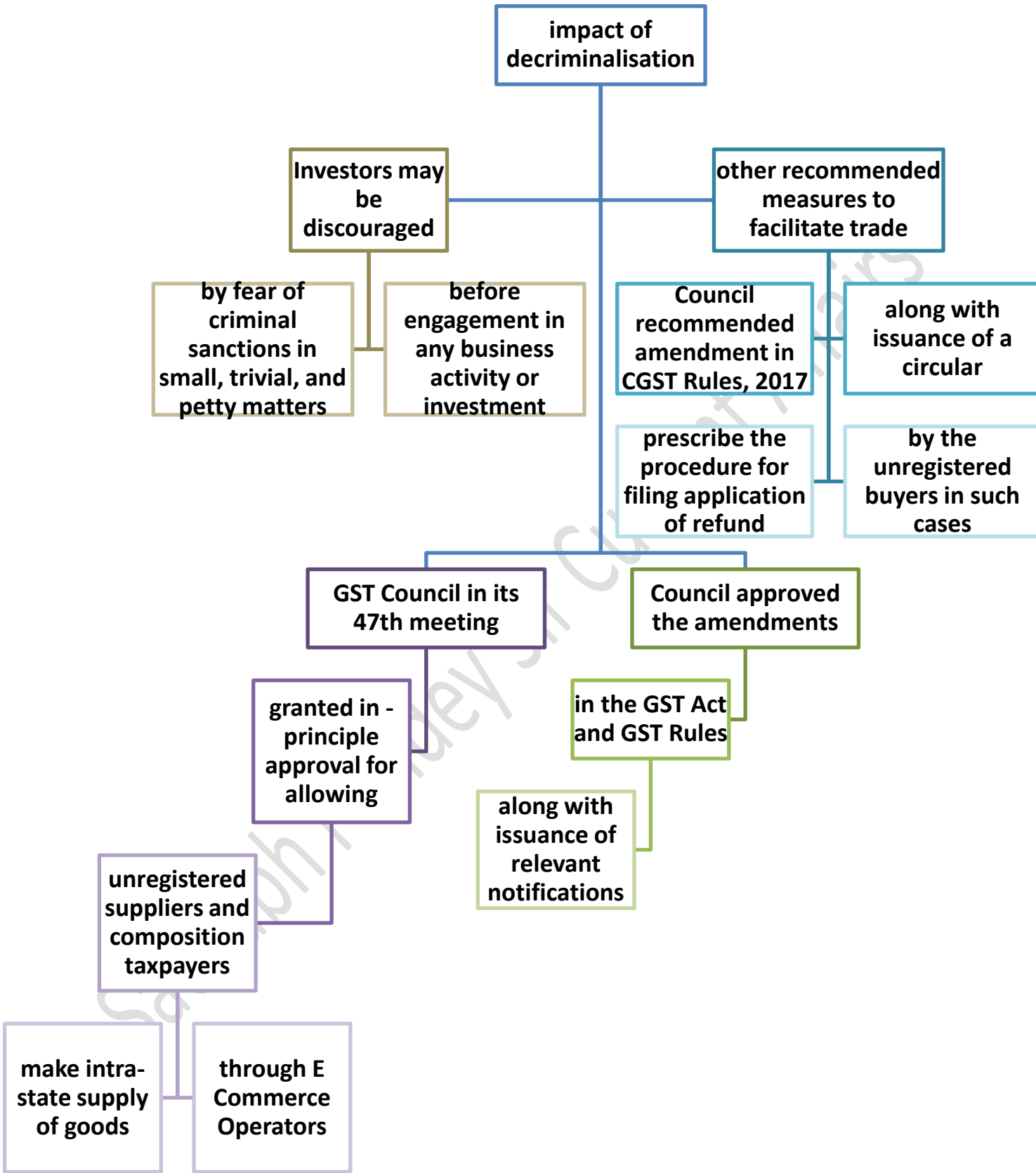
through which businesses even get to know fully

extent of the compliance burden

spread across multiple departments and agencies

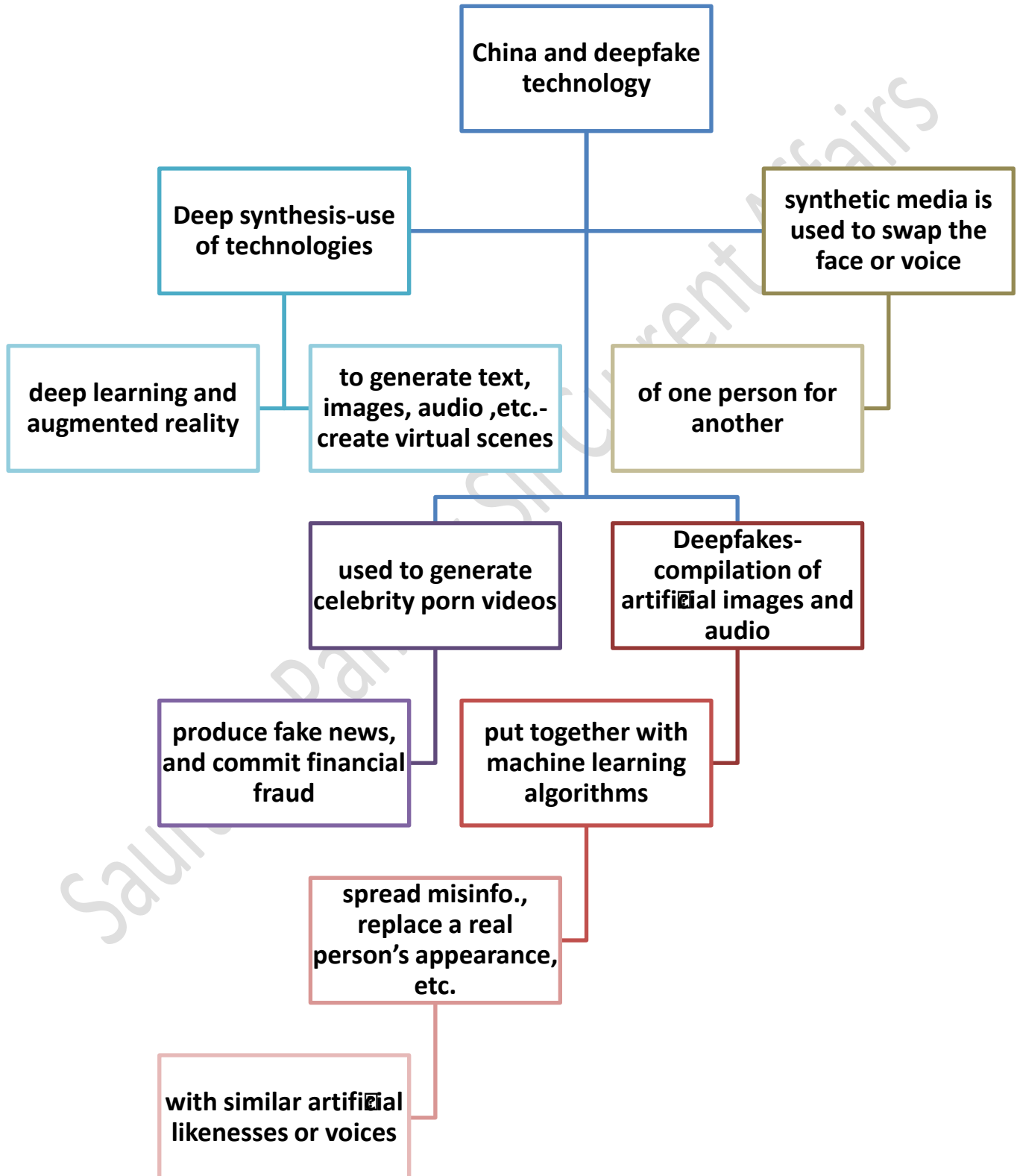
Decriminalising of offences under GST





China and deepfake technology

The Cyberspace Administration of China, the country's cyberspace watchdog, is rolling out new regulations, to be effective from January 10, to restrict the use of deep synthesis technology and curb disinformation



Deepfake

create people who do not exist

term deepfake originated in 2017

can fake real people saying and doing things

anonymous Reddit user called himself "Deepfakes"

technology disrupt the right to privacy

Canada is a member and leader

Canada does not have any regulations

in many related multilateral initiatives

cutting edge AI research conducted by govt

use these forums to coordinate

number of domestic and foreign actors

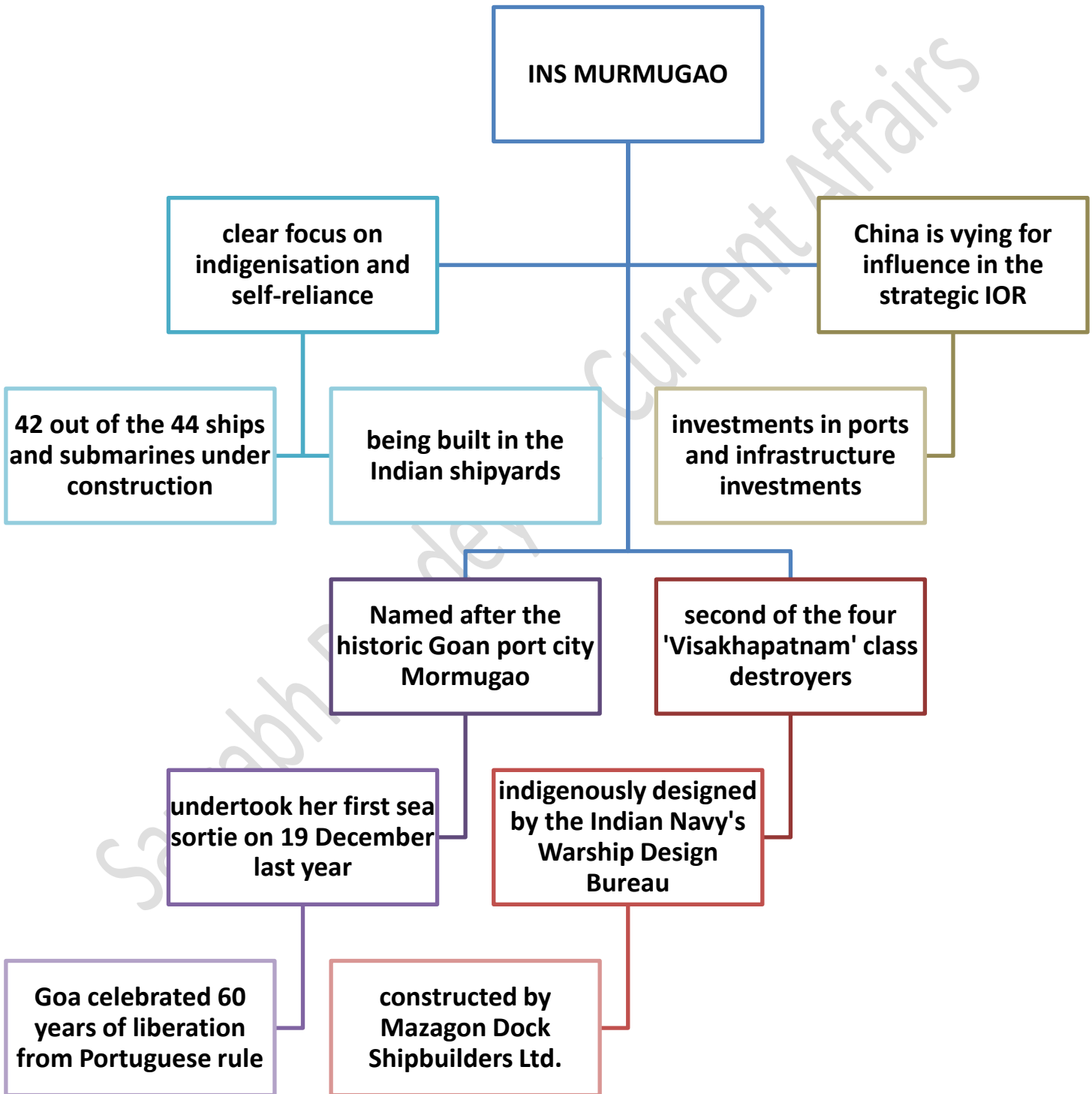
with global and domestic actors

to create deep fake policy in different areas

Paris Call for Trust and Security in Cyberspace, NATO Cooperative Cyber Defence Centre of Excellence, the Global Partnership on AI

INS MURMUGAO

India has been focusing on bolstering its maritime capability with a focus on the Indian Ocean in the backdrop of concerns over China's growing forays into the region, considered the backyard of the Indian Navy



INS MURMUGAO

**163 metres in length
and 17 metres in
breadth**

**one of the most
potent warships**

**displacement of
7,400 tonnes**

**to have been
constructed in India**

**70% of the
components used in
the construction-
indigenous**

**Navy said the ship is
equipped to fight**

**propelled by four
powerful gas turbines**

**under nuclear,
biological, and
chemical warfare
conditions**

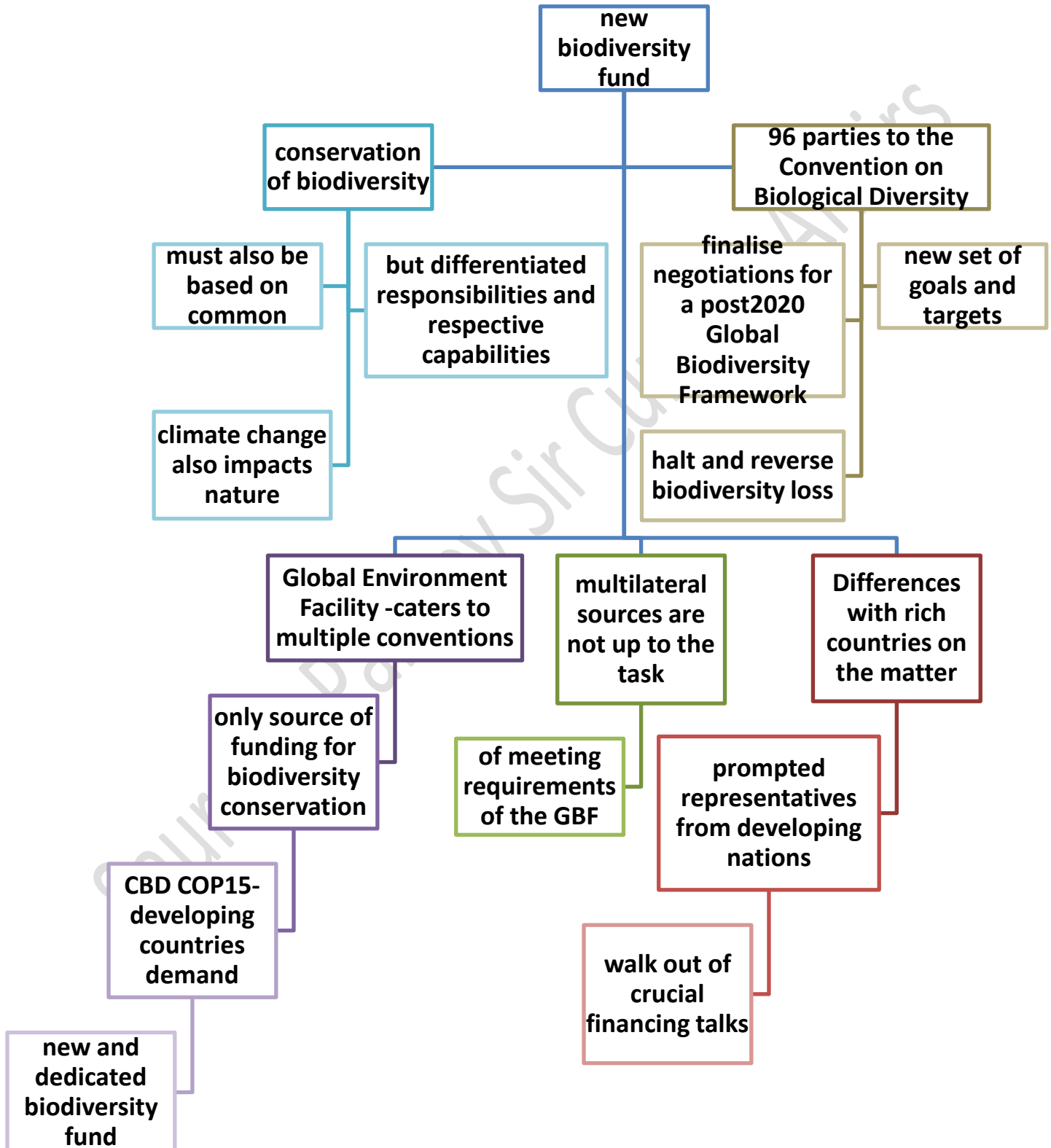
**capable of achieving
speeds over 30 knots**

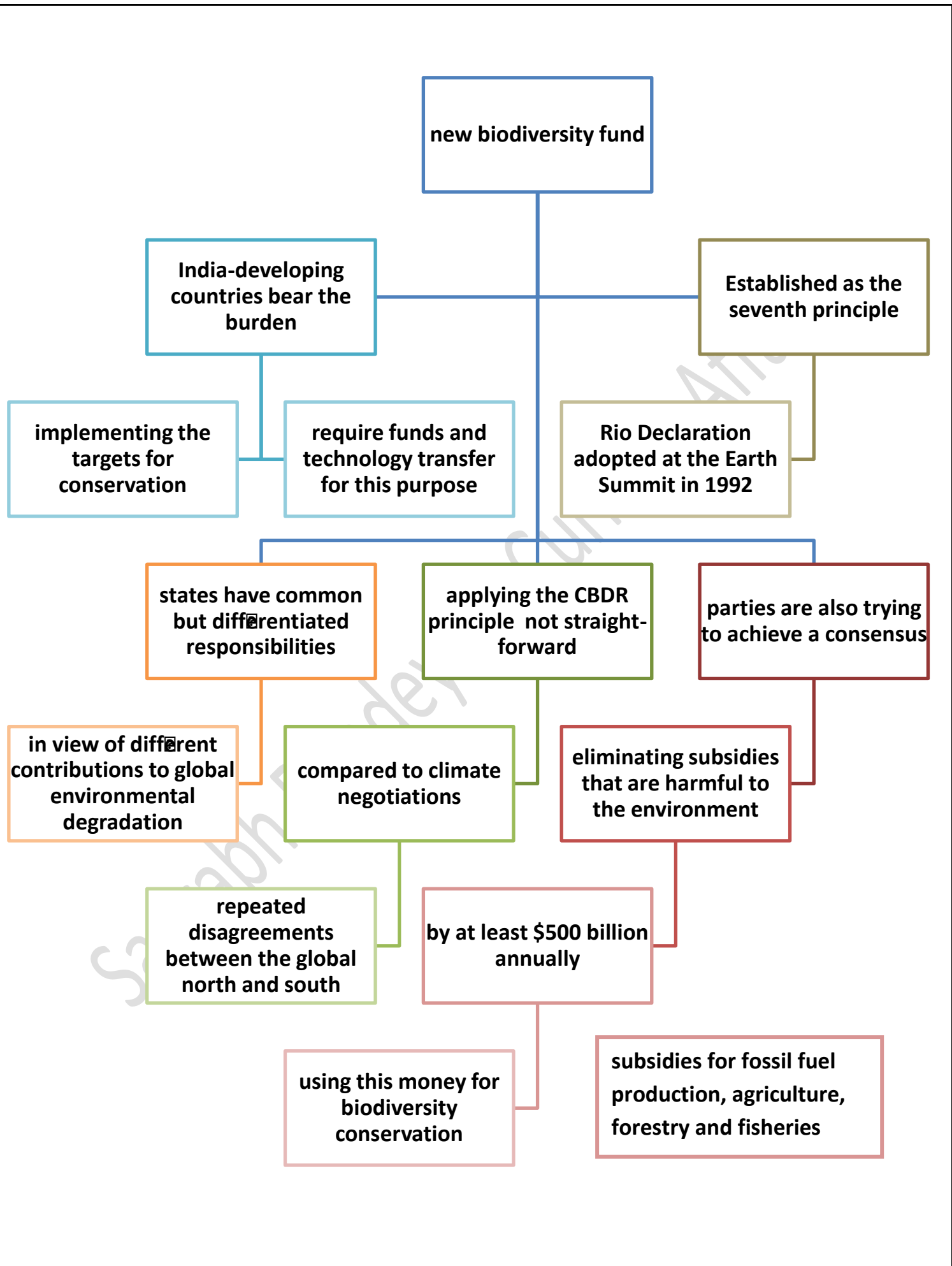
**fitted with a modern
surveillance radar**

**provides target data
to the gunnery
weapon systems**

New biodiversity fund

There is an urgent need to create a new and dedicated fund to help developing countries successfully implement a post2020 global framework to halt and reverse biodiversity loss, India has said at the U.N. biodiversity conference in Canada's Montreal





new biodiversity fund

India-developing countries bear the burden

Established as the seventh principle

implementing the targets for conservation

require funds and technology transfer for this purpose

Rio Declaration adopted at the Earth Summit in 1992

states have common but differentiated responsibilities

applying the CBDR principle not straight-forward

parties are also trying to achieve a consensus

in view of different contributions to global environmental degradation

compared to climate negotiations

eliminating subsidies that are harmful to the environment

repeated disagreements between the global north and south

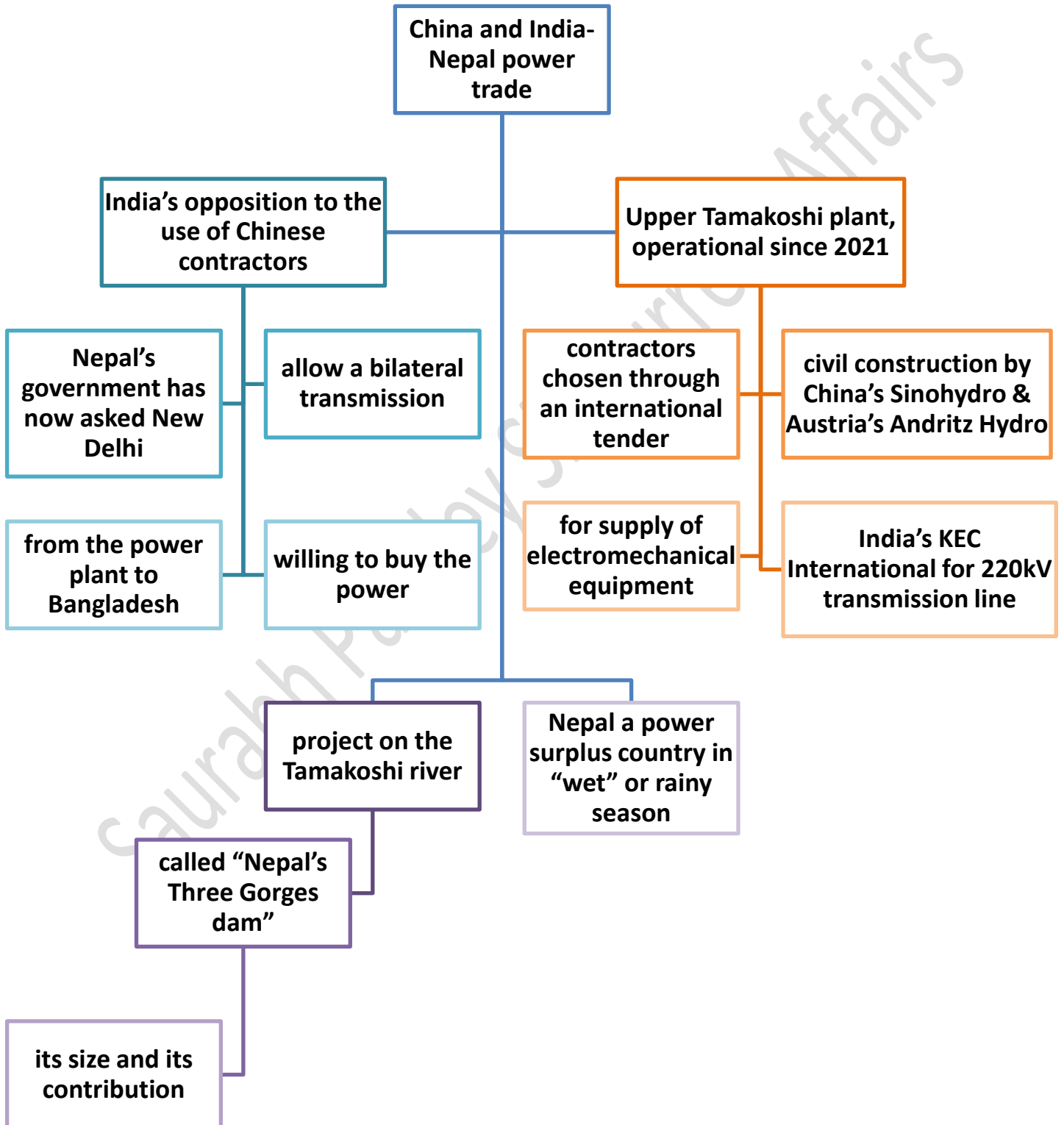
by at least \$500 billion annually

using this money for biodiversity conservation

subsidies for fossil fuel production, agriculture, forestry and fisheries

China and India-Nepal power trade

India Nepal hydropower BHUBANESWAR trade is set to become a regional game-changer, say officials in Delhi and Kathmandu, pointing to the possibilities of buying power from Nepal and making it available over an electric grid system to consumers in India, Bangladesh and Sri Lanka



China and India-Nepal power trade

After four years of negotiations

2021-military standoff at LAC

India and Nepal signed Power Trading Agreement , 2014

agreeing to the exchange of electricity

government issued a number of financial measures

on Chinese investment and imports

cooperation in the hydropower sector

"Procedure for Approval and Facilitating

Import/Export (Cross Border) of Electricity"

procedure included clause (6.3(i))

prohibited trade with power plants

that had ownership from a country

that shares "land border" with India

has no bilateral power treaty with India

Lollapalooza Effect

Lollapalooza Effect

confluence of factors
acting together

key is that when forces
combine

that can lead to either
large positive or
negative results

they don't just add up

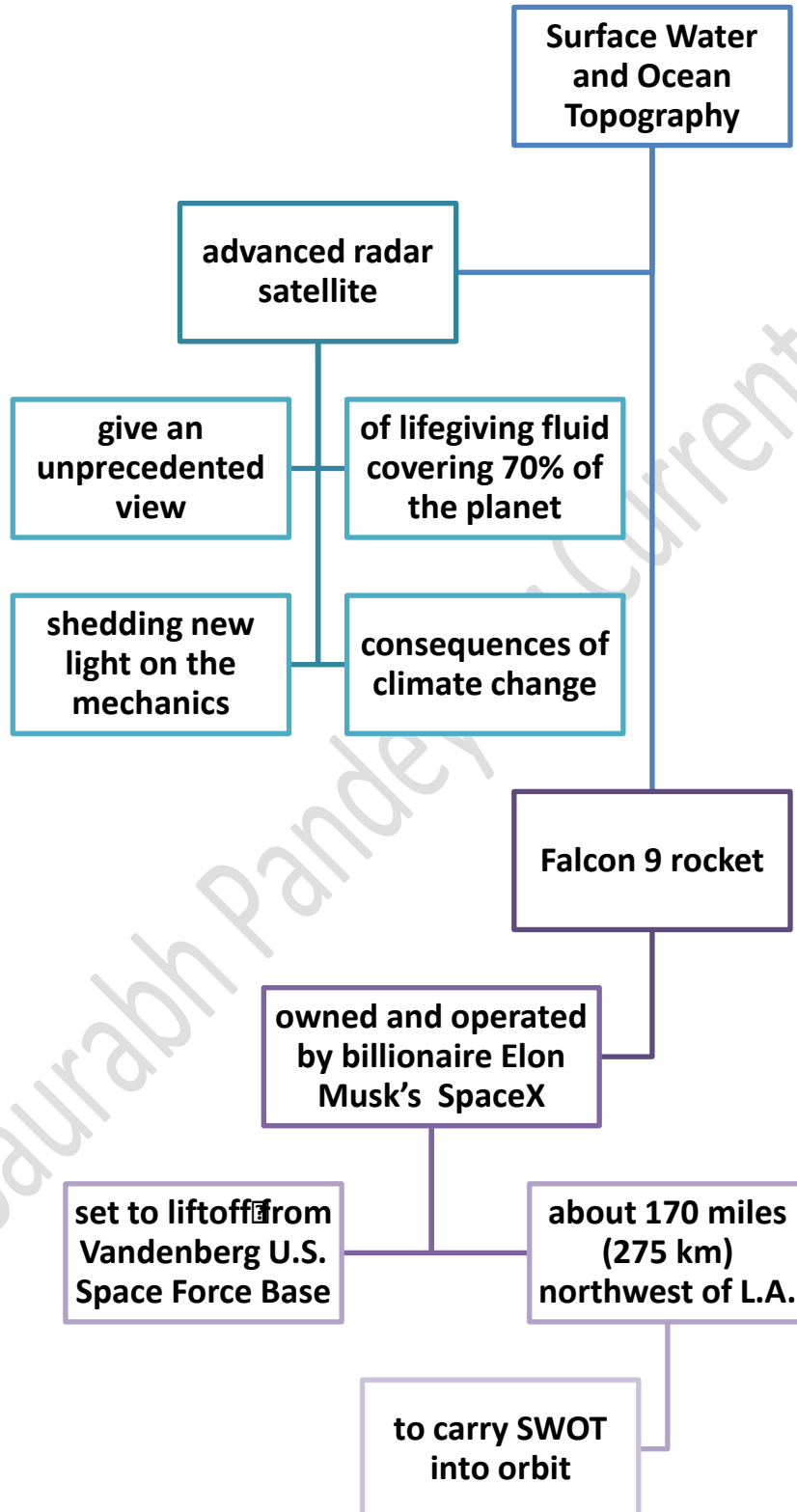
each force builds off
and strengthens the
other

creating an explosive
effect with huge result

Saurabh Pande

SWOT

A NASA led international satellite was launched from Southern California, on a major Earth science project to conduct a comprehensive survey of the world's oceans, lakes and rivers for the first time



The Hindu through Mind Maps
(Saurabh Pandey Sir)

December 20
2022

The Hindu Mind
Maps

Kamikaze drones

Kamikaze drones

small unmanned aircraft

called Switchblade

packed with explosives

can be flown directly at a tank or a group of troops

because their bladelike wings spring out on launch

destroyed when it hits the target and explodes

capability of going past traditional defences

difficult to detect on radar

to strike its targets

can even be programmed to hit targets

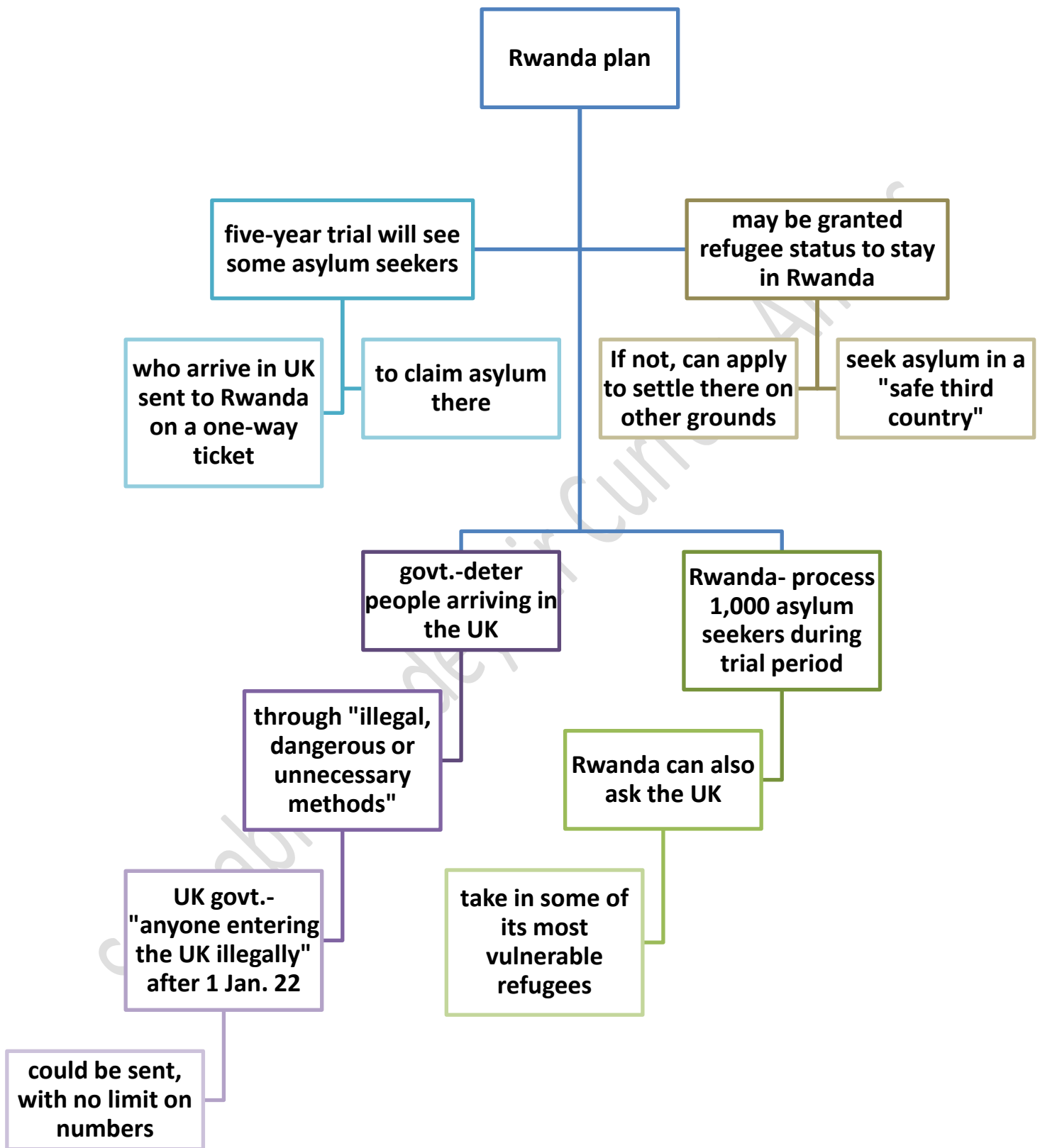
without human intervention

cost a fraction of what the larger counterparts do

based on facial recognition



Rwanda plan



asylum seeker

UN Refugee Agency-
asylum seeker

refugee-person who
has fled conflict

someone who has
applied for shelter
and protection

in another country

or persecution in
their own country

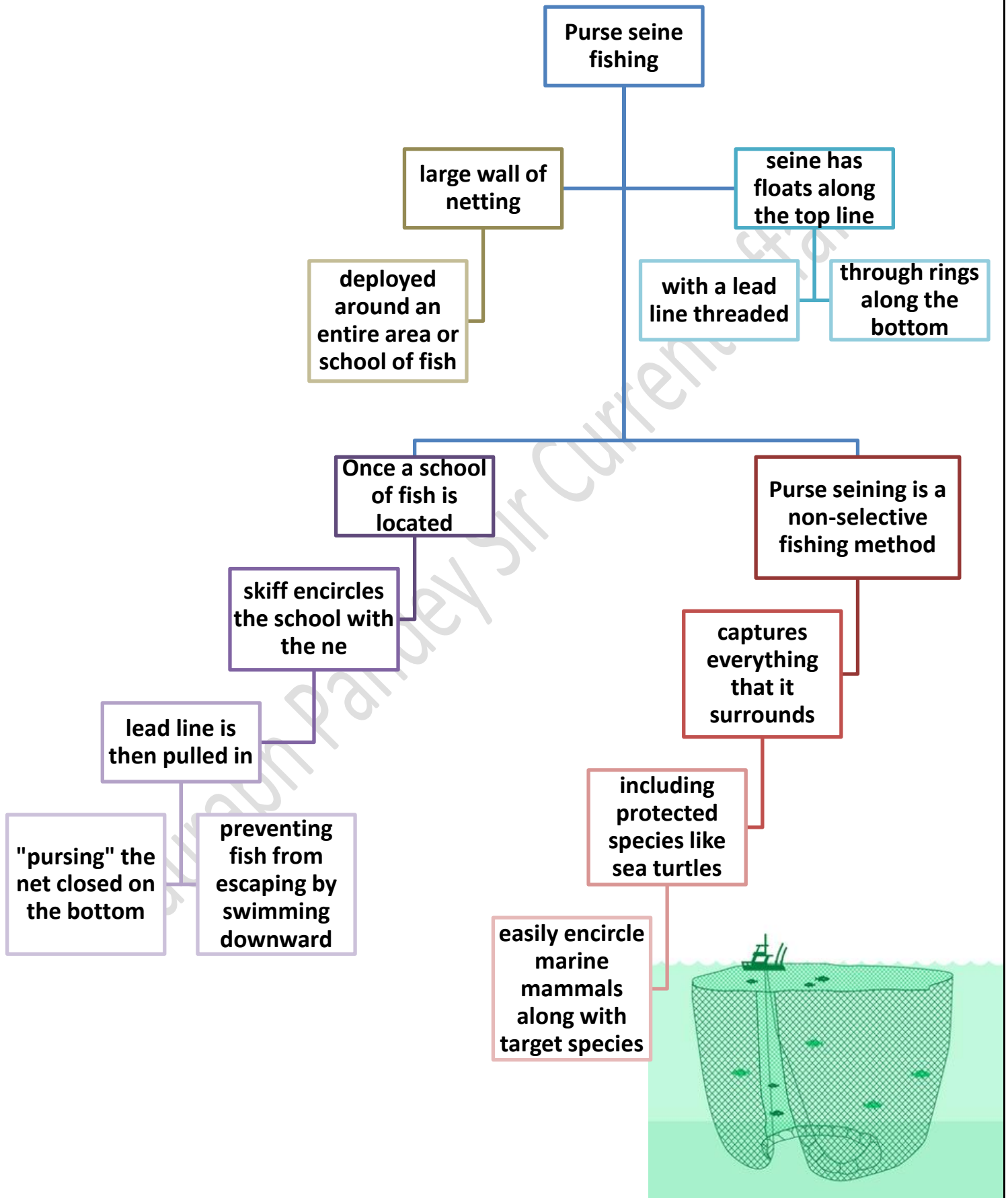
legal rights of
refugees

protected by
international law

up to host countries
to decide

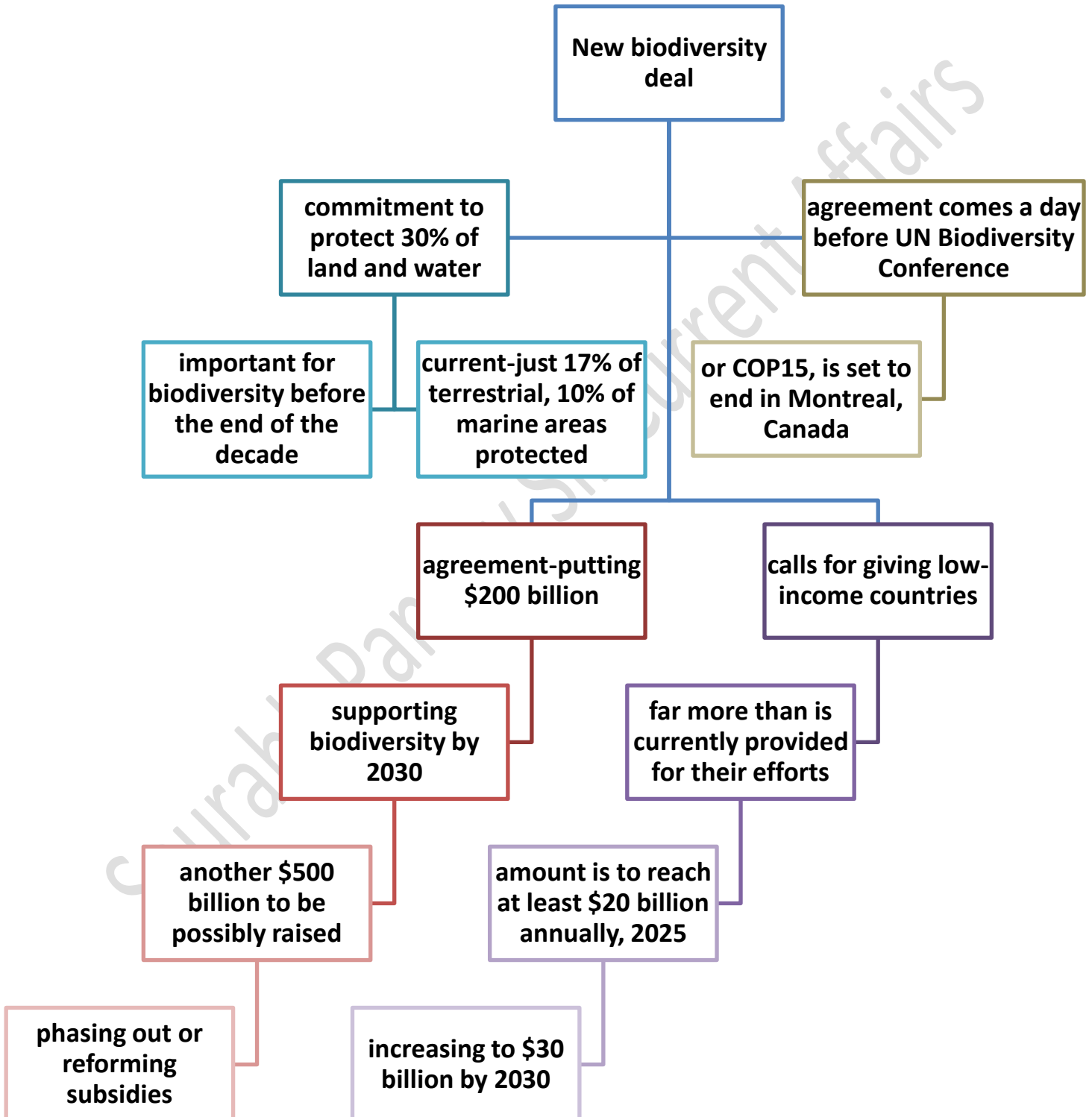
whether an asylum
seeker is granted
refugee status

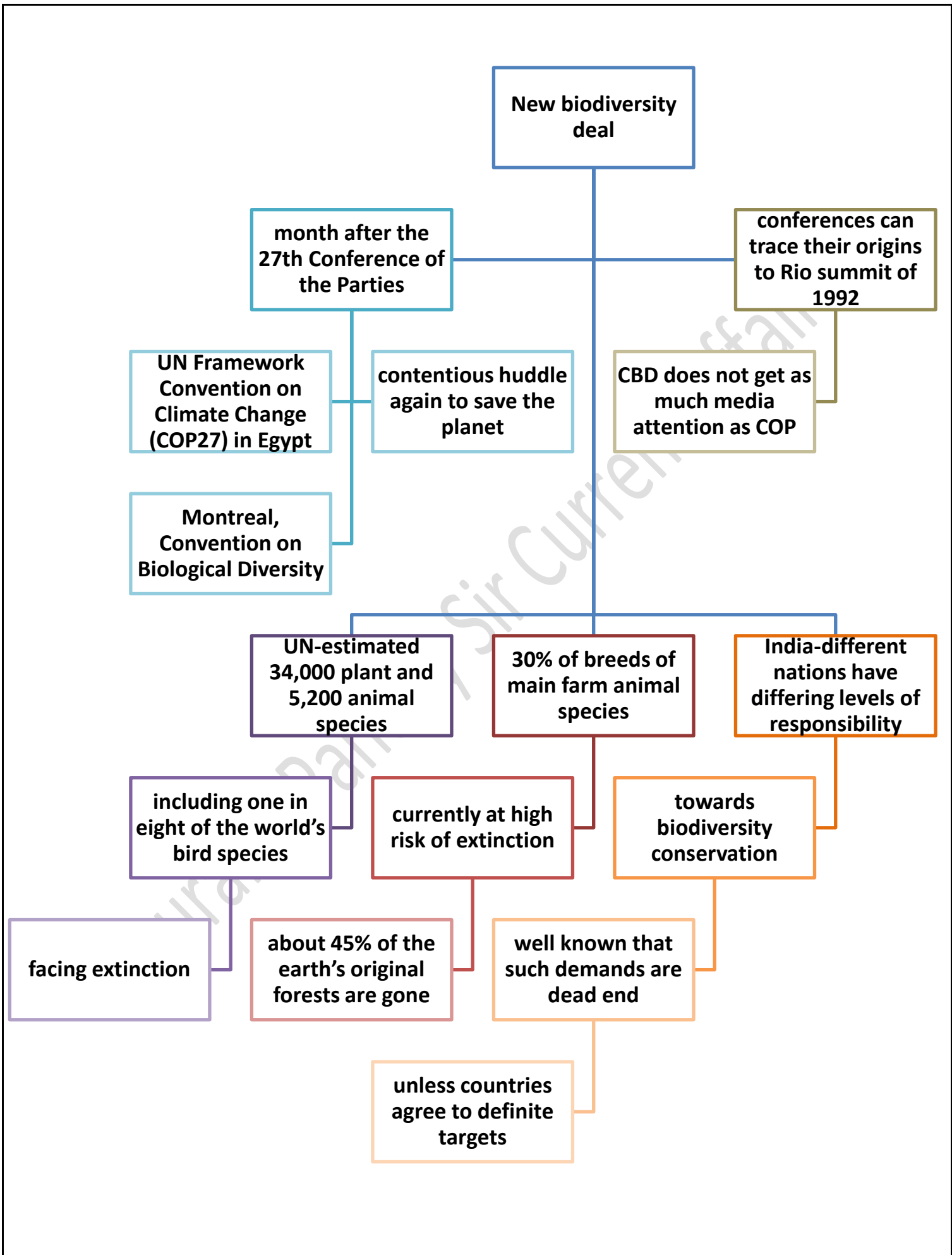
Purse seine fishing



New biodiversity deal

Negotiators at a UN biodiversity conference on Monday reached an agreement hailed as a landmark global effort to protect the world's lands and oceans





The minimum tax on big business

The minimum tax on big business

minimum tax rate

EU members- implement a minimum tax rate of 15%

boost global tax revenues by \$150 billion annually

on big businesses in accordance with Pillar 2 -global tax agreement

framed by Organisation for Economic Cooperation & Development

OECD-govt. equipped to impose additional taxes

Pillar 1 of the OECD's tax plan

more taxing rights to govt. of countries

in case companies paying taxes that are considered too low

address the question of taxing rights

where large businesses conduct substantial amount of their business

ensure big businesses with global operations

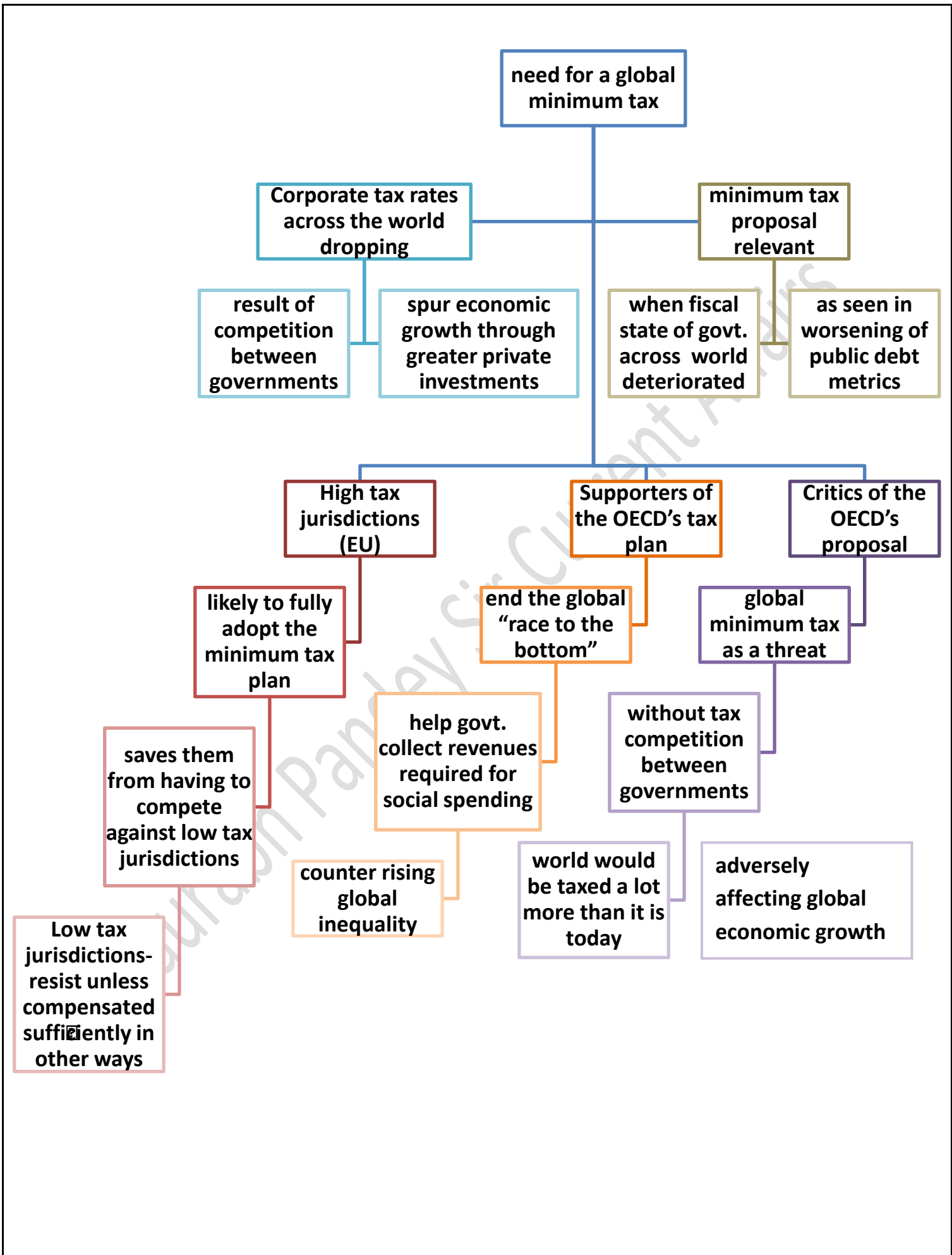
Large multinational companies paid taxes in their home countries

U.S. tech companies may have to pay more taxes

don't benefit by domiciling themselves in tax havens

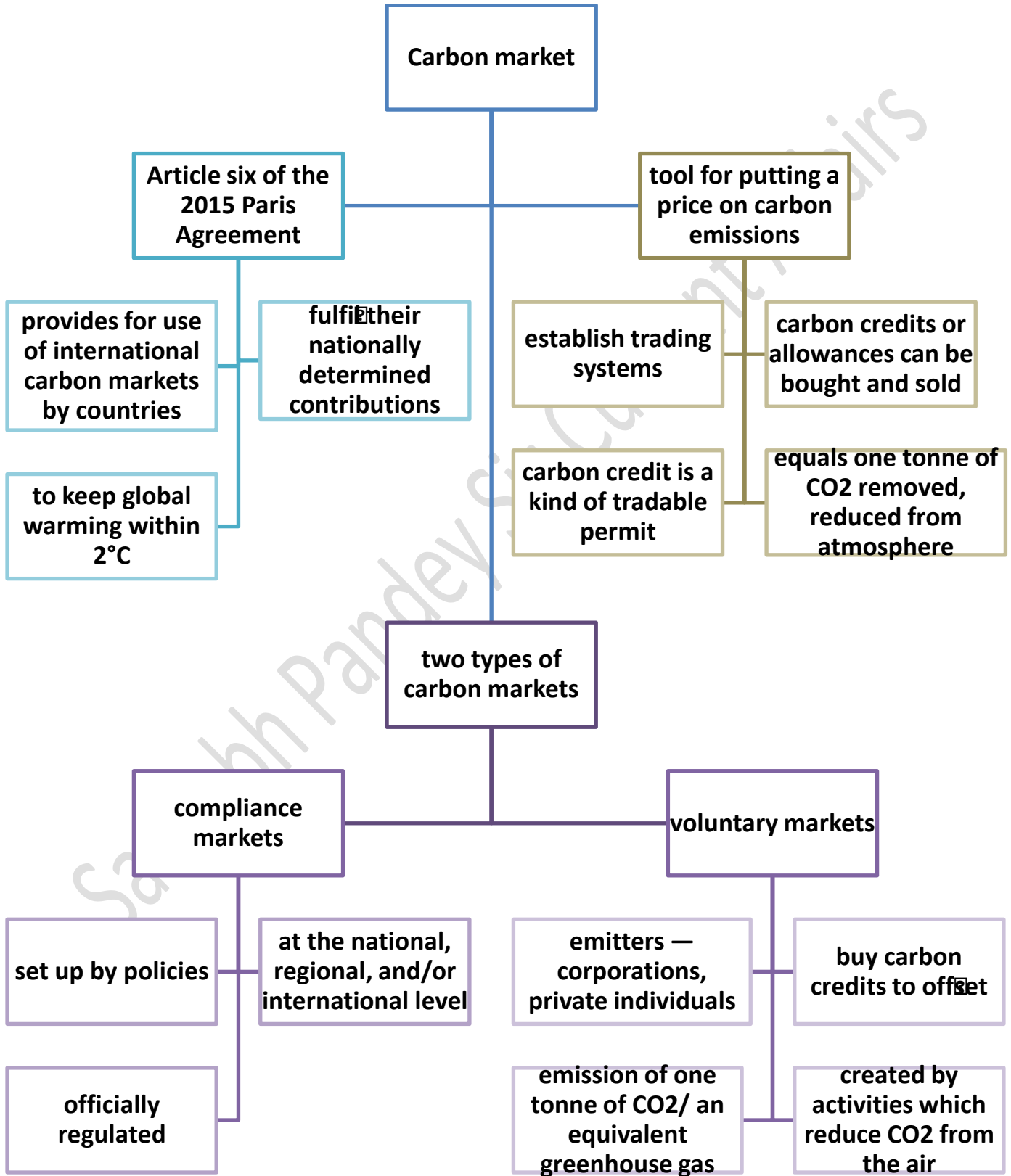
did most of their business in foreign countries

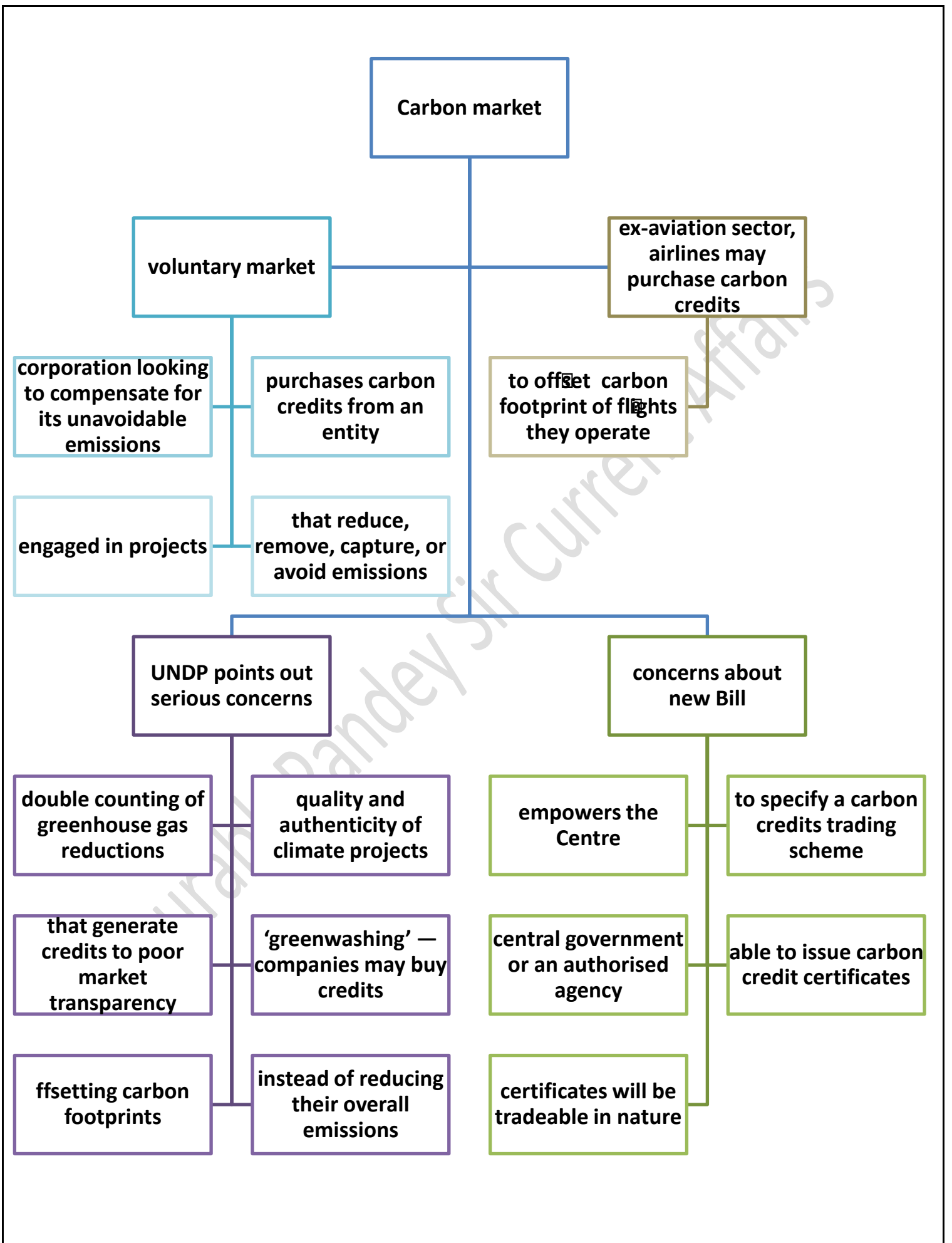
to governments of developing countries



Carbon market

The Energy Conservation (Amendment) Bill, 2022 was passed in Parliament
The Bill empowers the government to establish carbon markets in India and specify a carbon credit trading scheme





concerns about new Bill

able to buy carbon credit certificates

on a voluntary basis

Opposition members

Bill does not provide clarity on the mechanism

used for trading of carbon credit certificates

who will regulate such trading

questions about the right Ministry

while carbon market schemes in other countries

framed by their environment ministries

Indian Bill was tabled by the Power Ministry

Bill does not specify whether certificates

under already existing schemes

interchangeable and tradeable with carbon credit certificates

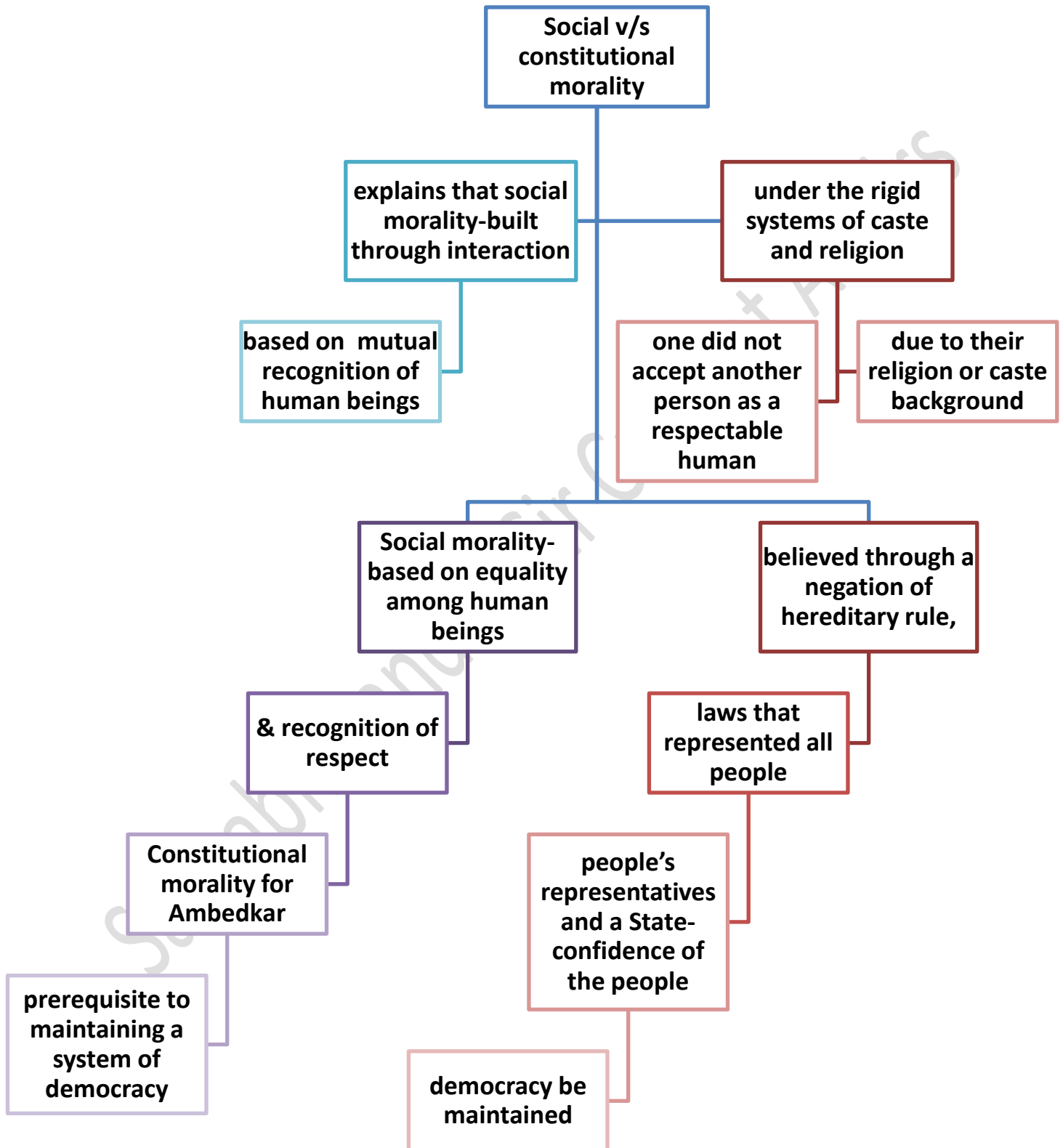
Two types of tradeable certificates issues in India

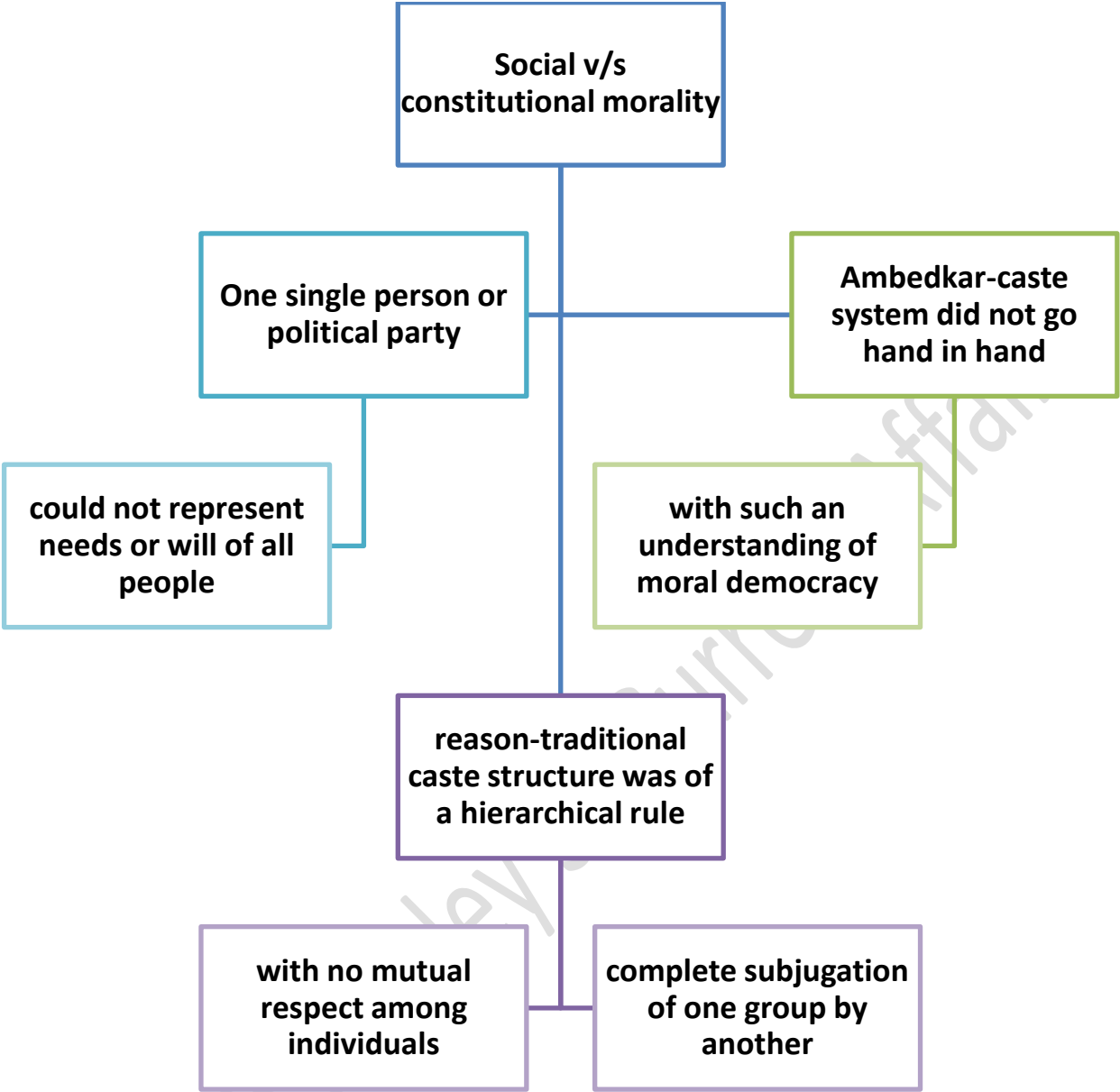
Renewable Energy Certificates

Energy Savings Certificates

Social v/s constitutional morality

Ambedkar divides morality into social morality and constitutional morality



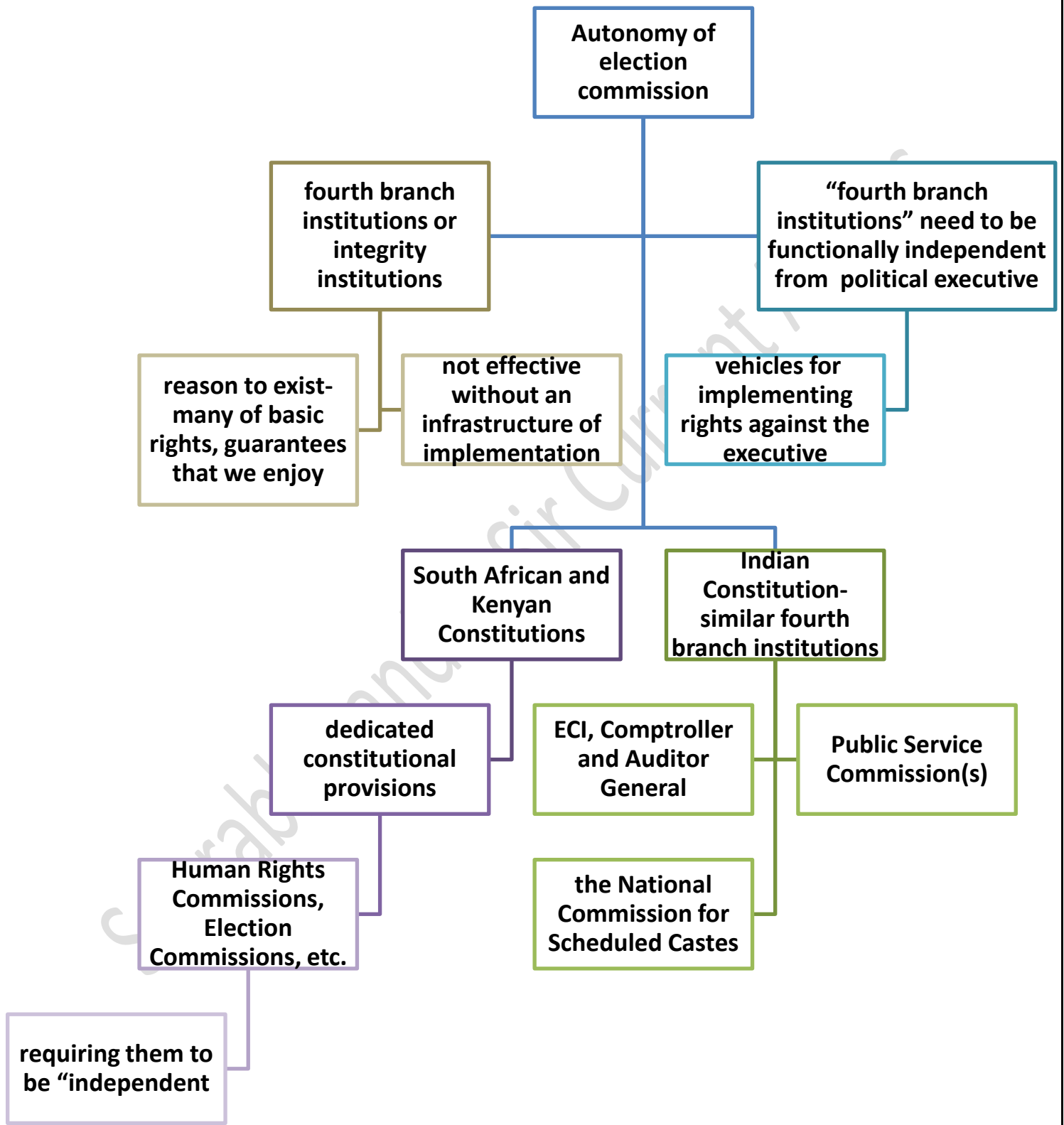


The Hindu through Mind Maps
(Saurabh Pandey Sir)

December 21
2022

The Hindu Mind
Maps

Autonomy of election commission



The problem

Constitution goes to some degree to protect

independence of fourth branch institutions

while officials are in office

power of appointment lies exclusively with executive

landmark Vineet Narain case

SC likewise held that for rule of law to prevail

appointment of the CBI Director

to be ratified by a three member body

included PM, Leader of Opposition, Chief Justice of India

Indo Pacific contestation

Indo Pacific contestation

Indian strategic thinking

deeming Beijing as a bigger threat than Islamabad

Beijing's larger strategic, diplomatic presence

grand ambitions

trigger angst for New Delhi

possibility of a twofront war persists

Pakistan's strategic isolation, economic and political fallout

border, terror challenges emanating from Afghanistan

minimised likelihood of its aggression

In Maldives, New Delhi reciprocating

President Ibrahim Solih's 'India First' policy

with massive economic assistance, grants, ect.

cooperating on maritime security

Nepal, Prime Minister Deuba's government

attempt to improve Nepal's overall bilateral relations with India

In Sri Lanka, India provided economic humanitarian assistance

investments worth \$4 billion

leading efforts in South Asia & Indian Ocean

attracted other Quad members (Japan, Australia, U.S.)

**Indo Pacific
contestation**

**Japan finalising its talks
with Sri Lanka-debt
restructuring**

**2020-U.S. signed a
defence**

**in Maldives,
Australia, U.S. have
committed**

**opening their
embassies, new
areas of
cooperation**

**security framework
with Maldives**

**Chinese
surveillance vessel
Yuan Wang5**

**Beijing-hosted its
first ever China -
Indian Ocean
Region Forum**

**reentered the
Indian Ocean**

**institutionalise its
presence in the
region**

**another vessel of
Yuan Wang series
entered Indian
Ocean**

**challenge new
initiatives**

**coinciding with test
flight of Agniseries
missile**

**Quad and Colombo
Security Conclave**

Colombo Security Conclave

formed in 2011

welcomed Mauritius as a fourth member

trilateral maritime security grouping

of India, Sri Lanka and the Maldives

at fifth meeting of national security advisers

Bangladesh and Seychelles attended as observers

Sri Lanka yet to chart its way out of economic crisis

invited to join the group

Energy shortages, inflation

negative or slow economic growth

Nepal, the Maldives and Bhutan

disrupting daytoday activities in these countries

struggling with depleting forex reserves

Criticism of data protection bill

Criticism of data protection bill

major concern is the provision in the Bill

poses a serious problem with the right of privacy

deny providing any personal information

on administration officials under Section 8(1)(j)

visàvis the right to freedom of speech

affect the right to freedom of speech

of Right to Information Act

citing protection of "individual privacy"

expression guaranteed under Article 19(1)(a) of Constitution

play havoc with the tenuous balance

between freedom of speech

& exceptional restrictions delineated in Article 19(2)

Data Protection Authority of India

will exercise excessive control

Criticism of data protection bill

selection committee

unfettered power of the executive over the DPAI

Chief Justice of India or her nominee

Cabinet Secretary, and one person with expertise and repute

serves to defeat autonomy of institution

in data technology field

will have tremendous power

DPAI also performs adjudicatory functions

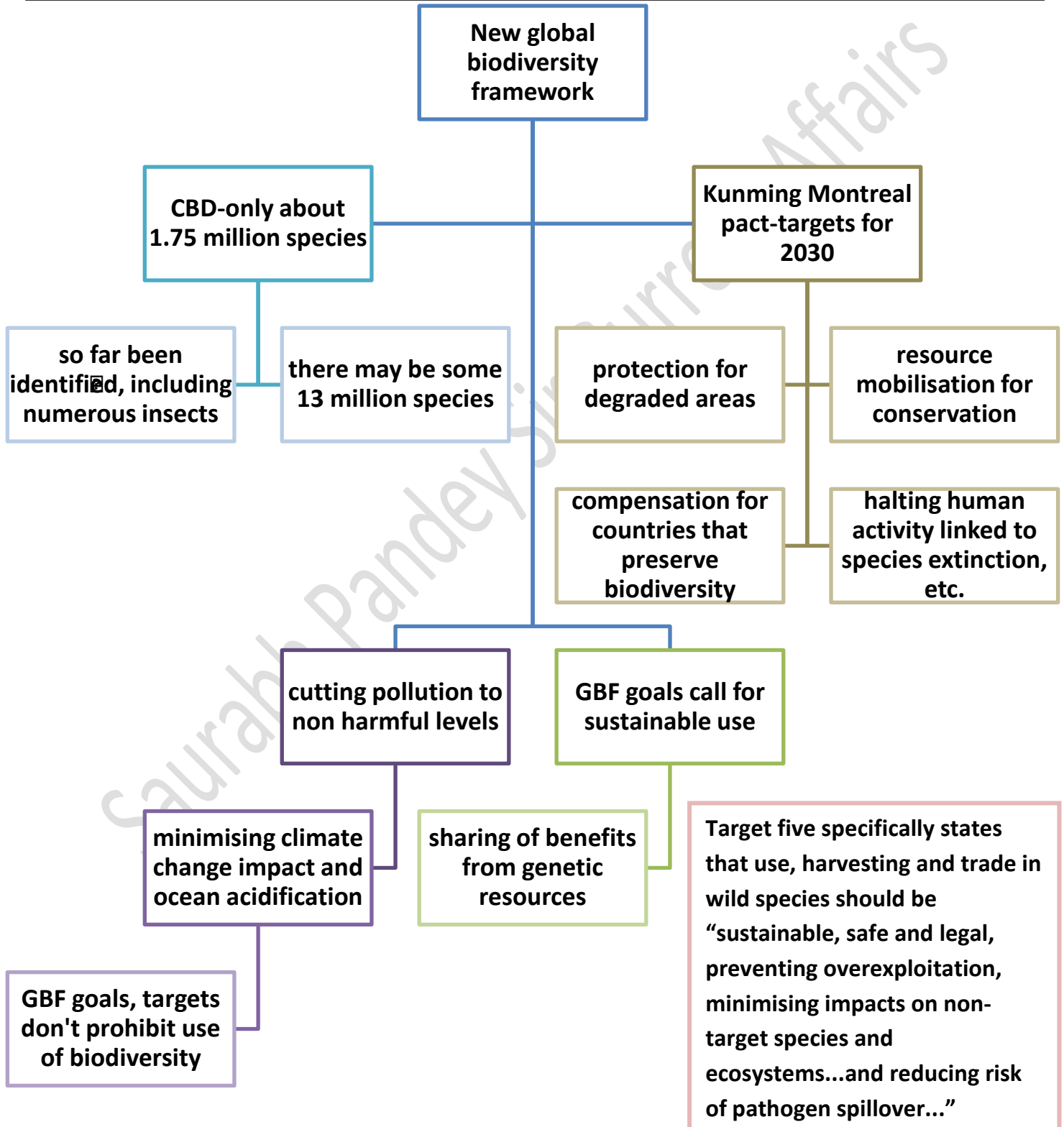
appellate adjudicatory officers

to be appointed by the board members of DPAI

solely appointed by the executive member

New global biodiversity framework

governments, supported by the U.S. and the Vatican, who are not party to Convention, adopted Kunming Montreal Global Biodiversity Framework (GBF) that sets out four goals for 2050, and 23 targets for 2030, to save existing biodiversity and ensure that 30% of degraded terrestrial, inland water, coastal and marine ecosystems come under effective restoration



New global biodiversity framework

GBF emphasises respect for rights of indigenous communities

agreement calls upon members

traditionally protect forests and biodiversity

their involvement in conservation efforts

adopt biodiversity-supporting methods

agroecology and sustainable intensification

advocates similar roles for women and local communities

Genetically Modified crops is not favoured by agroecologists

could contaminate nearby wild species of the same plants

turning cities into hosts of biodiversity

CBD launched the Aichi biodiversity targets for 2020

expanding area, improving quality and access

safeguarding of all ecosystems

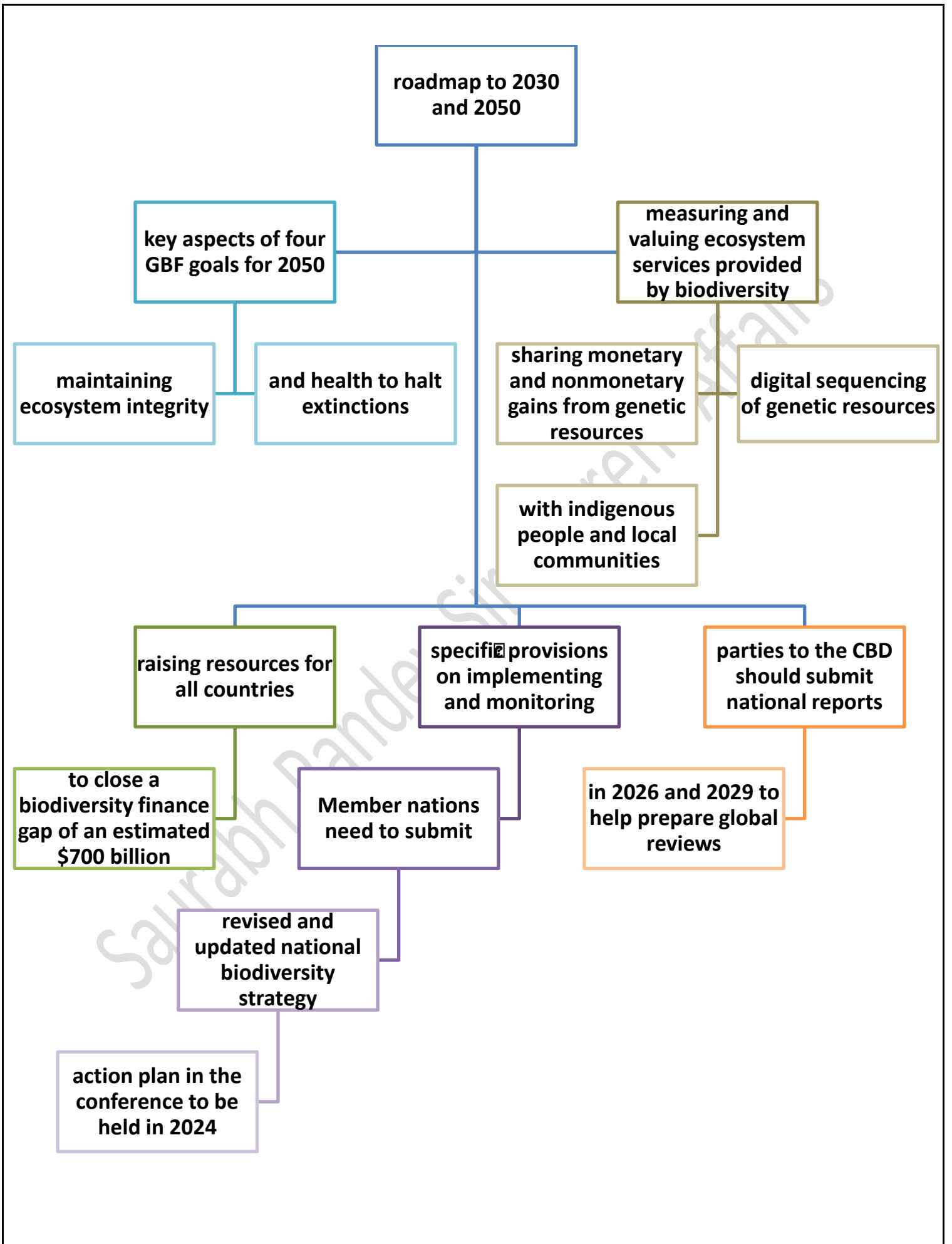
provide services for humanity's survival

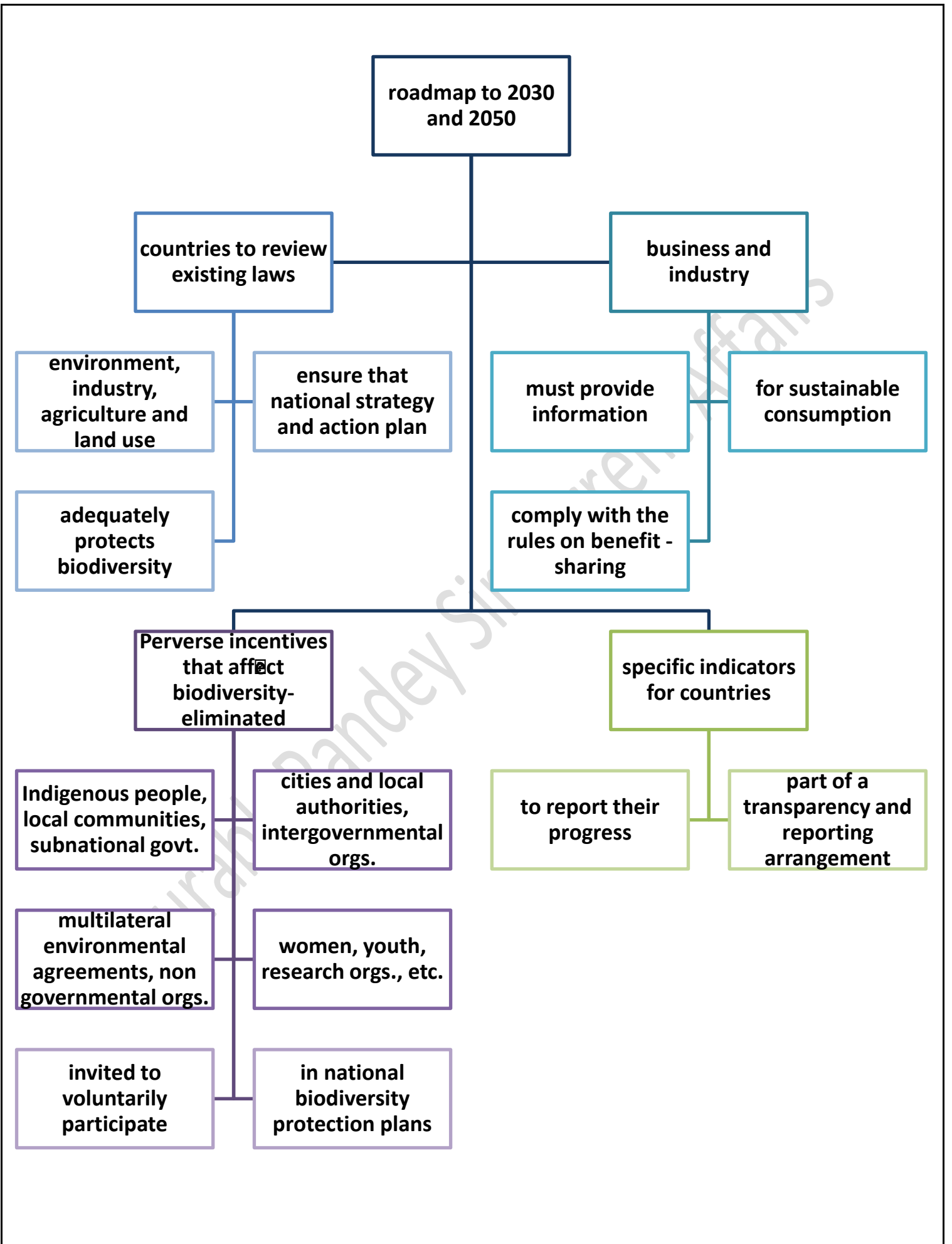
to urban green and blue spaces

Nagoya Protocol which went into effect in 2014

ensure sharing of biodiversity access and benefits

Urban planning should also be biodiversity inclusive, "enhancing native biodiversity, ecological connectivity and integrity, and improving human health and wellbeing and connection to nature."





What funding arrangements are planned?

2030-GBF hopes to see at least \$200 billion raised/year

In terms of international funding

sources-domestic, international, public and private

towards implementation of the national action plans

developing countries should get at least \$20 billion/year-2050

at least \$30 billion- 2030-contributions from developed countries

Global Environment Facility-multilateral body-partners countries and agencies

GBF envisages-there will be access to justice and information

GBF aligned with UN Sustainable Development Goals

asked to establish in 2023, and until 2030

related to biodiversity for indigenous peoples & local communities

three of which directly deal with environment, thus with biodiversity

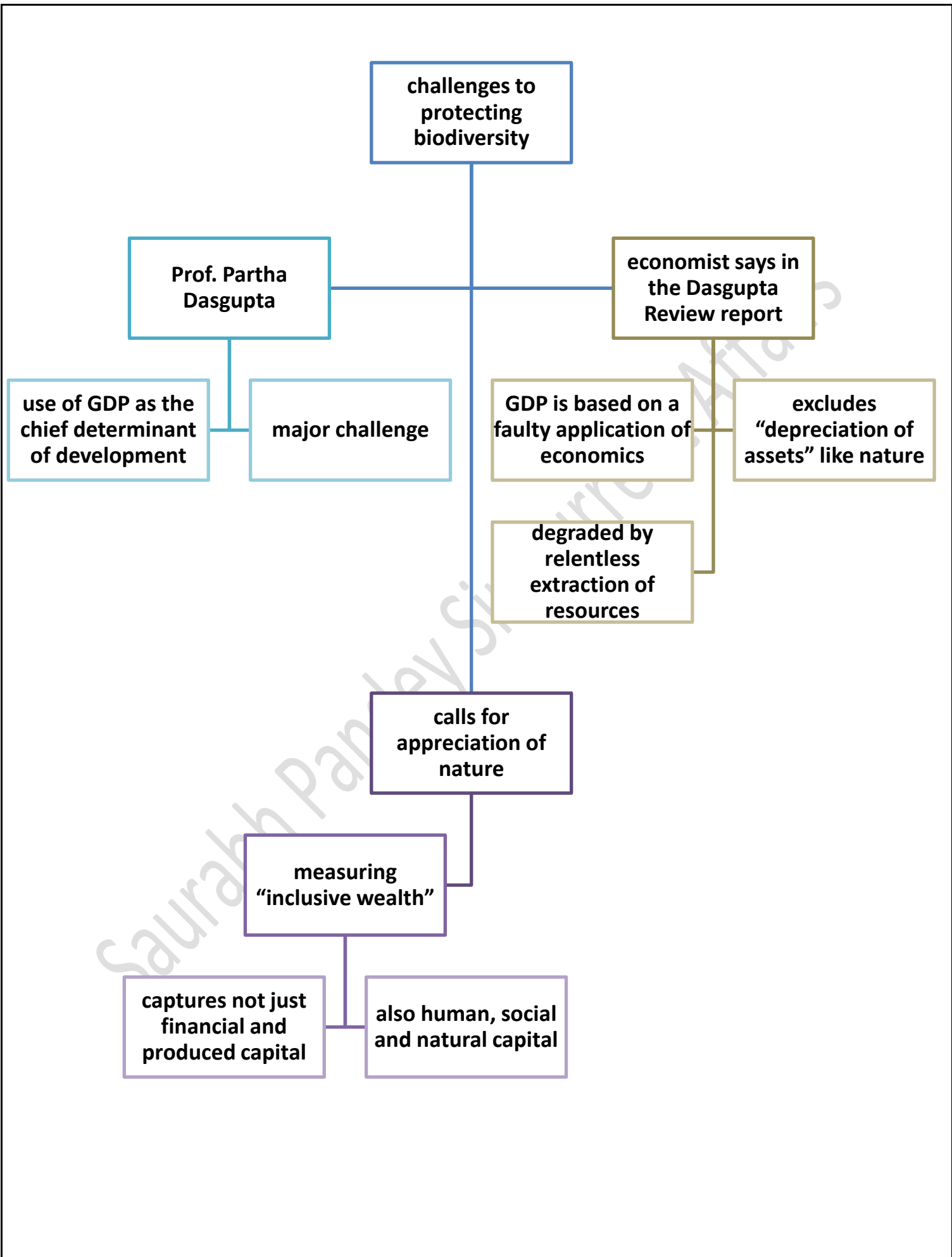
Special Trust Fund to support implementation of GBF

respecting their cultures and rights over lands, territories, etc.

Goal 13 on climate action, Goal 14 on life below water

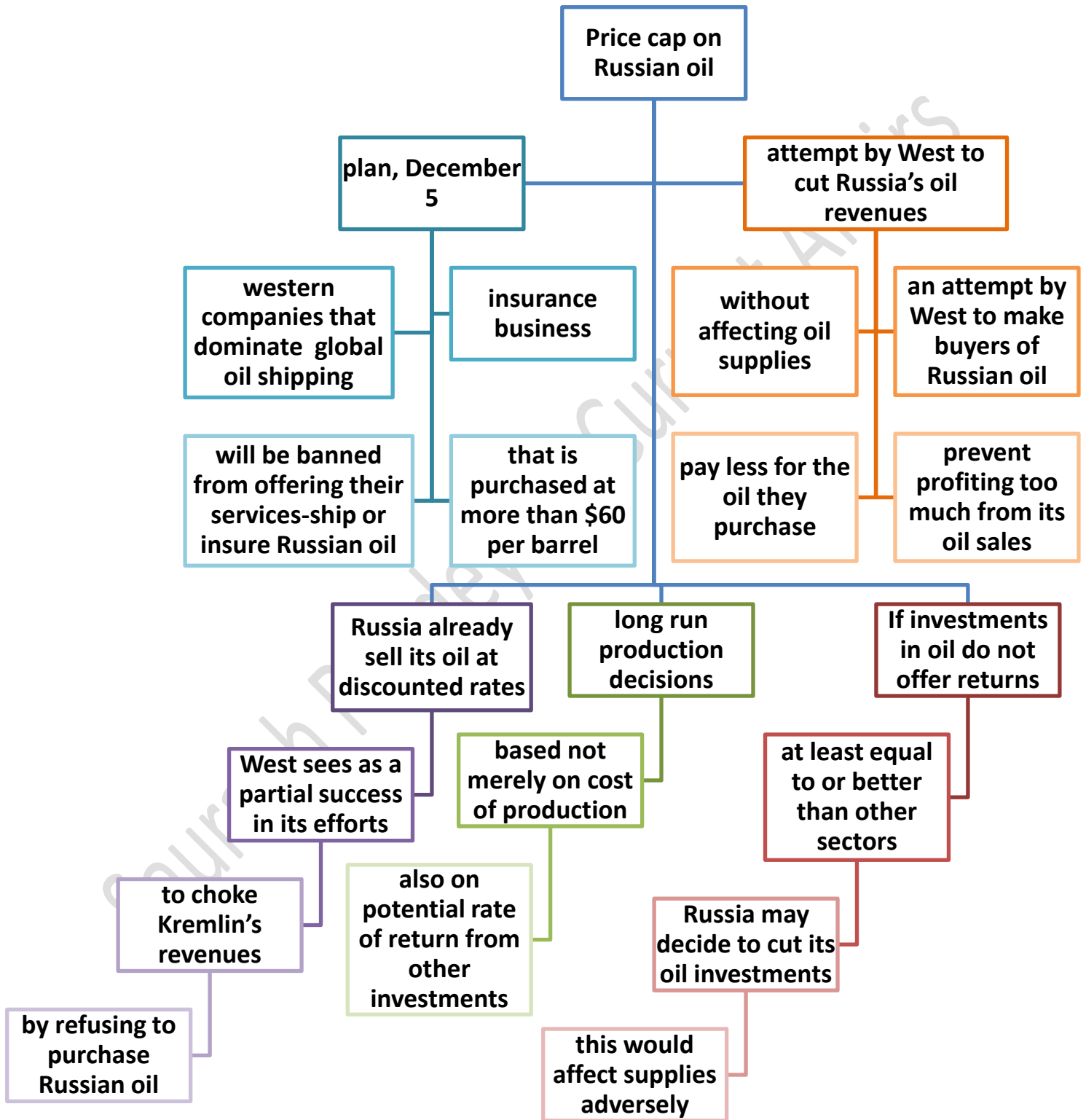
ensure full protection of environmental human rights defenders

Goal 15 on life on land



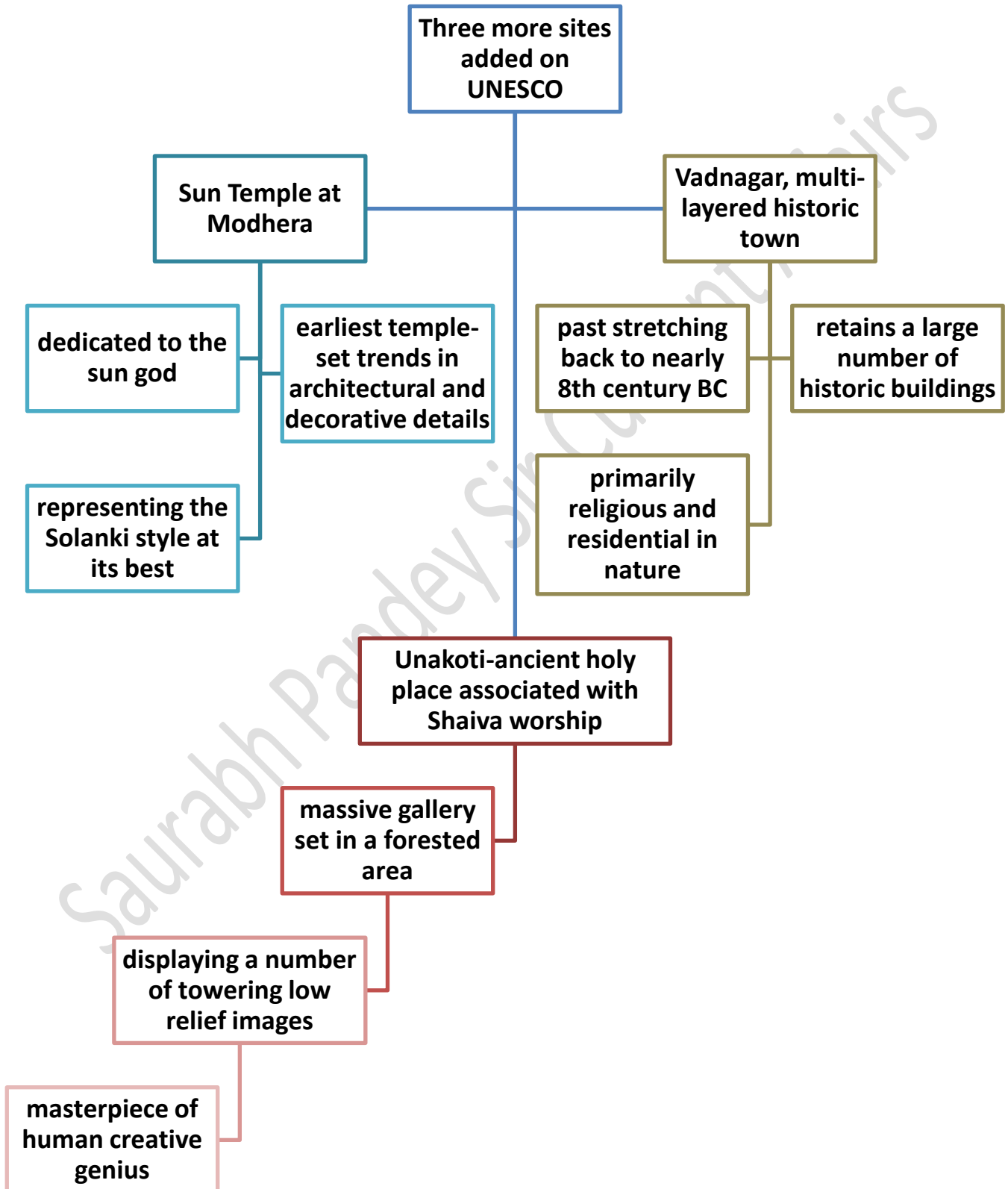
Price cap on Russian oil

G7 countries, the European Union and Australia have imposed a price cap on Russian seaborne oil to make it harder for Russia to fund its war against Ukraine

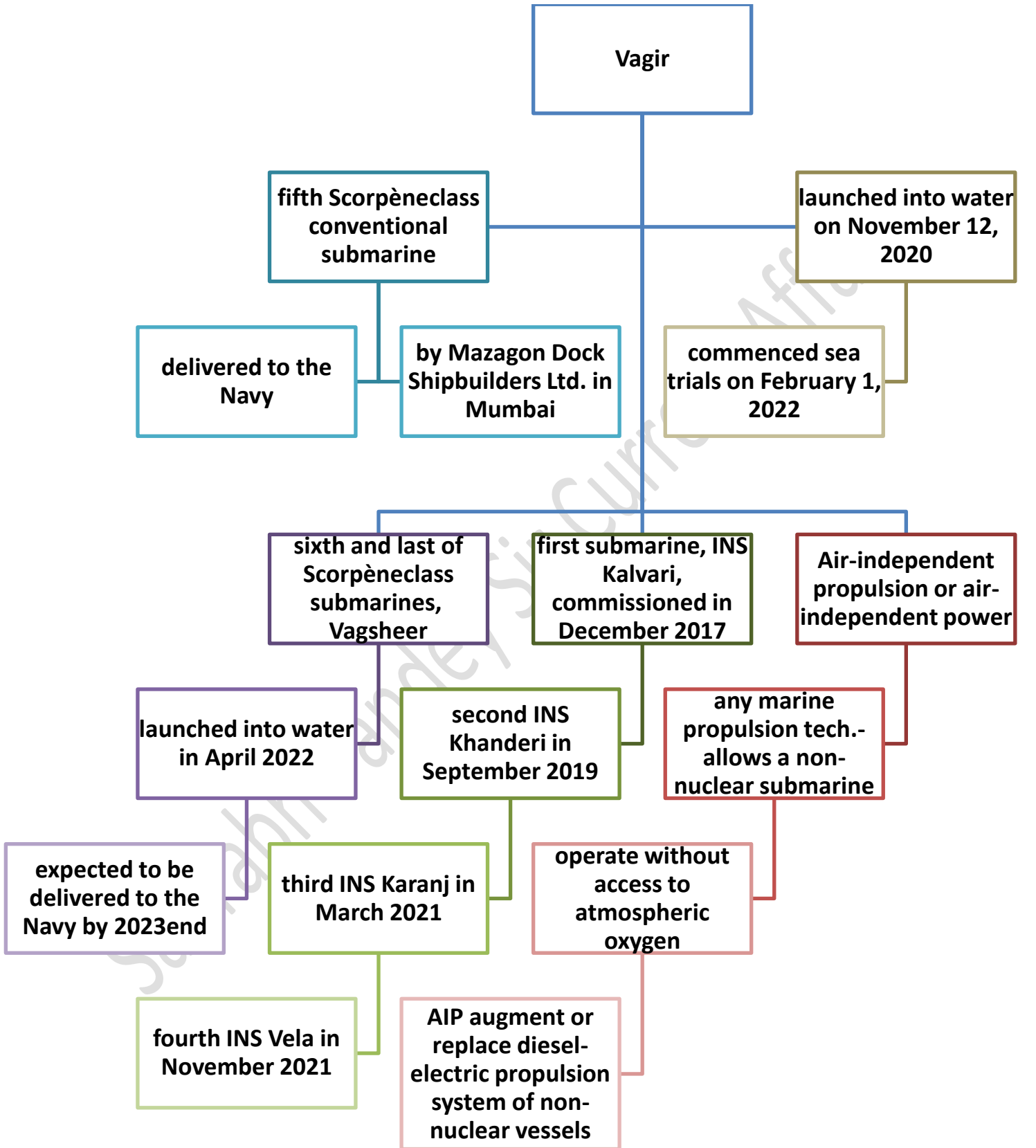


Three more sites added on UNESCO

Gujarat's Vadnagar town, the iconic Sun Temple at Modhera, and rock cut sculptures of Unakoti in Tripura have been added to the tentative list of UNESCO World Heritage Sites



Vagir



Rule 267 of the Rajya Sabha

Rule 267 of the Rajya Sabha rulebook that allows for suspension of the day's business to debate an issue suggested by a member has become a bone of contention

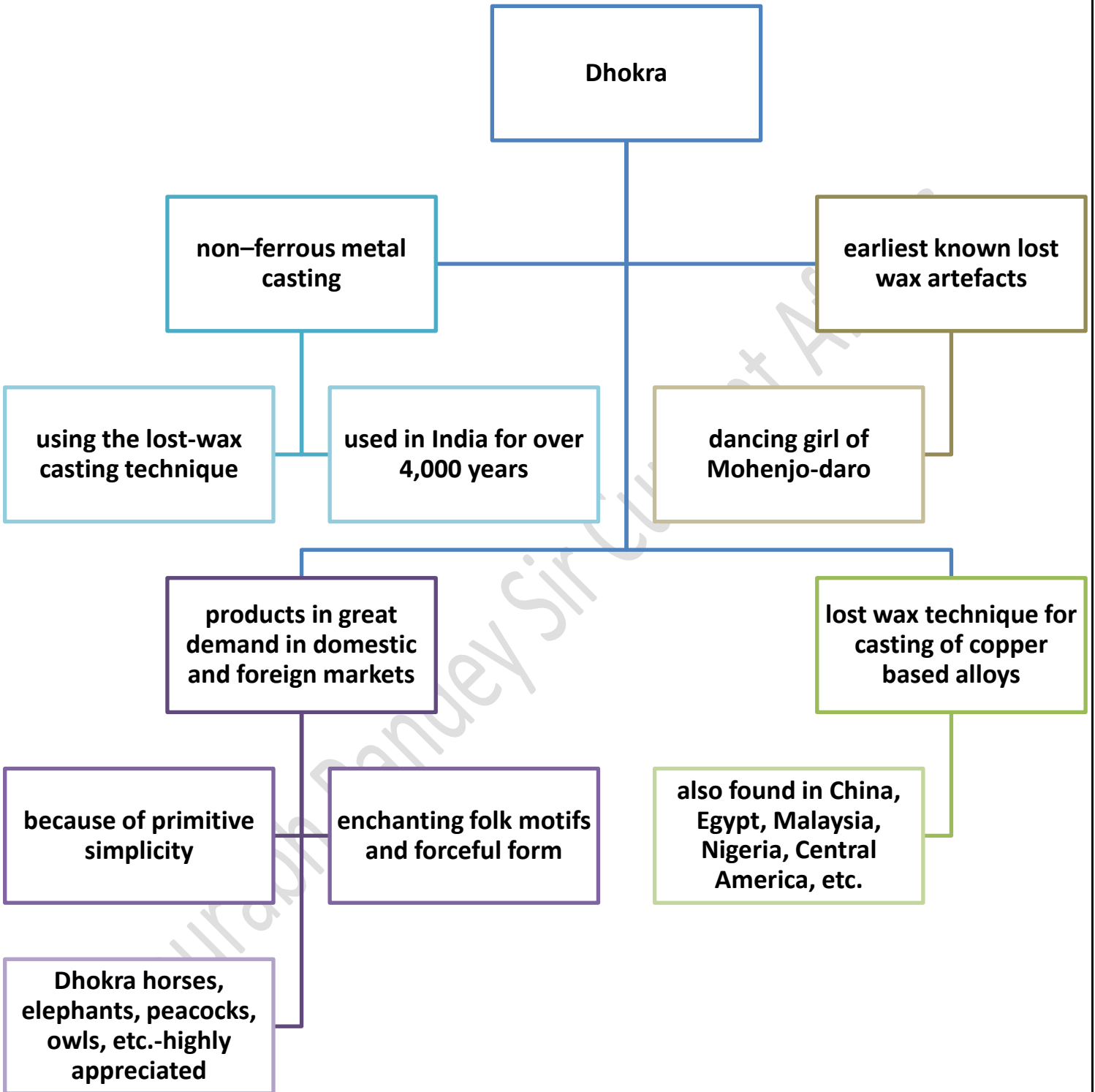
Saurabh Pandey Sir Current Affairs

The Hindu through Mind Maps
(Saurabh Pandey Sir)

December 22
2022

The Hindu Mind
Maps

Dhokra



process

**two main processes
of lost wax casting**

solid casting

hollow casting

**predominant in the
south of India**

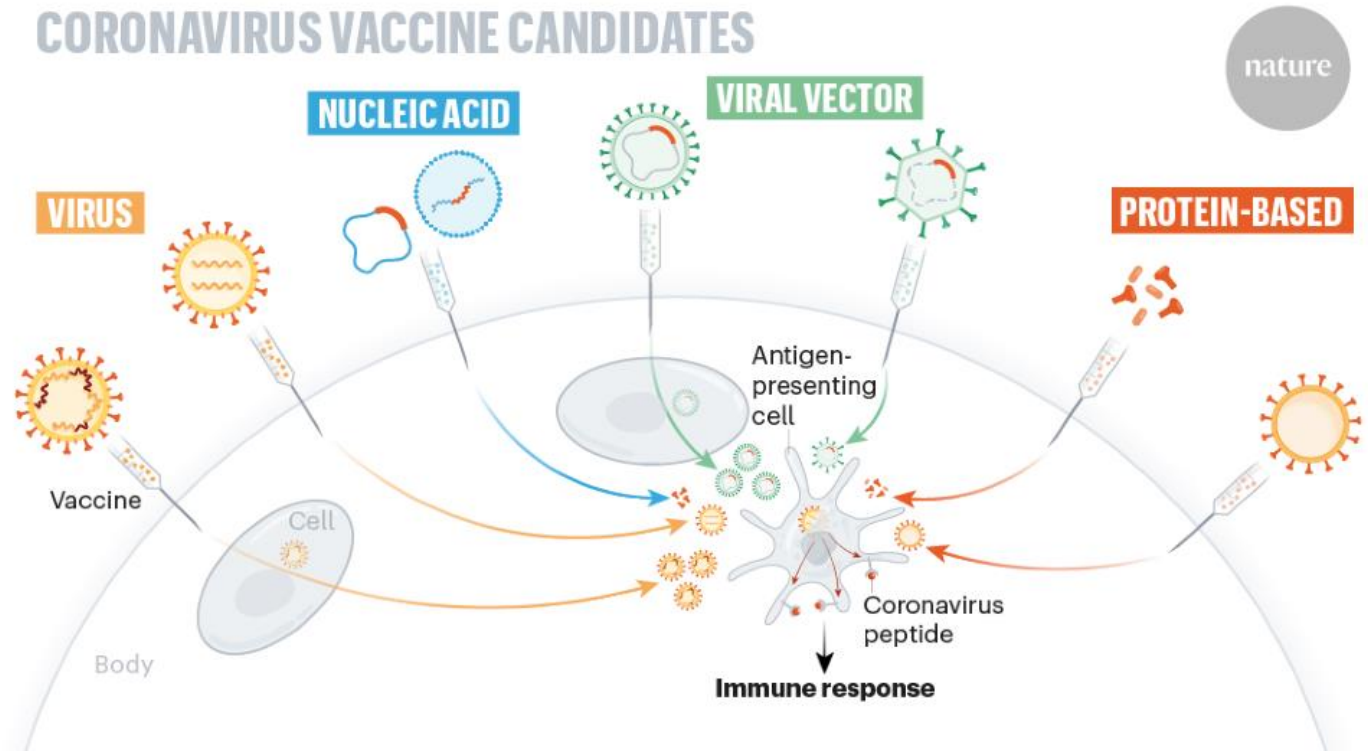
**does not use a clay
core**

**more common in
Central and Eastern
India**

**more traditional
method and uses
the clay core**

**instead a solid
piece of wax to
create the mould**

Different types of vaccines



DIFFERENT TYPES OF VACCINES

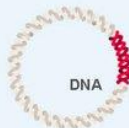
There are several types of vaccines currently under development for COVID-19, each with different potential strengths and weaknesses.

NUCLEIC ACID VACCINES

- New type of vaccine that uses fragments of mRNA or DNA to produce an adaptive immune response through the host cells, producing copies of that target antigen
- Elicits both antibody and cytotoxic T-lymphocyte responses
- Can scale up and produce quickly
- Expensive & booster doses likely needed
- >90% efficacy in initial phase 3 data from Moderna, Pfizer

Vaccines in development

- Moderna
- Pfizer
- Inovio
- CureVac
- Sanofi/Translate Bio

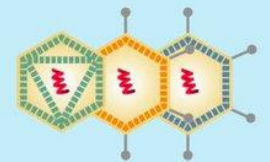


VIRAL VECTOR

- Uses modified non-coronaviruses (adenoviruses, vesicular stomatitis virus) expressing SARS-CoV-2 spike protein
- Elicits both antibody and cytotoxic T-lymphocyte responses
- Potential safety concerns in immunocompromised patients
- Host immunity to the viral vector may reduce vaccine efficacy
- Single dose possible
- Can quickly produce

Vaccines in development

- Johnson & Johnson
- CanSinoBIO
- AstraZeneca
- Merck

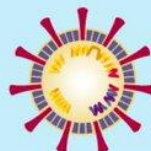


INACTIVATED VACCINES

- Uses a killed version of the virus to generate immunity
- Elicits neutralizing antibodies without a cell-mediated response
- Can be safely given to immunocompromised patients
- Proven vaccine technology already in use for several diseases (hepatitis A, influenza, polio, rabies)
- Booster doses likely needed

Vaccines in development

- Chinese Academy of Medical Sciences
- Wuhan Institute of Biologic Projects
- Sinovac



PROTEIN

- Uses recombinant viral proteins to induce immune response
- Elicits neutralizing antibodies without a cell-mediated response
- Can be safely given to immunocompromised patients
- Proven vaccine technology already in use for many diseases (eg, hepatitis B, HPV, pertussis, herpes zoster)
- Booster doses likely needed

Vaccines in development

- Sanofi/GSK
- Novavax
- Walter Reed Army Institute of Research (WRAIR)



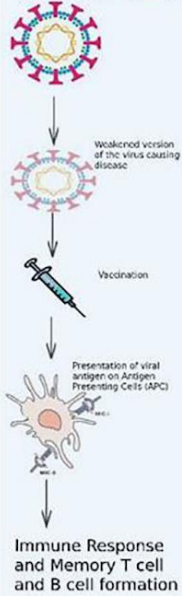
The authors gratefully acknowledge the assistance of Dr. Kayvon Modjarrad and Dr. Julie Ake (WRAIR) in the creation of this graphic.

Live Attenuated Vaccines

Live, weakened (attenuated) vaccines which do not cause disease
More powerful immune response
Potential contraindications in immunocompromised patients

Examples:
MMR Vaccine
Yellow Fever

Mechanism of Action:

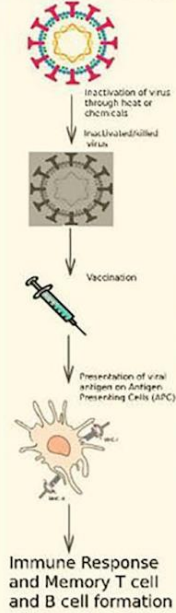


Inactivated Vaccines

Viral particles or pathogens grown in culture and killed. Less potent than live attenuated vaccines. Safer than live vaccines. Requires booster doses due to weaker induction of immunity

Examples:
Polio Vaccine
Pertussis Vaccine

Mechanism of Action



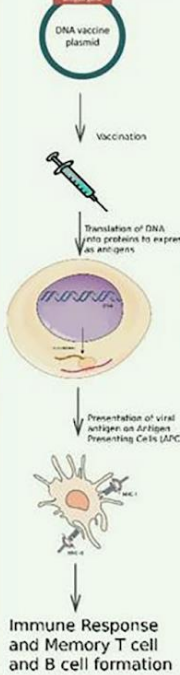
DNA Vaccine

DNA plasmids containing DNA sequence encoding for viral/pathogenic antigen

No risk for disease
Strong immune response
Easily developed
Possibility of tolerance to antigen

Examples
Currently in use for Ebola
SARS-CoV-2 vaccines in development

Mechanism of Action



RNA Vaccines

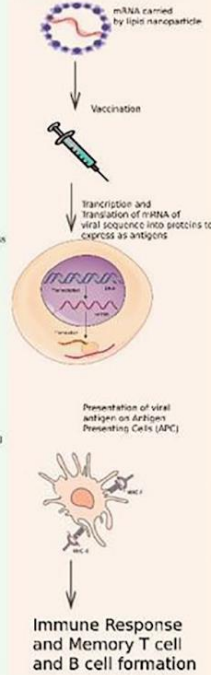
These vaccines use mRNA sequences that encode for viral antigenic proteins. Often carried by lipid nanoparticles

Cheaper, easily produced

Reactivity in susceptible patients

Examples
Moderna SARS-CoV-2 Vaccine
Pfizer-BioNTech SARS-CoV-2 Vaccine

Mechanism of Action



Subunit Vaccines

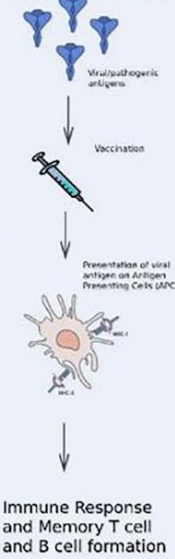
Present antigens to the immune system without genetic material from viral particles.

Focused immune response toward antigen, safer due to lack of viral genetic material.

Require multiple doses to induce long term immunity

Examples
Hepatitis B Vaccine
Pertussis Vaccine
HPV Vaccine

Mechanism of Action



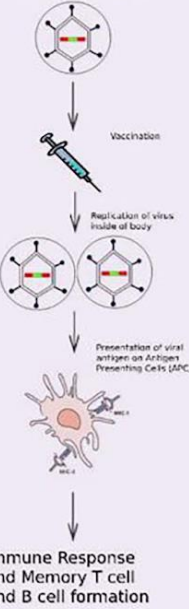
Immune Response and Memory T cell and B cell formation

Replicating Viral Vector Vaccine

Low pathogenic viruses are altered to viral vectors to produce similar proteins/antigens as the disease causing virus
Limited efficacy on preexisting immunity
Otherwise powerful immune response

Examples:
SARS-CoV-2 Vaccinations in development

Mechanism of Action



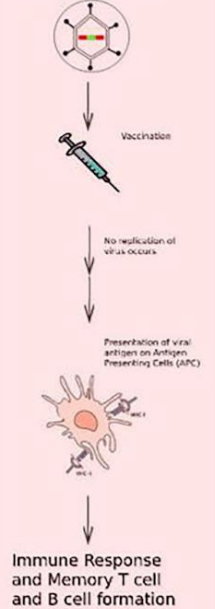
Immune Response and Memory T cell and B cell formation

Non-Replicating Viral Vector Vaccines

Only produce antigen, unable to replicate inside of the body unlike replicating viral vector vaccines.
Safer vaccine.
Requires higher dosing to induce immunity

Examples
Oxford-AstraZeneca SARS-CoV-2 Vaccine
Other SARS-CoV-2 Vaccinations in development

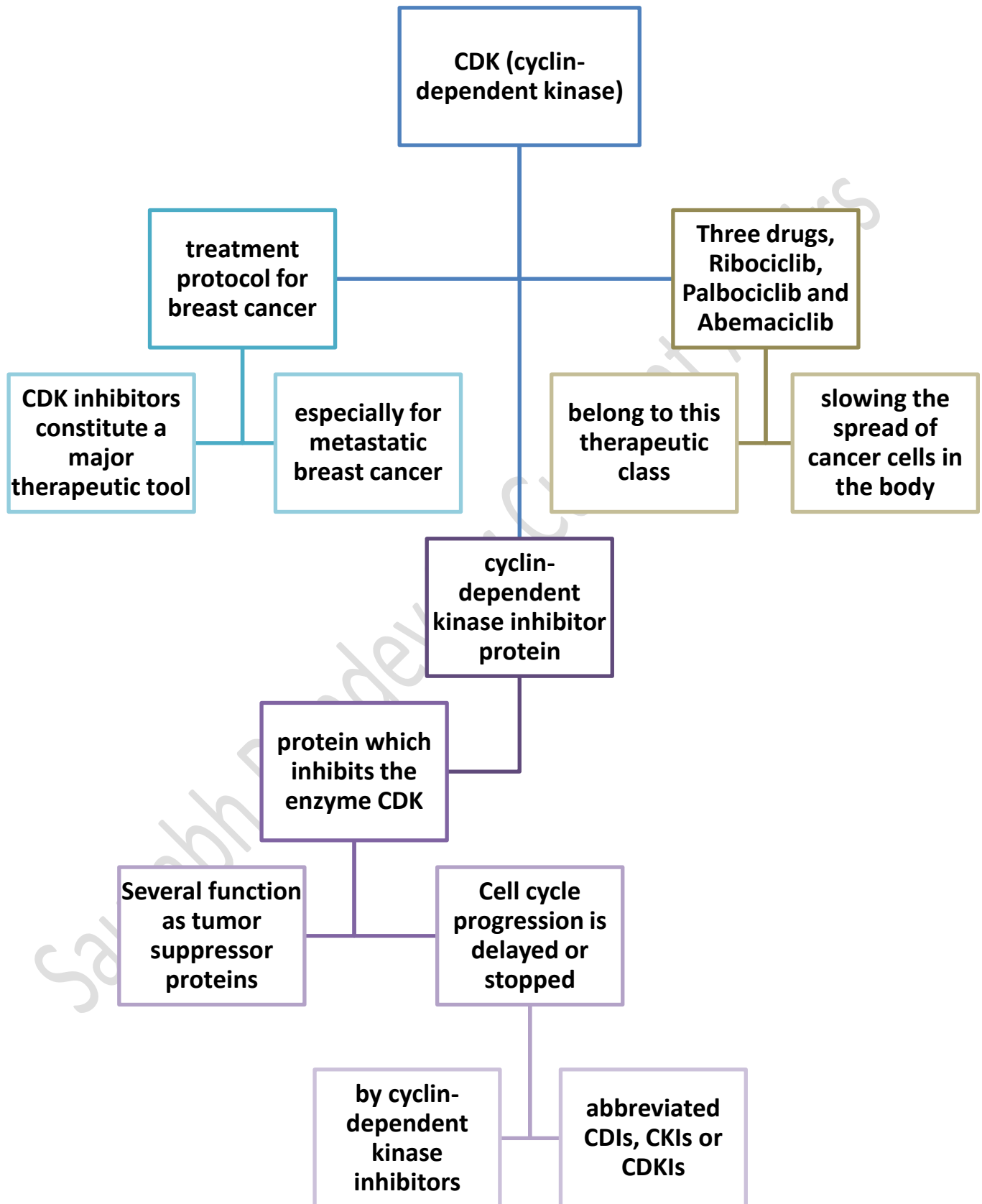
Mechanism of Action



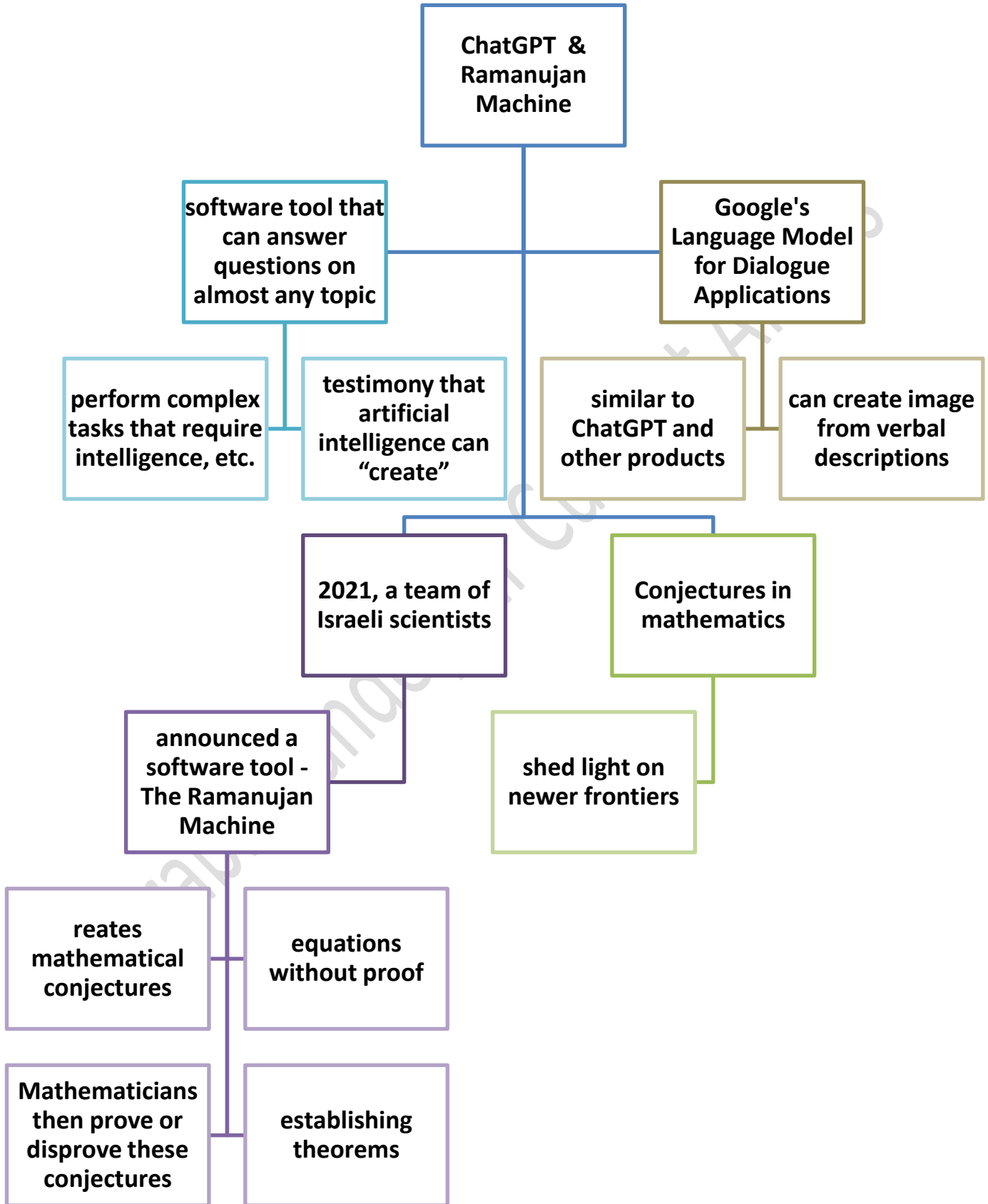
Immune Response and Memory T cell and B cell formation

Saurabh Pandey

CDK (cyclindependent kinase)



ChatGPT & Ramanujan Machine



EC Appointment

Article 324 of the Constitution is the fountainhead that creates the ECI. This brings to mind the larger issue of the working of the Constitution

Adoption of the Constitution to the CA on November 25, 1949, Dr. B.R. Ambedkar said, "However good a Constitution may be, it is sure to turn out bad because those who are called to work it, happen to be a bad lot. However bad a Constitution may be, it may turn out to be good if those who are called to work it, happen to be a good lot. The working of a Constitution does not depend wholly upon the nature of the Constitution."

November 26, 1949, almost echoing Dr. Ambedkar's words, Dr. Rajendra Prasad said, "Whatever the Constitution may or may not provide, the welfare of the country will depend upon the way in which the country is administered. That will depend upon the men who administer it... If the people who are elected are capable and men of character and integrity, they would be able to make the best even of a defective Constitution. If they are lacking in these, the Constitution cannot help the country. After all, a Constitution, like a machine, is a lifeless thing. It acquires life because of the men who control it and operate it, and India needs today nothing more than a set of honest men who will have the interest of the country before them."

EC Appointment

elevation of ECs to Chief Election Commissioner

existing committee of Parliament or a new committee

tenures of ECs and CEC

process is proposed

should propose qualifications & requirements

for persons to be appointed as ECs/CEC

proposals of the committee

Once qualifications & requirements

should be put to Parliament

should be considered approved

approved by Parliament

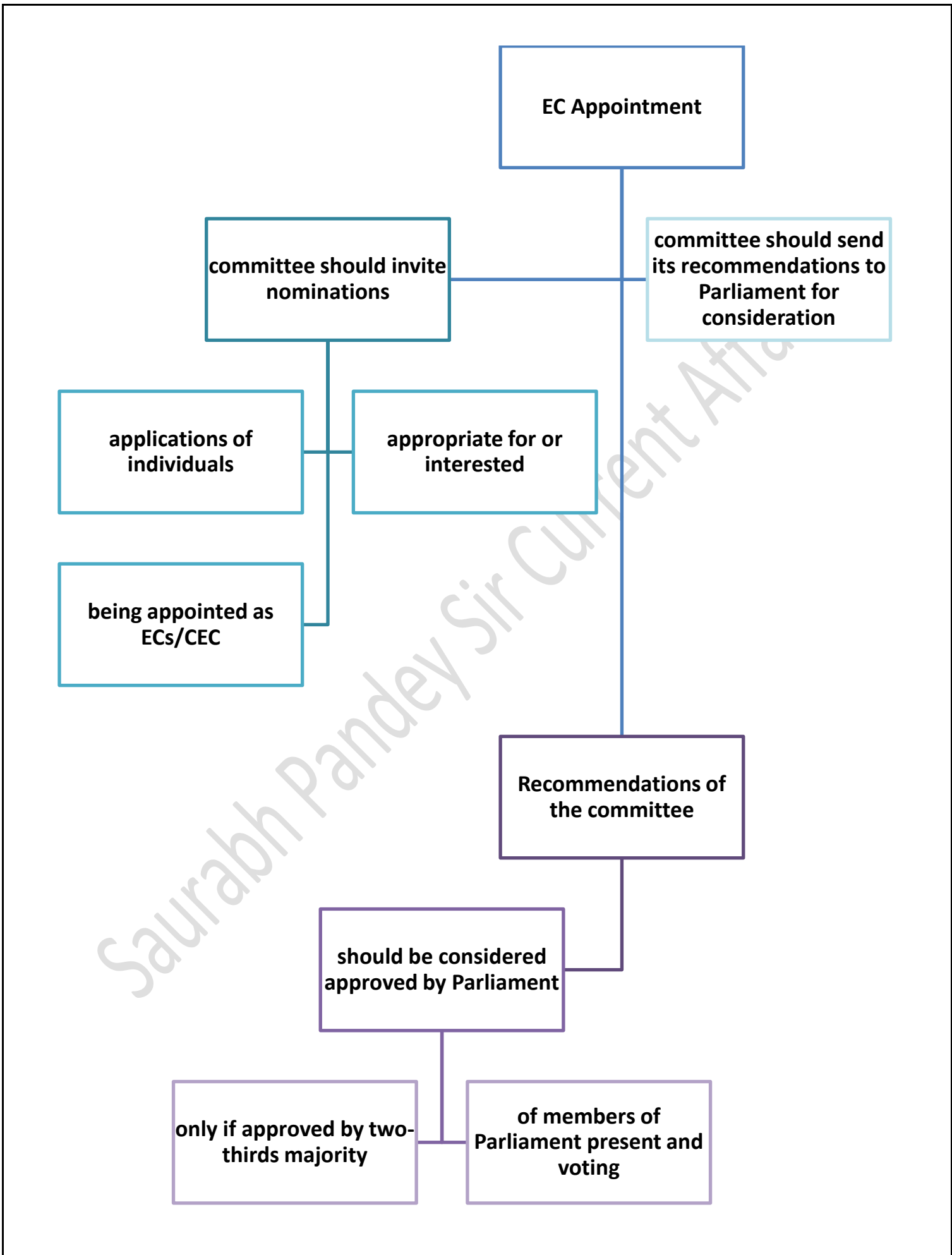
only if they are approved by two thirds majority

of the members of Parliament present and voting

same committee should be entrusted

task of searching for and selecting individuals

proposed to be appointed as ECs/CEC



EC Appointment

committee should invite nominations

committee should send its recommendations to Parliament for consideration

applications of individuals

appropriate for or interested

being appointed as ECs/CEC

Recommendations of the committee

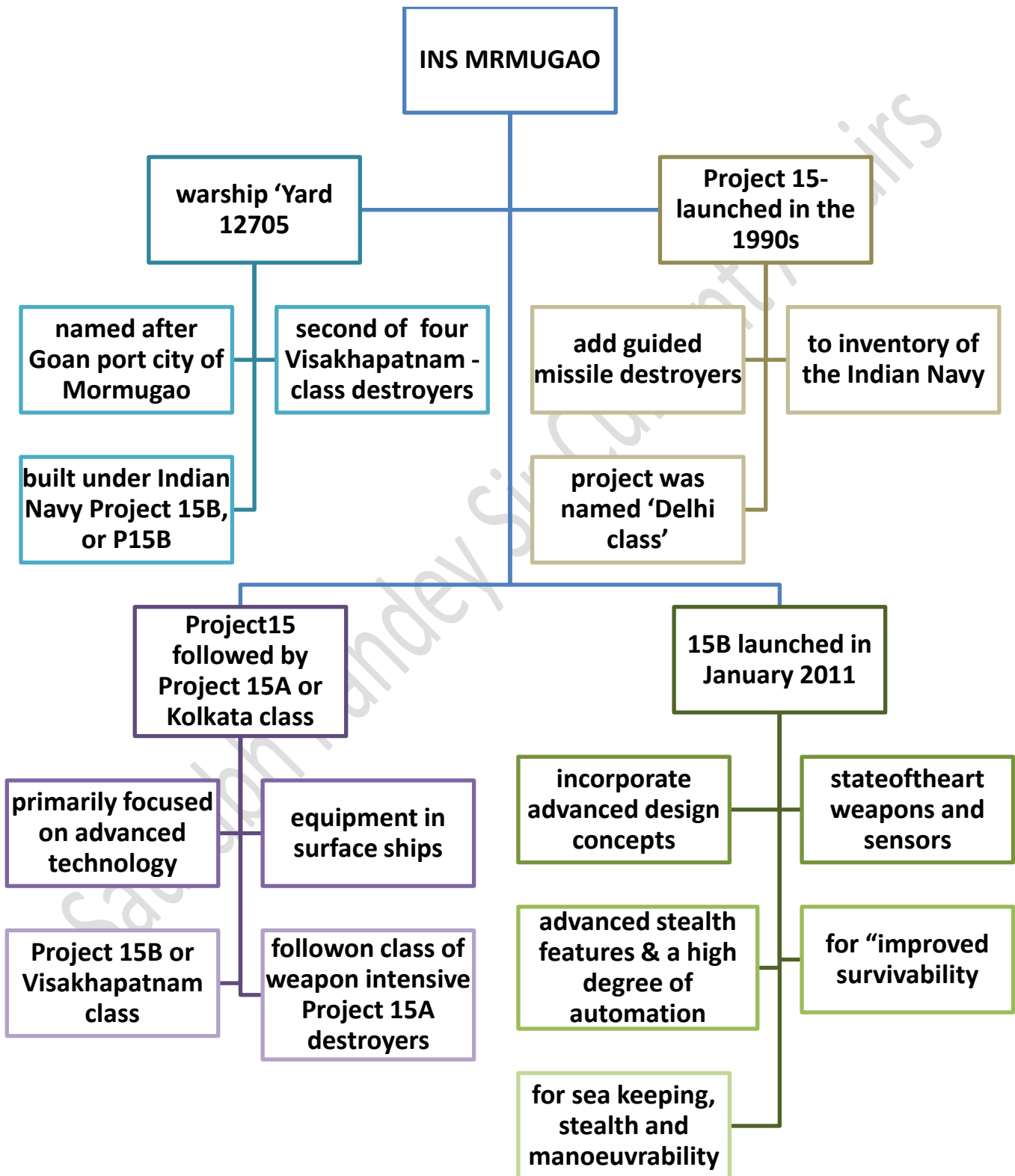
should be considered approved by Parliament

only if approved by two-thirds majority

of members of Parliament present and voting

INS MRMUGAO

In a boost to the country's maritime capabilities, INS Mormugao has officially joined the Indian Navy's fleet, marking a significant milestone for indigenous military expedition.



capabilities of INS Mormugao

destroyer is 163 metres long, 17 metres wide

displaces 7,400 tonnes when fully loaded

propelled by four gas turbines

in combined gas and gas configuration

allows the ship to achieve a speed

more than 30 knots

maximum range of 4,000 nautical miles

accommodate a crew of about 300 personnel

enhanced stealth features

firepower comprises BrahMos surface-to-surface missiles

Barak8 surface-to-air missiles for a long range of shore, sea-based targets

ensure a reduced Radar Cross Section or radar signature

automated with sophisticated digital networks

76mm super rapid gun mount

armed with RBU-6000 antisubmarine rocket launchers

Gigabyte Ethernet-based Ship Data Network

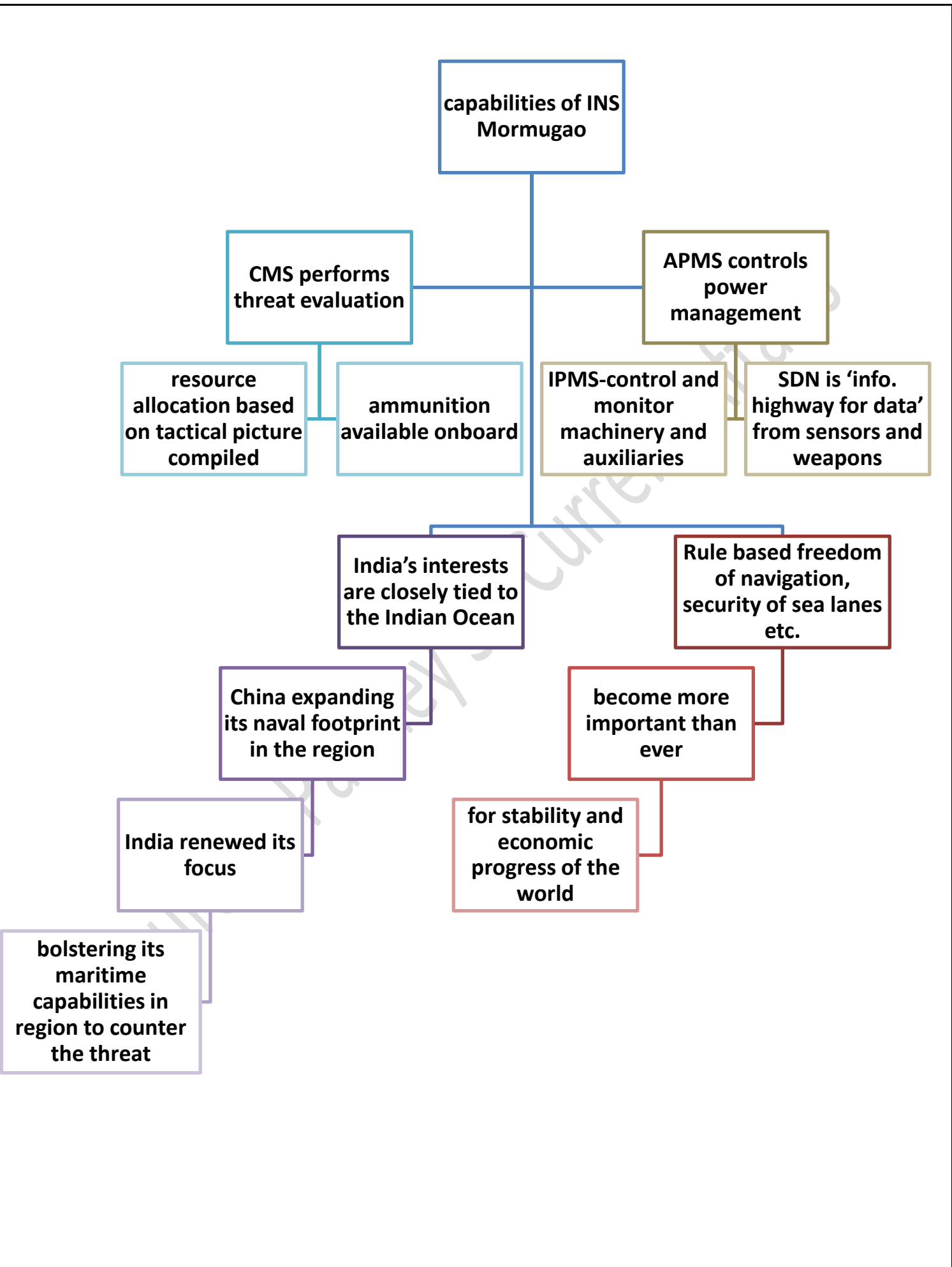
Combat Management System

533mm torpedo launchers

equipped to carry and operate multi-role helicopters

Automatic Power Management System

Integrated Platform Management System, etc.



capabilities of INS Mormugao

CMS performs threat evaluation

APMS controls power management

resource allocation based on tactical picture compiled

ammunition available onboard

IPMS-control and monitor machinery and auxiliaries

SDN is 'info. highway for data' from sensors and weapons

India's interests are closely tied to the Indian Ocean

Rule based freedom of navigation, security of sea lanes etc.

China expanding its naval footprint in the region

become more important than ever

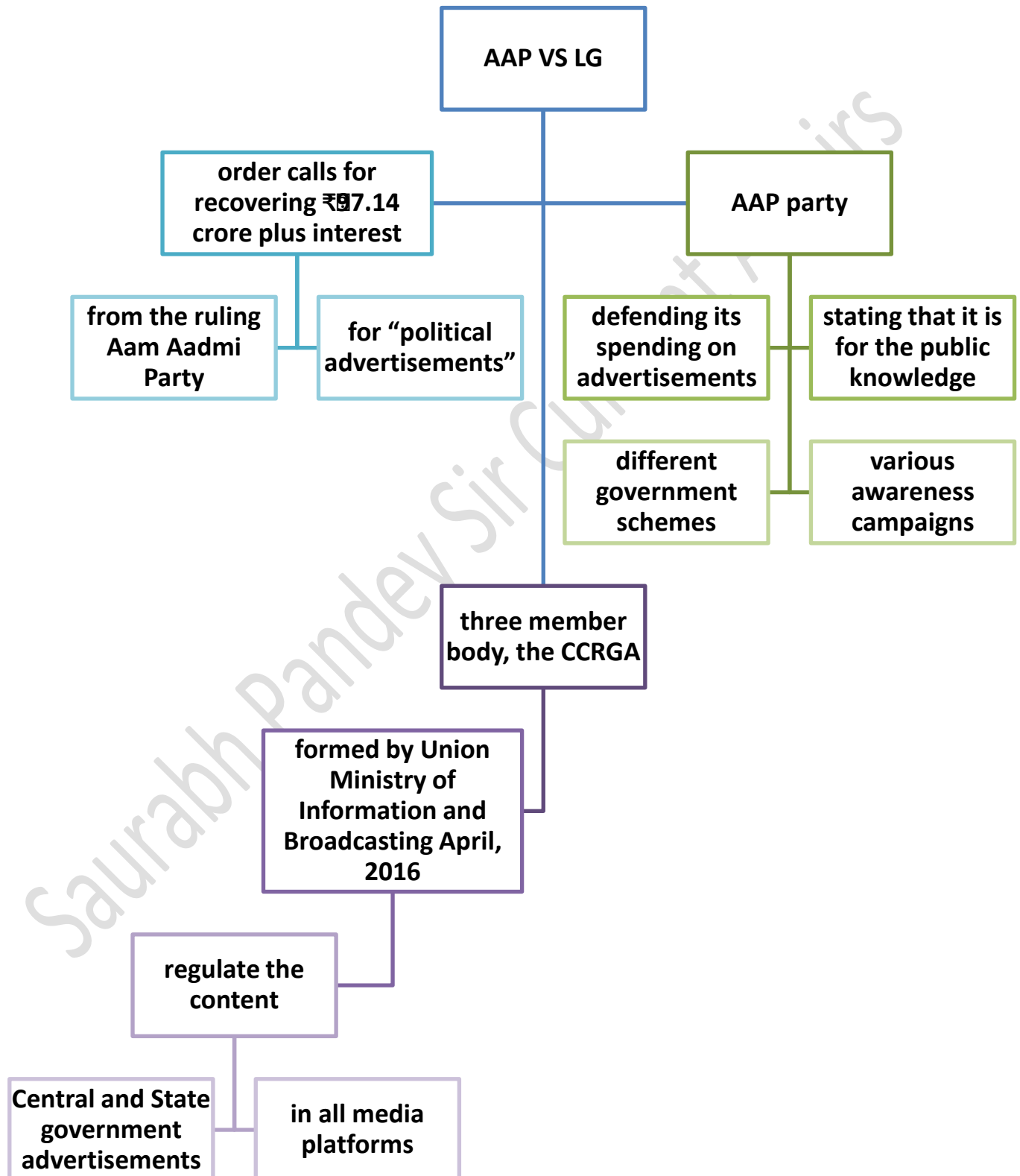
India renewed its focus

for stability and economic progress of the world

bolstering its maritime capabilities in region to counter the threat

AAP VS LG

The Delhi Lieutenant Governor Vinai Kumar Saxena has directed the implementation of a 2016 order of the Committee on Content Regulation in Government Advertising.



Maritime anti piracy bill

Maritime anti piracy bill

Parliament has passed the Maritime Anti Piracy Bill 2022

Bill enables Indian authorities to take action

with Rajya Sabha

already passed by Lok Sabha

against piracy on the high seas

applies to the sea beyond the Exclusive Economic Zone

beyond 200 nautical miles from India's coastline

Bill defines piracy as any illegal act

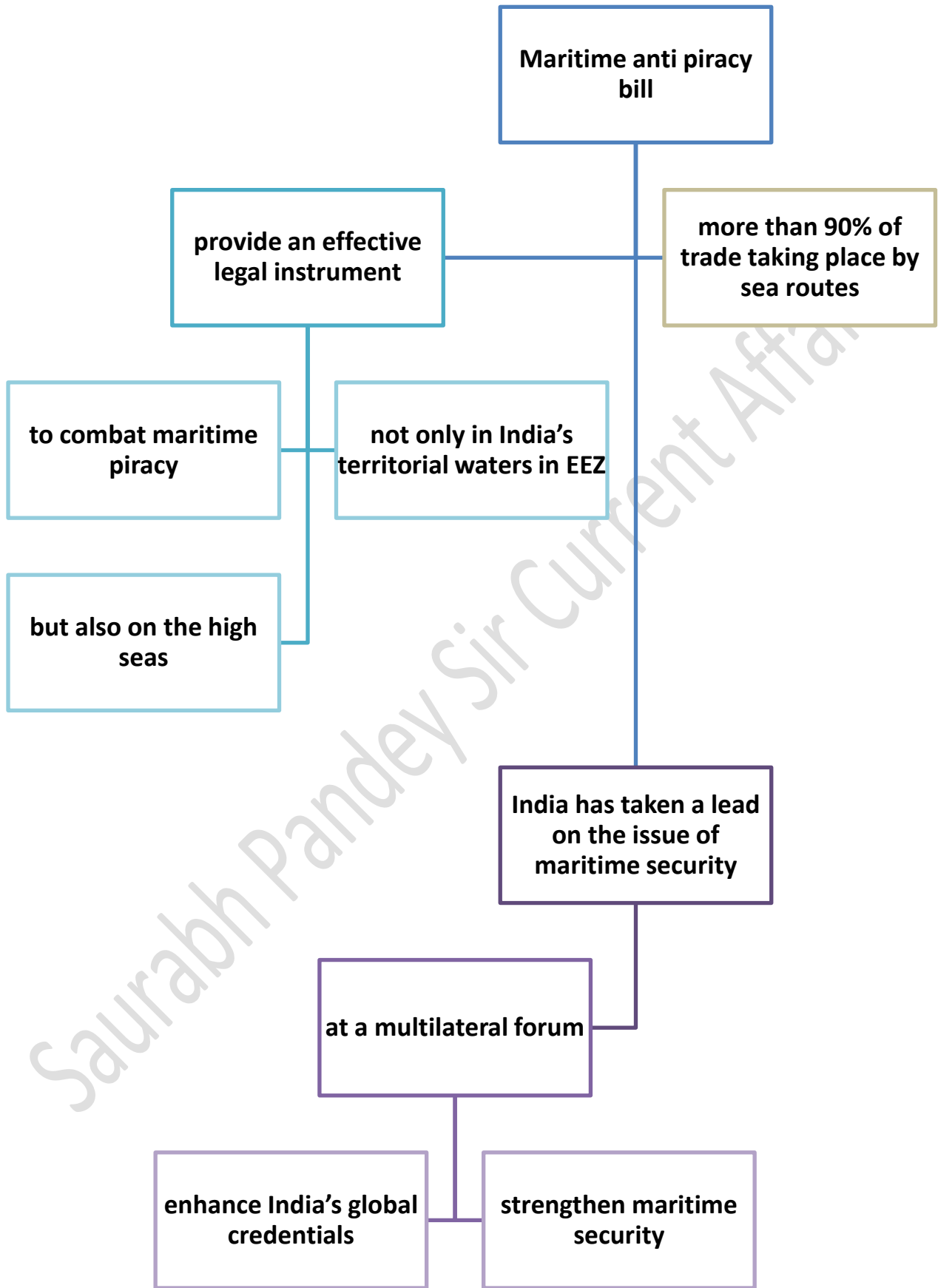
of violence, detention, or destruction against a ship, aircraft, etc.

by the crew or passengers of a private ship or aircraft

Bill will strengthen India's credentials

as a partner with other countries

to make the world more piracy free

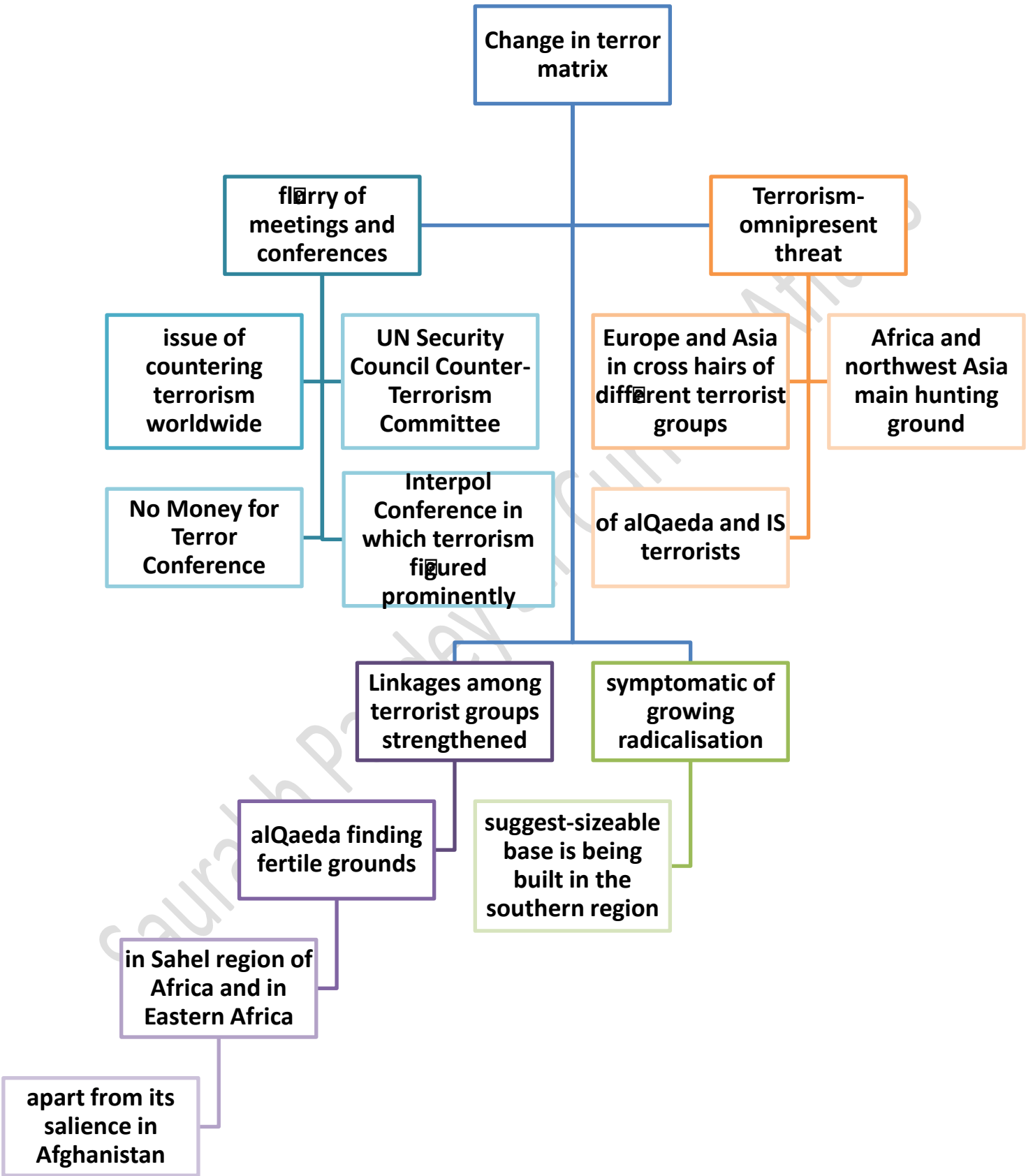


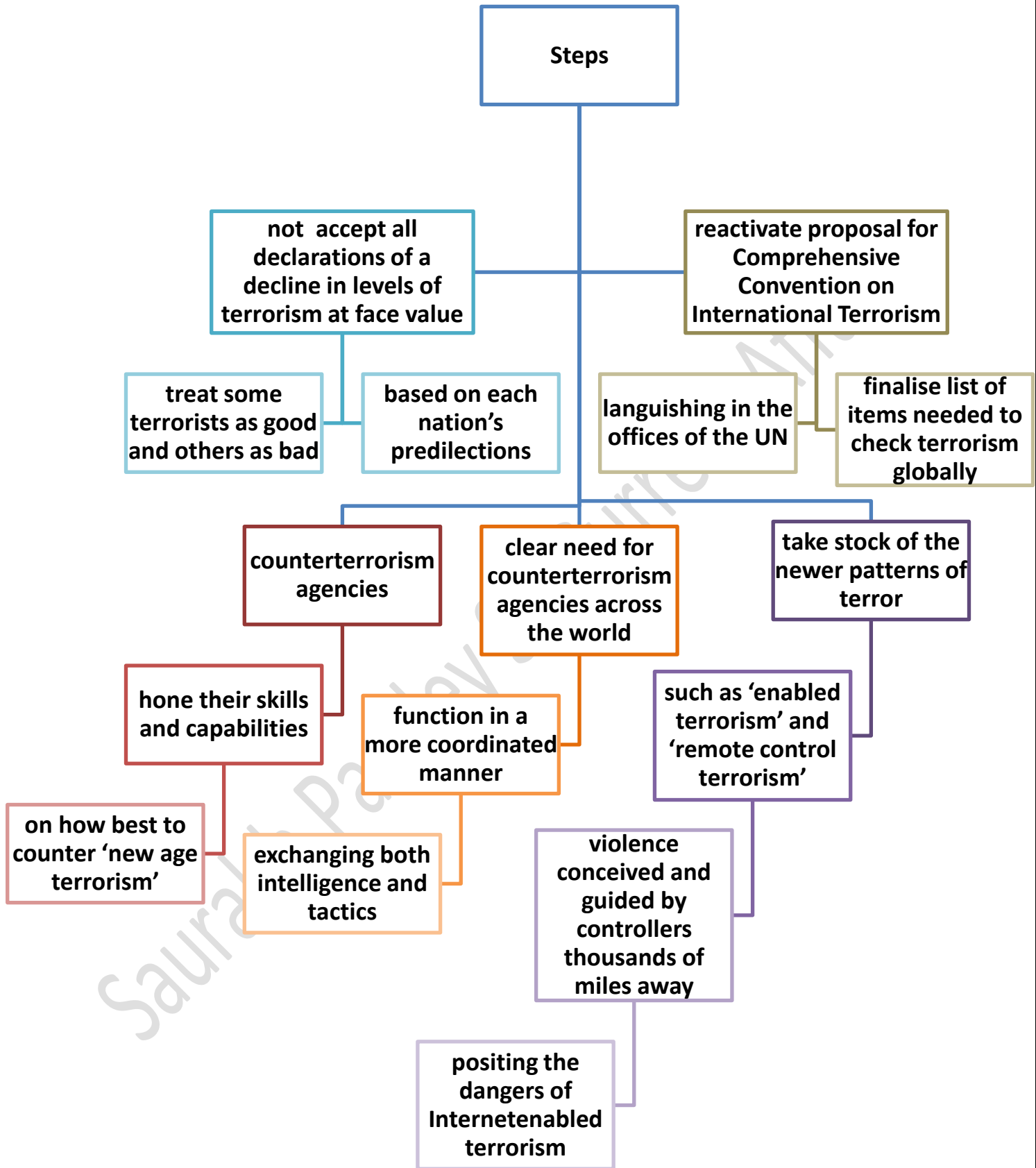
**The Hindu through Mind Maps
(Saurabh Pandey Sir)**

December 23
2022

The Hindu Mind
Maps

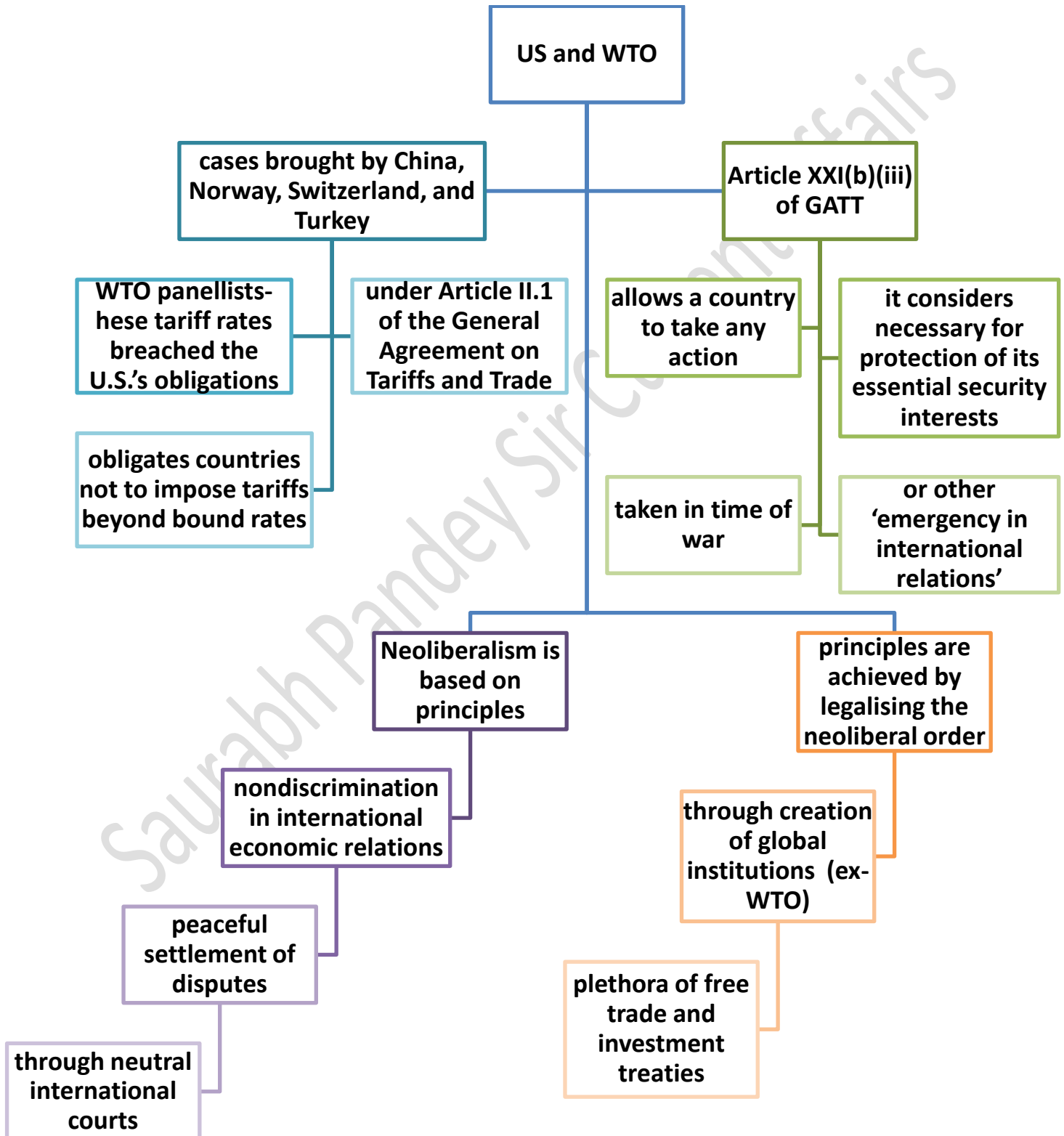
Change in terror matrix

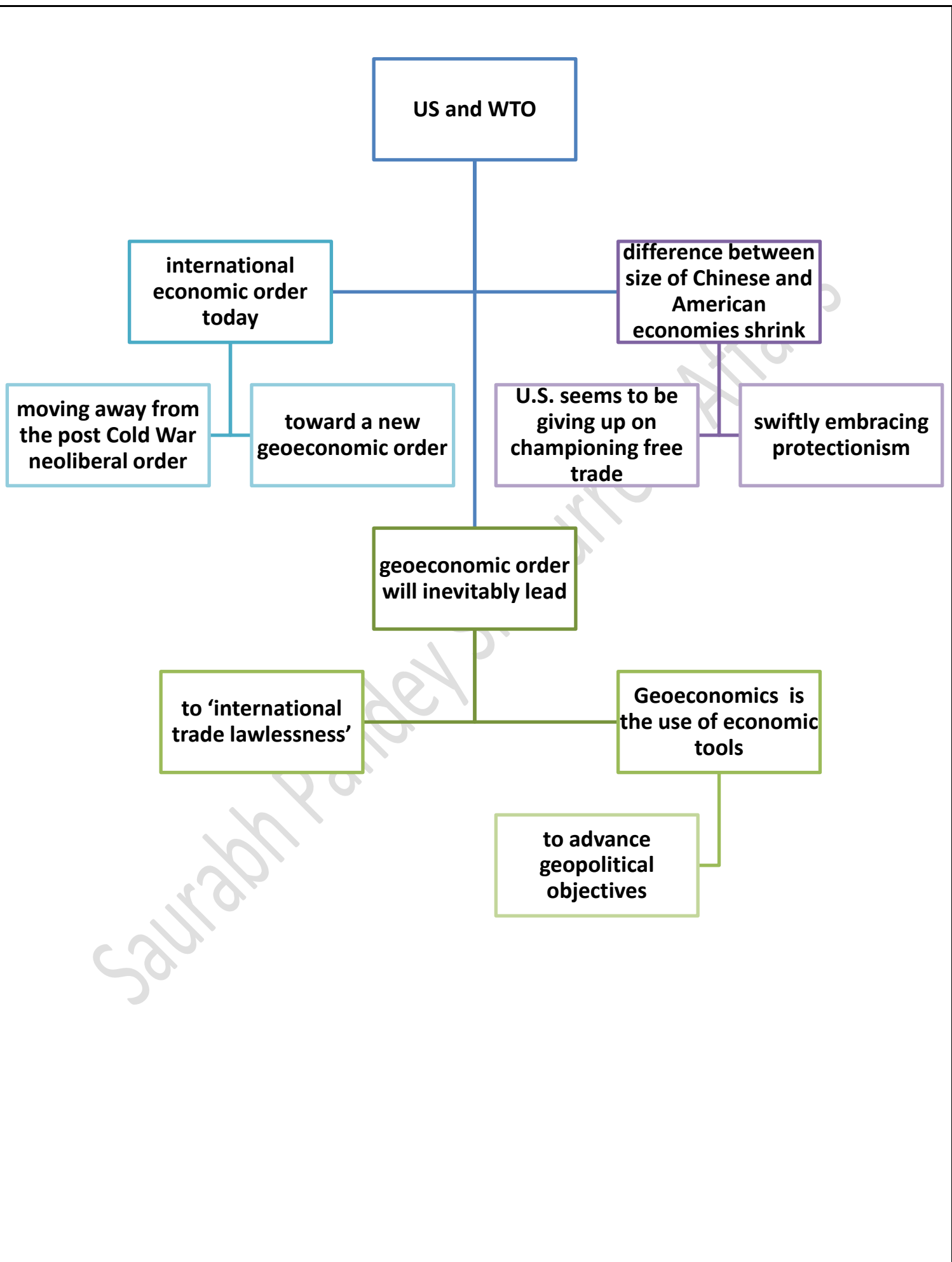




US and WTO

In a significant development in international trade law, four separate World Trade Organization (WTO) Panel reports have ruled that tariffs of 25% and 10% on steel and aluminium, respectively, that U.S. had imposed during the presidency of Donald Trump are inconsistent with WTO law





Uncontrolled re entry

Uncontrolled re entry

phenomenon of rocket parts falling back to earth

in unguided fashion once their missions are complete

rocket stage simply falls

Its path down is determined by its shape, angle of descent

air currents and other characteristics

rocket disintegrate as it falls

smaller pieces fan out

potential radius of impact will increase on the ground

Some pieces burn up entirely while others don't

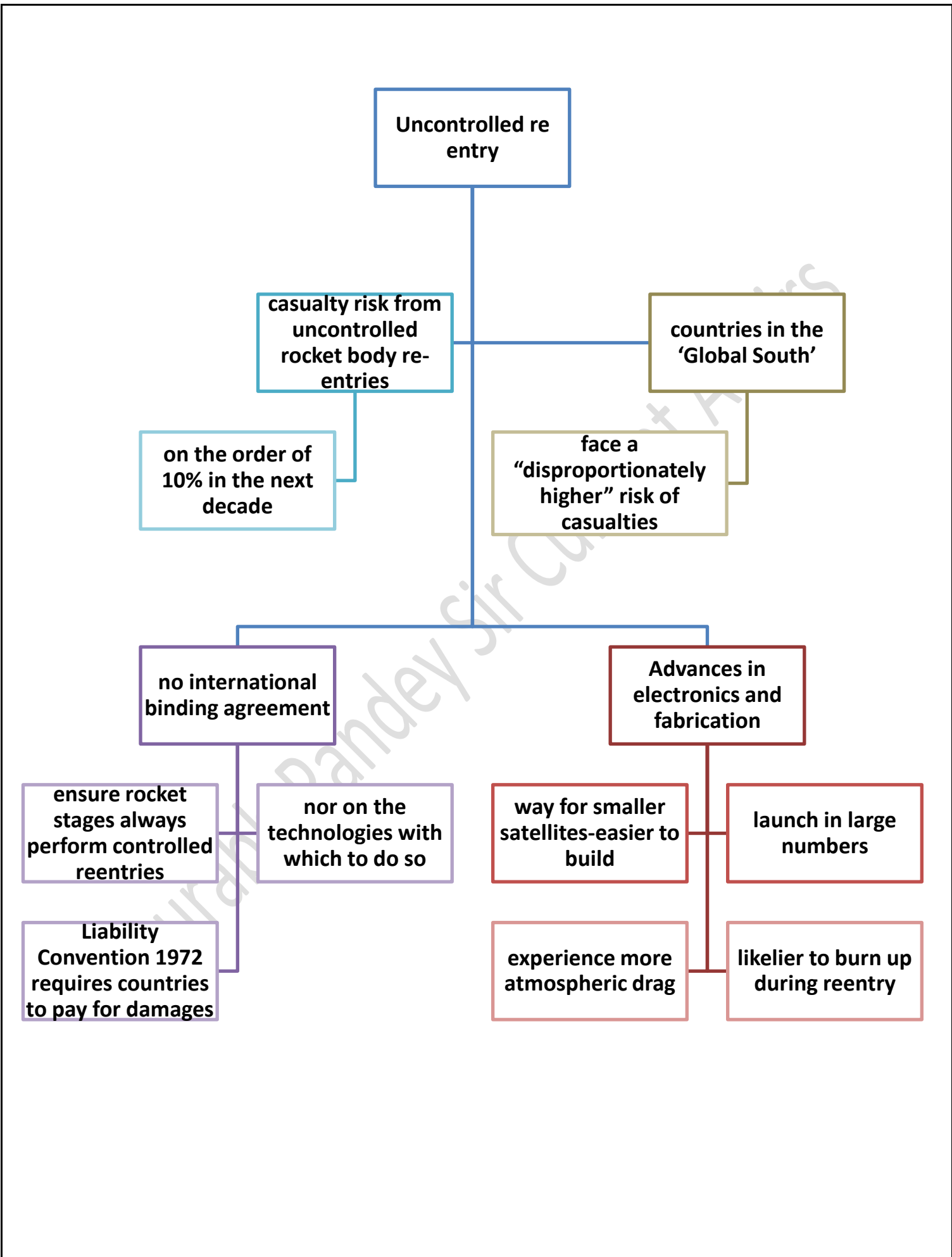
speed at which they're travelling- debris can be deadly

Parts of a SpaceX Falcon 9-fell down in Indonesia in 2016

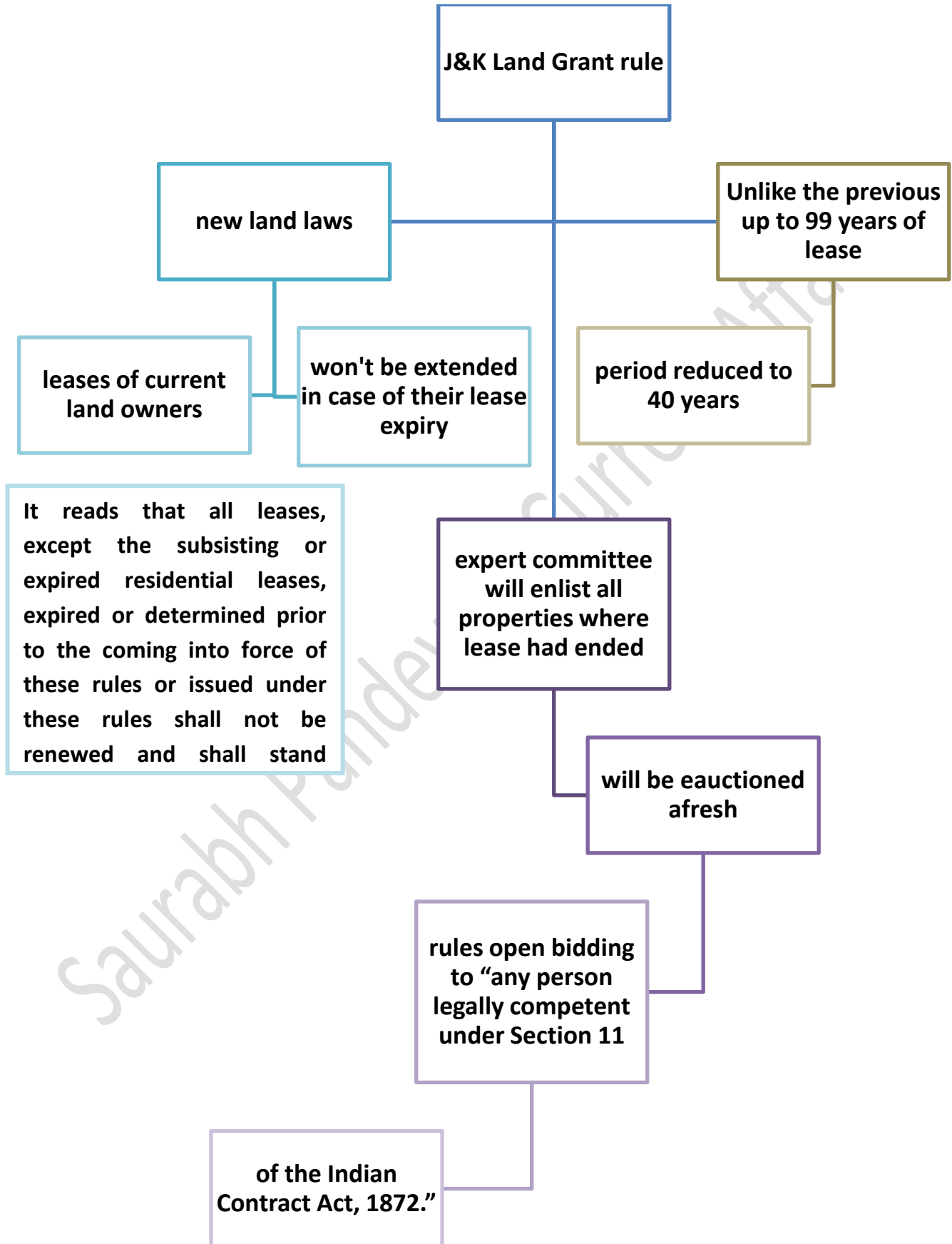
included two "refrigerator-sized fuel tanks"

If reentering stages still hold fuel

risk- atmospheric and terrestrial chemical contamination



J&K Land Grant rule



J&K Land Grant rule

rules deem a person or an entity in default of Government Revenue

now-no such land shall be granted on lease to the person

accrued to govt. under J&K Land Grant Act, 1960

who is not a permanent residence of State

Govt. convicted under Prevention of Money Laundering Act 2022

except govt. relax this restriction

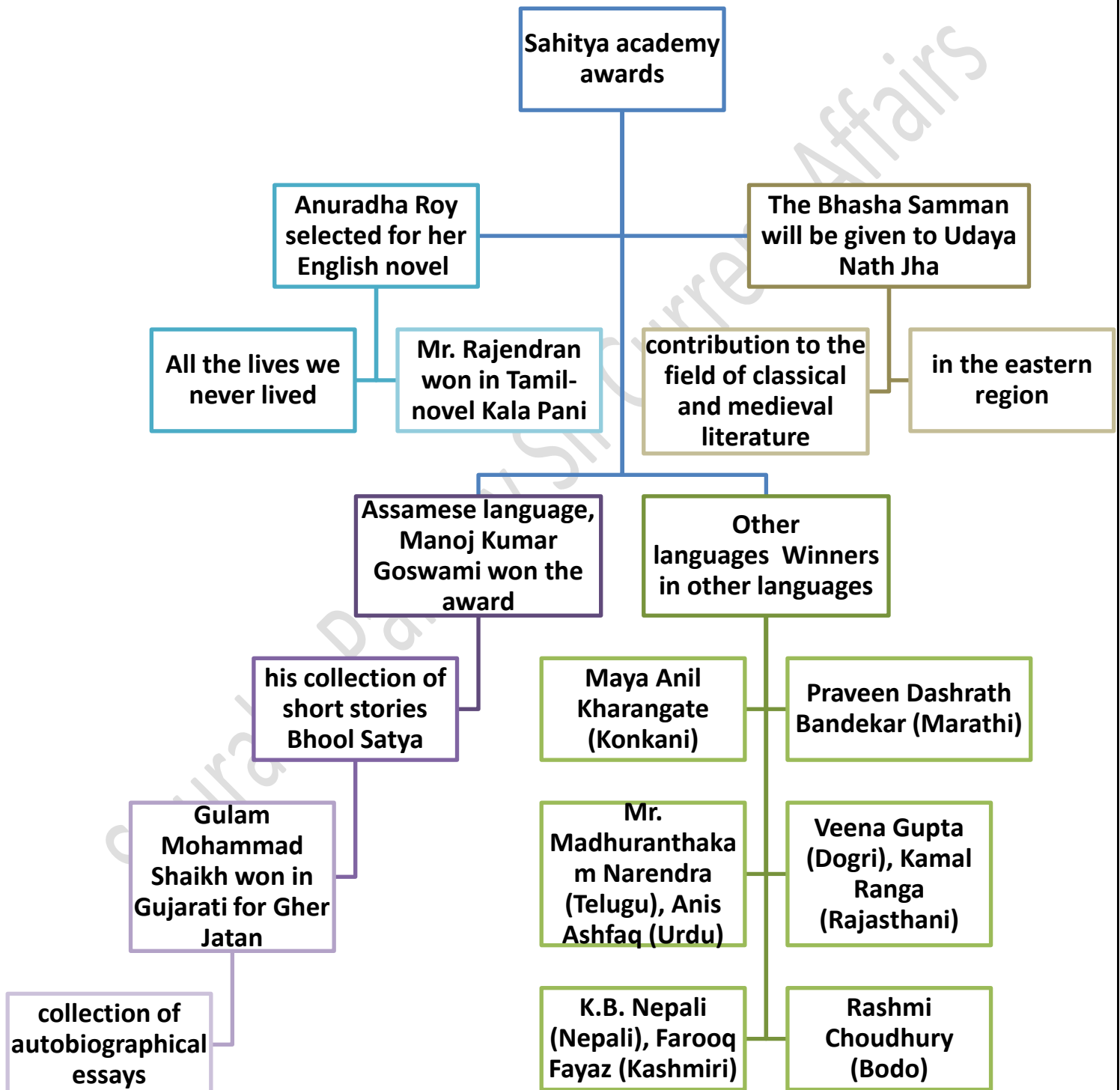
interest of industrial or commercial development

not eligible for participation in the auction

or in the favour of a registered charitable society

Sahitya academy awards

Tamil author M. Rajendran, Telugu writer Madhuranthakam Narendra and Sanskrit poet Janardan Prasad Pandey 'Mani' are among the 23 authors who won the Sahitya Akademi awards for 2022



Sahitya academy awards

M. Thomas Mathew won the award in Malayalam

work on literary criticism, Ashaante Seethayanam

Mudnakudu Chinnaswamy won in Kannada

collection of articles

Bahutvada Bhaarata mattu Bouddha Taatvikate

The Sahitya Akademi 'Yuva Puraskar'

awarded to Pawan Nalat

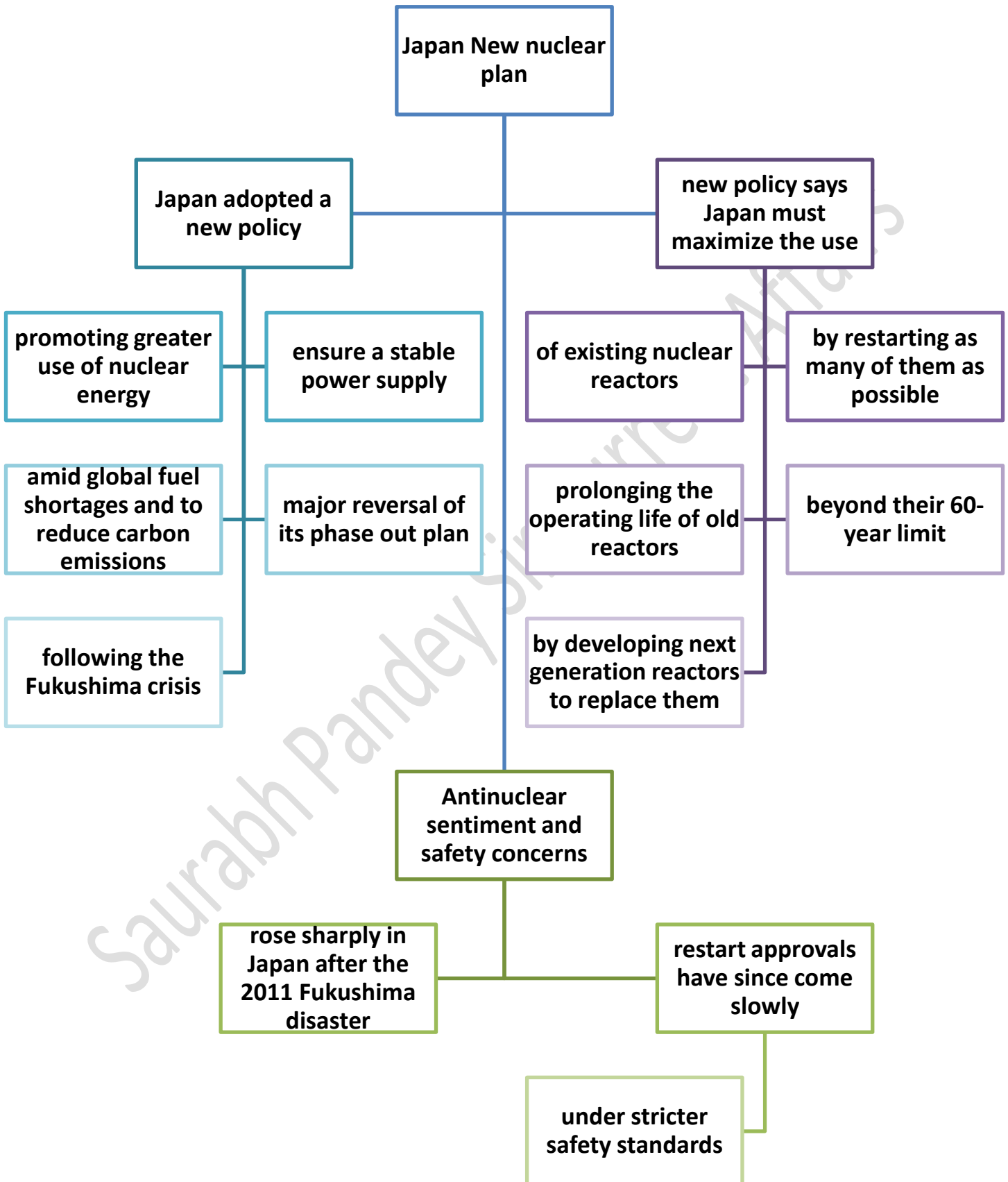
Marathi poetry collection Mi Sandarbha Pokharatoy

The Bal Sahitya Puraskar

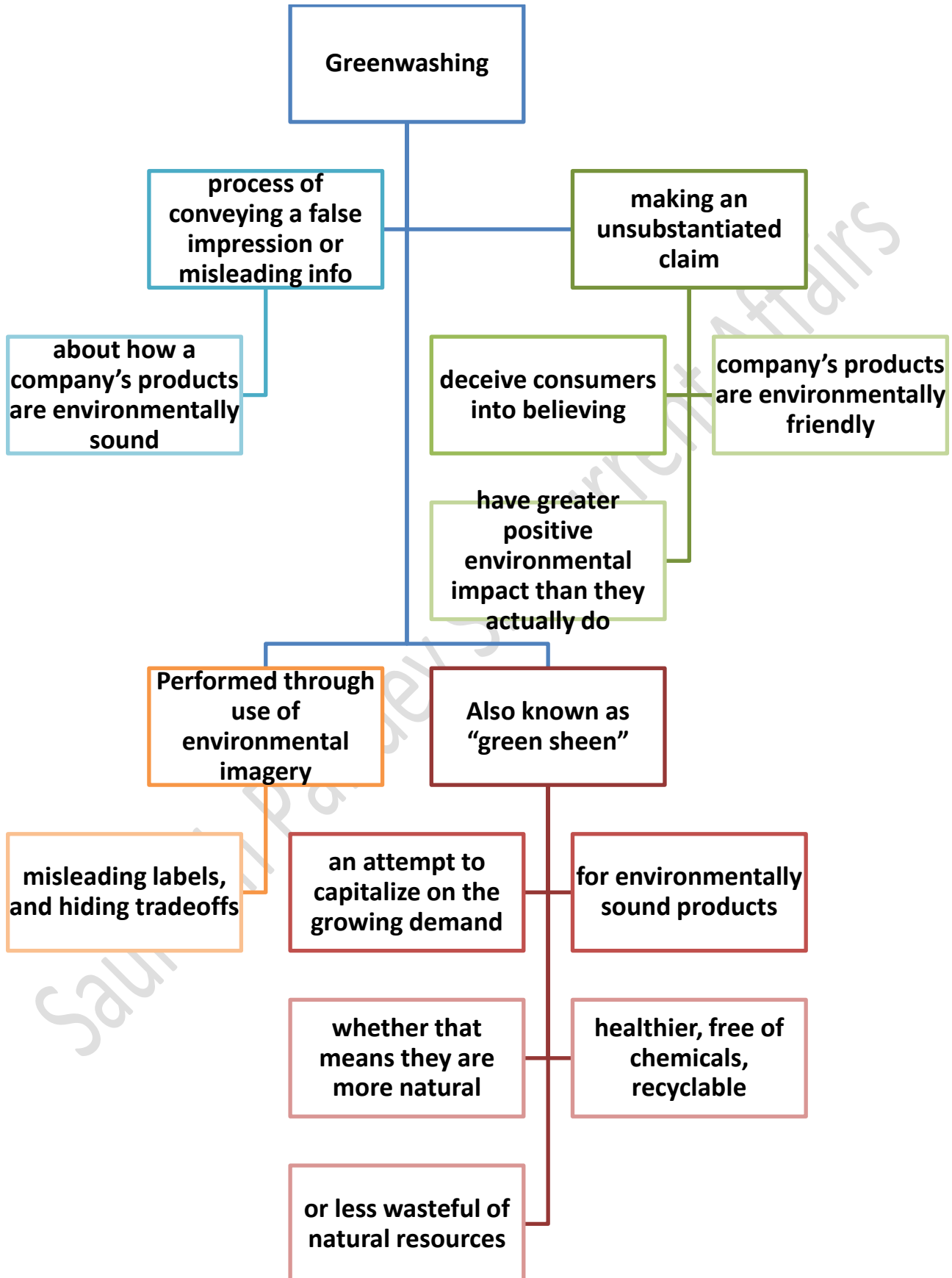
given to Ganesh Marandi

Santali book Hapan Mai

Japan New nuclear plan



Greenwashing



The Hindu through Mind Maps
(Saurabh Pandey Sir)

December 24
2022

The Hindu Mind
Maps

Intranasal vaccine

Intranasal vaccine

stimulates a broad immune response

Immune responses at the site of infection

neutralizing IgG, mucosal IgA, and T cell responses

essential for blocking

infection and transmission of COVID-19

nasal route has excellent potential for vaccination

Oxford vaccine-an adenovirus vector vaccine

organized immune systems of the nasal mucosa

Non-invasive, Needle-free

originally developed for intramuscular administration

elicited antigen specific mucosal antibody

Ease of administration

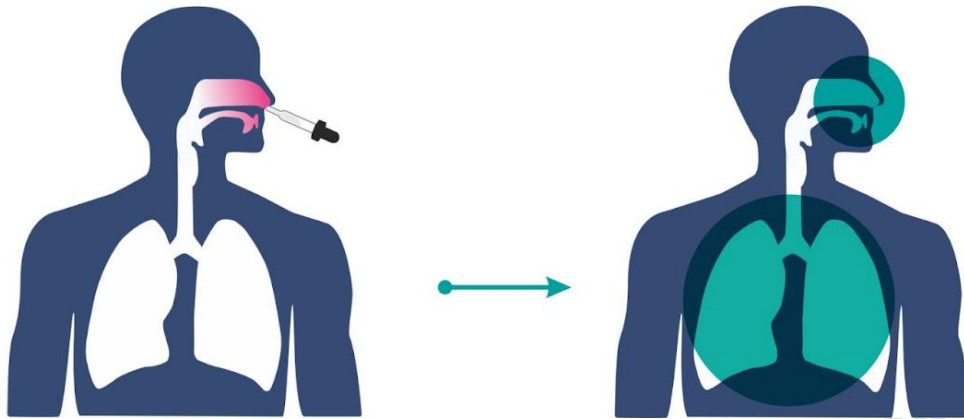
Elimination of needle-associated risks

The Oxford vaccine, as an intranasal vaccine, did not elicit "consistent mucosal antibody response nor a strong systemic response"

High compliance

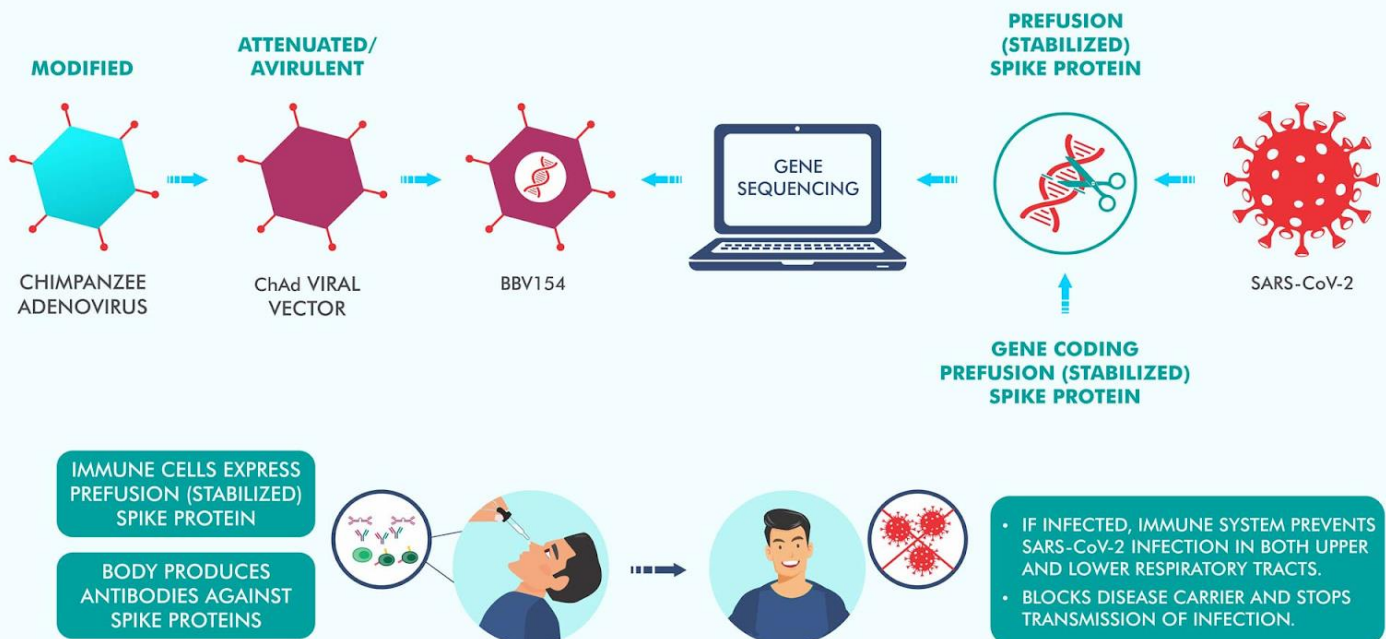
Scalable manufacturing

Intranasal SARS-CoV-2 Vaccines



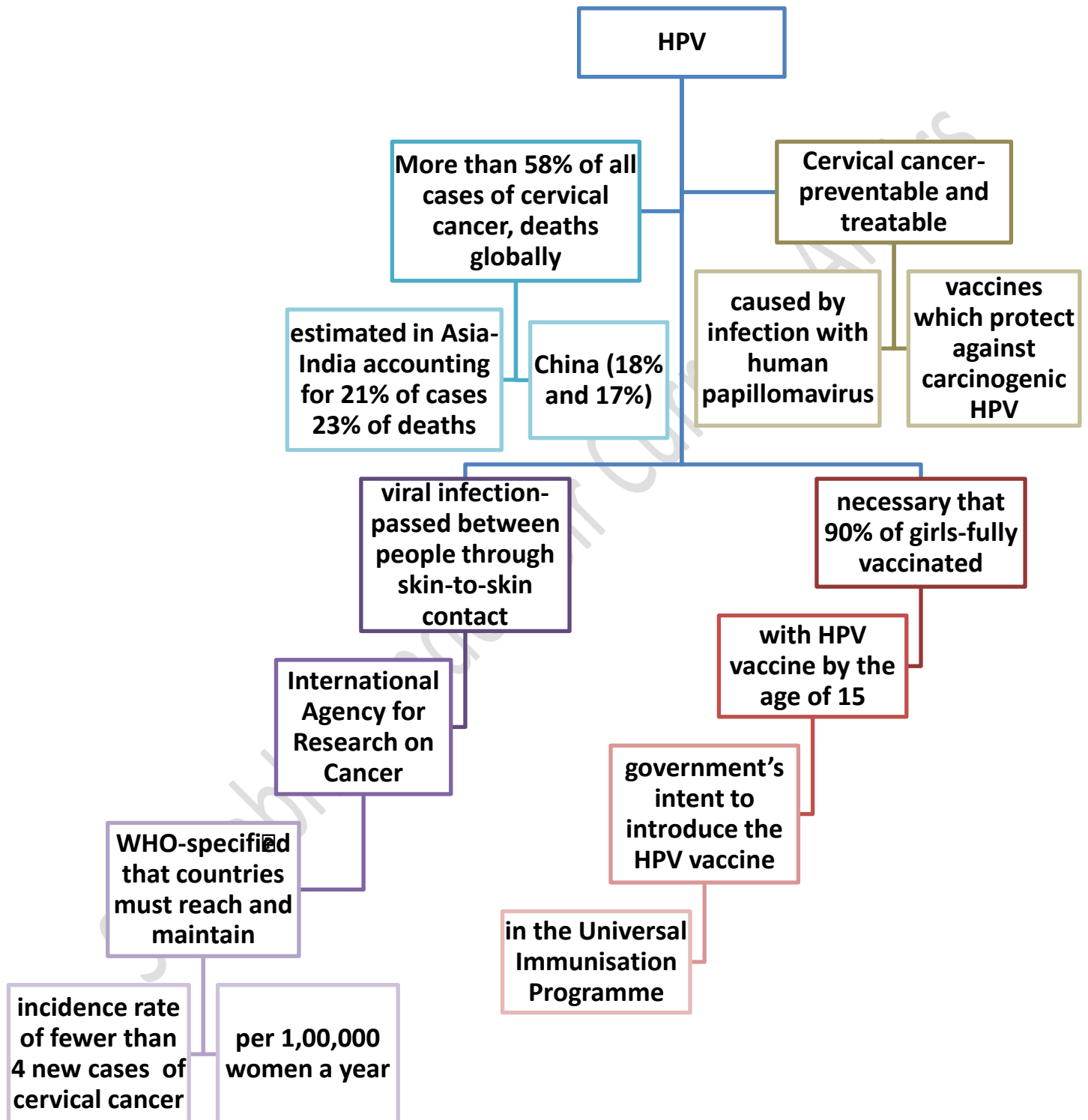
- Likely to prevent infection and transmission
- Likely to prevent disease

COVID-19 BBV154 NASAL VACCINE TRIAL



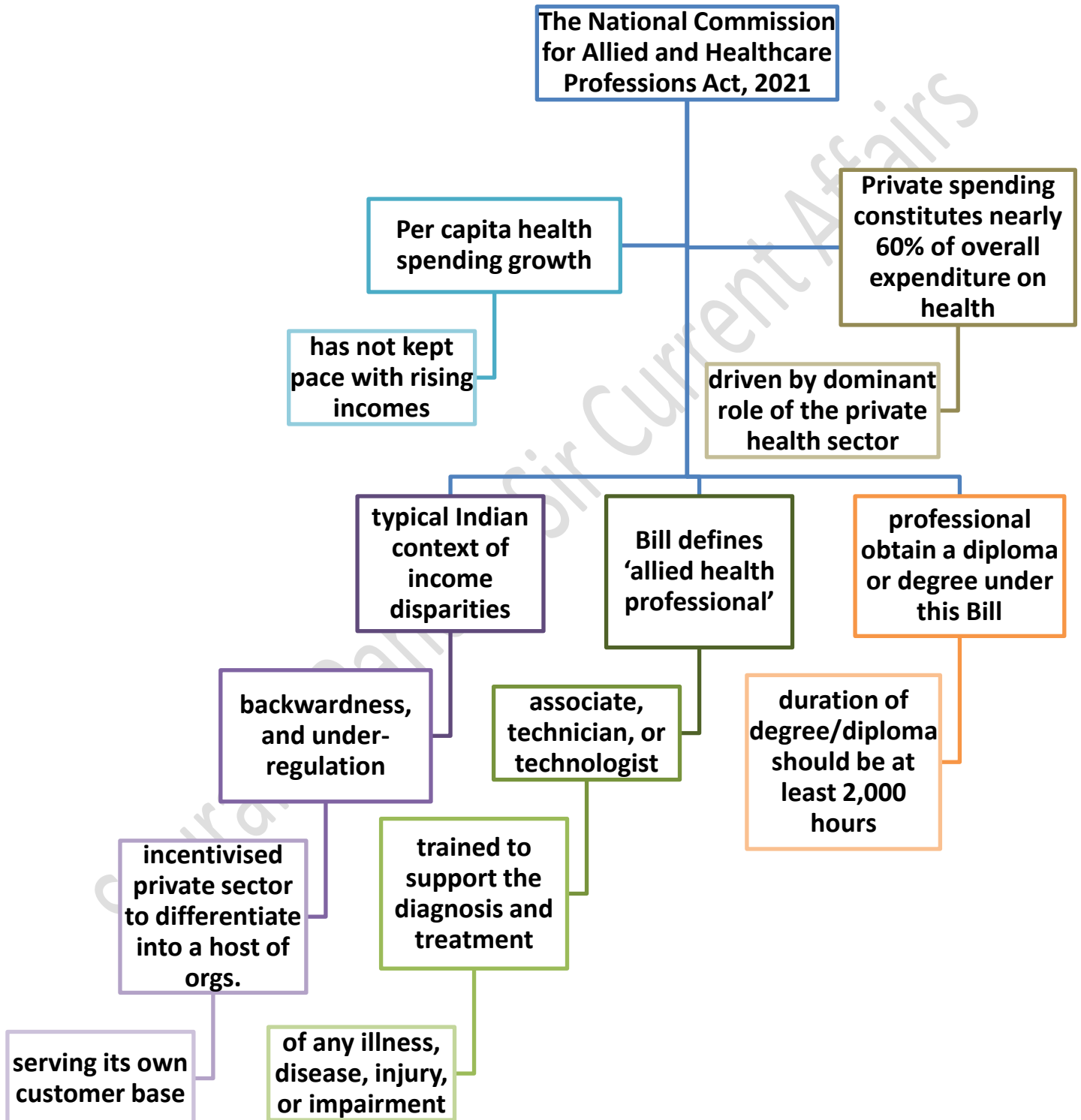
HPV

The Lancet published this month showing that India accounts for the highest number of cervical cancer cases in Asia, followed by China



The National Commission for Allied and Healthcare Professions Act, 2021

India ranks poorly on multiple health financing indicators. Its public health expenditure as a percentage of its GDP (1.28%) and share of general government expenditure dedicated to health (4.8%) remain akin to the poorest countries.



The National Commission for Allied and Healthcare Professions Act, 2021

'healthcare professional' includes a scientist, therapist

professional who studies, advises, researches, supervises, or provides

preventive, curative, rehabilitative, therapeutic, promotional health services

professional should have obtained a degree under this Bill

duration of the degree-at least 3,600 hours

Commission will consist

**(i) the Chairperson,
(ii) Vice-Chairperson**

(iii) five members representing various Departments/ Ministries of central government

(iv) one representative from Directorate General of Health Services

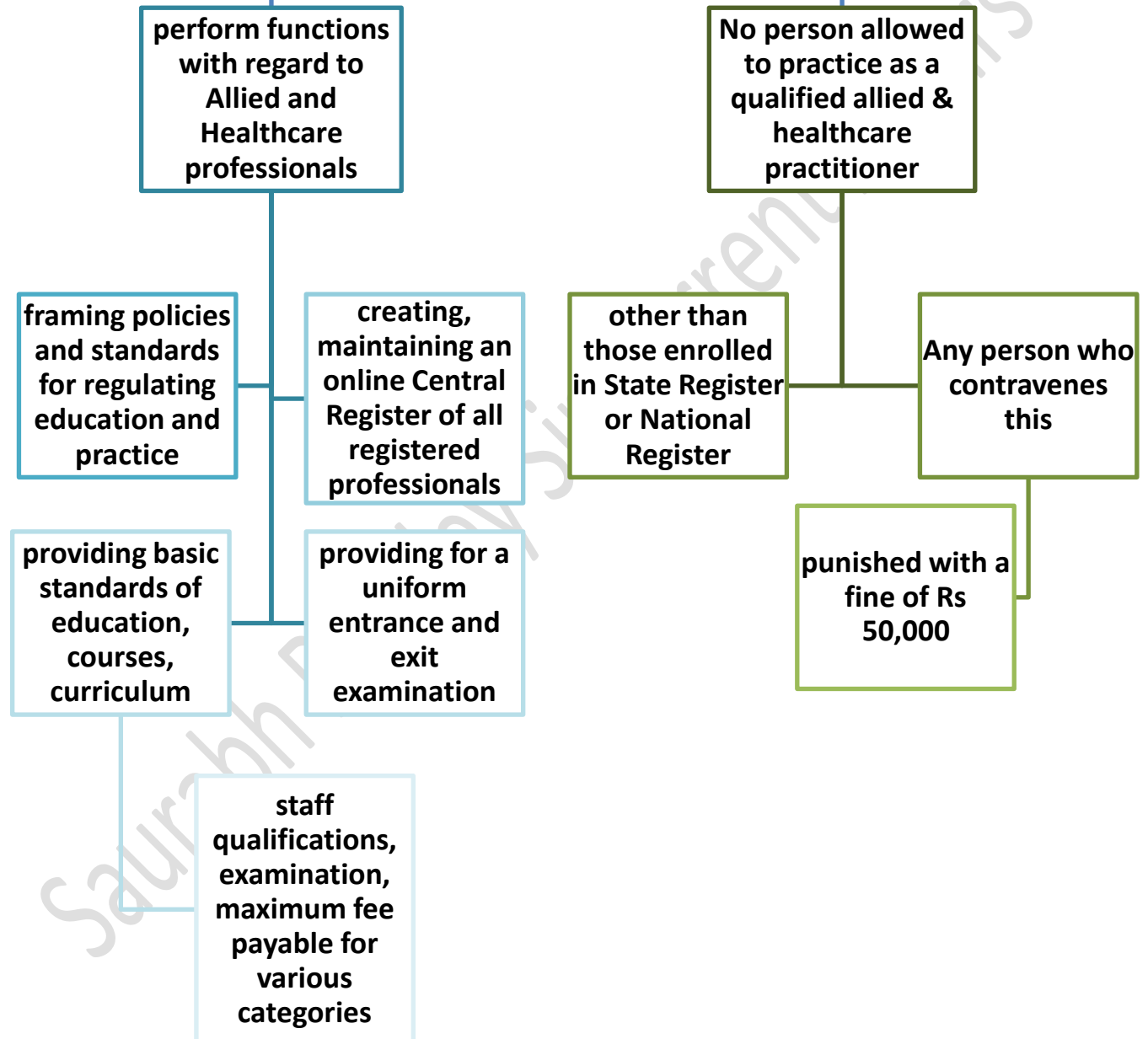
(v) three Deputy Directors or Medical Superintendents

appointed on a rotational basis from amongst medical institutions

including the AIIMS, Delhi and AIPMR, Mumbai

(vi) 12 part-time members representing State Councils

Functions of the Commission



CAG Report on DRDO

CAG Report on DRDO

Assessing the Mission Mode (MM) projects

irregular closure of projects declaring them successful

of Defence Research and Development Organisation

Comptroller and Auditor General

despite nonachievement of one or more key obj.

taking up of new projects

flagged time and cost overrun in completion of projects

for realising unachieved obj. of earlier closed projects

declared as successful

Mission Mode (MM) projects are taken up by DRDO

Defined as "most important officer in Constitution of India"

as high priority projects

Comptroller and Auditor General of India

based on specific user requirements

independent jurisdiction authorised

with a definite time frame for their completion

under Article 148 of the Indian Constitution

CAG Report on DRDO

CAG also "Guardian of the Public Purse"

vested with the responsibility of inspecting and auditing

all the expenditure of both the Central and the State Govt.

orgs. or bodies which the government significantly funds

Duties Of CAG

audits the accounts associated with all expenditure

from the Consolidated Fund of India

Consolidated Fund of every state and UT having a legislative assembly

audits all the expenditure from the Contingency Fund of India

& Public Account of India

the Contingency Fund and Public Account of every state

Duties Of CAG

audits all the trading, manufacturing, profit

loss accounts, balance sheets and separate subsidiary accounts

kept by any department of Central Govt. and State govt.

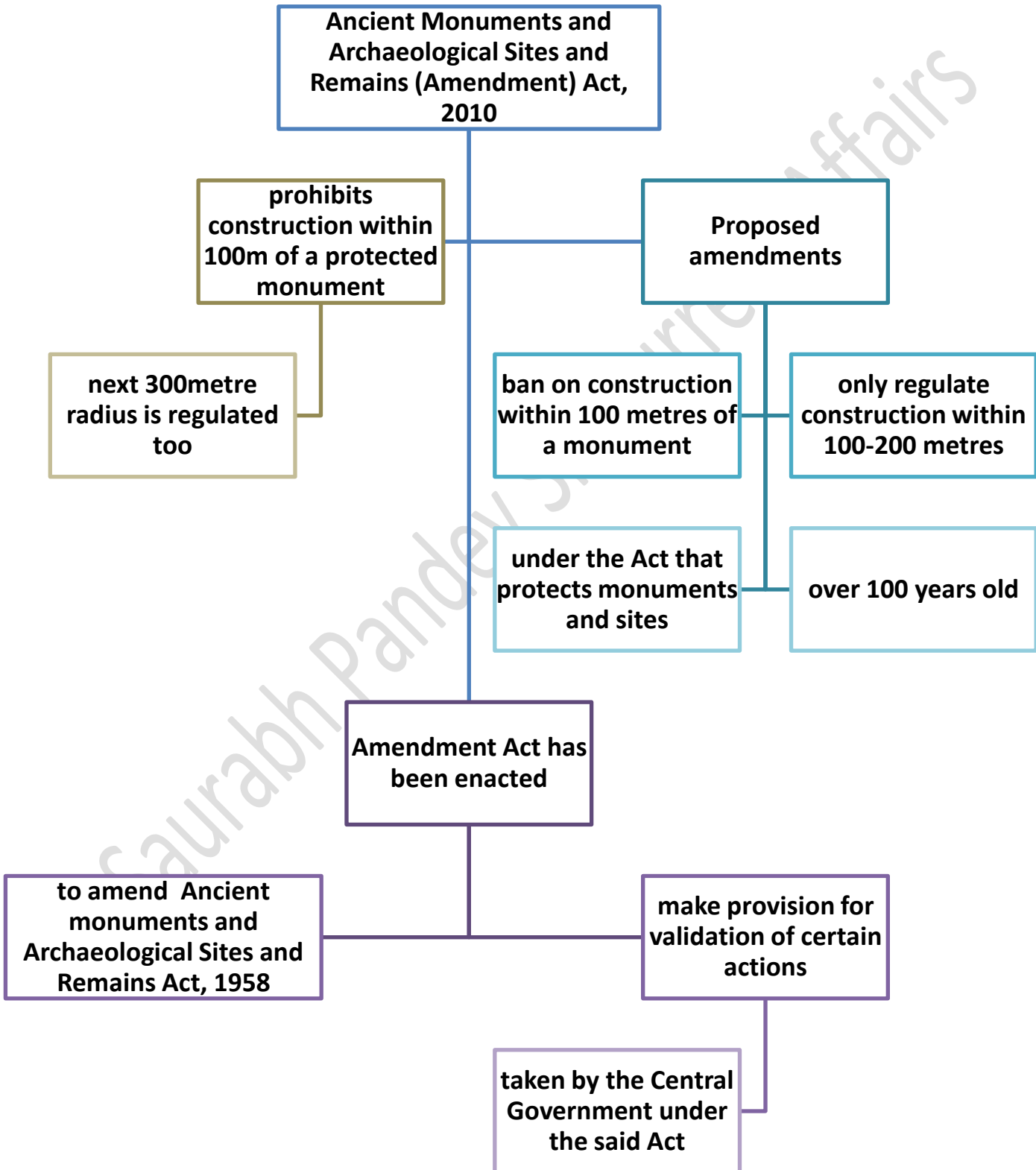
audits receipts and expenditure of bodies and authorities

extensively financed from the Central or State revenues

government companies, other corporations, and bodies

The Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010

The ASI regulates construction around the protected monuments through the Ancient Monuments and Archaeological Sites and Remains (Amendment) Act, 2010.



Ancient Monuments and Archaeological Sites and Remains (Amendment) Act, 2010

limits of prohibited area and regulated area

limits may be further extended

around monuments, archaeological sites and remains

declared by Central Government as protected

on the basis of gradation and classification of the monuments

remains to be done by the National Monument Authority

specified in principal Act as 100 m and 200 m, respectively

is to be constituted by the Central Govt.

by virtue of the Amendment in the principal Act

Authority shall have a full time Chairperson

five full time and five part-time members

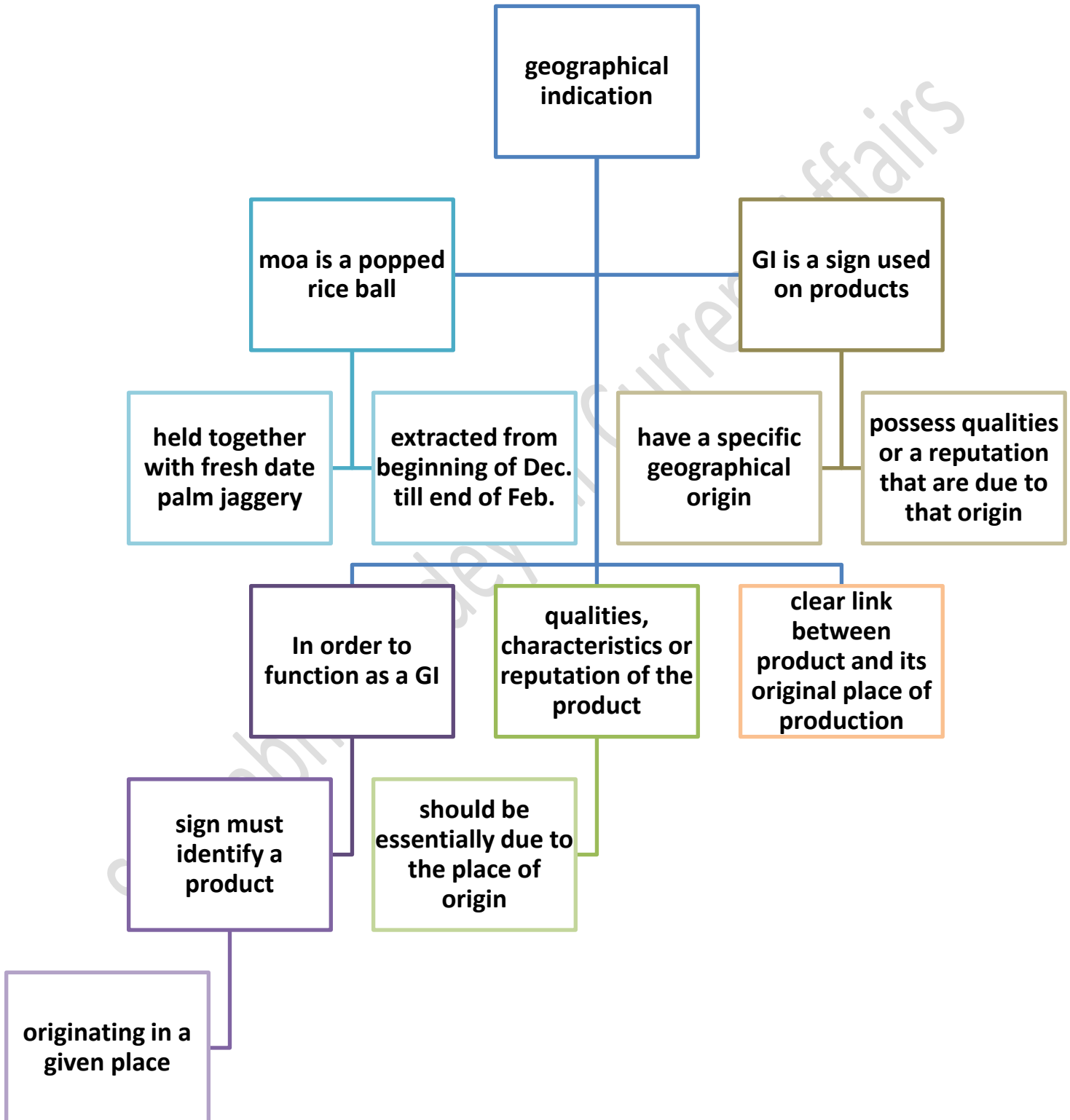
proven experience and expertise from the fields

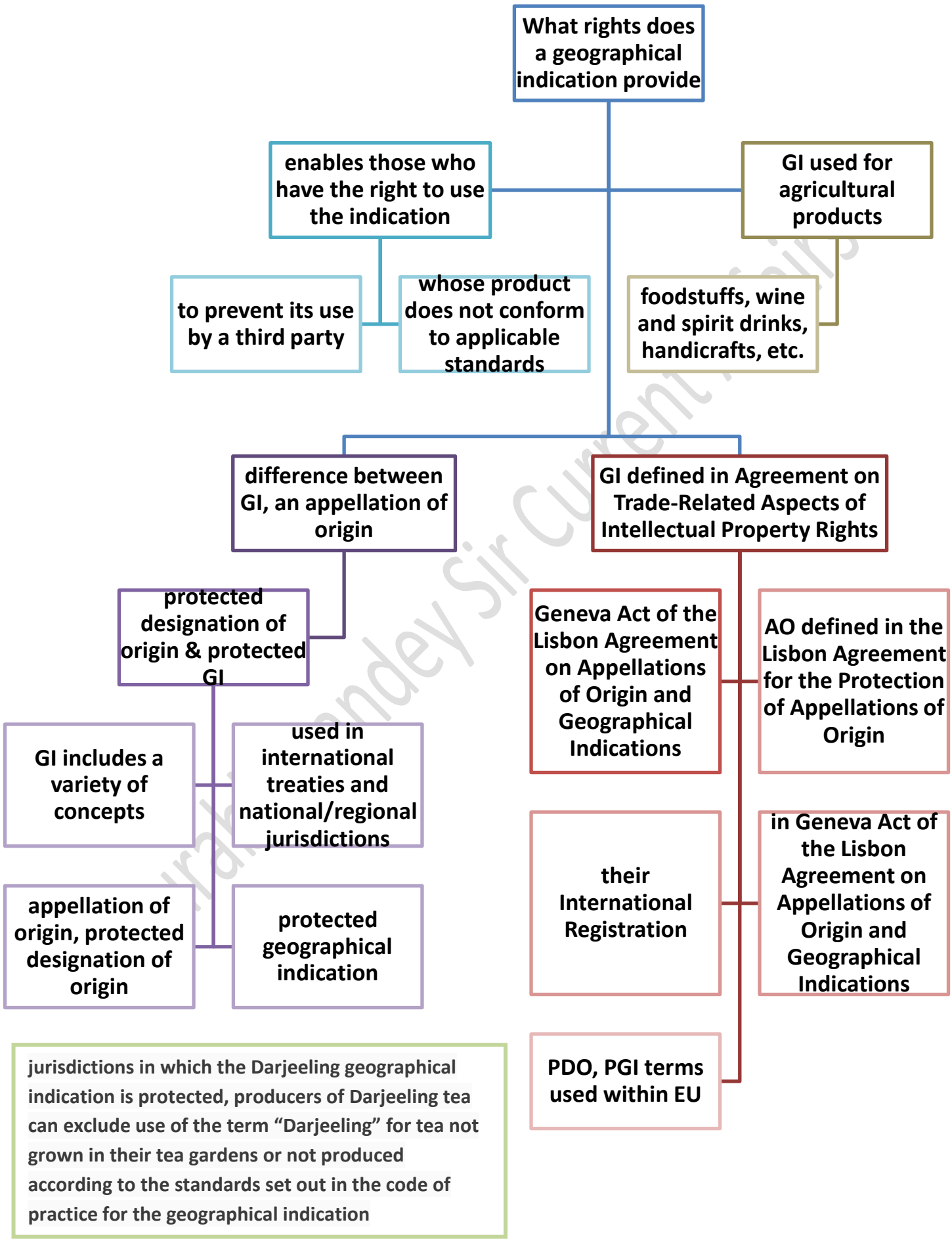
archaeology, town and country planning, architecture, heritage

conservation architecture or law with a tenure of three years

GI

Joynagar moa, the popular Bengal sweetmeat available only during the colder months of the year, with the number of registered manufacturers witnessing a massive rise and its Geographical Indication tag getting a 10year extension.





What rights does a geographical indication provide

enables those who have the right to use the indication

GI used for agricultural products

to prevent its use by a third party

whose product does not conform to applicable standards

foodstuffs, wine and spirit drinks, handicrafts, etc.

difference between GI, an appellation of origin

GI defined in Agreement on Trade-Related Aspects of Intellectual Property Rights

protected designation of origin & protected GI

Geneva Act of the Lisbon Agreement on Appellations of Origin and Geographical Indications

AO defined in the Lisbon Agreement for the Protection of Appellations of Origin

GI includes a variety of concepts

used in international treaties and national/regional jurisdictions

their International Registration

in Geneva Act of the Lisbon Agreement on Appellations of Origin and Geographical Indications

appellation of origin, protected designation of origin

protected geographical indication

jurisdictions in which the Darjeeling geographical indication is protected, producers of Darjeeling tea can exclude use of the term "Darjeeling" for tea not grown in their tea gardens or not produced according to the standards set out in the code of practice for the geographical indication

PDO, PGI terms used within EU

Engineering goods

Engineering goods

comprises metal products, industrial machinery and equipment

automobiles and their components, transport equipment, bicycles, etc.

India's top five export destinations

US, China, the UAE, Italy, and Germany

India's zero-duty Export Promotion Capital Goods scheme

Since the record postCOVID recovery last fiscal

helped in this growth

allows the import of capital goods

signs of distress in the current fiscal

for all stages of the production cycle

withdrawal of the export duty on steel items

may restore iron and steel exports

"Demand continues to remain subdued in Europe primarily due to high energy prices and lower manufacturing activity."

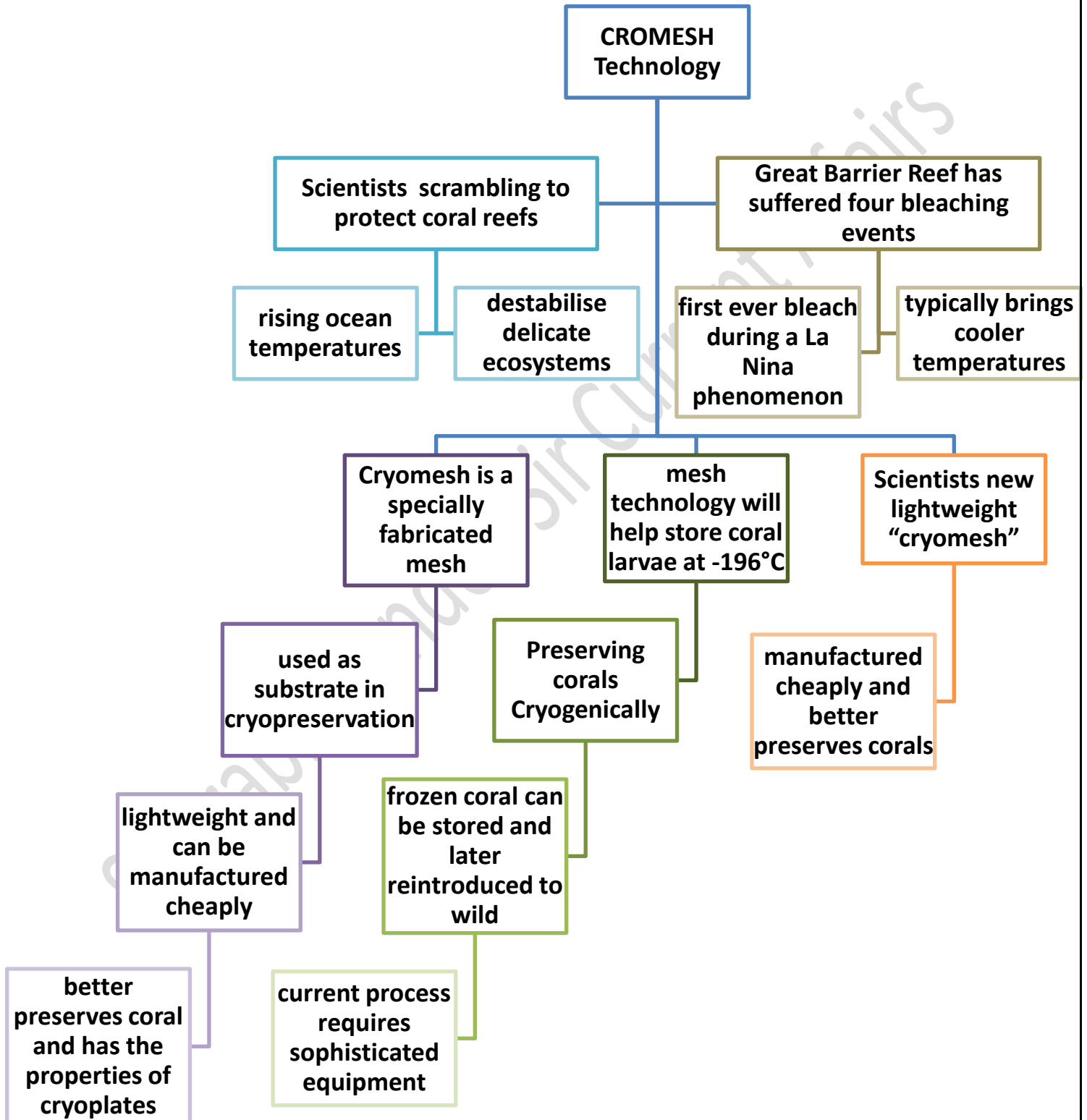
The Hindu through Mind Maps
(Saurabh Pandey Sir)

December 25
2022

The Hindu Mind
Maps

CROMESH Technology

Scientists working on Australia's Great Barrier Reef have successfully trialled a new method for freezing and storing coral larvae they say could eventually help rewild reefs threatened by climate change



Mesh technology

will help store coral larvae at 196°C

Cryogenically frozen coral can be stored

devised by a team from the University of Minnesota's

later reintroduced to the wild

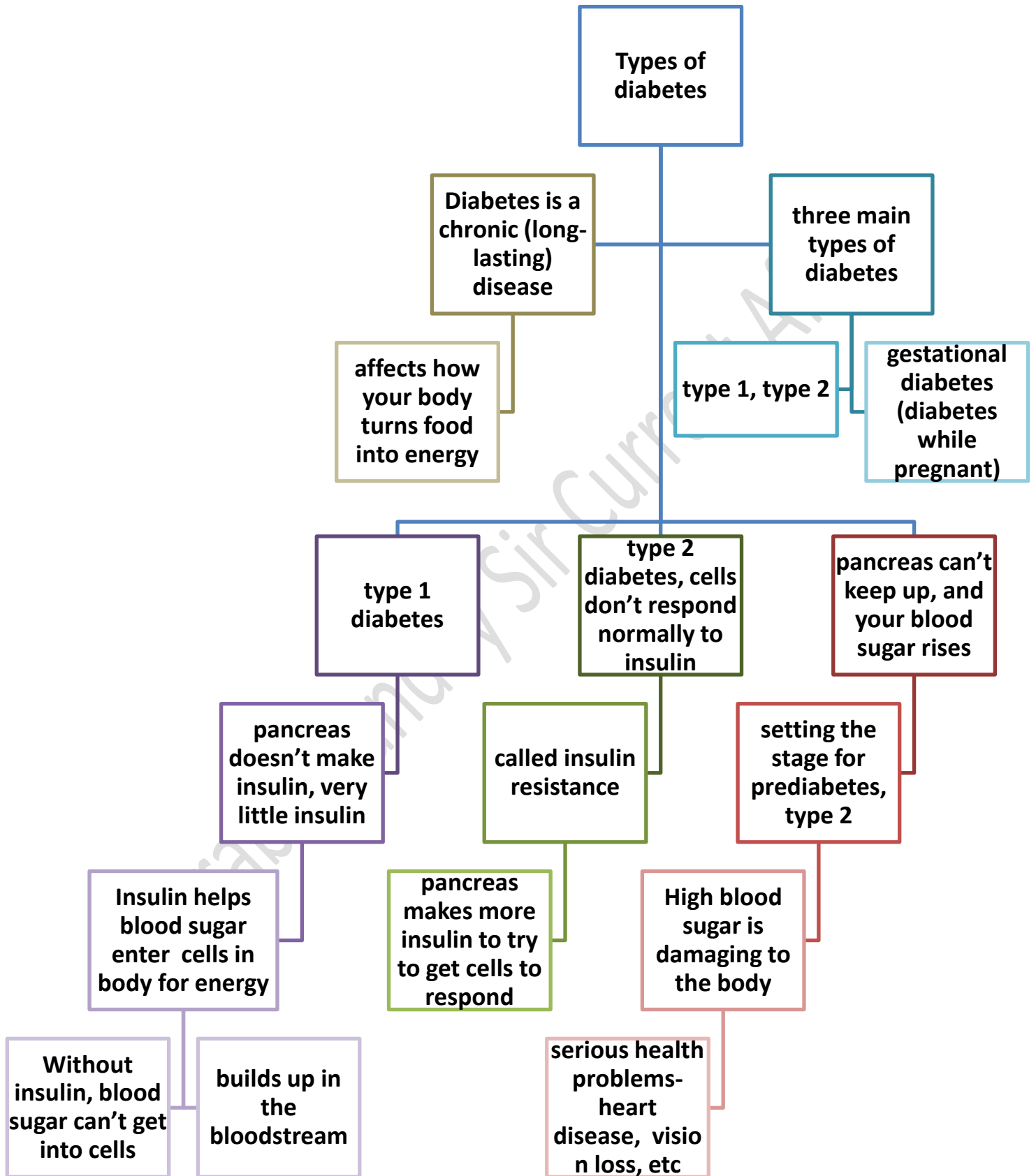
eventually help to rewild reefs threatened by climate change

build a bigger, more diverse bank of frozen living corals

preserving biodiversity

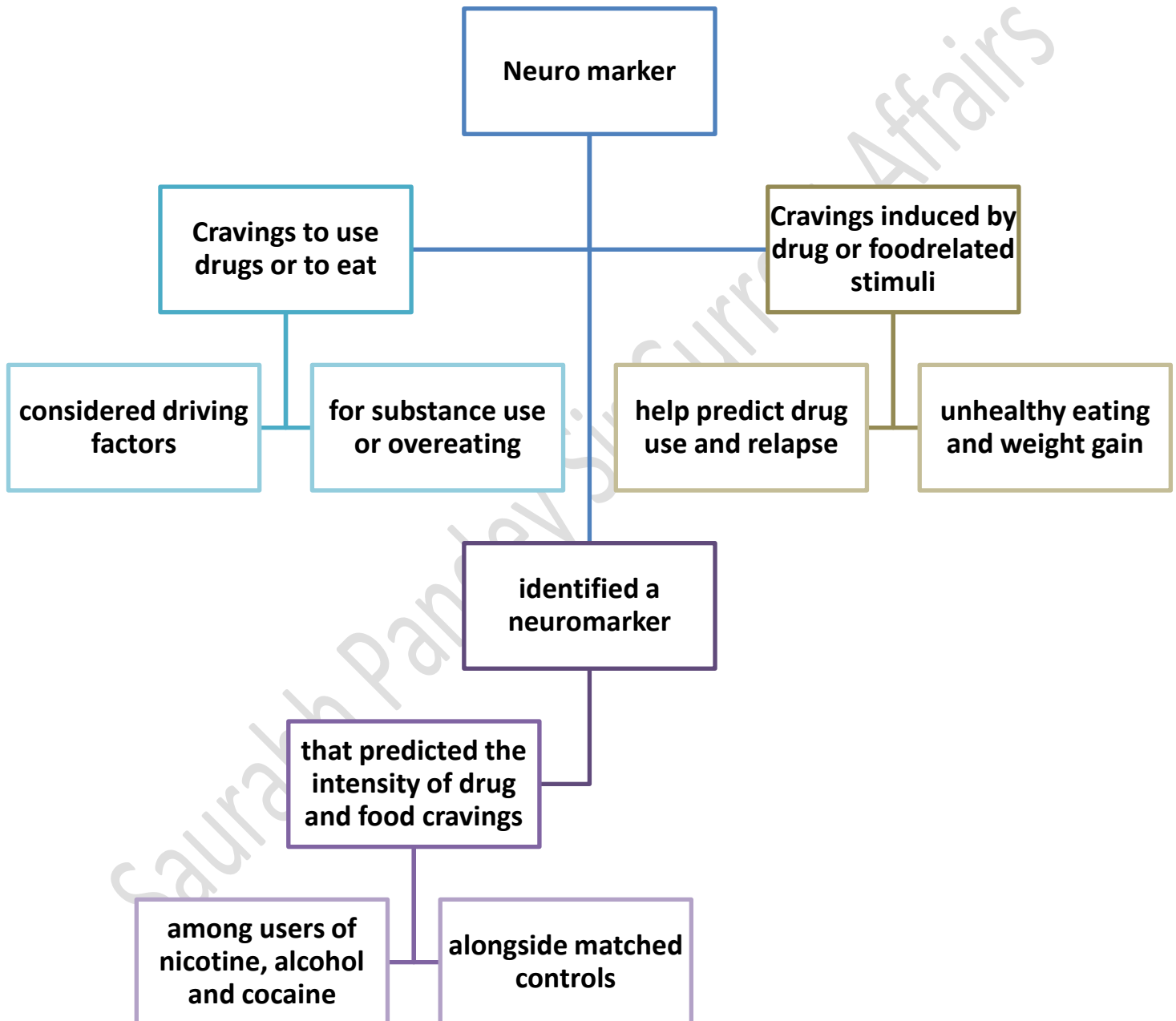
Saurabh Pandey's Research Affairs

Types of diabetes



Neuro marker

Researchers have found a neuroimaging signature to predict the intensity of drug and food cravings (Nature Neuroscience)



Strep A

Strep A

unseasonal rise in
group A
Streptococcus
infections

killed over a dozen
children

Strep A infections
cause a mild sore
throat

occasionally they
can lead to scarlet
fever

rarely, to even more
serious conditions
such as meningitis

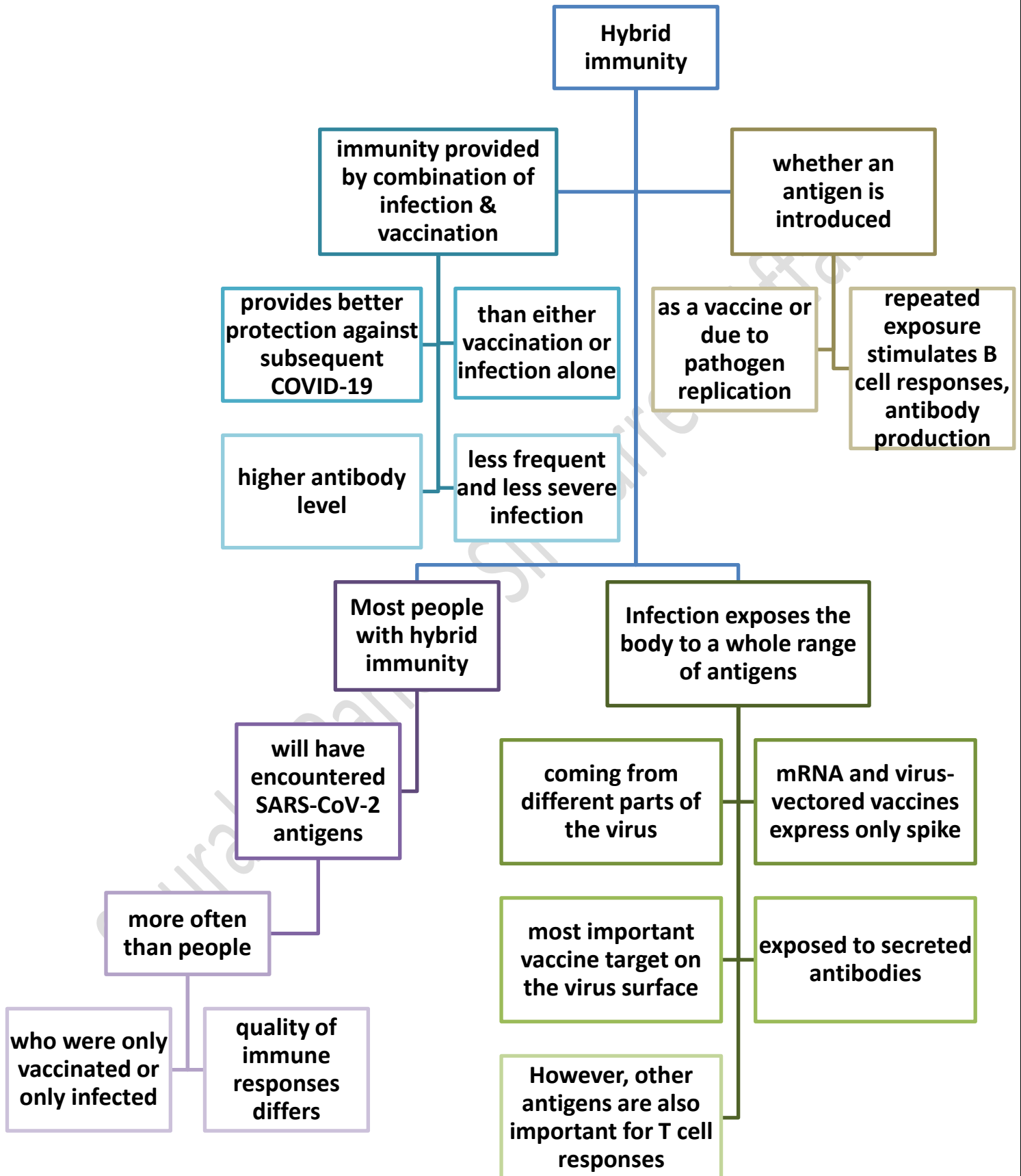
Some researchers
theorized

off season
outbreaks are a
result of past surges

that spawned new
strep strains

which happened
before the
pandemic

Hybrid immunity



"**B cells** produce and secrete antibodies, activating the immune system to destroy the pathogens. The main **difference between T cells** and **B cells** is that **T cells** can only recognize viral antigens outside the infected **cells** whereas **B cells** can recognize the surface antigens of bacteria and **viruses**." Sep 25, 2017

Although all lymphocytes originate from only one type of stem cell, the final steps in their development lead to the production of two distinct types of lymphocyte: T-lymphocytes and B-lymphocytes.

T-lymphocytes	B-lymphocytes
Produced in the bone marrow and migrate to the thymus gland for final maturation.	Produced in the bone marrow and mature in the bone marrow itself.
If the antigen comes from outside the body, it needs to be presented to the T-cells on the surface of an antigen presenting cell.	Recognize and bind antigen particles without having to be presented by an antigen presenting cell.
Cell- mediated immunity	Antibody mediated (humoral) immunity

India's Foreign policy

The war in Ukraine saw the government spell out its version of “nonalignment”, as it sought to keep a balance in the growing polarisation between the U.S. and the European Union on one side, and Russia on the other.



What were the other highlights?

2022, India returned to Free Trade Agreements

2022, India signed trade agreements

Modi govt. had called for a review of all FTAs

crapped all Bilateral Investment Treaties

with the UAE and Australia

hopes to progress on talks with the EU

walked out of 15-nation Asian Regional Comprehensive Economic Partnership

Gulf Cooperation Council and Canada for others

India also joined U.S.led Indo Pacific Economic Forum

G20-India is expected to highlight climate change transitions

later decided to stay out of trade talks

“women led” development and multilateral reform

What about ties with neighbours?

India's foreign policy marked by economic assistance to Sri Lanka

strengthened ties with Central Asian countries on connectivity

regional trade and energy agreements

with Bangladesh, Bhutan and Nepal

could see a South Asian energy grid emerge

government kept channels open

India abstained on a UNSC vote

with repressive regimes like Afghanistan's Taliban, Myanmar Junta

opening a "technical mission" in Kabul

calling for Myanmar to end violence

release political prisoners

sending the foreign secretary to Nay Pyi Taw

Iran-protests against the killing of activist Mahsa Amini

brought thousands onto the streets

India has steered clear of any criticism

with Pakistan, ties remain flatlined

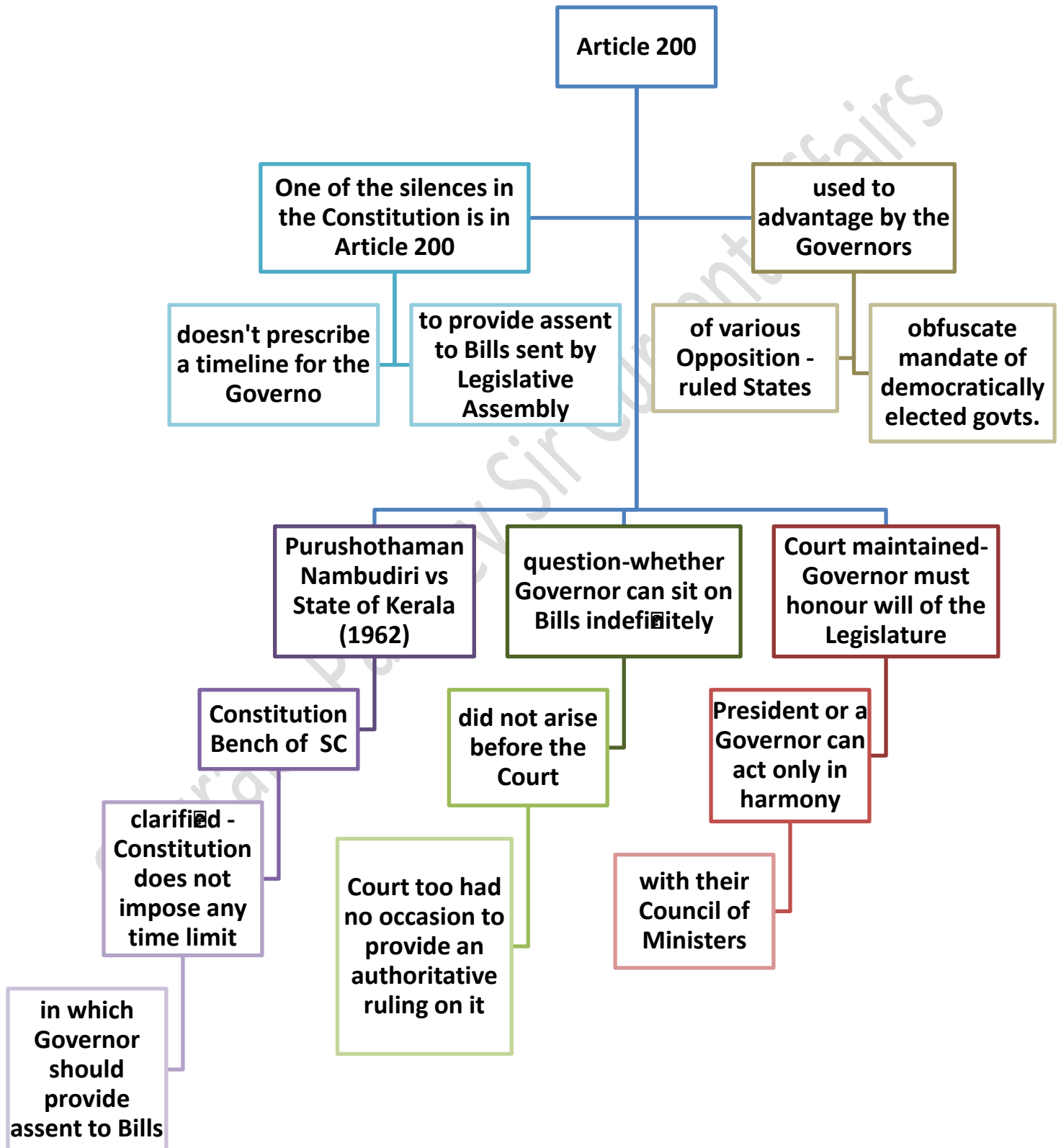
**The Hindu through Mind Maps
(Saurabh Pandey Sir)**

December 26
2022

The Hindu Mind
Maps

Article 200

When the Constitution was adopted by the Constituent Assembly, the founders left deliberate gaps in it to enable a future Parliament to modify and amend the Constitution that was in accordance with the aspirations and the will of the people



Article 200

**issue-
President not
acting swiftly**

**National Commission to
Review the Working of
the Constitution**

**to grant
assent to Bills
reserved by
the Governor**

**for
consideration
of the
President**

**set up by the
A.B. Vajpayee
government
in 2000**

there should be a
timelimit — say a
period of six months-
within which Governor
should take a decision
whether to grant
assent or to reserve a
Bill for consideration
of President

**imp. to
understand
real objective
behind Article
200**

**independent
Governor -avoid
the stateen acted
law**

**sarkaria commission -
delay from the side of
Governor in granting
assent**

**requiring the
Governor to
grant assent
to Bills**

**being
repugnant to
the Union
laws**

**can be
avoided by
streamlining
existing
procedures**

**independent
Governor
would be
necessary**

**making prior
consultation
with the
Governor**

**at the stage of
the drafting of
the Bill**

**act as a check
and balance**

**prescribing
timelimits for
its disposal**

Article 200

'Reasonable time' is what is necessary

Keisham Meghachandra Singh vs The Hon'ble Speaker

to do conveniently what the contract or duty requires

should be done in a particular case

Manipur Legislative Assembly (2020)

SC held that Speaker must act on disqualification petitions

against the defecting MLAs within a 'reasonable time'

reasonable time is three months

Governor's duty-ensure elected government is working

Constitution should be read contextually to provide meaning

within the parameters of the Constitution

that Governor must act on the Bills

doesn't mean Governor can sit on the Bills indefinitely

within a reasonable time, say three months

because no time limit prescribed

Article 200

constitutional silences should not give way

for unconstitutional inaction

leaving space for anarchy in the rule of law

As Justice V.R. Krishna Iyer put it pithily

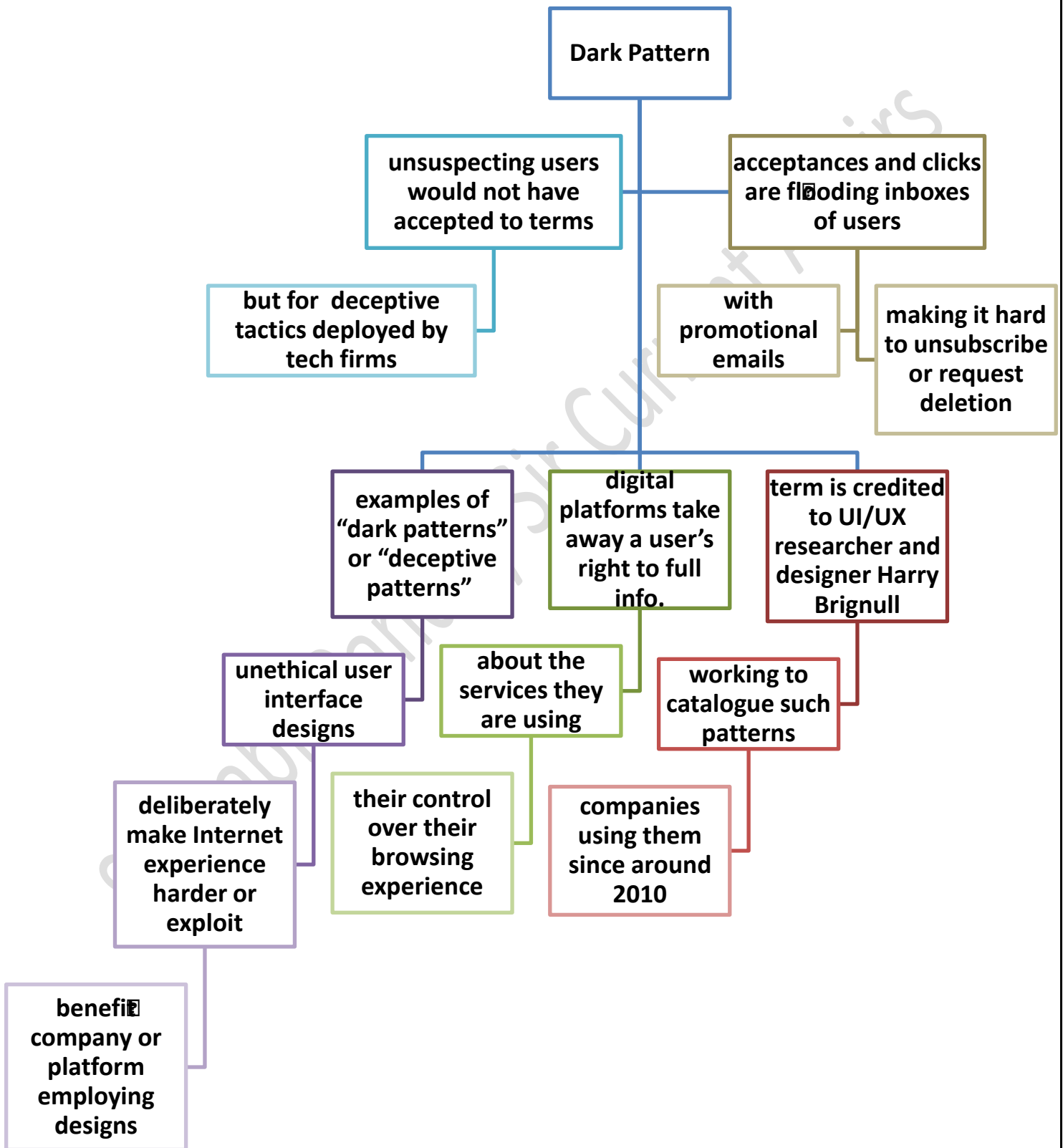
Shamsher Singh and Anr. vs State Of Punjab

“may be, our founding fathers were not political prophets who could foresee glaring abuses or perverted developments”

Saurabh Pandey Sir Current Affairs

Dark pattern

Some Internet-based firms have been tricking users into agreeing to certain conditions or clicking a few links



XBB Lineage

XBB Lineage

SARSCoV2 virus has the potential to evolve

First detected in January 2022

by exchanging large fragments of the genome

called recombination

XBB lineage from recombinant

between Omicron sublineages BA.2.10.1 and BA.2.75

lineage was largely detected in genomes

Global Initiative on Sharing Avian Influenza Data

from Singapore and India

largest number of genomes on GISAID

global science initiative and primary source

established in 2008

belonging to the U.S. and India

Lineage BQ.1 is a BA.5 sublineage

provides open-access to genomic data

of influenza viruses and the coronavirus

mutations K444T & N460K in spike protein of virus

responsible for the COVID-19 pandemic

World heritage and forest rights

Of the 39 areas declared by UNESCO in 2012 as being critical for biodiversity in the Western Ghats, 10 are in Karnataka

World heritage and forest rights

Before recognising areas as world heritage sites

UNESCO seeks opinion of inhabitants

on the implication of possible declaration

on their lives and livelihoods

Development activities like road repair has been stopped

Farming is not allowed in a normal way

slight sound is demurred, use of fertilizers is banned

small knife is not allowed to be carried into the forest

people are prohibited from cutting trees falling on their houses

increasing animal insurgency

Those who don't have recognition over their lands

to undertake repair work or move the earth

causing damage to the crops

are not given compensation for the loss

restrictions were in enforcement from the time

of the farming forest dwellers

these areas were declared as protected areas

World heritage and forest rights

Monkeys and snakes released from urban settings

Owning livestock in the villages close to forests

enter their houses

monkeys do not survive in the wild for long

more challenging than in regular revenue villages

areas where irrigation projects have come up

Half the world heritage sites in Karnataka fall under protected areas

issue becomes complicated

affected people reported

when people refuse to 're-locate'-their attachment to the land

grazing lands have been taken over by the govt.

(National Park: 1; Wildlife Sanctuaries: 4)

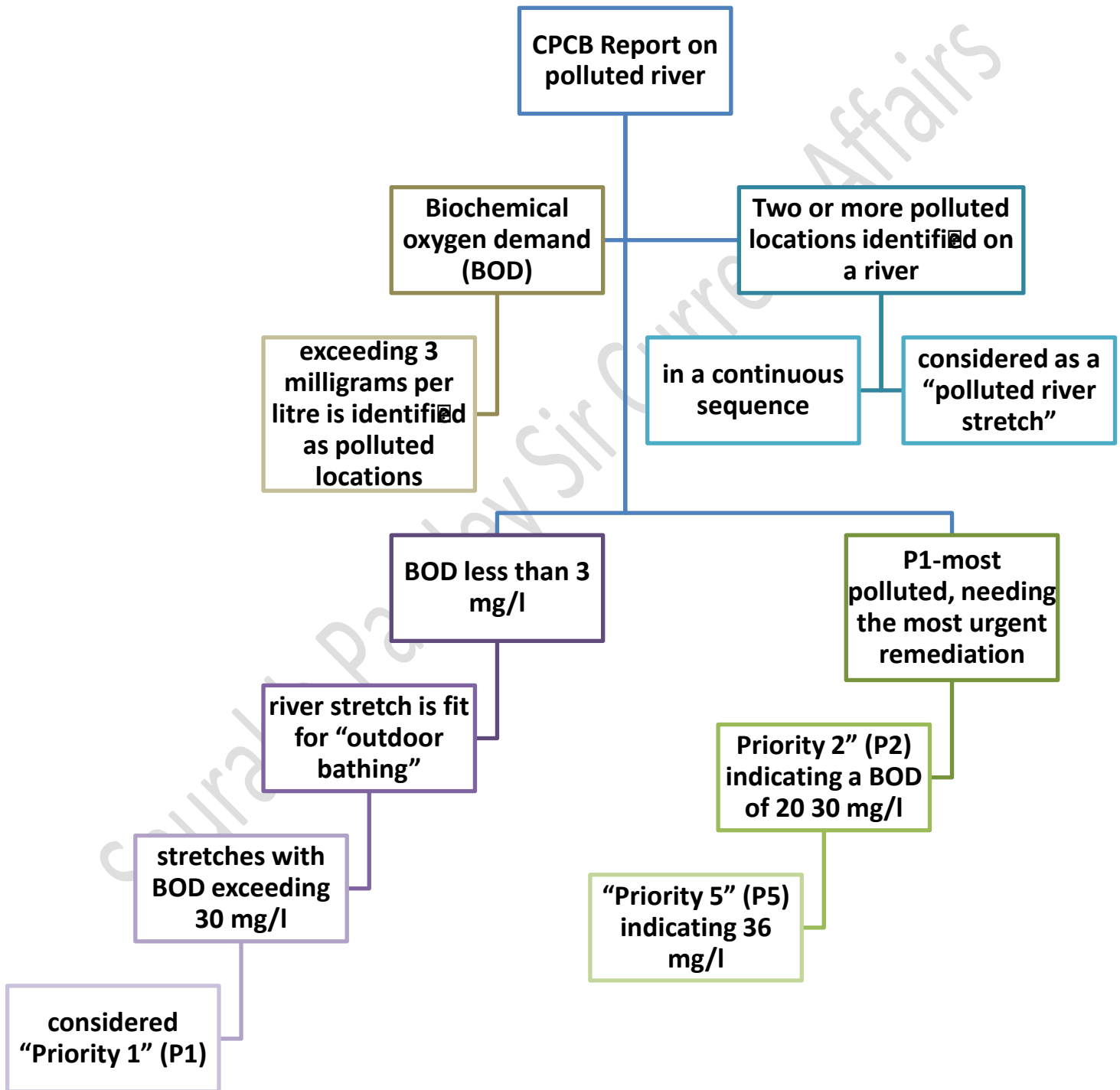
fearing extinction of their culture and religious roots

remaining are reserved forests

to compensate for the forest land lost to such projects

CPCB Report on polluted river

The number of polluted stretches in India's rivers has fallen from 351 in 2018 to 311 in 2022, though the number of most polluted stretches is practically unchanged, according to a report from the Central Pollution Control Board (CPCB) in November but made public this week. The CPCB network monitors water quality at 4,484 locations across the country.



CPCB Report on polluted river

success of river - cleaning programmes

Gujarat and Uttar Pradesh

measured by the number of stretches

moving from 1 to 2, 2 to 3 until those in 5

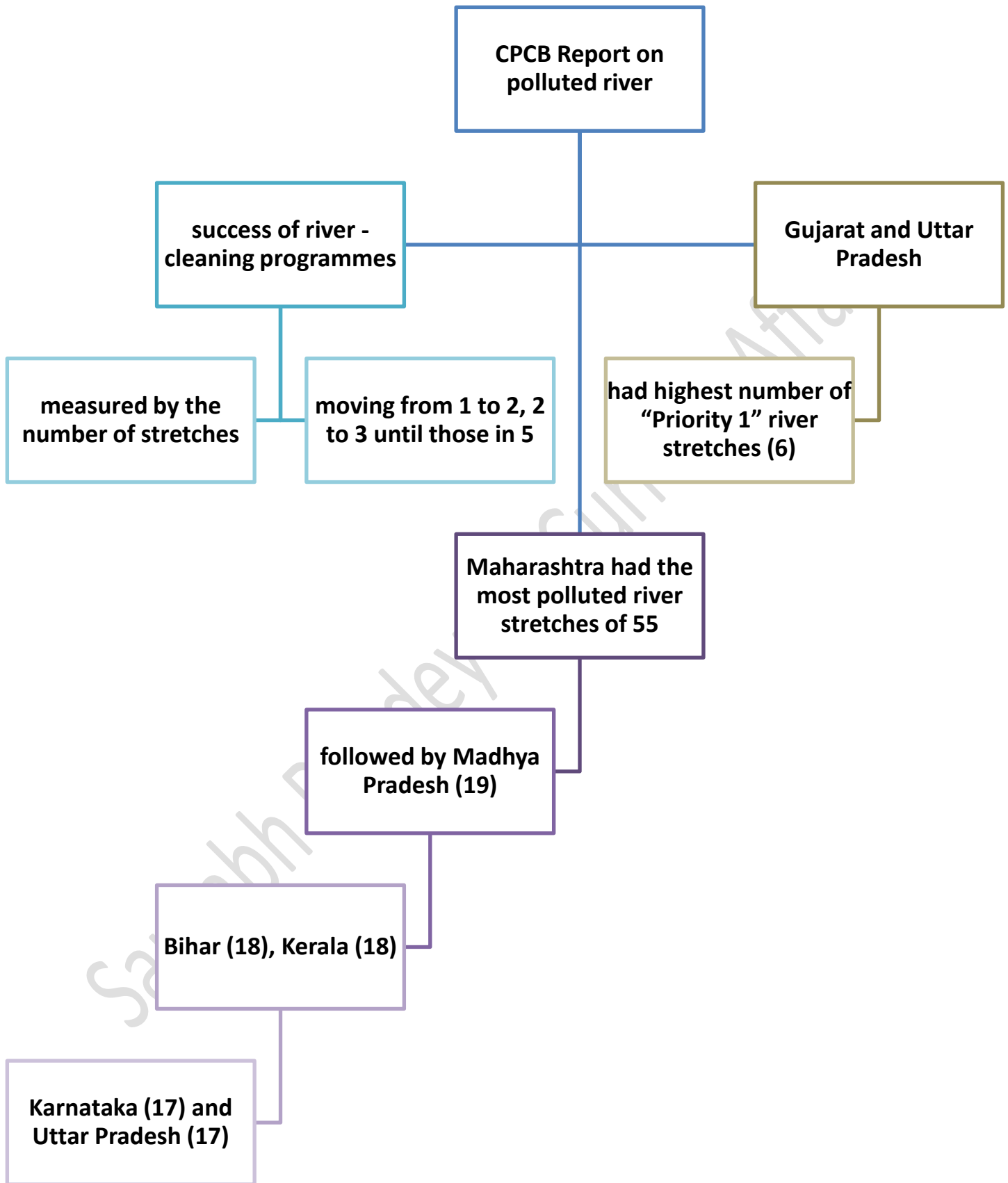
had highest number of "Priority 1" river stretches (6)

Maharashtra had the most polluted river stretches of 55

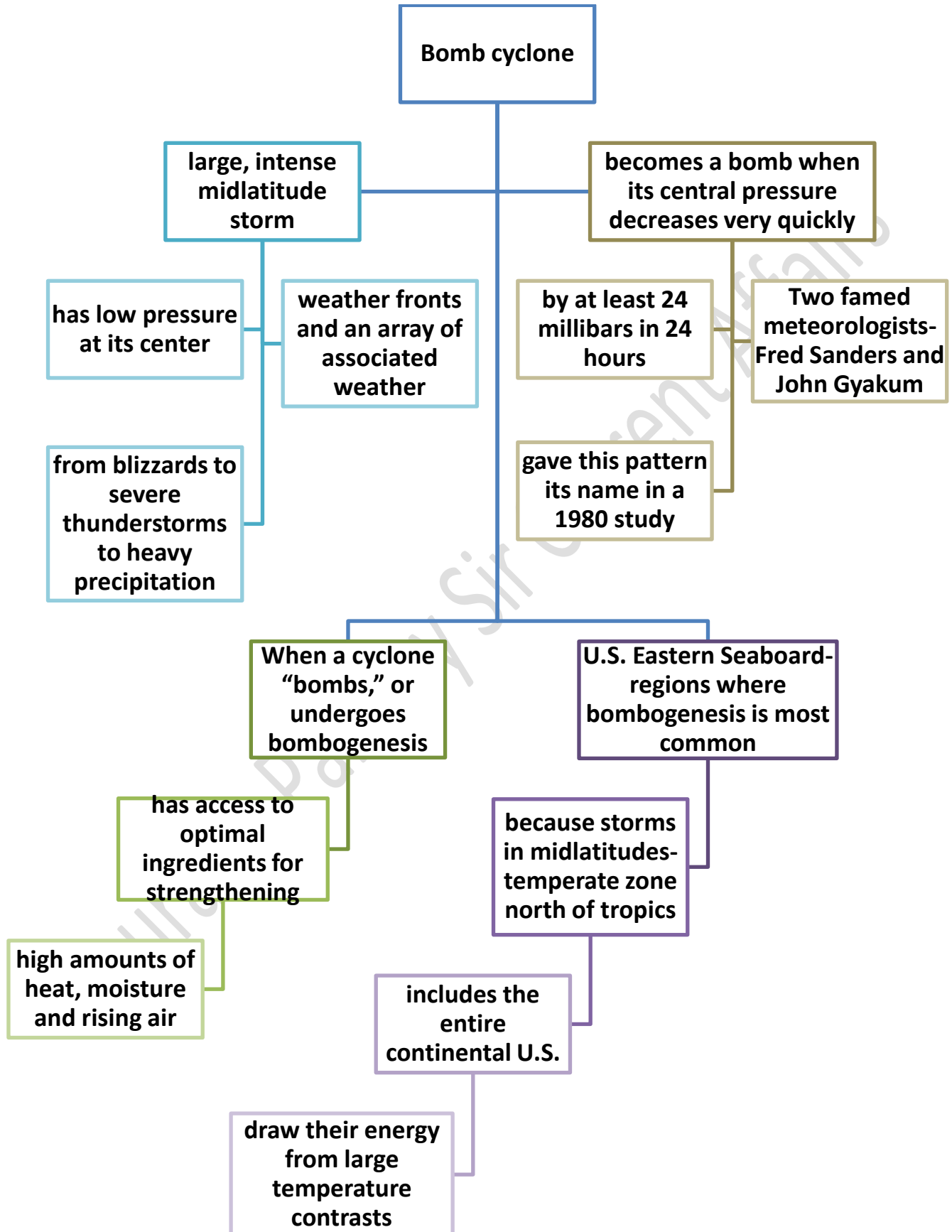
followed by Madhya Pradesh (19)

Bihar (18), Kerala (18)

Karnataka (17) and Uttar Pradesh (17)



Bomb cyclone



Bomb cyclone

Over the warmer ocean, heat and moisture are abundant

But as cool continental air moves overhead

creates a large difference in temperature

lower atmosphere becomes unstable and buoyant

Air rises, cools and condenses, forming clouds and precipitation

Saurabh Patil's Sir's Affairs

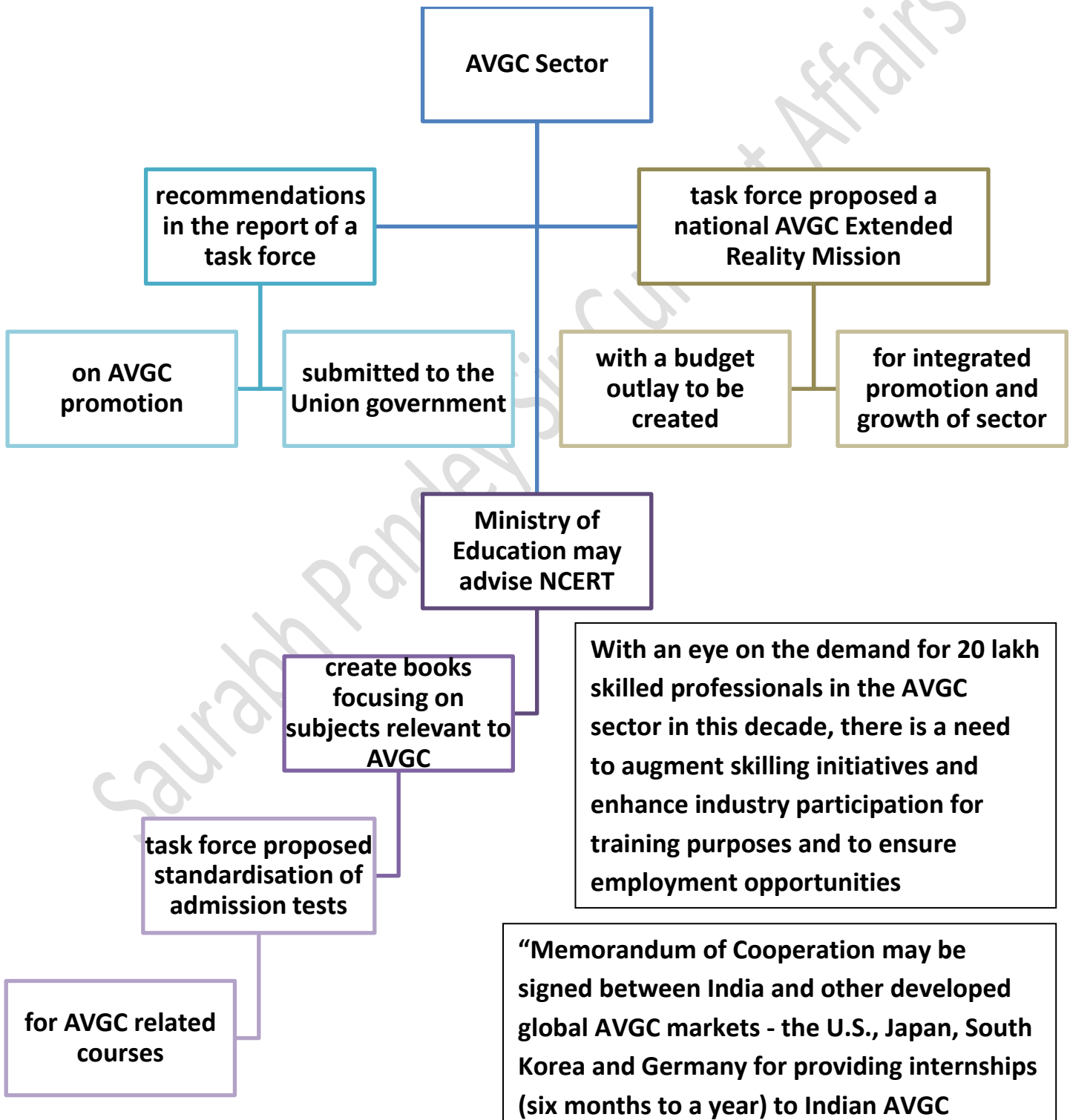
The Hindu through Mind Maps
(Saurabh Pandey Sir)

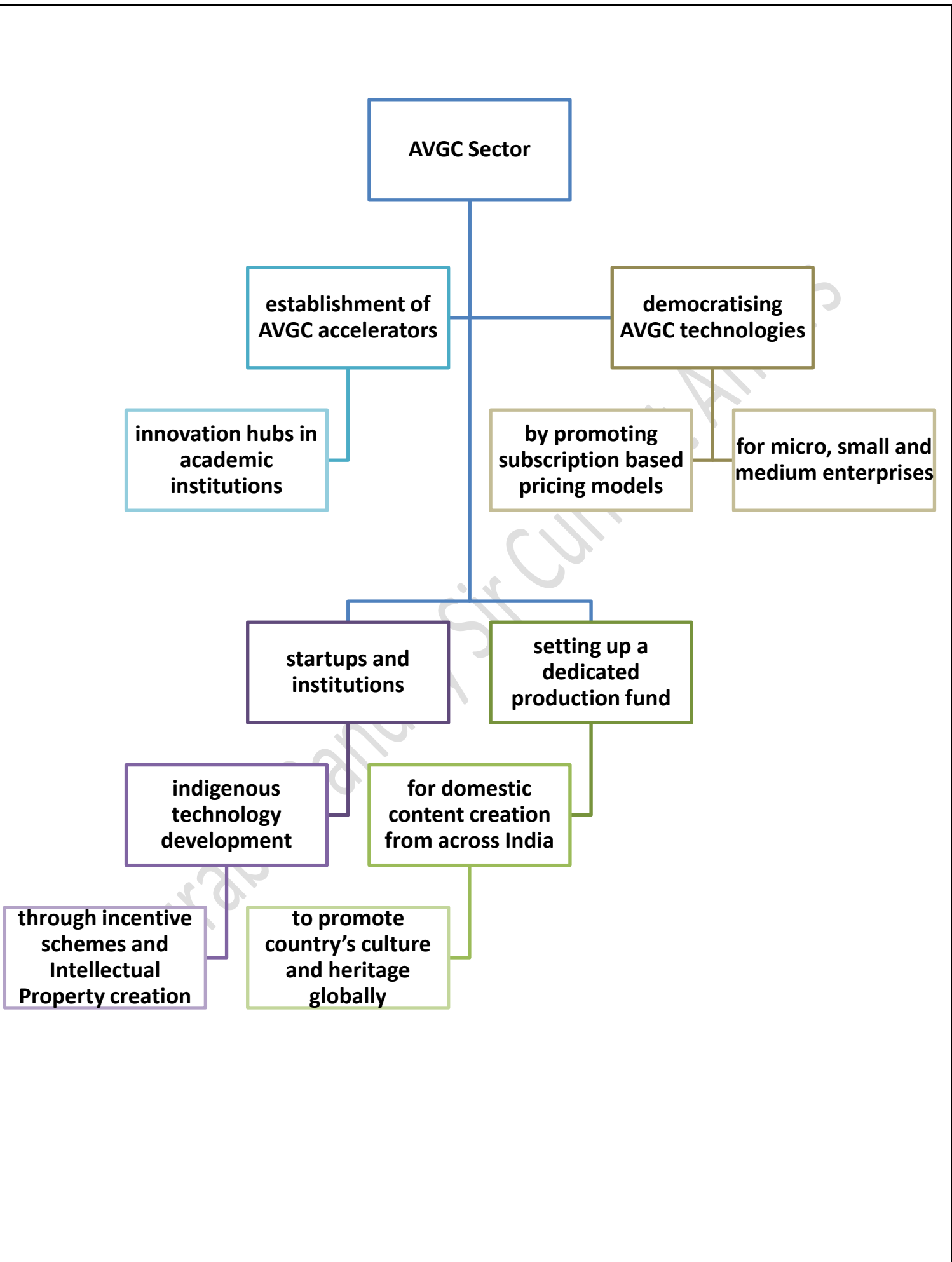
December 27
2022

The Hindu Mind
Maps

AVGC Sector

A “Create in India” campaign with an exclusive focus on content creation; an international platform for animation, visual effects, gaming and comics (AVGC) aimed at attracting foreign direct investment, coproduction treaties and innovation in collaboration with international counterparts; national and regional centres of excellence for skill development; and leveraging the National Education Policy to develop creative thinking at school level





AVGC Sector

team, which emphasised skilling and industry outreach

team-promotion of local children's channels

in tier 2 and 3 towns and villages

said-special incentives for women entrepreneurs

raising awareness of the rich culture and history of India

among children and youth

suggested the establishment of a framework

India today contributes about \$2.53 billion

According to industry experts

ensure protection of child rights in digital world

of the estimated \$260275 billion worldwide AVGC market

Indian market that currently employs

about 1.85 lakh AVGC professionals

witness a growth of 14 16% in the next decade

STOBAR VS CATOBAR

STOBAR VS
CATOBAR

STOBAR -short
take-off but
arrested recovery

STOBAR-combining
elements of "short
take-off and
vertical landing

short take-off,
barrier-arrested
recovery

system used for the
launch and
recovery of aircraft

with "catapult-
assisted take-off
but arrested
recovery

from the deck of an
aircraft carrier

Compared to
CATOBAR, STOBAR
is less expensive to
develop

Lack of any moving
parts in ski-jump

STOBAR-doesn't
require any
additional system
to generate force

easier to operate
than a CATOBAR
configuration

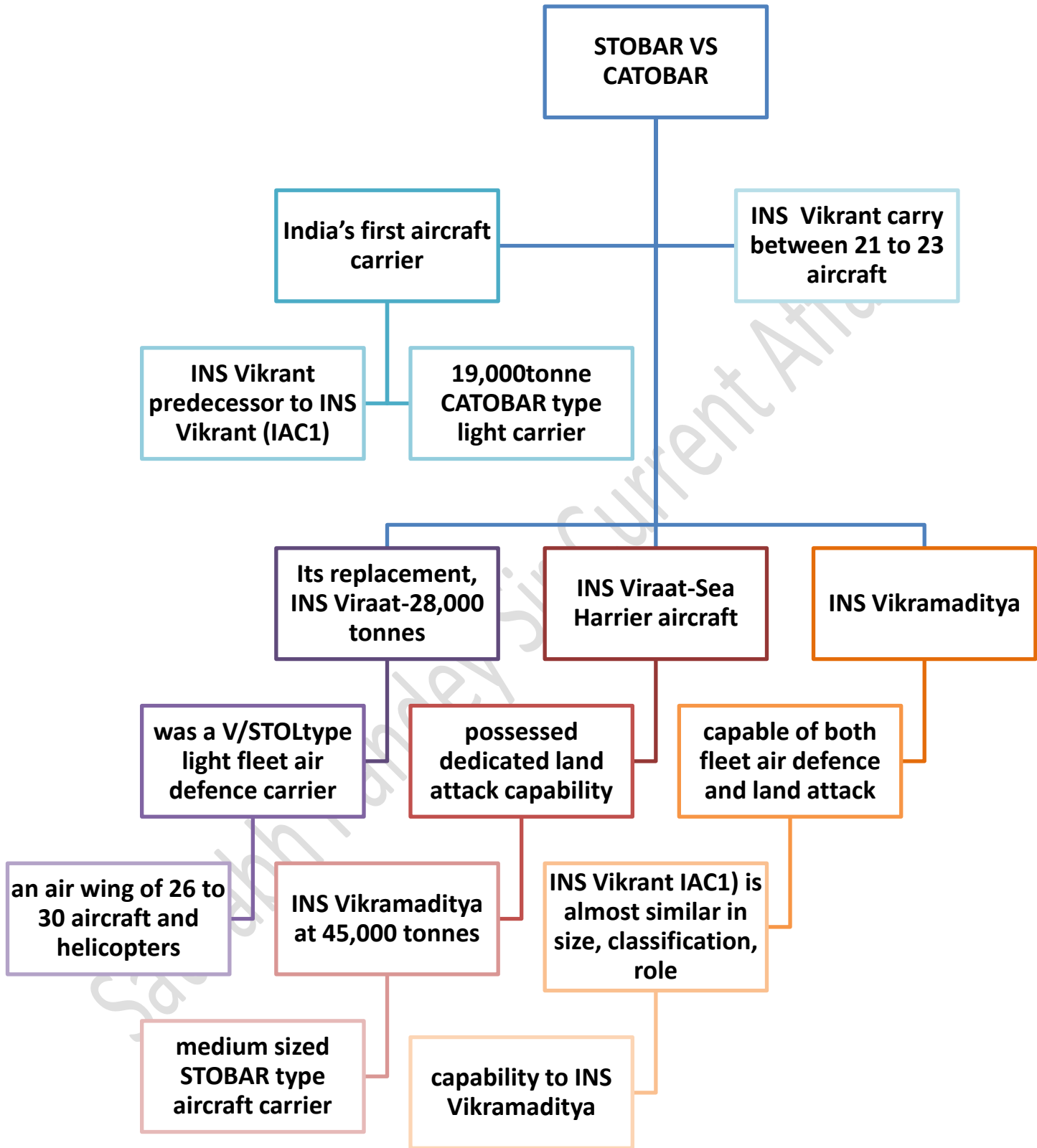
makes it less
expensive to
maintain the
launch system in
STOBAR

required to launch
the aircraft

CATOBAR requires
large number of
operators to launch
the aircraft

CATOBAR-external
force is needed to
be generated

from steam
catapult or
electromagnetic
aircraft launch
system



an air wing of 26 to 30 aircraft and helicopters

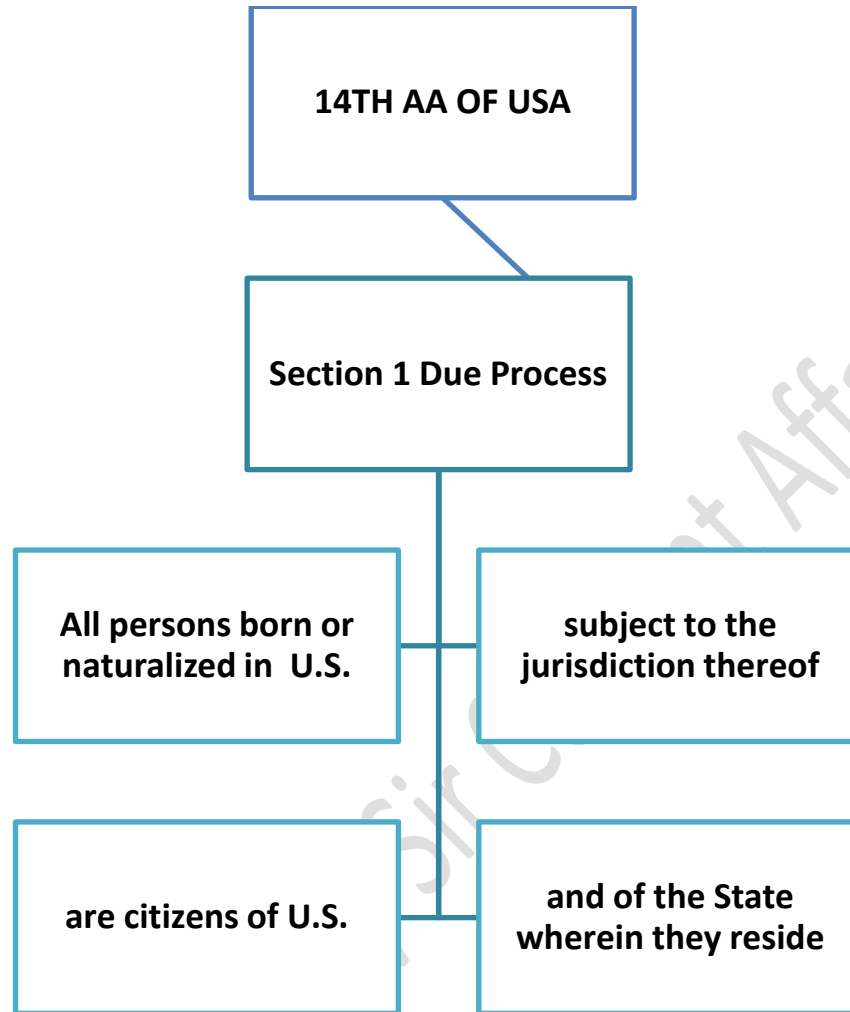
INS Vikramaditya at 45,000 tonnes

INS Vikrant IAC1) is almost similar in size, classification, role

medium sized STOBAR type aircraft carrier

capability to INS Vikramaditya

14TH AA OF USA



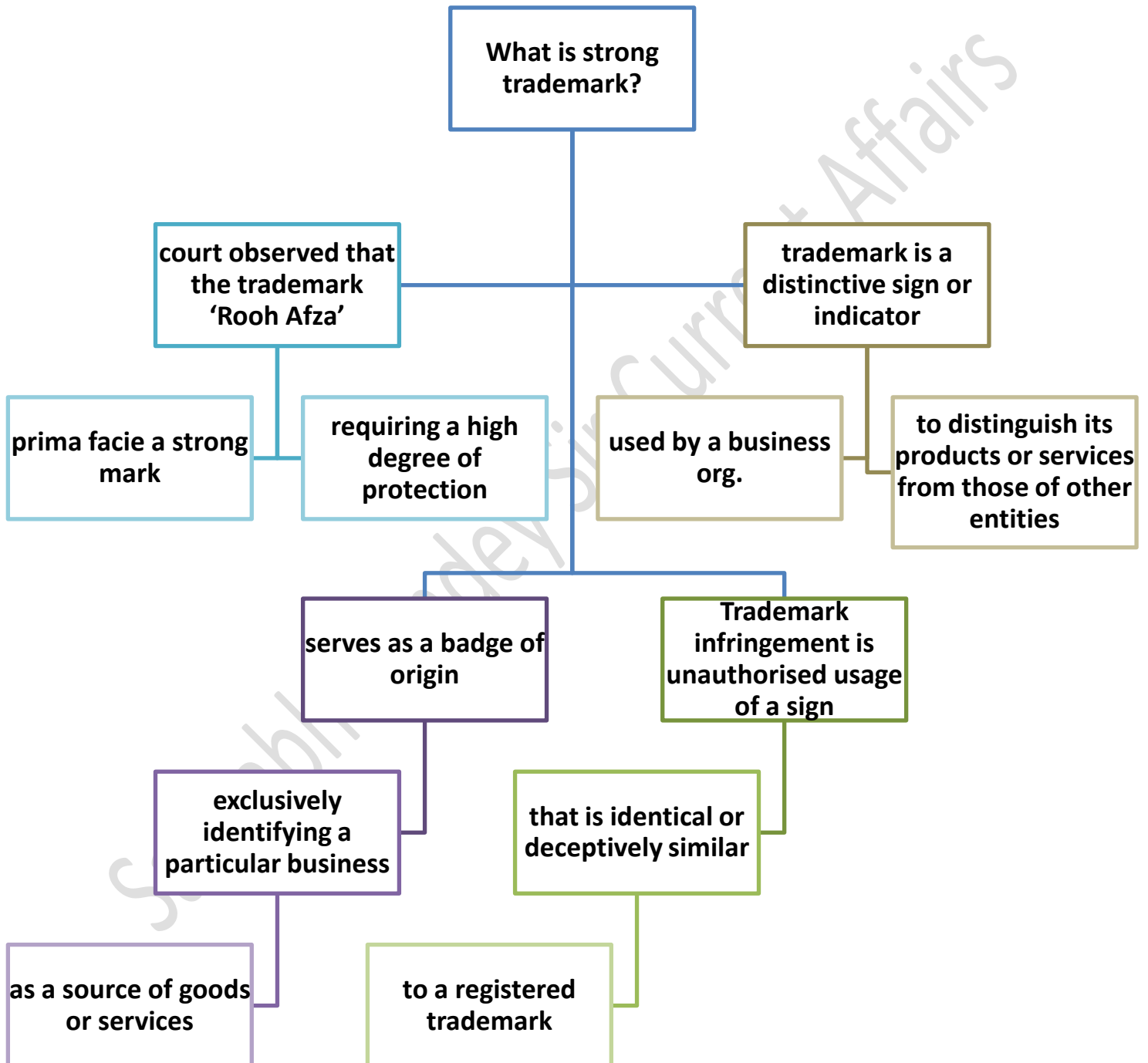
No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws

Section 3 Disqualification from Holding Office

No person shall be a Senator or Representative in Congress, or elector of President and Vice-President, or hold any office, civil or military, under the United States, or under any State, who, having previously taken an oath, as a member of Congress, or as an officer of the United States, or as a member of any State legislature, or as an executive or judicial officer of any State, to support the Constitution of the United States, shall have engaged in insurrection or rebellion against the same, or given aid or comfort to the enemies thereof.

What is strong trademark?

On December 21, the Delhi High Court, in the case of Hamdard National Foundation (India) vs Sadar Laboratories Pvt. Ltd., restrained Sadar Laboratories from manufacturing and selling beverages under the impugned trademark 'Dil Afza'.



What is strong trademark?

mark is said to be strong

degree of the protection of any trademark

when it is well known

has acquired a high degree of goodwill

changes with the strength of the mark

stronger the mark

higher the requirement to protect it

“Rooh Afza requires more protection as it is more likely to be subjected to piracy by those who seek to draw an undue advantage of its goodwill”, the judgment said

Saurabh Patil's

Great lake

Great lake

largest group in a chain of large lakes

From west to east Great Lakes comprise lakes Superior

including Winnipeg, Athabasca, Great Slave and Great Bear

lies along southern boundary of the Canadian Shield

Michigan, Huron, St. Clair, Erie and Ontario

total area of approximately 244,100 km²

Lake St Clair- considered part of this Laurentian chain

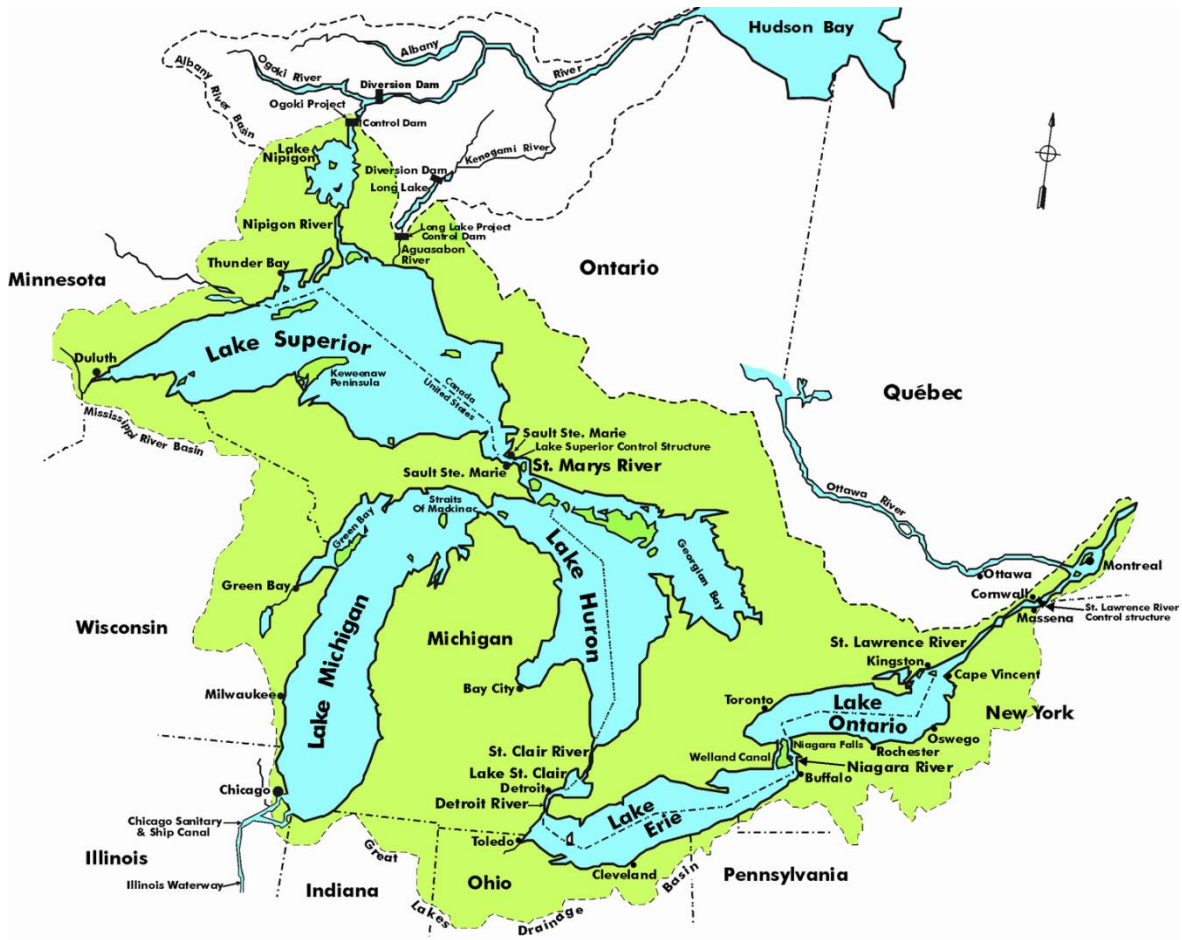
drop from 183 m above sea level

Great Lakes lie near the intersection of the Hudson Bay

at Lake Superior to 74 m at Lake Ontario

Mississippi River and St. Lawrence River drainage basins

most dramatic drop occurring at Niagara Falls



U.S. Army Corps of Engineers, Detroit District



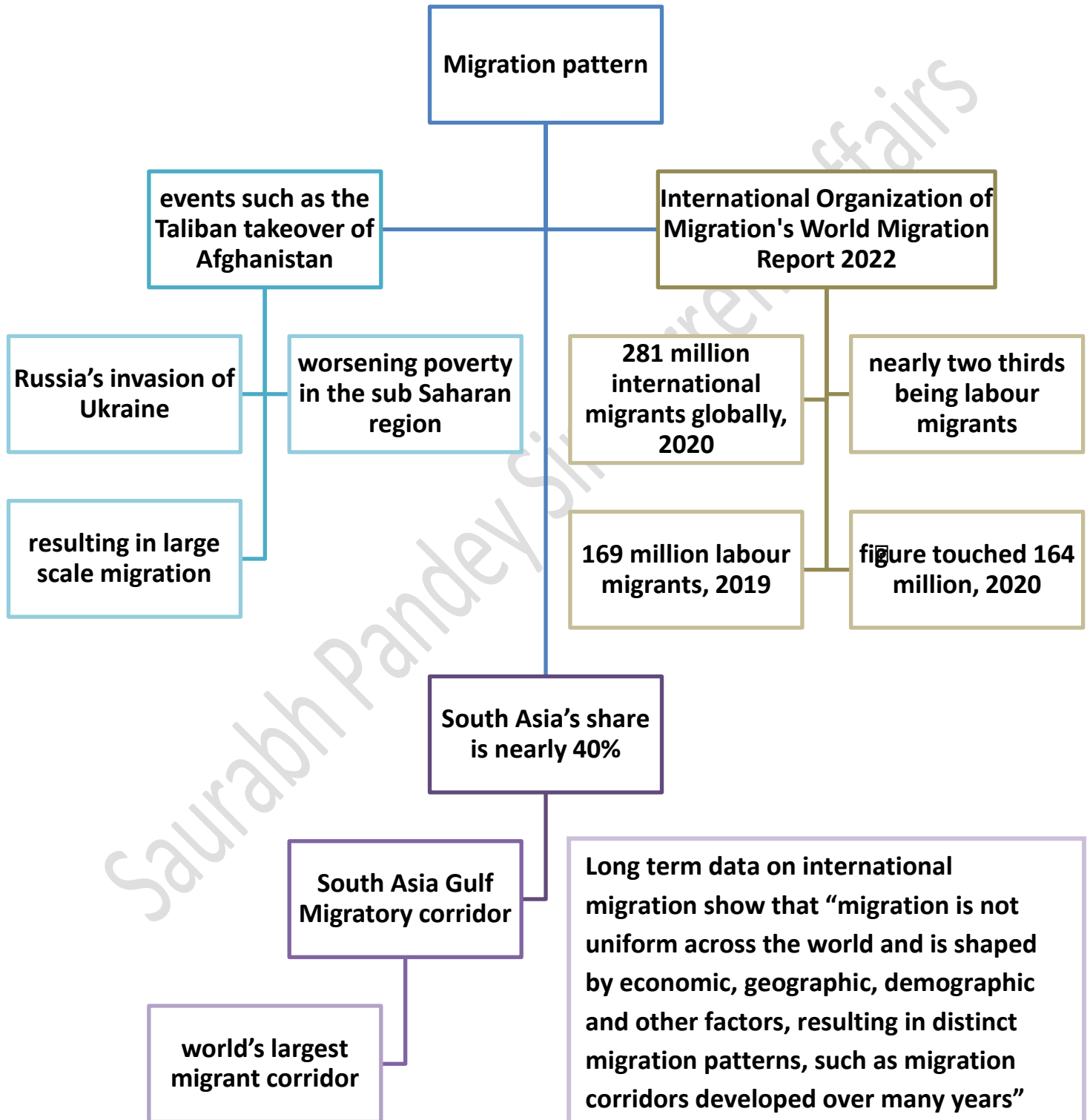
The Hindu through Mind Maps
(Saurabh Pandey Sir)

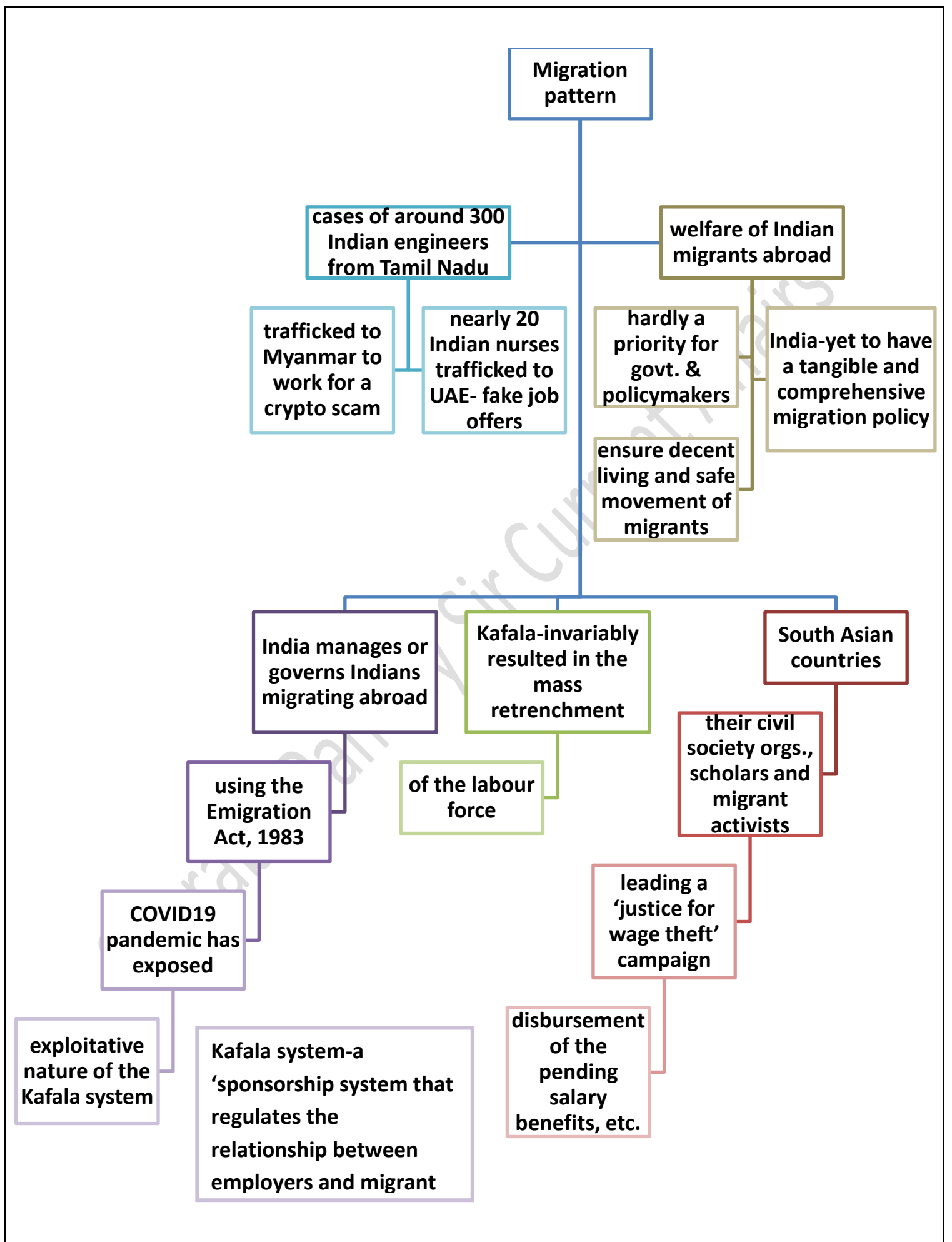
December 28
2022

The Hindu Mind
Maps

Migration pattern

This year, International Migrants Day (observed annually on December 18) must be seen in the backdrop of unprecedented volatility that began in 2020 as a result of the COVID19 pandemic.





Migration pattern

cases of around 300 Indian engineers from Tamil Nadu

trafficked to Myanmar to work for a crypto scam

nearly 20 Indian nurses trafficked to UAE- fake job offers

welfare of Indian migrants abroad

hardly a priority for govt. & policymakers

ensure decent living and safe movement of migrants

India-yet to have a tangible and comprehensive migration policy

India manages or governs Indians migrating abroad

Kafala-invariably resulted in the mass retrenchment

South Asian countries

using the Emigration Act, 1983

of the labour force

their civil society orgs., scholars and migrant activists

COVID19 pandemic has exposed

leading a 'justice for wage theft' campaign

exploitative nature of the Kafala system

Kafala system-a 'sponsorship system that regulates the relationship between employers and migrant

disbursement of the pending salary benefits, etc.

Migration pattern

recurring problems that migrant labourers face

long term problem in the GCC countries

irregular payment, poor working conditions

negation of labour rights

Irregular payment and nonpayment of wages

abuse at the workplace

absence of proper grievance redress mechanisms

access to a transparent judicial system

Attention to be focussed on women migrant workforce

United Nations, through its non-binding resolution

largely limited to GCC countries

also to Organisation for Economic Co-operation and Development countries

recognises the challenges

migrant labour faces across the world

Global Compact for Safe, Orderly Migration and Regular Migration

Indian nurses and caregivers

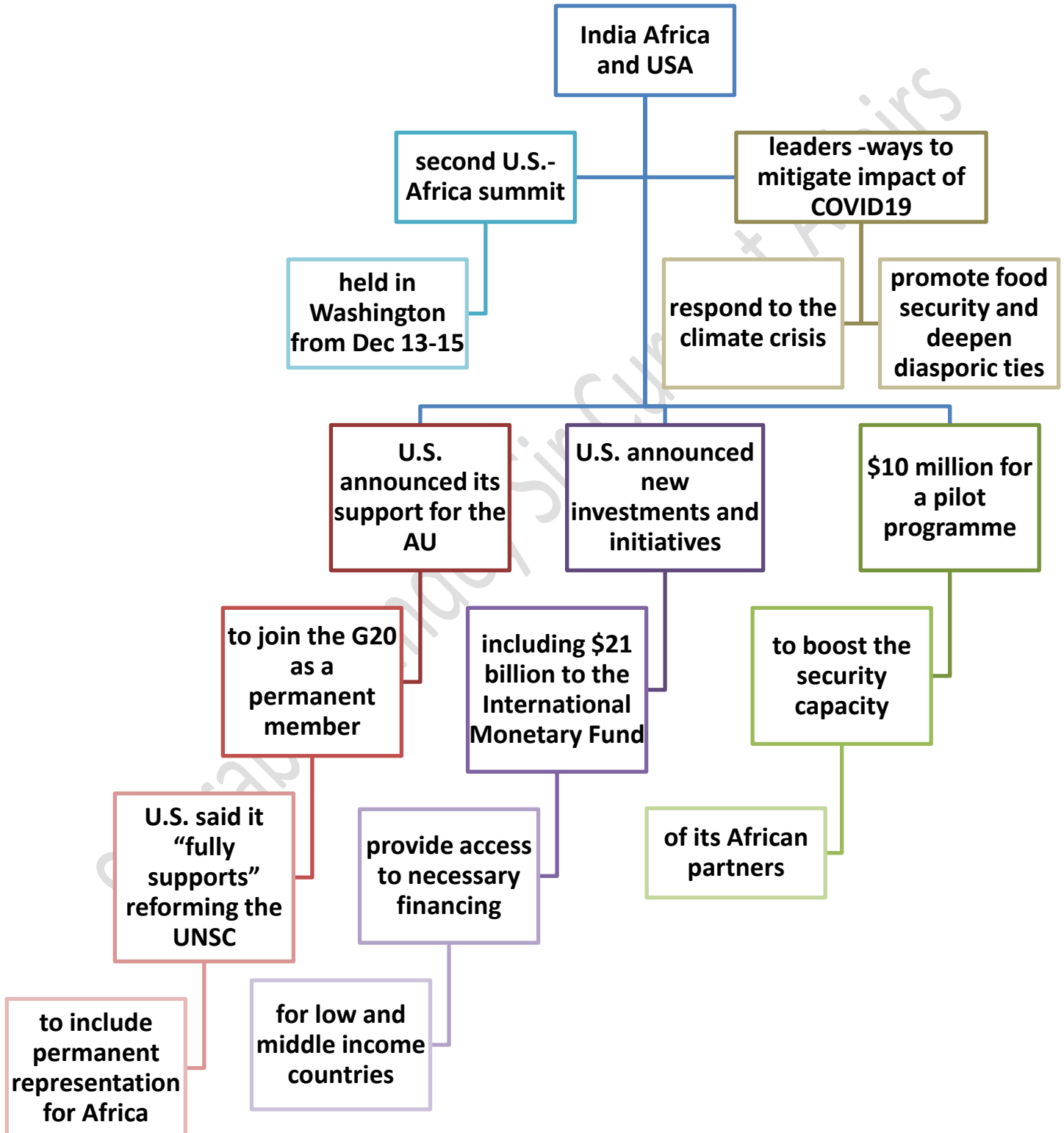
working in the most volatile countries

Iraq, Syria, Libya, Yemen and Israel, etc.

India Africa and USA

India, through the G20 presidency, intends to be remembered as the voice of the Global South at the heart of which is Africa.

Most of the 54 countries of this continent are developing or least developed countries



India Africa and USA

China emerged as the largest trading partner

fourth largest investor in the African continent

through its steady diplomacy ,extensive economic engagement

U.S. and other nations take a cue

from Forum on China Africa Cooperation

established in October 2000

China has a full-fledged inter-ministerial mechanism

ensure timely implementation of FOCAC decisions

than that of China and U.S.

India's equity in Africa is older and richer

India and the U.S. should work closer together in Africa

reflect firmly Africa's Agenda 2063 for development

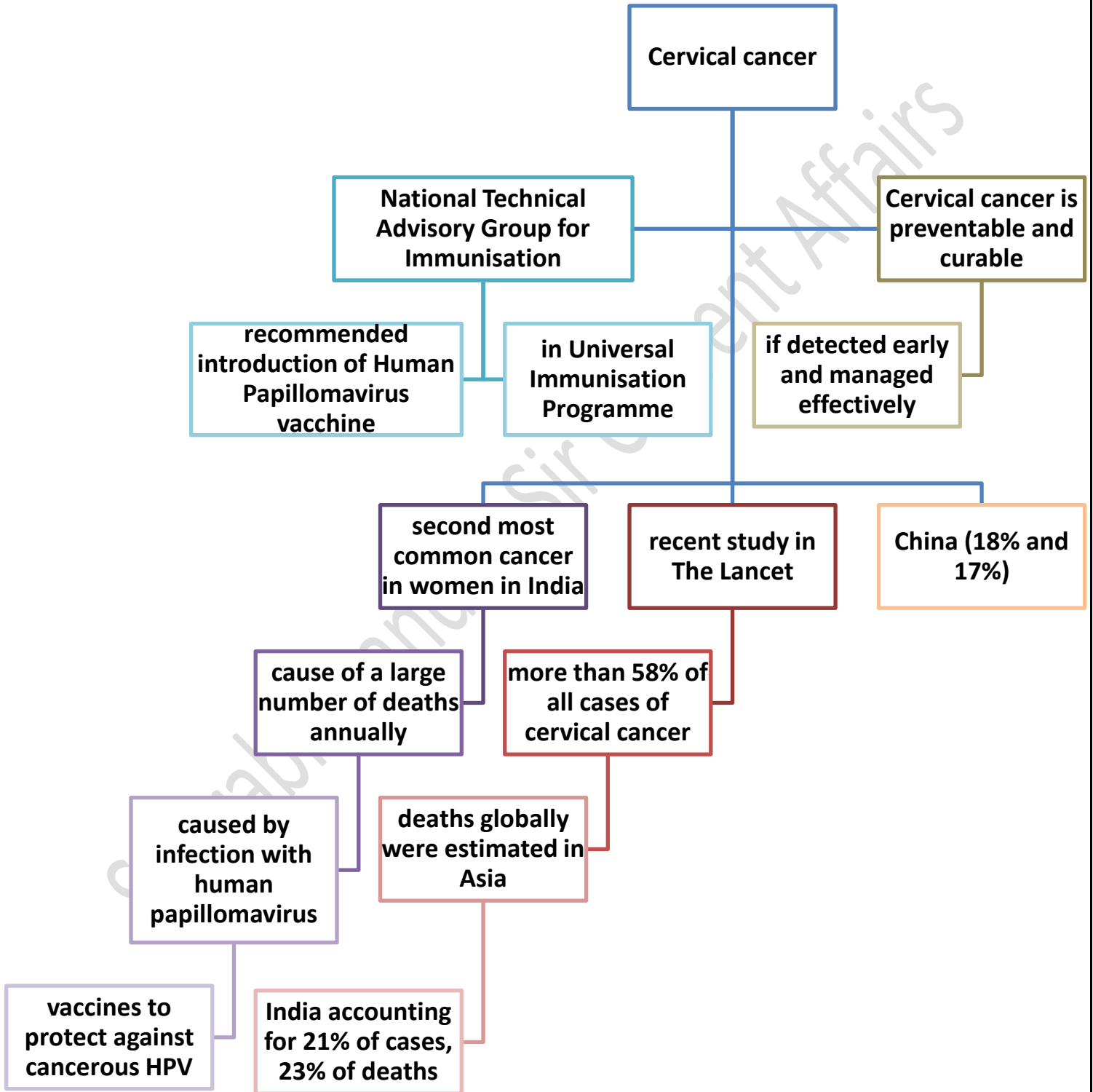
G20 presidency is India's opportunity

ensure AU becomes a permanent member of this grouping

Fourth India Africa Forum Summit should be held in early 2024, lest the third summit held in 2015 becomes a distant memory

Cervical cancer

The government has announced that it will roll out vaccines for the prevention of cervical cancer to girls aged between 9 and 14 years through schools



What are the challenges?

study identified substantial geographical and socioeconomic inequalities

2022, India ranked 132 out of 191 countries

in cervical cancer globally

clear gradient of increasing rates for countries

Human Development Index

with lower levels of human development

health experts- India's fertility rate is declining due to a variety of factors

should prompt everyone in the ecosystem

improved literacy rate

increase in the age of marriage, etc.

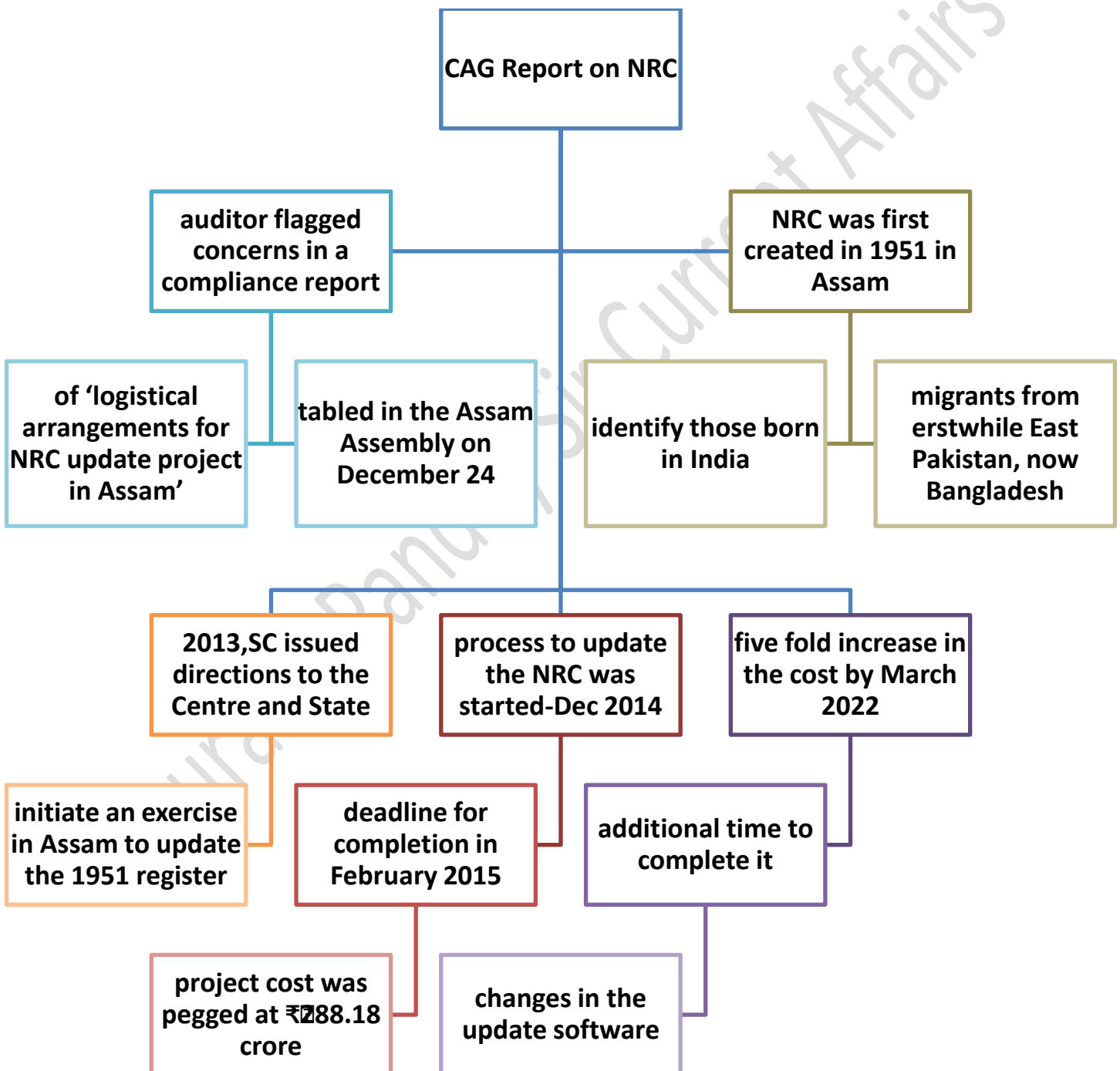
from government, doctors to ground level health workers

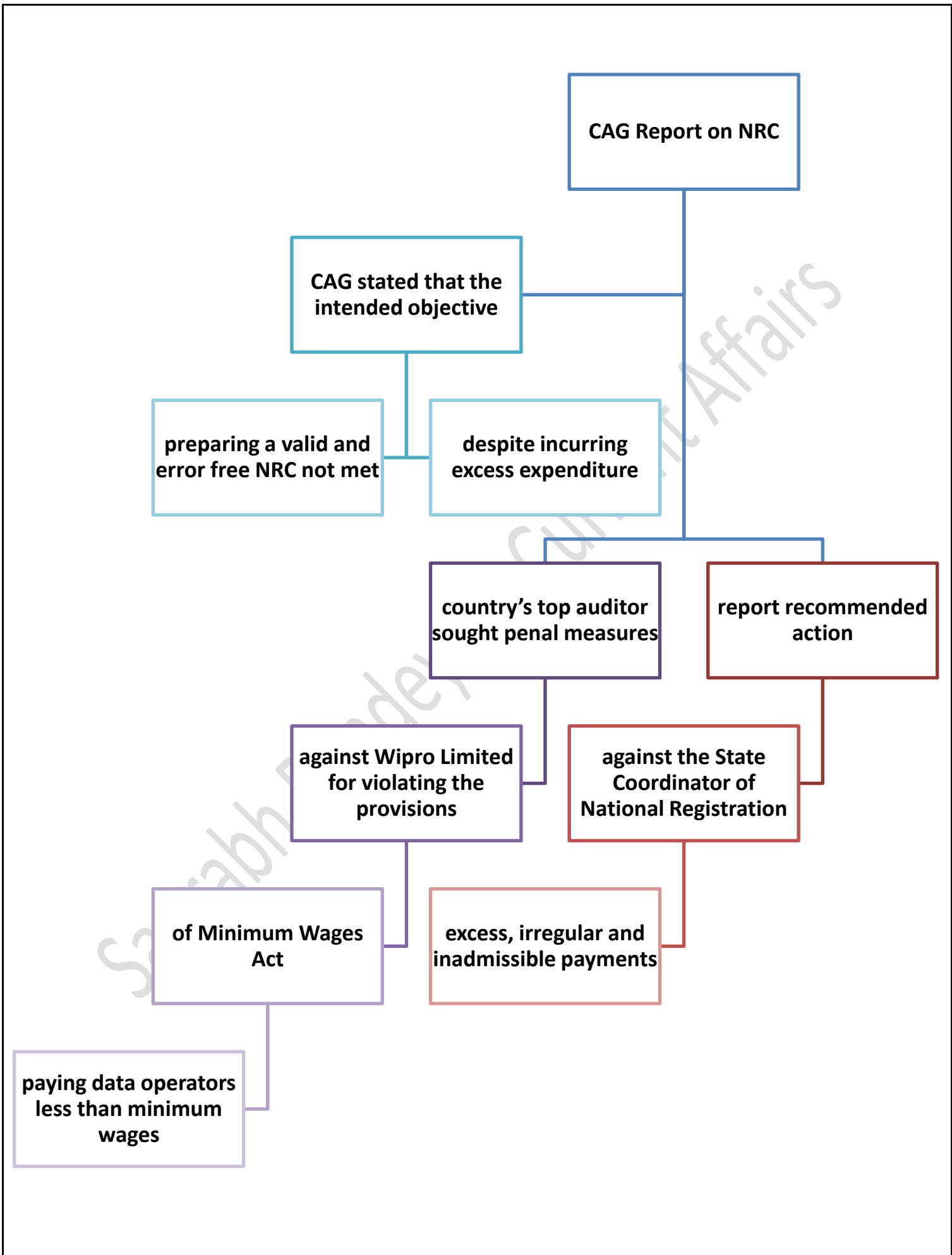
launch campaigns on cervical cancer awareness

push vaccinations and screening for all girls

CAG Report on NRC

A recent Comptroller and Auditor General of India report on the update exercise of National Register of Citizens in Assam has flagged serious irregularities, including “haphazard development” of software for exercise, making it prone to data tampering, and flagged undue profits worth crores amassed by the system integrator (SI) by violating the Minimum Wages Act





Delimitation commission

Delimitation
commission

Delimitation-act or
process of fixing
limits or
boundaries

job of delimitation
is assigned to a
high power body

of territorial
constituencies in a
country or a
province

having a legislative
body

known as
Delimitation
Commission or a
Boundary
Commission

India-Delimitation
Commissions have
been constituted 4
times

Delimitation
Commission in
India is a high
power body

1952 under the
Delimitation
Commission
Act,1952

1963 under
Delimitation
Commission Act,
1962

1973 under
Delimitation Act,
1972

2002 under
Delimitation Act,
2002

orders have the
force of law

cannot be called in
question before
any court

orders come into
force on a date

to be specified by
the President of
India in this behalf

copies of its orders
are laid before the
House of the People

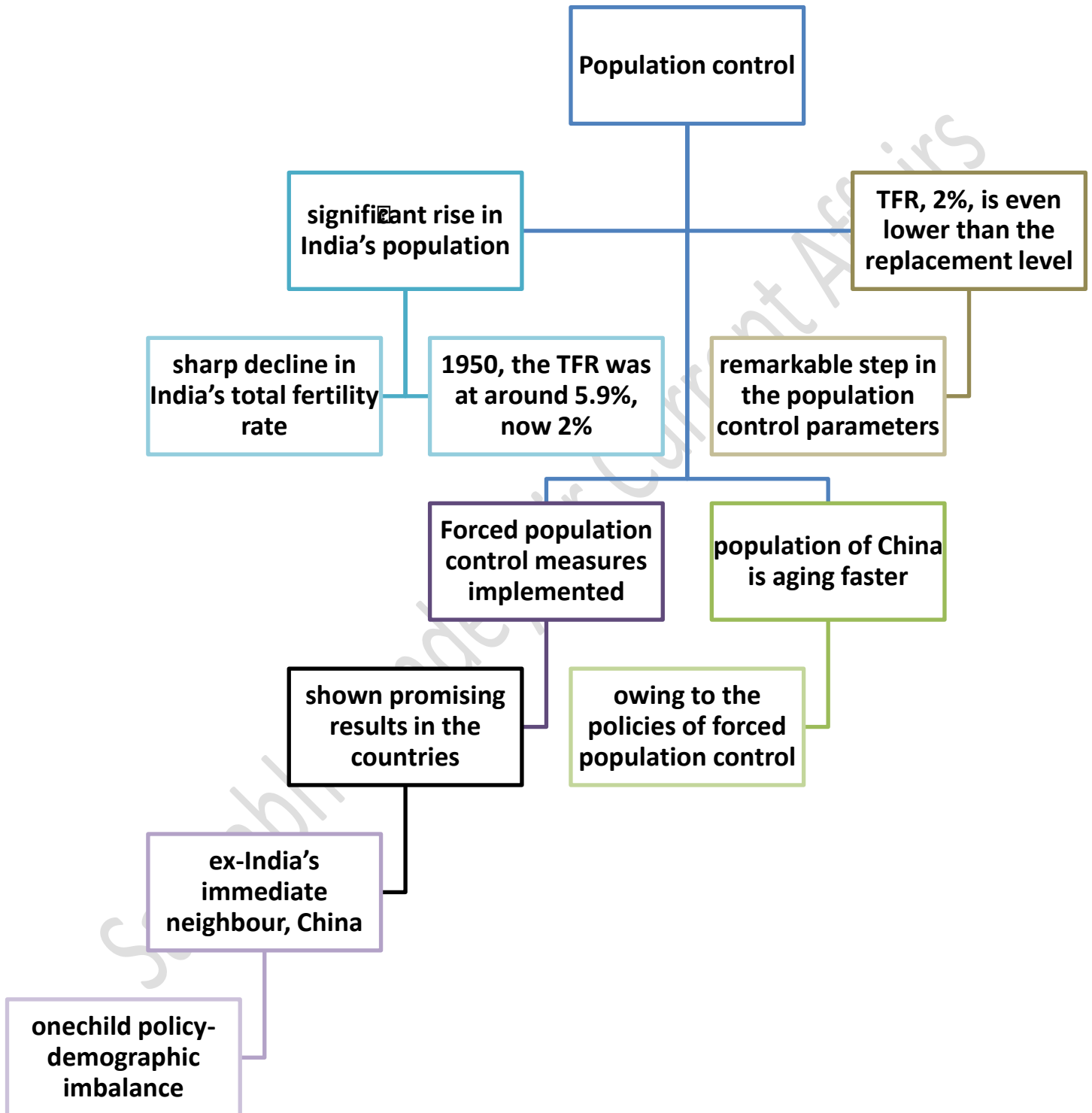
no modifications are
permissible therein
by them

The Hindu through Mind Maps
(Saurabh Pandey Sir)

December 29
2022

The Hindu Mind
Maps

Population control



Population control

India needs to adopt population control measures

Any forced control method

focus-strengthening public health infrastructure

raising awareness about the need for population control

will impact the rate of aging

UN data-there is a projected rise in the population

trend started in rich countries such as Japan,

of old people

trend is now visible in developing countries

decline in the young population in many countries

especially Southeast Asia

Export decline

Export decline

part of the import bill dip triggered by lower non oil cargo

non-oil exports-share in exports growth shrinking since June

signalling slowing domestic demand

but non oil exports' performance is a greater worry

contraction accelerating for many sectors from Sep - Nov

engineering goods-\$422 billion goods exports in 202122

contracted 11.3% while textiles fell a steeper 25%

Services exports and remittance inflows

policy makers need to focus on ensuring a soft landing

may cushion India's current account deficit

for factories in export intensive sectors

from the goods trade imbalance

also massive employers

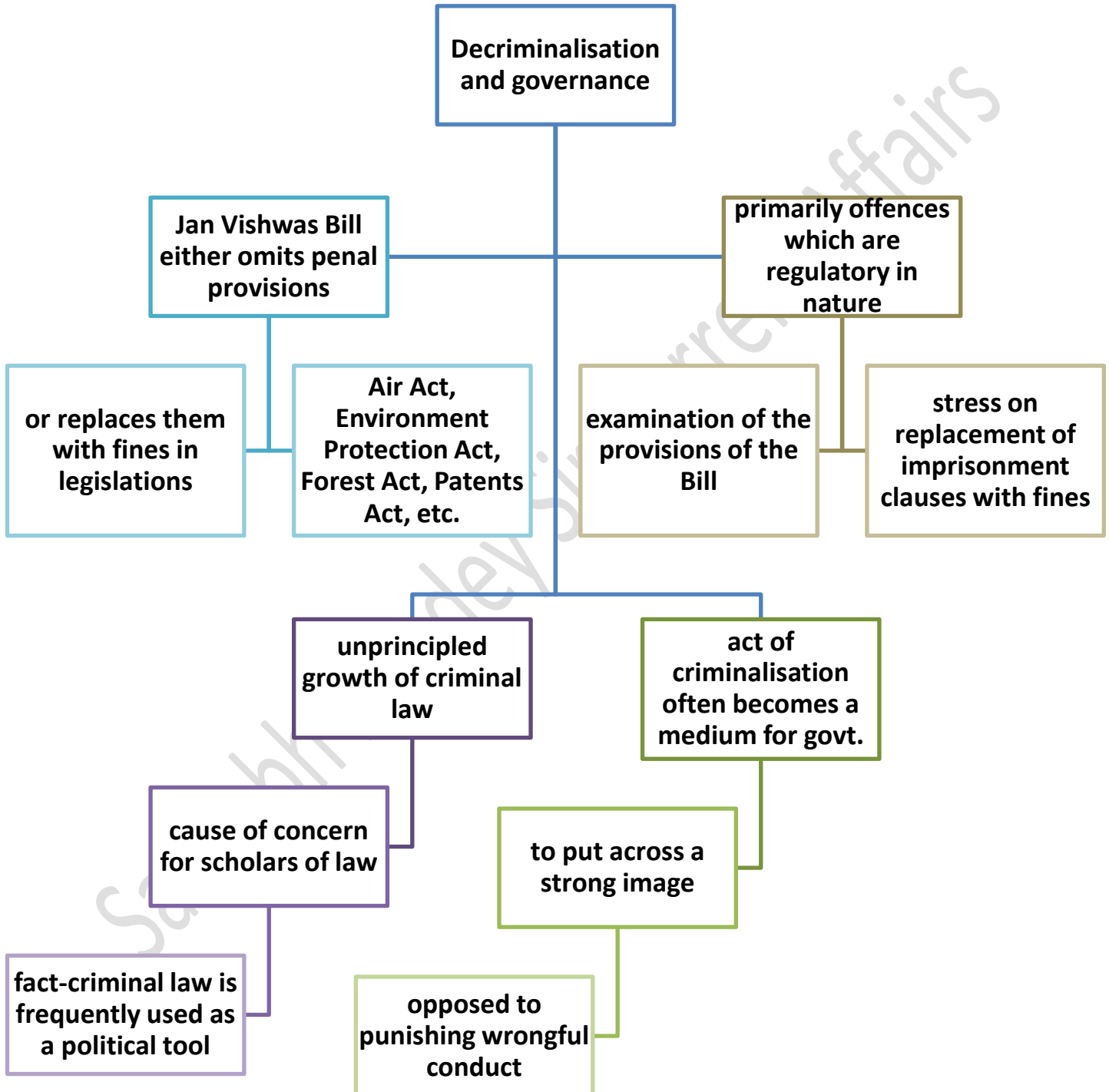
restrict economy's external vulnerabilities

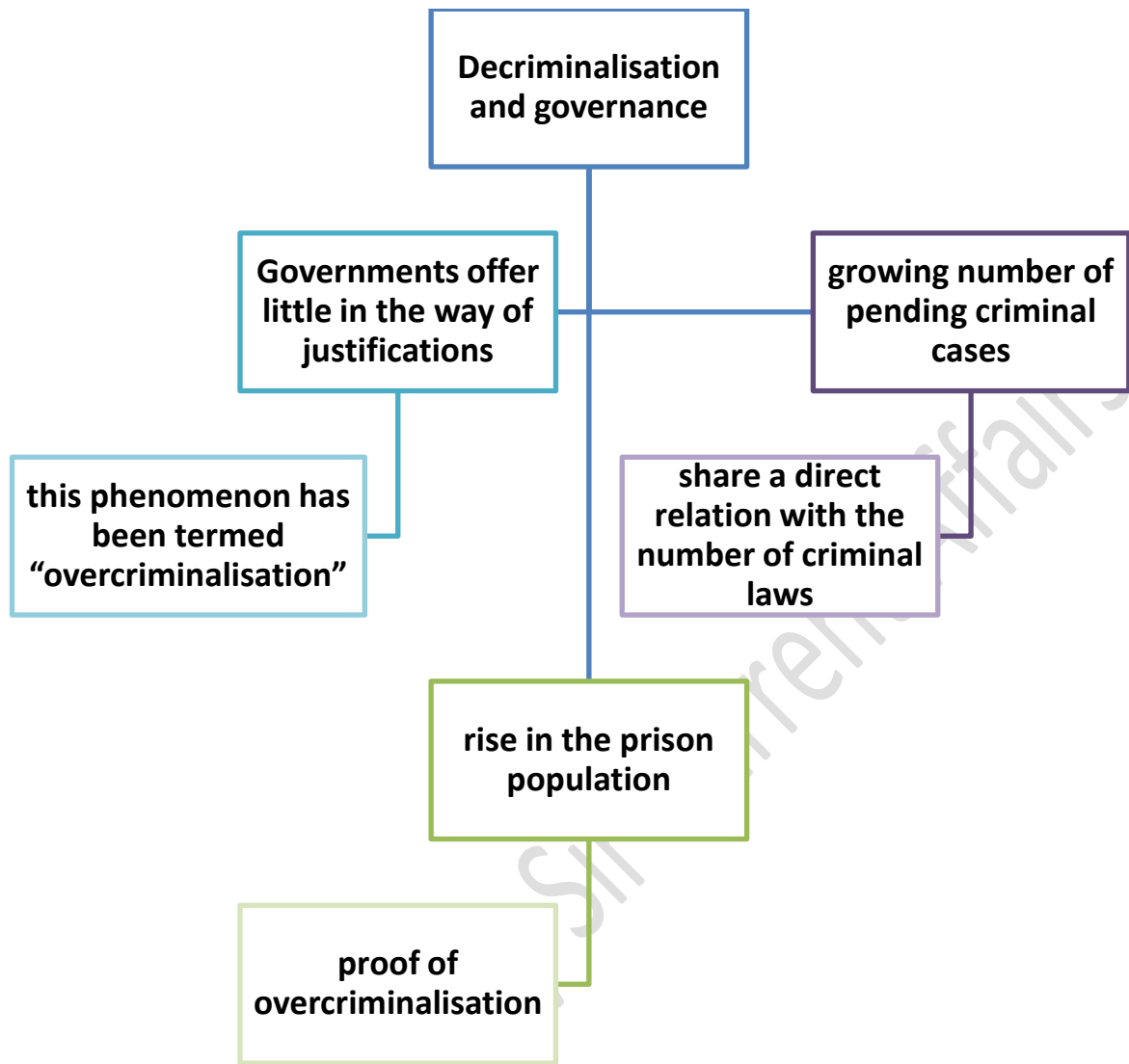
so that global gloom does not hit domestic sentiment

In recent weeks, the Government belatedly scrapped the export duty on steel and iron ore, that was hurting engineering exports too, and brought them under a tax refund scheme with thus far excluded sectors like drugs and chemicals

Decriminalisation and governance

Union Government tabled the Jan Vishwas Bill, 2022, (Bill) in the Parliament with the objective of “decriminalising” 183 offences across 42 legislations and enhancing the ease of living and doing business in India

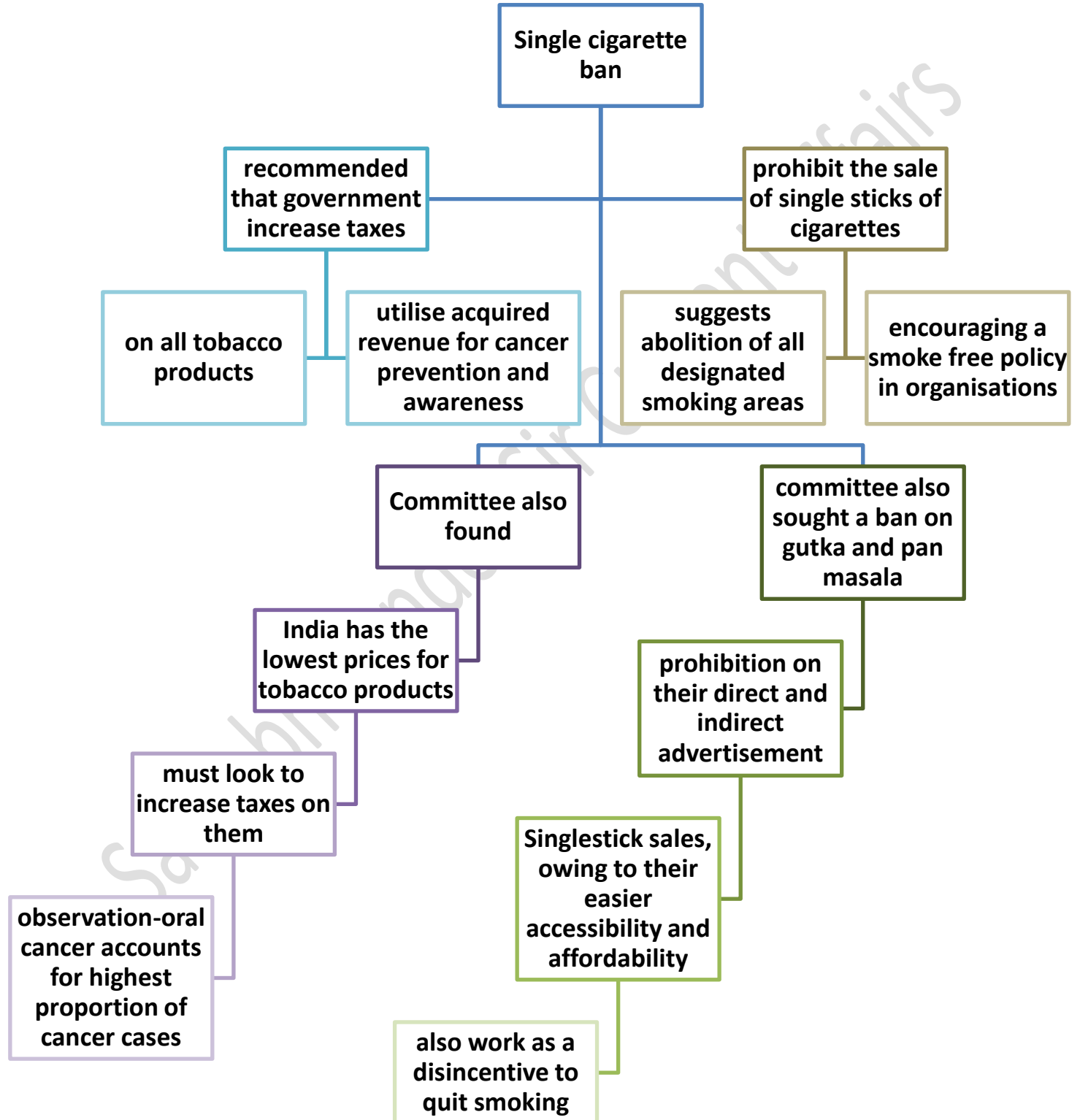




Saurabh Patil

Single cigarette ban

The Parliamentary Standing Committee on Health and Family Welfare, in its latest report about cancer management, prevention and diagnosis, recommended that the government institute a ban on the sale of single sticks of cigarettes



Delegated legislation

Delegated legislation

law made by some person or body other than parliament

authority is laid down in a parent act of parliament 'enabling act'

with the permission of parliament

creates structure of law then delegates' powers to others

to make more detailed law in the area

Delegated legislation, including rules and regulations

A delegated power to legislate by making rules or regulations

formed by State and Central authorities

cannot be exercised

should not supplant but supplement the parliamentary statute

as to bring into existence substantive rights, obligations or disabilities

from which it draws power

not contemplated by the provisions of the parent statute

"If a rule goes beyond the rulemaking power conferred by the statute, the same has to be declared invalid. If a rule supplants any provision for which power has not been conferred, it becomes invalid"

India's stack

India's stack

IndiaStack is a set of APIs

Open API team at iSPIRT has been a pro-bono partner

allows governments, businesses, startups and developers

utilise an unique digital Infrastructure to solve India's hard problems

in development, evolution, and evangelisation c

of these APIs and systems

towards presence-less, paperless, and cashless service delivery

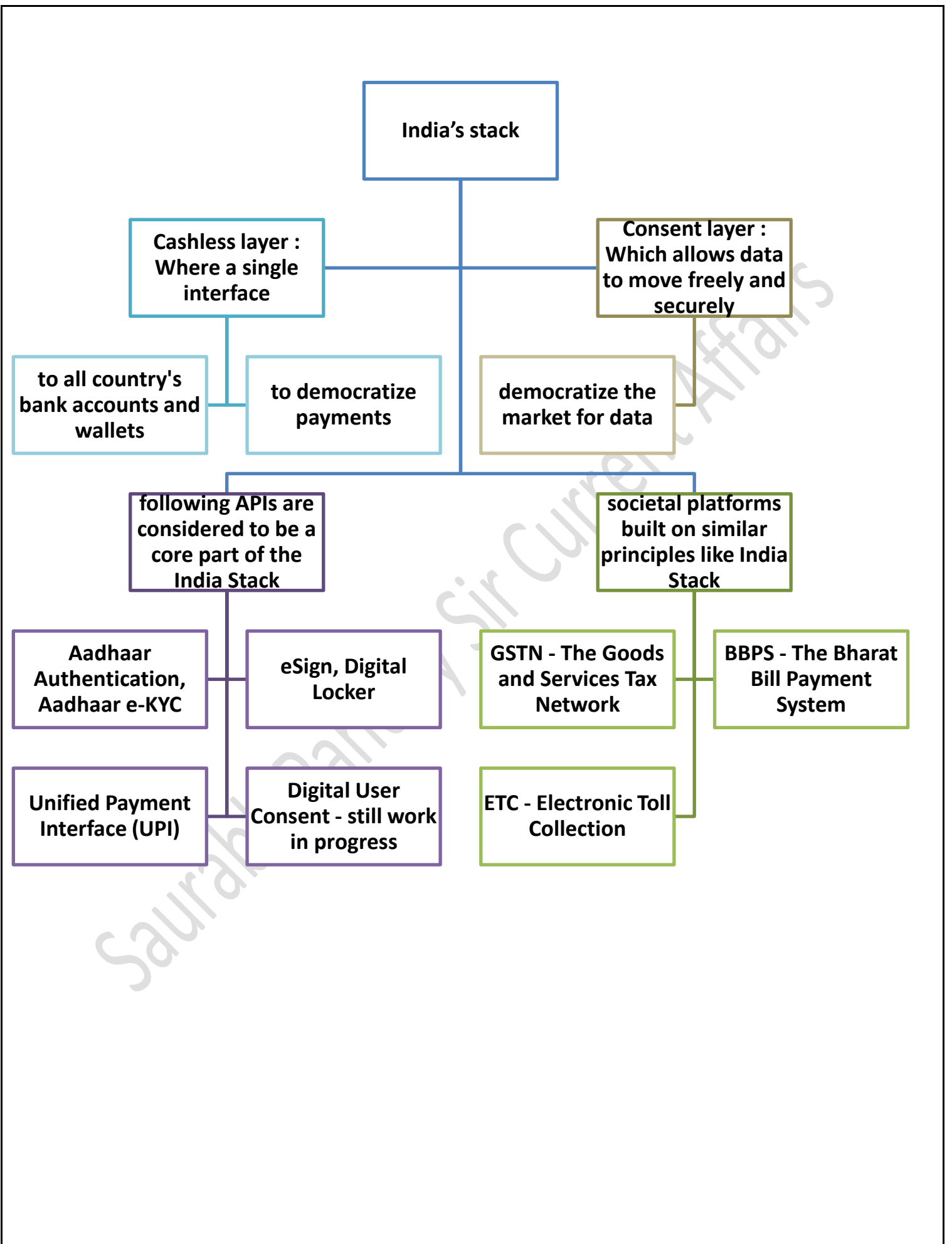
four distinct technology layers provided are

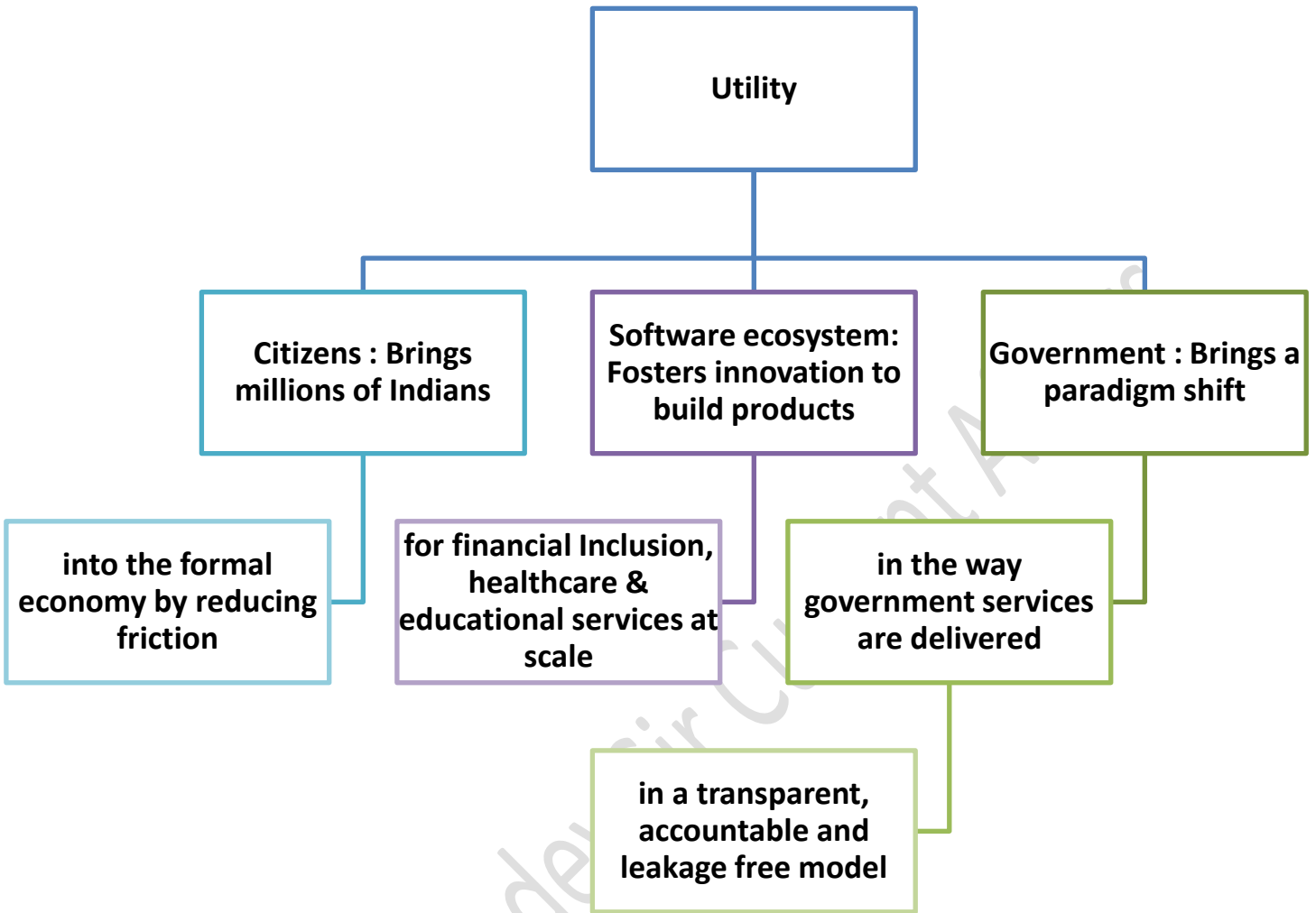
Presenceless layer : universal biometric digital identity allows people

Paperless layer : digital records move with an individual's digital identity

participate in any service from anywhere in the country

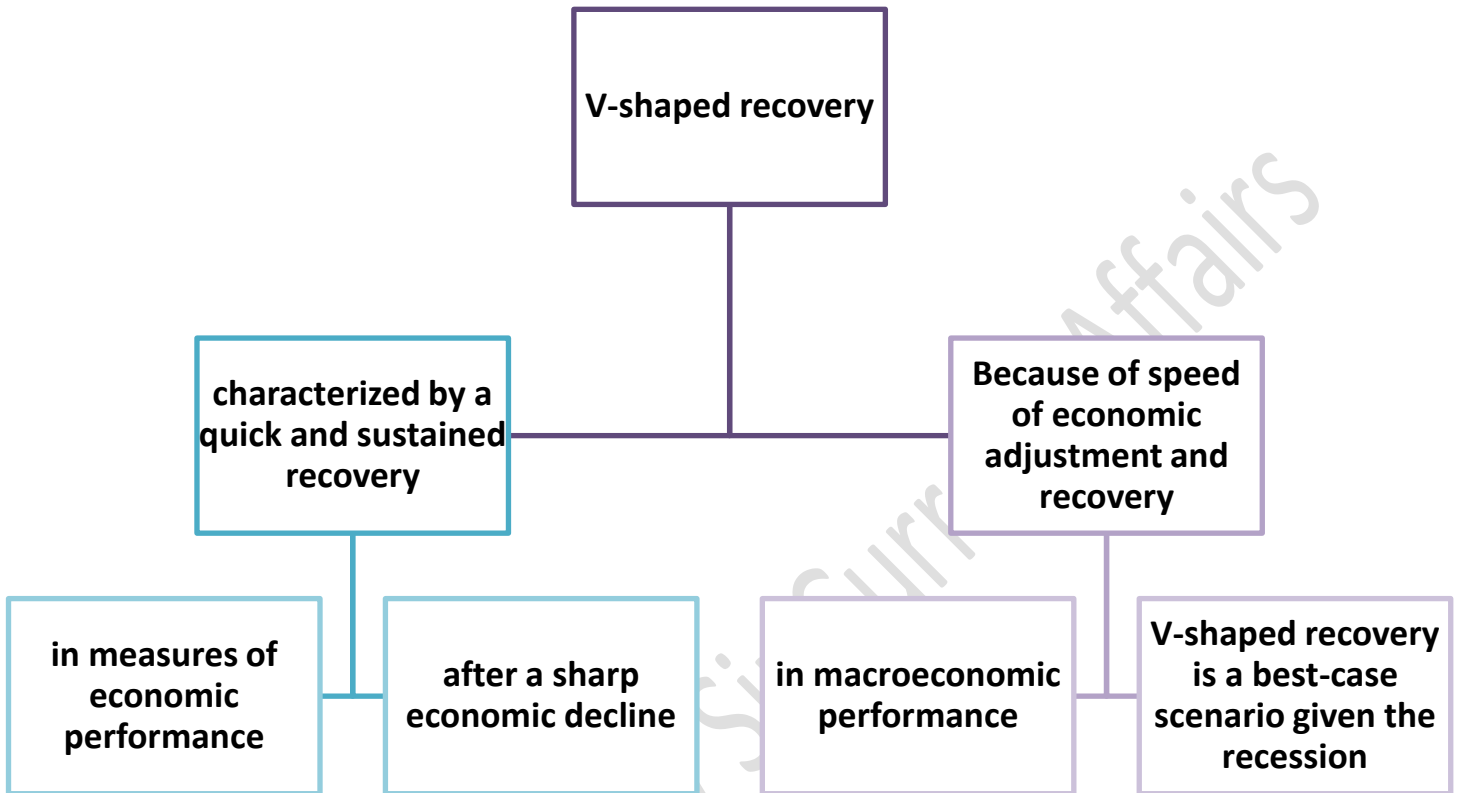
eliminating need for massive amount of paper collection and storage





Saurabh Pande

V-shaped recovery



**The Hindu through Mind Maps
(Saurabh Pandey Sir)**

December 30
2022

The Hindu Mind
Maps

Kalasa Banduri project

Kalasa Banduri project

water disputes in India-from a lack of a similar cooperation

Kalasa-Banduri Project undertaken by the Karnataka govt.

conflict on the Mandovi / Mahadayi river

flowing through Goa, Karnataka and Maharashtra

proposes to divert Mandovi river water from Kalasa and Banduri canals

into the Malaprabha river in the state

facilitate drinking water to 13 towns

of Dharwad, Belagavi, Bagalkote and Gadag

entire project aims to construct a total of 11 dams

diversion of water from Kalasa and Banduri *nullahs*

on the river Mandovi

point of contention between Karnataka and Goa

Goa claiming it would strip the state of its flora and fauna

Kalasa Banduri project

Mandovi originates from Karnataka's Belagaum district

river is 81 kilometres (km) in length

Mandovi river basin falls into states of Goa, Karnataka and Maharashtra

35 km of which flows in Karnataka

1 km in Maharashtra and 45 km in Goa

seeds of the conflict were sowed over 40 years ago

plan was also to allow a steady flow of water

1985, Karnataka initially explored a 350 megawatt-hydro-electric project

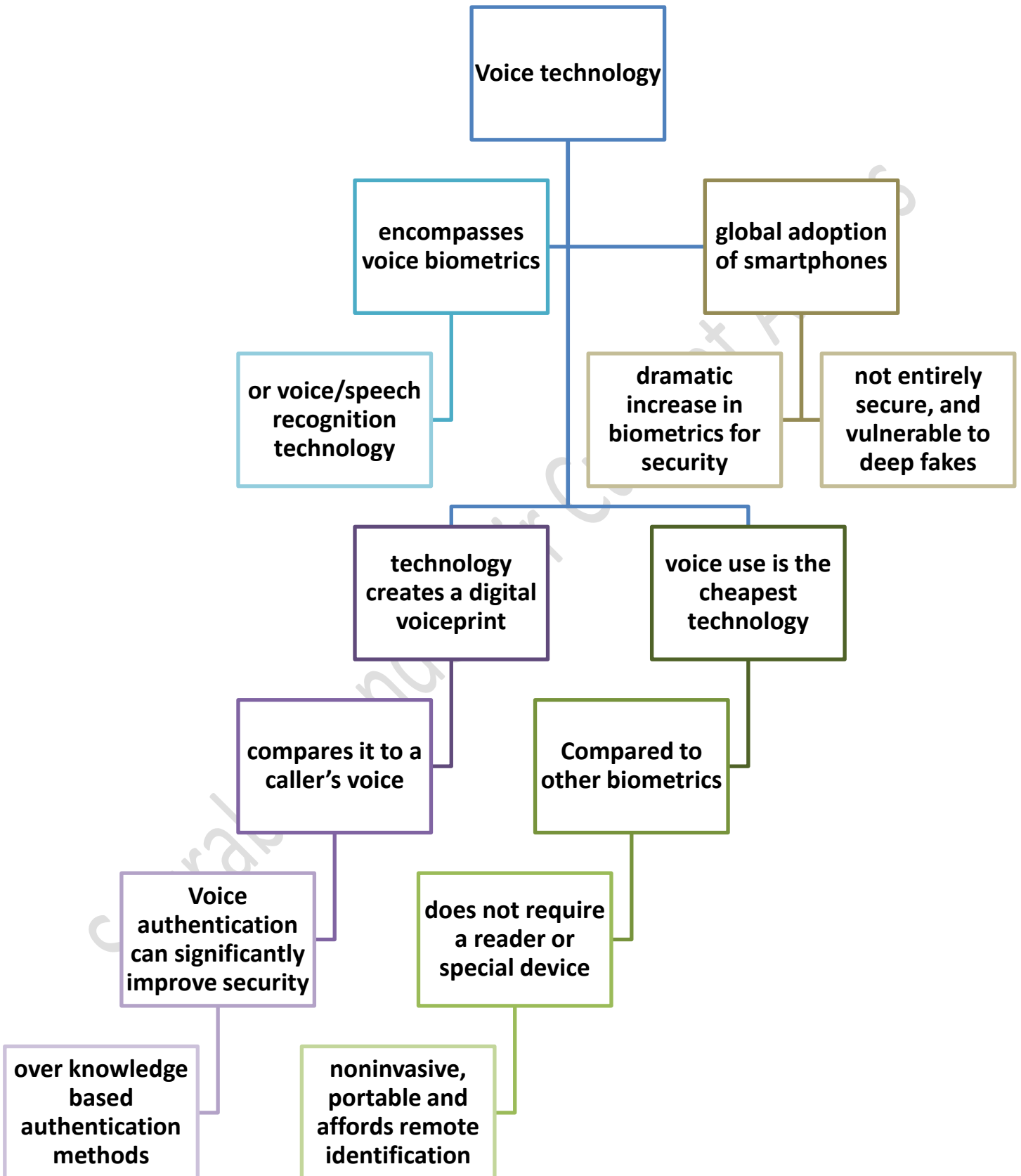
from the power project's storage dam

divert 50% of Mandovi river water in Karnataka for irrigation

after using water for irrigation purposes in Karnataka

served drinking water and irrigation purposes in Goa as well

Voice technology



Voice technology

police can leverage voice

Voice has a much lower error rate

improve investigation efficiency, identify criminals, etc.

finding use from criminal background checks to airport security

requires no eye contact

advantage of improving user experience

excellent tool for Govt. to disburse money for various schemes

reducing call handle times and call centre costs

ensuring high-accuracy authentication in seconds

and verify the proof of life

of pensioners from their homes

ability to resist playback attacks

sensitive enough to detect

making waves in the world of fraud protection

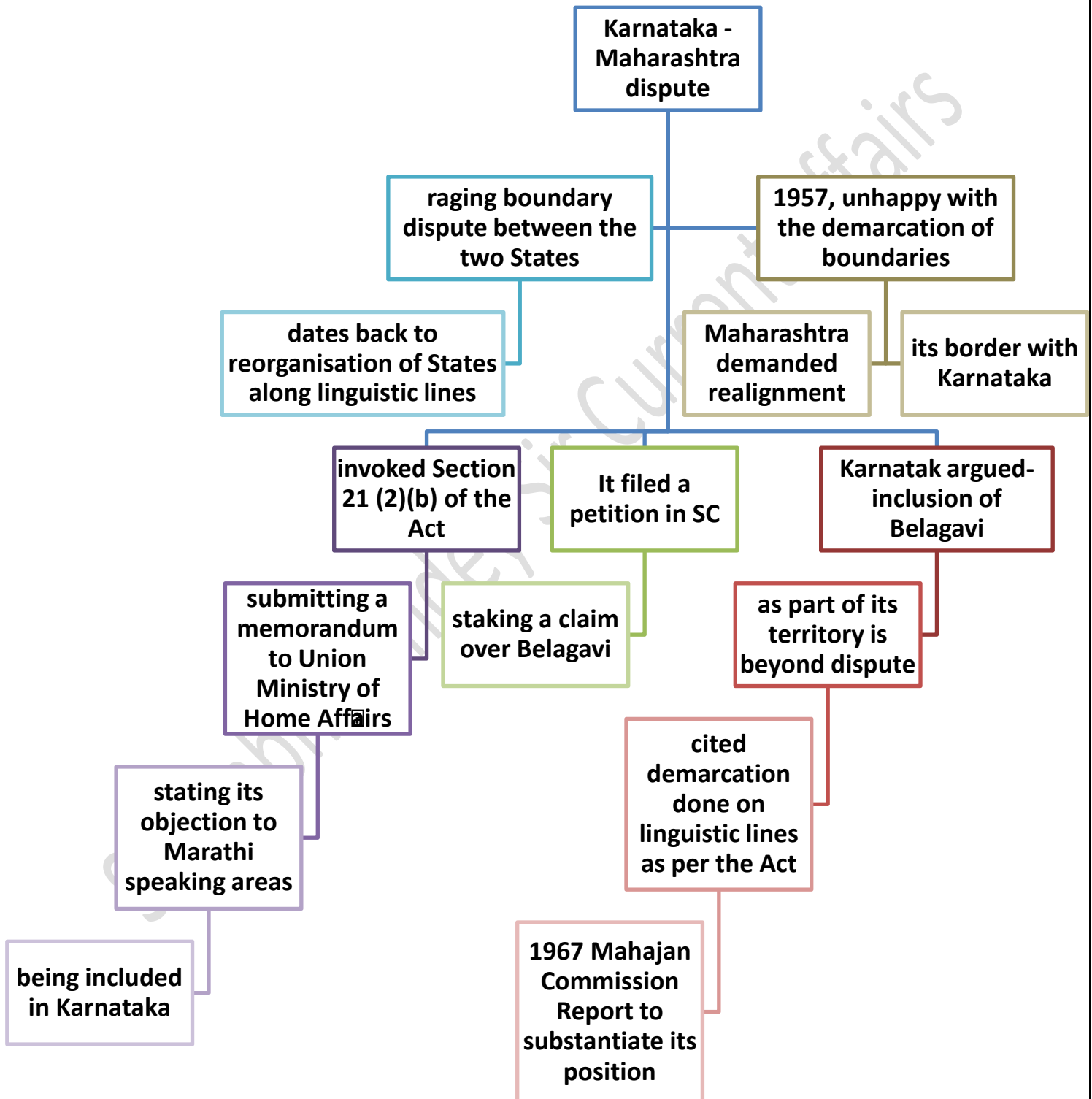
by providing an extra layer of protection for data

if someone is impersonating user or playing a recording

identify even if user has a cold or a sore throat

Karnataka -Maharashtra dispute

The border town of Belagavi has been a part of Karnataka since boundaries were demarcated along linguistic lines under the States Reorganisation Act, 1956. interState border dispute between Karnataka and Maharashtra erupts every now and then



**Karnataka -
Maharashtra
dispute**

**Karnataka has
argued for the
inclusion of areas**

**in Kolhapur,
Sholapur and Sangli
districts**

in its territory

**From 2006, Karnataka
started holding the
winter session**

**of the Legislature in
Belagavi**

**building the
massive Suvarna
Vidhana Soudha**

**in the district
headquarters to
reassert its claim**

**1966, at
Maharashtra's
insistence**

**recommended that
264 villages be
transferred to
Maharashtra**

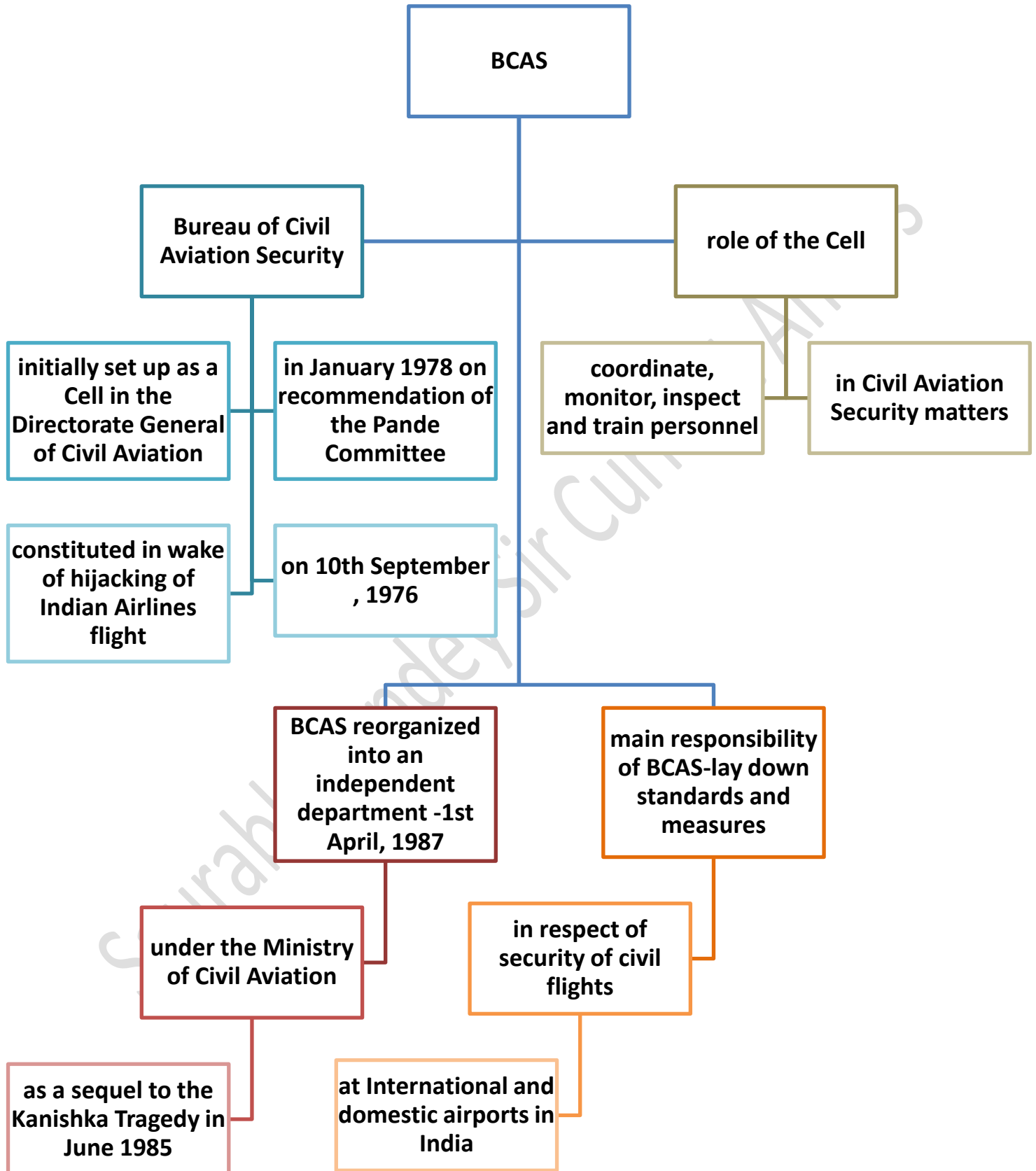
**then Prime Minister
Indira Gandhi**

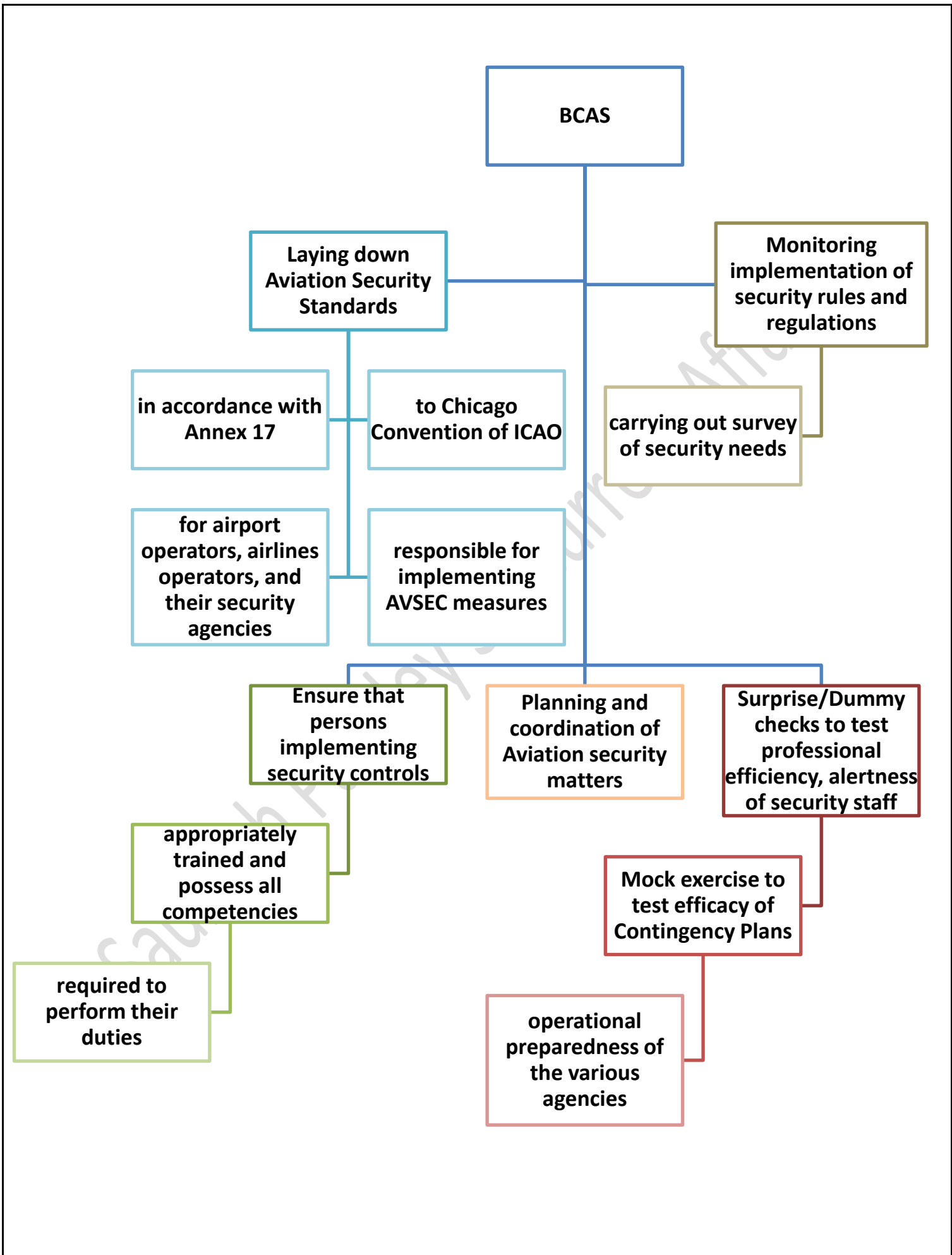
**Belagavi (Belgaum)
and 247 villages
remain with
Karnataka**

**established a one-
man commission
led by Mehr Chand
Mahajan**

**Maharashtra
rejected the report,
Karnataka
welcomed it**

BCAS





BCAS

Laying down Aviation Security Standards

Monitoring implementation of security rules and regulations

in accordance with Annex 17

to Chicago Convention of ICAO

carrying out survey of security needs

for airport operators, airlines operators, and their security agencies

responsible for implementing AVSEC measures

Ensure that persons implementing security controls

Planning and coordination of Aviation security matters

Surprise/Dummy checks to test professional efficiency, alertness of security staff

appropriately trained and possess all competencies

Mock exercise to test efficacy of Contingency Plans

operational preparedness of the various agencies

required to perform their duties

RVM

The Election Commission on Thursday announced the development of a prototype of a multiconstituency remote electronic voting machine to enable remote voting by migrant voters.

RVM

undertaking this major move to increase voter participation

The multi-constituency remote EVM

"After focus on youth and urban apathy, remote voting will be a transformational initiative for strengthening participation in electoral democracy"

developed by a public sector undertaking

can handle up to 72 constituencies

from a single remote polling booth

ECI "has now explored option of using a modified version

highlights challenges of defining domestic migrants

time-tested model of M3 EVMs

enumerating remote voters

enable voting at remote polling stations

implementation of the Model Code of Conduct

polling stations outside home constituency, for domestic migrants

at remote polling booths in other states

RVM

Ensuring secrecy of voting, facility of polling agents

Representation of the People Act, 1950 and 1951

for identification of voters

process and method of remote voting

Conduct of Election Rules, 1961

Registration of Electors Rules, 1960

counting of votes

these are other issues identified by the note

will need to be amended to introduce remote voting

no central database available for migration within country

"Out-migration" is predominant among the rural population

analysis of available data in public domain

in overall domestic migration

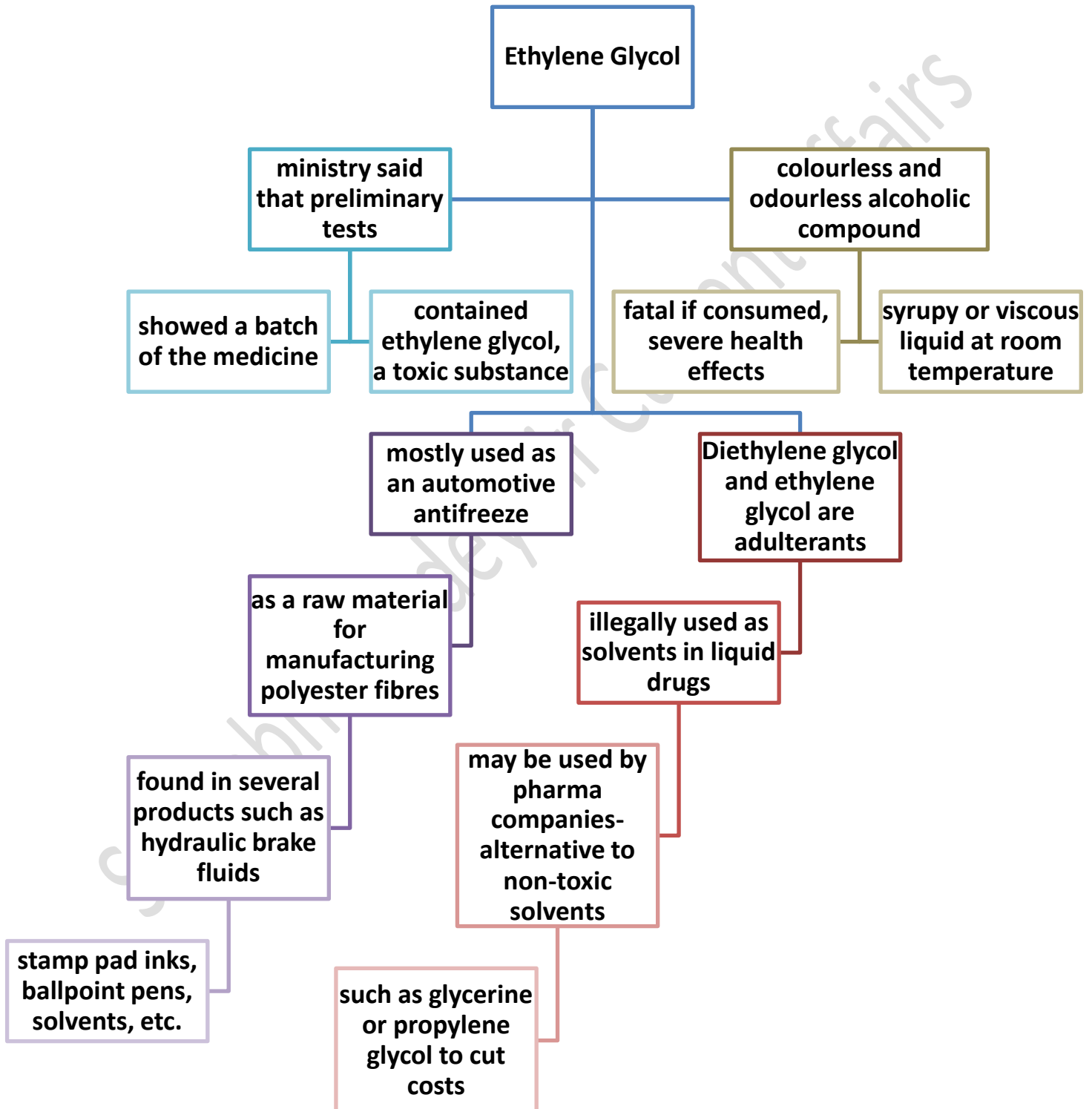
points to work, marriage and education-related migration

around 85% of the internal migration is within states

important components of domestic migration

Ethylene Glycol

Uttar Pradesh Drug Control and the Central Drugs Standards Control Organisation (CDSCO) are investigating Marion Biotech after Uzbekistan linked the deaths of 18 children to a “contaminated” cough syrup made by the Noidabased firm



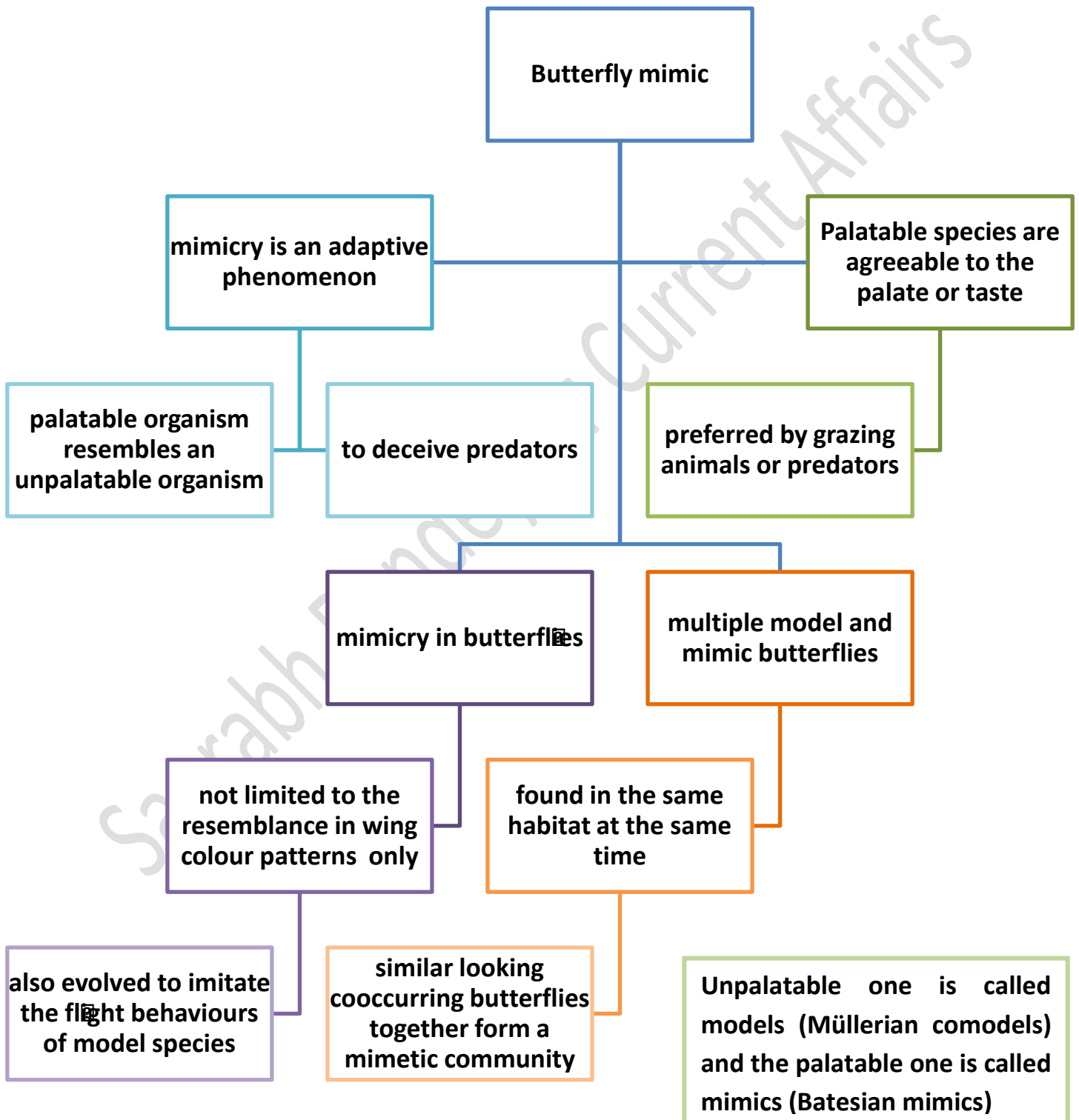
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Butterfly mimic

In a five year study, scientists of the National Centre for Biological Sciences (NCBS) in Bengaluru have discovered secrets of a long evolutionary game through which butterflies come to warn, fool, and escape their predators using traits such as wing colour patterns and even flight behaviour



About Model species

**model organism is a
non-human species**

**extensively studied to
understand particular
biological phenomena**

**expectation that
discoveries made in the
model organism**

**provide insight into the
workings of other
organisms**

Saurabh Pandey's Current Affairs

What are cloud services?

What are cloud services?

infrastructure, platforms, or software

All infrastructure, platforms, software, or technologies

hosted by third-party providers

made available to users through the internet

users access through the internet

without requiring additional software downloads

considered cloud computing services

including the following as-a-Service solutions

Infrastructure-as-a-Service provides users

Platforms-as-a-Service provides users with a platform

with compute, networking, and storage resources

applications can run, IT infrastructure required for it to run

What are cloud services?

Software-as-a-Service provides users with essentially a cloud app

Function-as-a-Service, an event-driven execution model

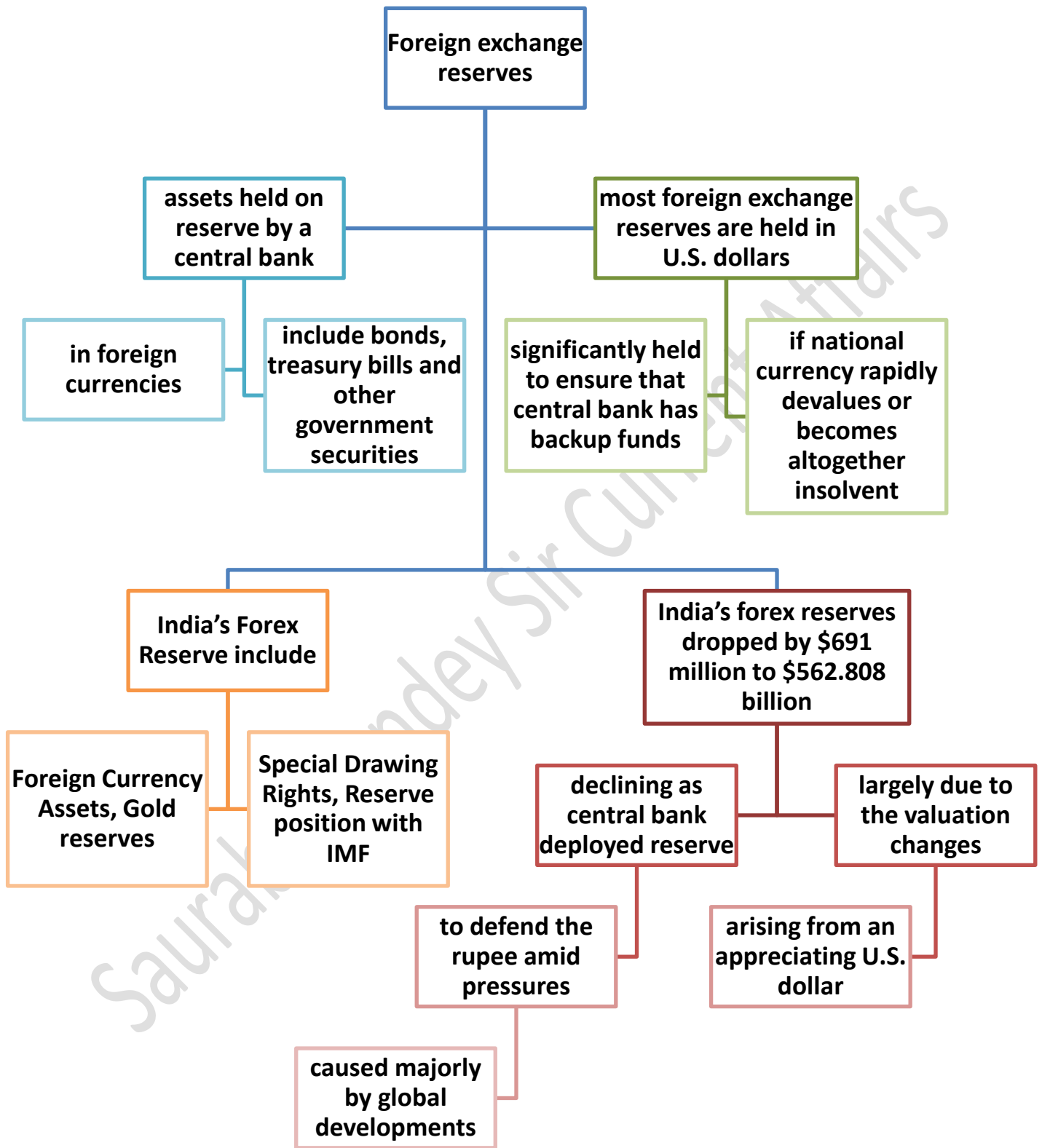
platform on which it runs, platform's underlying infrastructure

lets developers build, run, and manage app packages

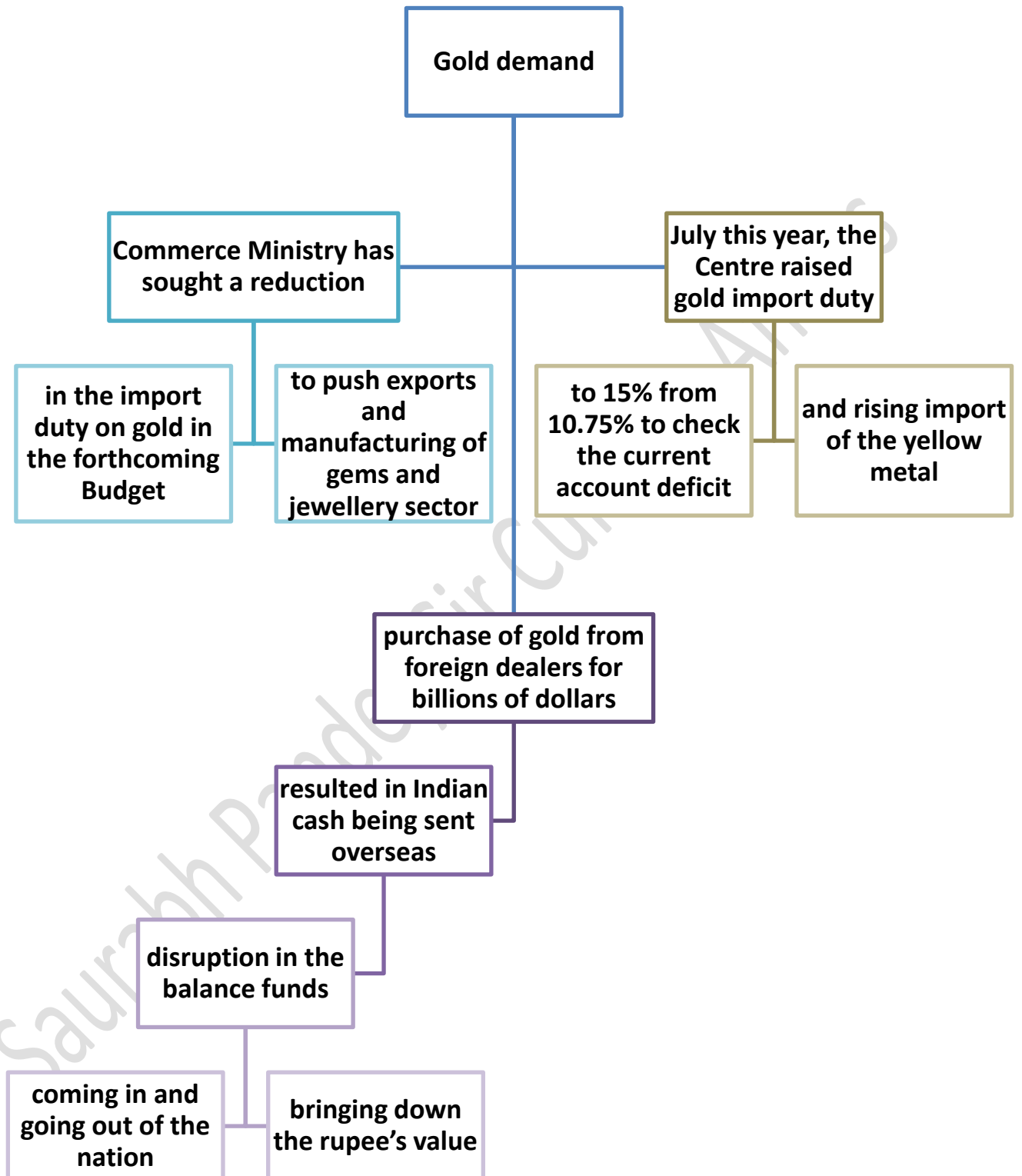
as functions without maintaining infrastructure

Saurabh Pa

Foreign exchange reserves



Gold demand



Gold demand

**Gold imports
directly affect CAD
of India**

**country is presently
the largest
importer of gold**

**larger the CAD with
respect to GDP**

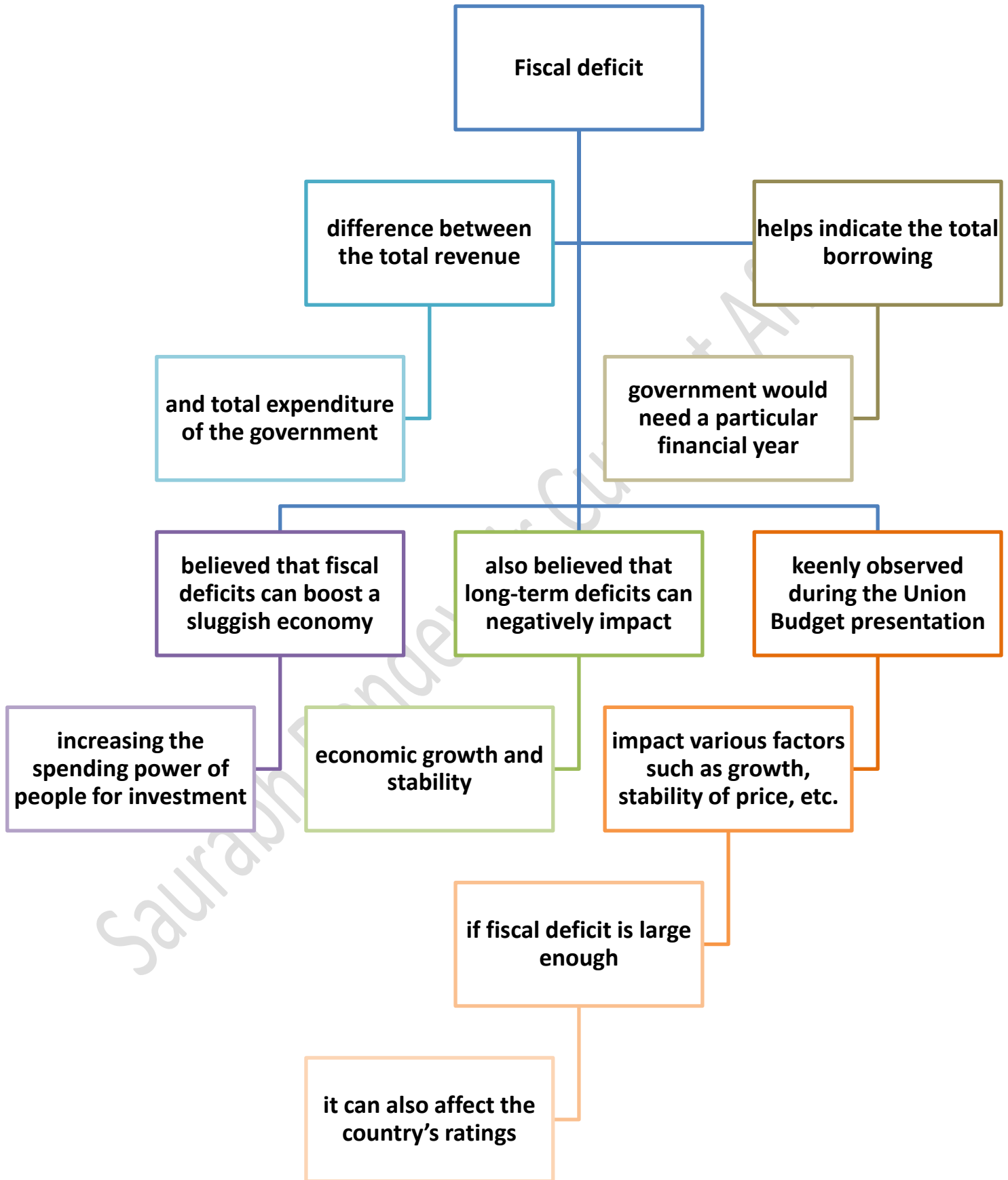
**riskier it is for the
overall economy**

**consuming one-
third of the
planet's supply on
annual basis**

**gold is the second-
most purchased
overseas
commodity after oil**

Saurabh Pandey Sir

Fiscal deficit



Fiscal deficit

govt. continues borrowing and stops printing currency notes

impact of fiscal deficit on inflation

upwards pressure on interest rates

result in increased production costs lead to higher prices

depends on the kind of expenditure

undertaken by the government

if government spends on productive investments

Fiscal deficits can help a slow economy

Keynes advocated a countercyclical fiscal policy

that take care of both supply and demand

especially if money is spent on productive assets

during periods of economic woe

impact might be reduced

that create investment and job opportunities

government should undertake deficit spending

to make up for decline in investment and boost consumer spending

in order to stabilize aggregate demand

DO YOU KNOW ?

Environmental, social, and governance (ESG) investing refers to a set of standards for a company's behavior used by socially conscious investors to screen potential investments.

Environmental criteria consider how a company safeguards the environment, including corporate policies addressing climate change, for example. Social criteria examine how it manages relationships with employees, suppliers, customers, and the communities where it operates. Governance deals with a company's leadership, executive pay, audits, internal controls, and shareholder rights.



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