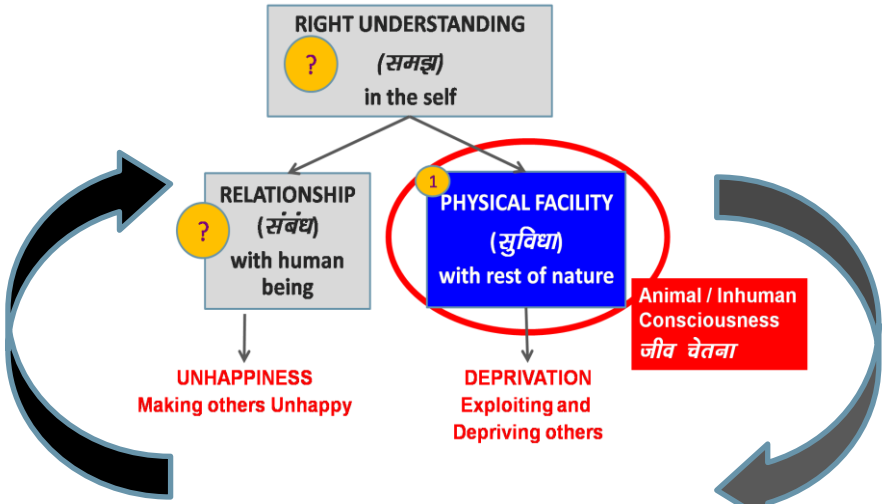
Practice Session 8
Human Role in Mutual Enrichment (Harmony) in Nature

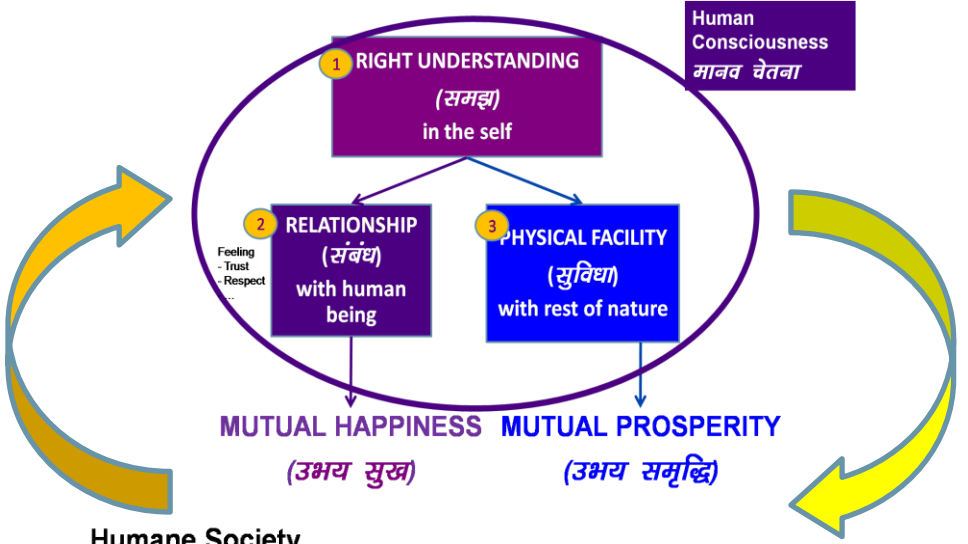


Inhuman "Society" (Crowd or Battlefield)

Assumptions (eg. Money is everything)	Accumulation By Any Means	Domination , Exploitation, Fear	Mastery & Exploitation
In Every Individual	In few Individuals	In Society	Over Nature
Obsession for Consumption " for Profit " for Sensual Pleasure		Terrorism War	Resource Depletion Pollution

Individual based (having different or opposing goals)

Transformation- Progress
संक्रमण–विकास



Humane Society

Right Understanding & Right Feeling	Prosperity	Fearlessness (Trust)	Co-Existence (Mutual Fulfilment)
Happiness			
In Every Individual	In Every Family	In Society	In Nature/ Existence

Family based Society (families having common goal)

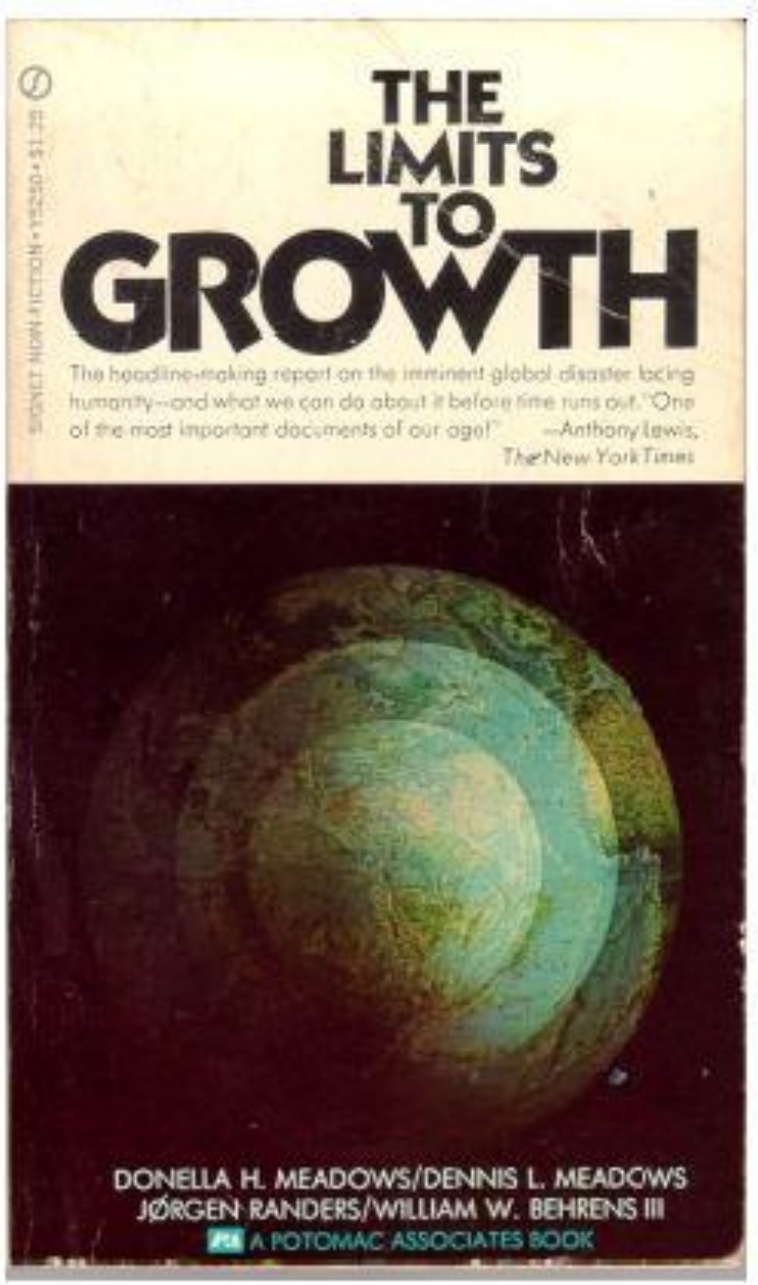
1972 - The Club of Rome publishes "Limits to Growth"

The Club of Rome publishes "Limits to Growth". The report is extremely controversial because it predicts dire consequences if there is not a slowdown of "growth" (throughput of raw materials from nature) in 50 years (by 2022):

1. Environmental breakdown
2. Breakdown of human relationship – wars
3. Mental breakdown

By 2016

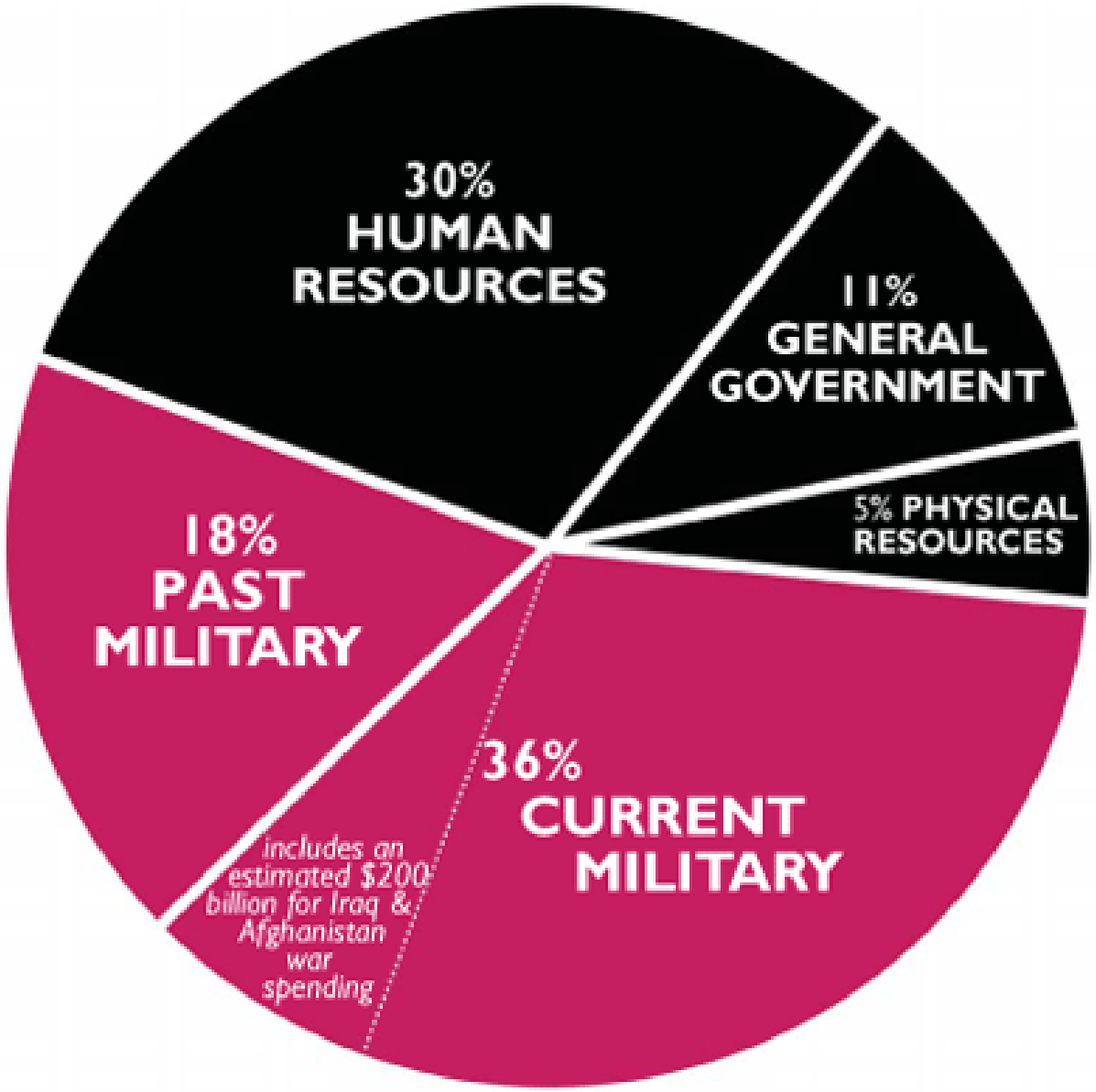
1. 2016 was hottest year in India's recorded history (>51 degrees C), global atmospheric CO2 > 400PPM, way beyond stable norm of 300PPM
2. Over 50% tax money spent globally on preparing for war
3. WHO statistics show increasing obesity (>30%), depression (>10%) & suicide rates (>0.1%) in developed countries



Total Outlays (Federal Funds): $2,650 billion

MILITARY: 54% and $1,449 billion

NON-MILITARY: 46% and $1,210 billion



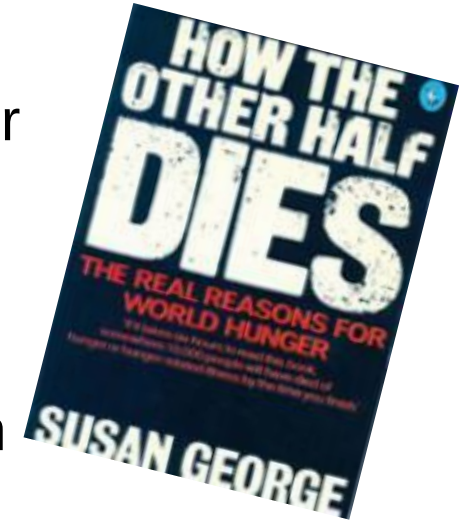
1974 – Hunger is not a Scourge but a Scandal

Contrary to popular opinion, malnutrition and starvation are not the result of over-population, of poor climate or lack of cultivatable land.

The reason why hunger exists on such a vast scale is because world food supplies are controlled by the rich and powerful for the wealthy consumer.

Vested interests share responsibility for the fate of the poor.

Working with local elites & protected by the powerful they are gradually imposing control over the whole population.



This classic study of world hunger was written after the World Food Conference in 1974

Approaching a state shift in Earth's biosphere – NATURE June 2012

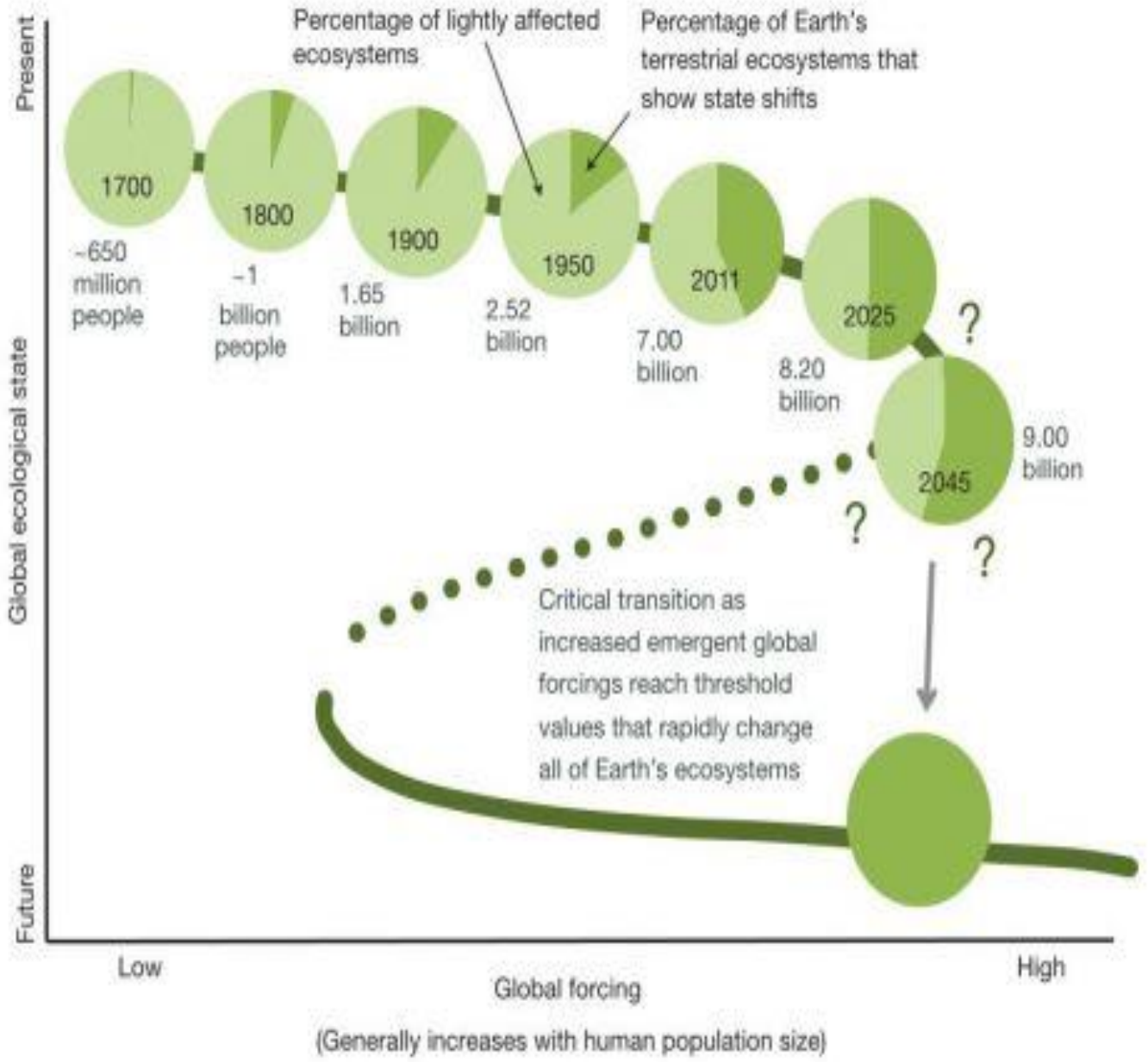
Human activity now dominates 43 percent of Earth's land surface and affects twice that area.

One-third of all available fresh water is diverted to human use.

A full 20 percent of Earth's net terrestrial primary production, the sheer volume of life produced on land every year, is harvested for human purposes.

Extinction rates compare to those recorded during the demise of dinosaurs.

Average temperatures will likely be higher in 2070 than at any point in human evolution.



Problems

Human

Human-human relationship

Obesity, other diseases

Depression

Alcoholism, Drug abuse

Suicide

Population

Divorce

Societal breakdown

Terrorism

War

Human-rest of nature relationship

Atmospheric carbon (CO2…)

Soil fertility

Water insecurity

Seed for profit

Food insecurity

Breed for profit

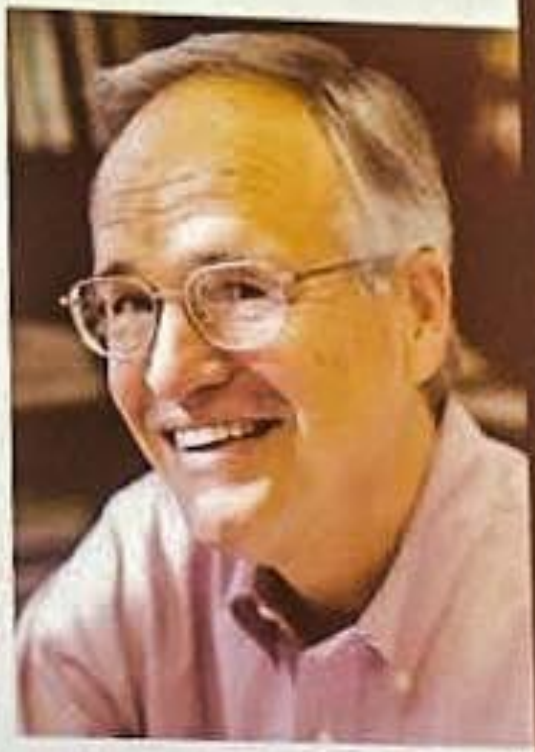
Genetic manipulation for profit

Global warming

Climate change

"We scientists don't know how to do that"

"I used to think the top environmental problems were biodiversity loss, ecosystem collapse and climate change.



I thought that with 30 years of good science we could address those problems.

But I was wrong.
The top environmental problems are selfishness, greed and apathy…

…and to deal with those we need a spiritual and cultural transformation

- and we scientists don't know how to do that."

Gus Speth

Atmospheric Carbon

We’re Running Out of Atmosphere (March 2012)

How Much Carbon in the Atmosphere is Too Much?

- In last 650,000 years, CO2 levels nearly steady at 300 PPM
- Greater than 350 parts per million CO2 is not compatible with the planet on which civilization developed and to which life on earth is adapted
- Today, the atmosphere is 395 PPM of CO2
- And rising at about 2 PPM per year

From climatologist Jim Hansen and his team at NASA. For more, see:

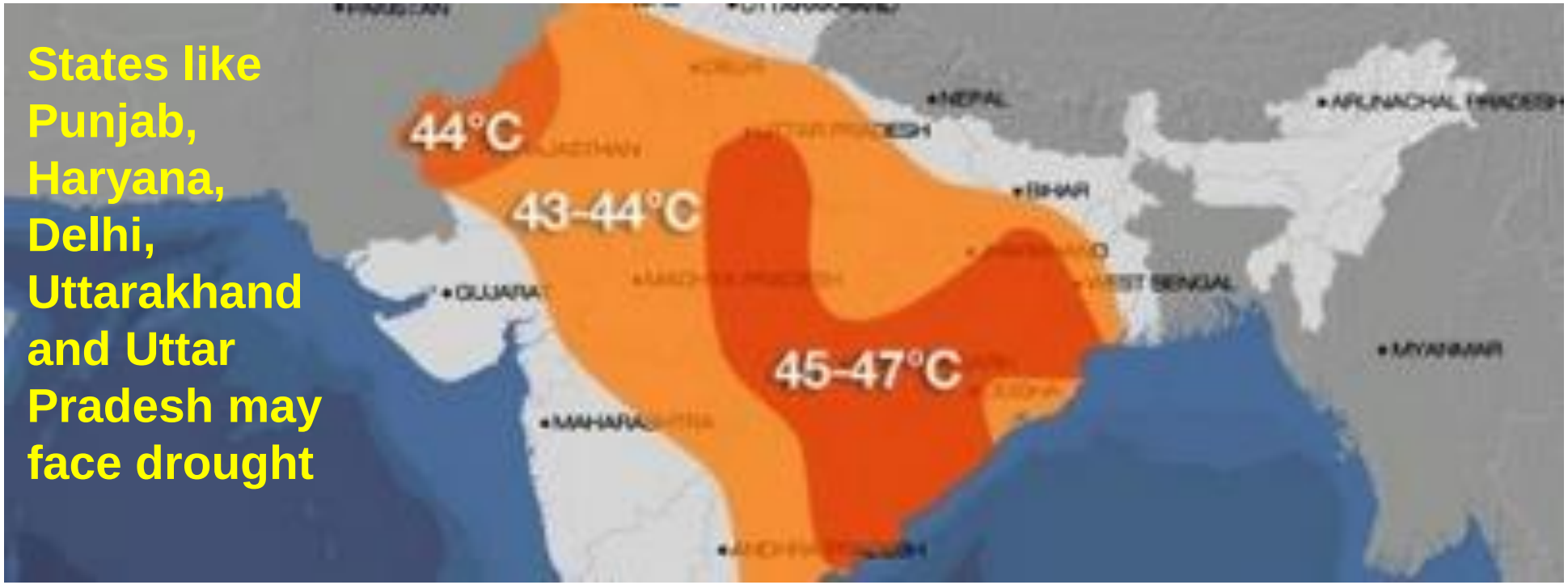
http://topdocumentaryfilms.com/great-global-warming-swindle/

http://www.ted.com/talks/james_hansen_why_i_must_speak_out_about_climate_change.html

62 Year High Temperatures in India (+5 Degrees) by 25 May 2015

Severe heatwave breaks temperature records, claims hundreds of lives across India

A red alert has been issued by Indian authorities after a severe heatwave left hundreds [estimated over 1000] of people dead across the country over the last ten days. Weather officials warn the heat will continue over the coming days and could get worse



http://thewatchers.adorraeli.com/category/heat-wave/

27-Sep-2013

Earth may reach tipping point by 2038

<u>India outlook</u>

4 deg temp rise

20% increase in rainfall

<u>Sea level Rise</u>

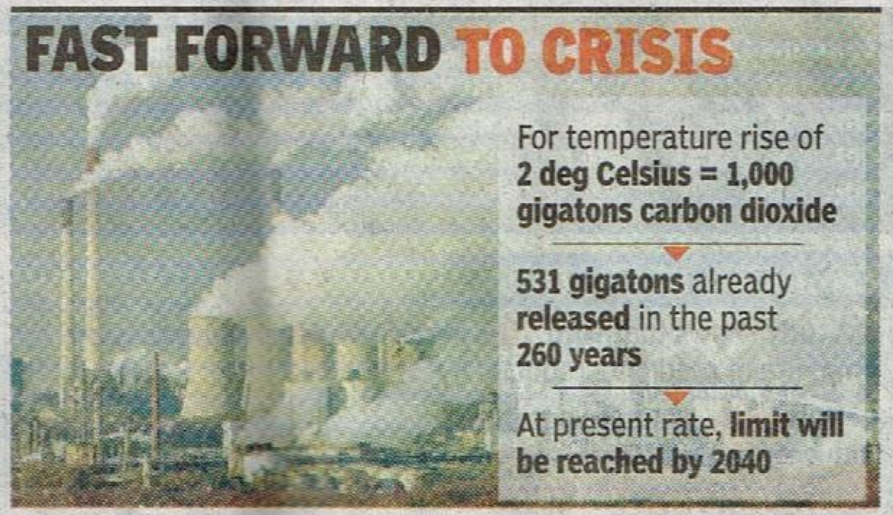
20’

TIMES NATION

‘Planet racing towards 2°C temperature rise’

May Reach Tipping Point In 25 Yrs: IPCC

Subodh Varma
TIMES INSIGHT GROUP



The report issued on September 27 by the UN’s Intergovernmental Panel on Climate Change (IPCC) may sound similar to the one issued five years ago — after all, it says that humanity is causing climate change, though with more certainty. But on two key aspects this report has categorically said what was never said before.

tion regarding sea level rise. It says that sea levels are projected to rise by 28-97cm by 2100. This is over 50% more than the previous projection of 18-59cm over the same period. This increase is because of better estimation methods and more observations. By

scientific studies, reviewed by 1089 experts from 55 countries. They received 54,677 comments from scientists across the world. Over 2 million gigabytes of numerical data was analyzed before 209 authors put together the draft report. Then representa-

Disappearing islands of India – December 26th, 2006

Lohachara and Suparibhanga Islands

Once home to around 10,000 people, Lohachara island has slipped beneath the ocean and it's neighbor, Suparibhanga island, met the same fate a while back.

http://www.greenlivingtips.com/eco-news/disappearing-islands-of-india.html

Island nation swallowed whole by the sea – 9th March 2012

The president of Kiribati, Anote Tong, is in desperate negotiations with the country of Fiji to find his nation (pop 110,000) a new, higher elevation home…

Related Videos

The Indoor Generation

https://youtu.be/TpwOrUTZdaY

Water Insecurity

Abundance of Natural Fresh Water Availability

India

3,287,590 km²

890 mm average rainfall

Total annual rainfall

2,925 cubic km

Total annual human water use

230 cubic km (urban + rural)

- Water Storage
  - Forest (tree roots) (max%)
  - Glaciers (small%)
  - Bauxite mountains (min%)
  - Bogs, underground aquifers (433,000 cubic km)
  - Lakes, ponds…
  - Forests
- Natural distribution of water
  - Rain
  - Rivers & Streams overground (also distributes silt, fish…)
  - Rivers & Streams underground

Water Status – Mismanagement

India

3,287,590 km²

890 mm average rainfall (has become erratic)

Total annual rainfall

2,925 cubic km (59% in 2014)

Total annual human water

230 cubic km (urban + rural)

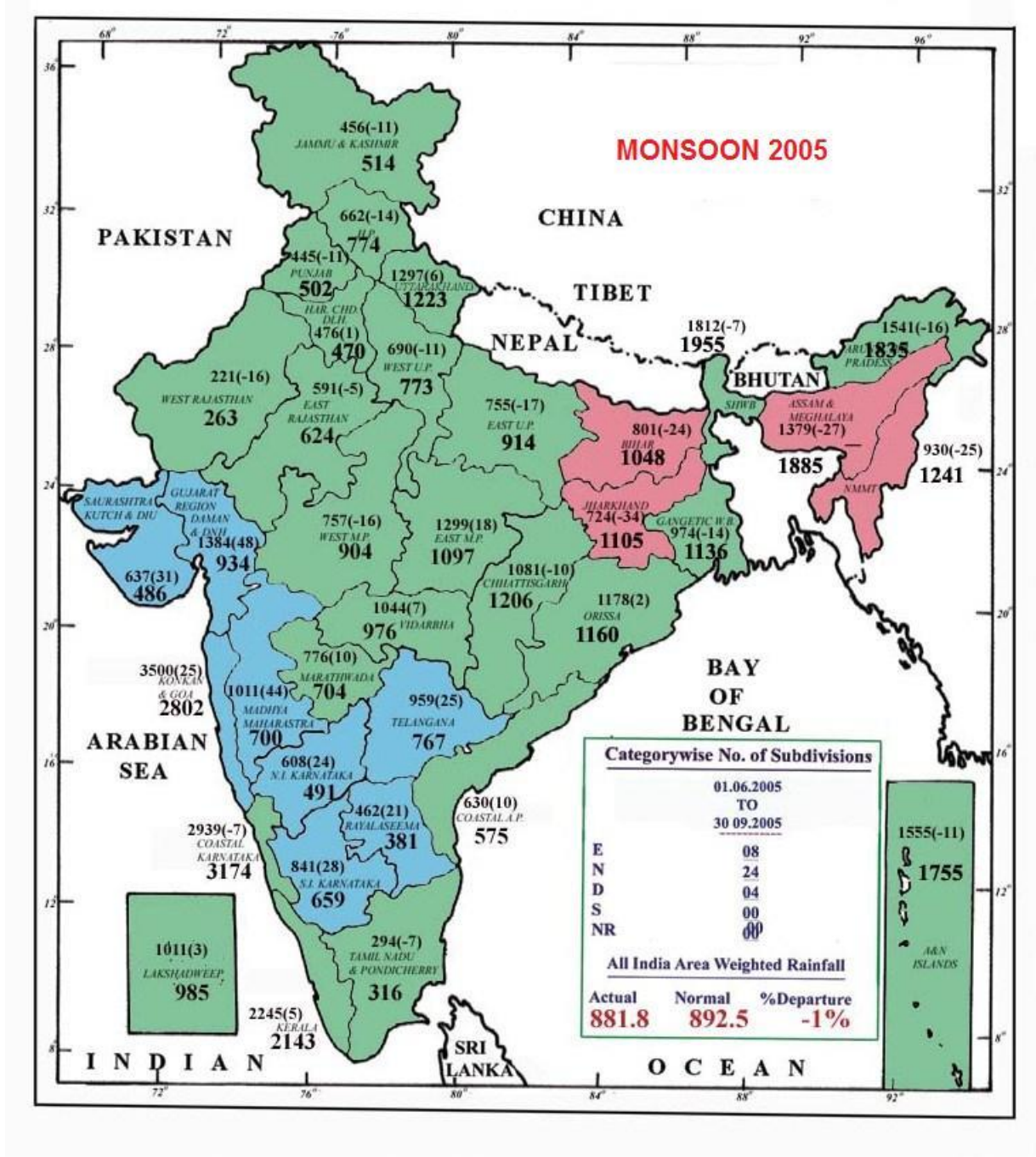
(increasing indiscriminate use in urban areas,

dumping of waste in rivers, ground...,

chemical farming, heavy machinery,

reduced bio-diversity...)

- Water Storage
  - Forests (deforestation)
  - Glaciers (melting rapidly)
  - Areas with bauxite (mining)
  - Bogs, underground aquifers (433,000 cubic km) (30% dry)
  - Lakes, ponds… (filled up)
- Natural distribution of water
  - Rain (disturbed)
  - Rivers (both over & under ground disturbed)
- Unnatural storage & distribution of water
  - Dams
  - Canals



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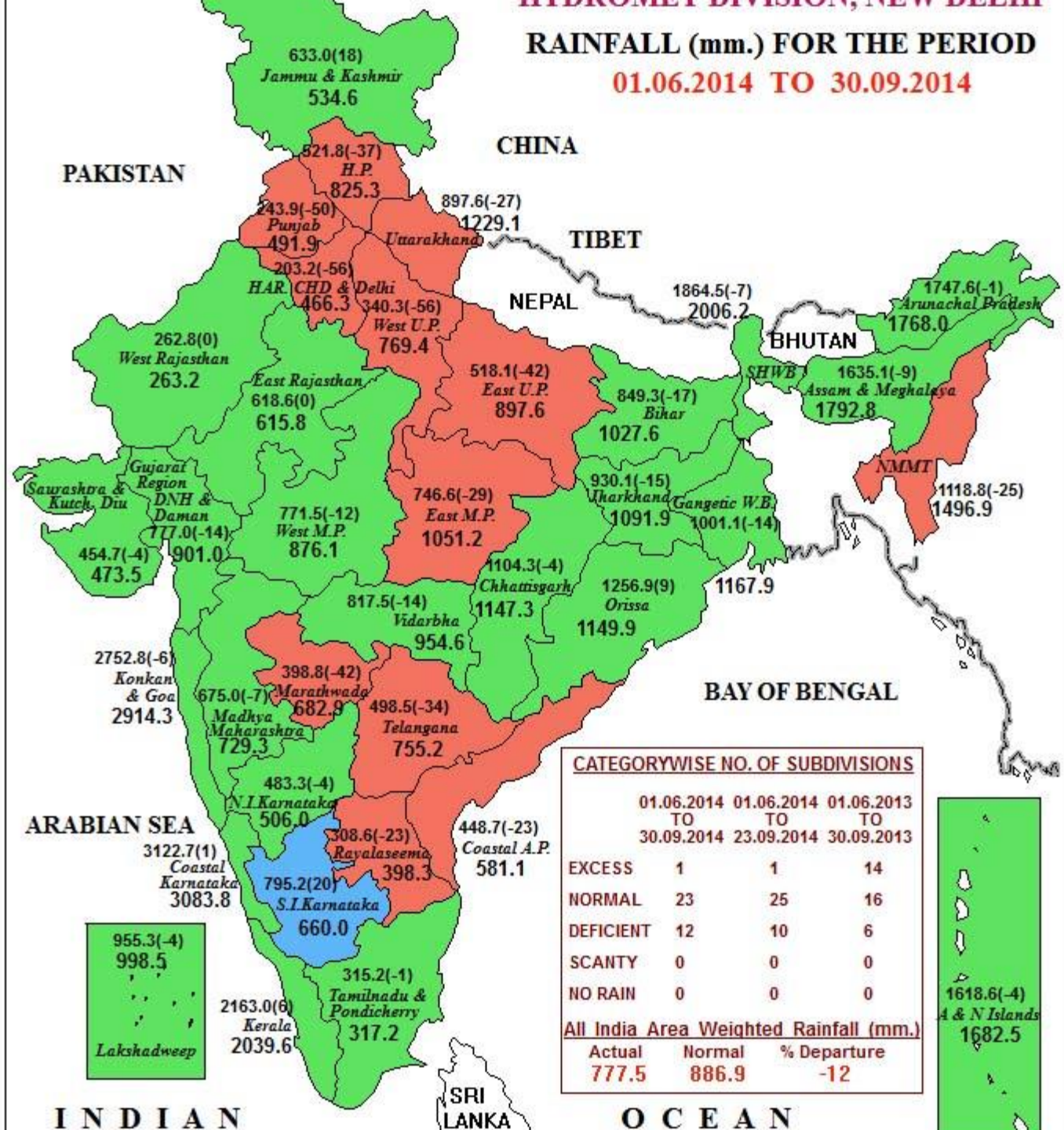
HYDROMET DIVISION, NEW DELHI

RAINFALL (mm.) FOR THE PERIOD

01.06.2014 TO 30.09.2014



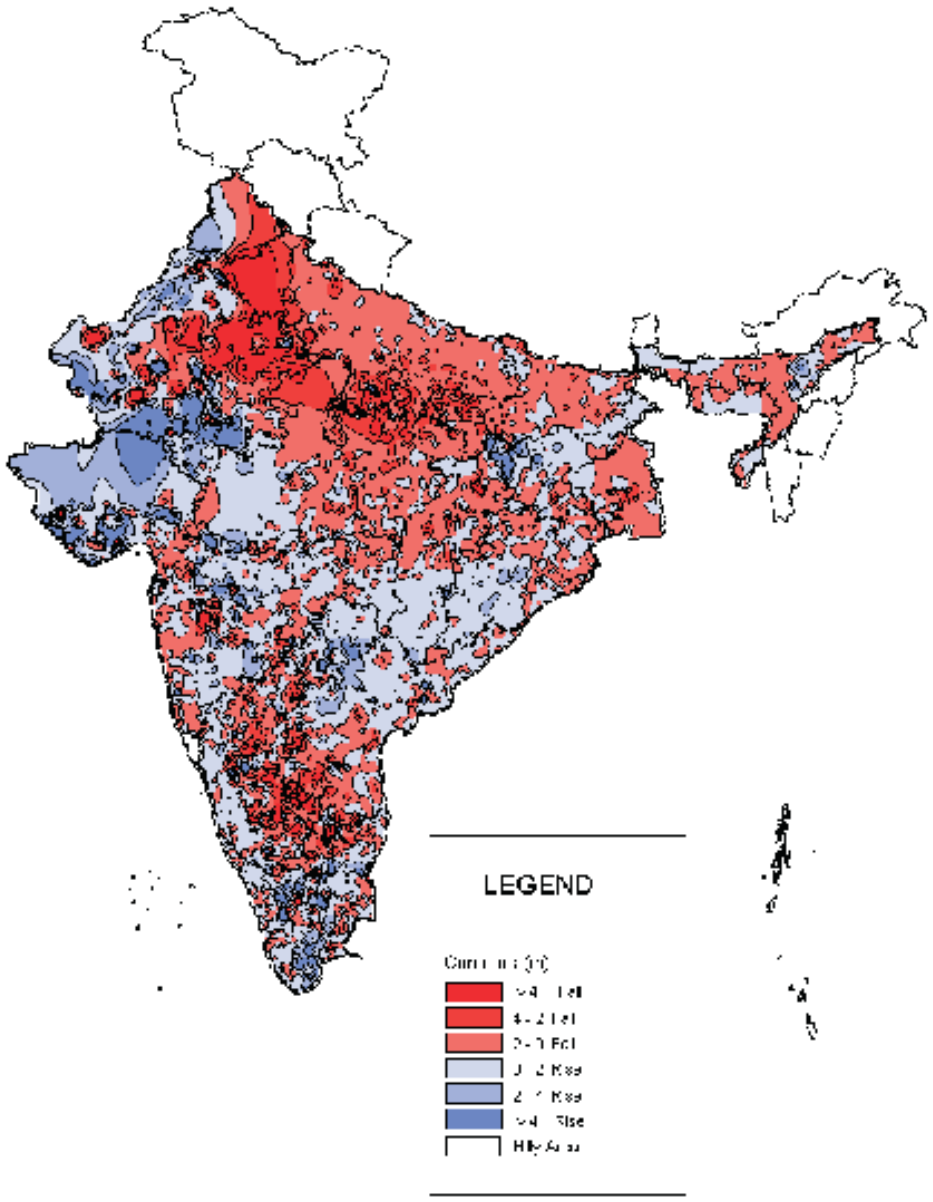
CATEGORYWISE NO. OF SUBDIVISIONS

	01.06.2014 TO 30.09.2014	01.06.2014 TO 23.09.2014	01.06.2013 TO 30.09.2013
EXCESS	1	1	14
NORMAL	23	25	16
DEFICIENT	12	10	6
SCANTY	0	0	0
NO RAIN	0	0	0

All India Area Weighted Rainfall (mm.)

Actual	Normal	% Departure
777.5	886.9	-12

Water Level Fluctuation -
January 2007 Vs Decadal Mean(1997-2006)



Areas with maximum underground water over-use (red areas) also have poor rainfall

E.g. Delhi

- water table has fallen > 4 m 1997-2006

In 2013

5,723 ground water blocks in the country

1,615 or 29% classified as semi-critical, critical or overexploited

60% of aquifers in India will be in a critical condition by 2028 if the trend of indiscriminate exploitation of ground water continues

India's Ground Water Table to Dry Up in 15 years (DH March 2013)

India's estimated use of ground water = 230 cubic km annually

- **60% of irrigated agriculture**
- **80% of rural and urban water supplies**

5,723 ground water blocks in the country

1,615 or 29% classified as semi-critical, critical or overexploited

60% of aquifers in India will be in a critical condition by 2028 if the trend of indiscriminate exploitation of ground water continues

Grounwater hold capacity is estimated to be 433 billion cubic meters

World Bank report calls for immediate corrective measures

http://www.deccanherald.com/content/56673/indias-ground-water-table-dry.html

Food Insecurity

FAO Report – 11-May-2011

Of the 4.2 billion tons of food produced, more than 1 billion tons of food is lost or wasted every year, UN-backed report finds (11 May 2011**)**

About a third of all the food produced for human consumption each year – or roughly 1.3 billion tons – is lost or wasted, according to a new **study** commissioned by the United Nations Food and Agriculture Organization (**FAO**)

Global Food Production is 6 times requirement
Global Food Wastage is 1/3rd of production
Wastage is enough to feed 1300 crore people/year

Have we understood right utilisation?
Is it a question of production?
Is it a question of relationship?
Is it a question of right understanding?
It is a question of right education-sanskar

http://www.un.org/apps/news/story.asp?NewsID=38344&Cr=fao&Cr1

Even Small Individual Choices Add Up. E.g. Choice of Food

20% of all life produced on land every year is harvested for human purposes

14-16 kg grain & 21,000 litres of water → 1 kg meat

The world's cattle alone (not including other livestock) annually consume food grains enough for 8.7 billion people

Land use – 3¼ acres/person on meat diet vs 0.2 acres/person on veg diet

20% Amazon rain forest (the size of California) destroyed since 1970
80% of this land is used for cattle raising

By feeding grain to livestock, we lose 90% of the protein, 96% of the calories, 99% of its carbohydrates, and 100% of the fiber. Animal-based diets are high in saturated fat, excessive protein and cholesterol, leading to heart disease and stroke (nearly 50% of all deaths in the US)

Video (1 min)

http://www.planetaryrenewal.org/ipr/vegetarian.html

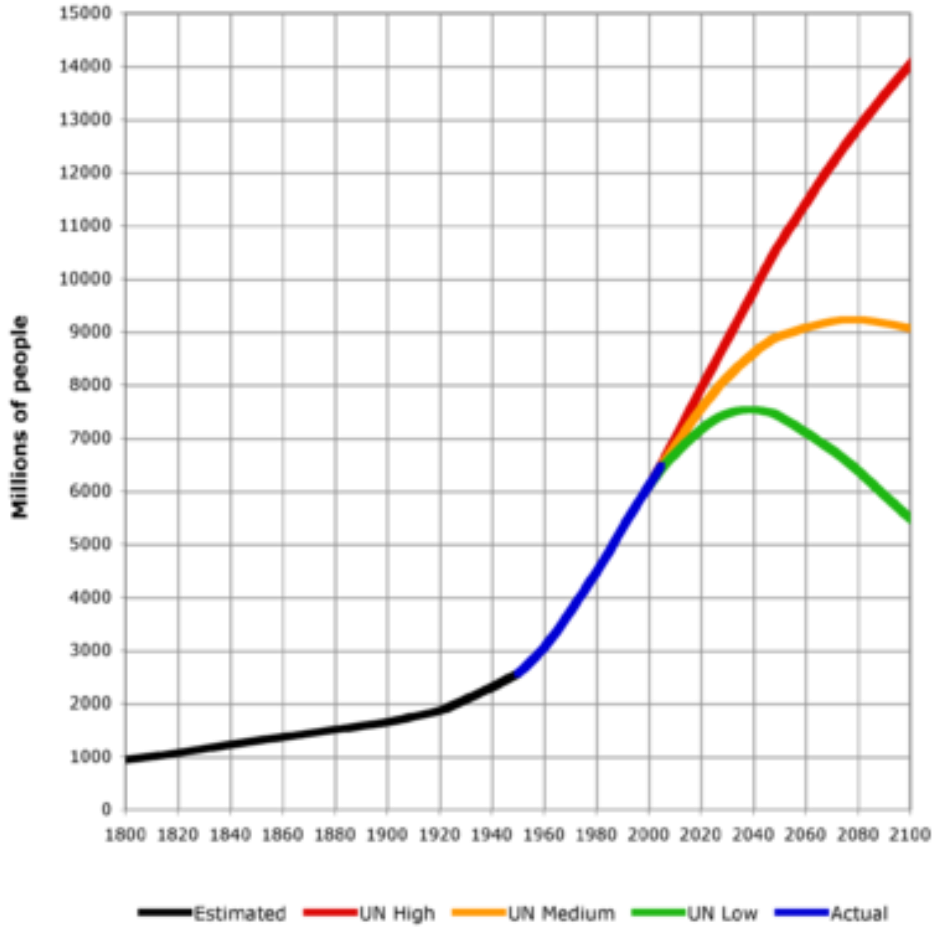
Human Population

Population

1. Obsession for sensual pleasure (Kaam Unmad)
2. Breakdown of human relationship (Village Family → Joint Family → Nuclear Family → Individual → Split Personailty …)
3. Modern Medical Science
   - Lower infant mortality
   - Longer Lifespan
   - Healthier?

Small Family & Long Life VIDEO

World Population Extrapolation VIDEO



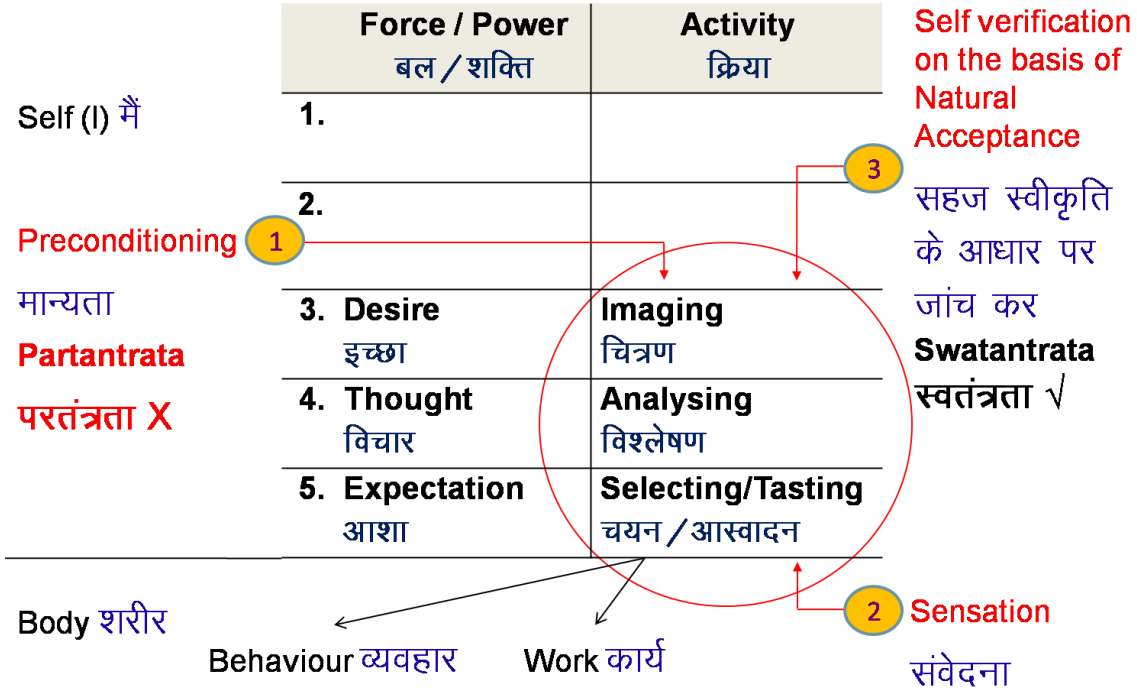
World population from 1800 to 2100

Source: http://en.wikipedia.org/wiki/World_population

The problem is not – just the population

The problem is – population without right understanding

3.1.1. Knowledge of HB– Comparing (Basis for Analysing)



Un-guided
(or under the influence of Preconditioning, Sensation)

Appealing to Senses	Conducive to Health	Profit able
↓	↓	↓
Obsession for Sensation	Obsession for Indulgence	Obsession for Profit

↓

(Sound, Touch, Sight, Taste, Smell)

Holistic Approach

Current Approach

Problem – Population, water scarcity,
Our way of thinking…
(or only symptom?)

Action taken to get rid of it – Technology…
(or symptomatic relief – Temporary?)

Work to be Done in Society

1. Clarity of All Encompassing Solution (Samadhan)
2. Effort for All Encompassing Solution
   Human Education,
   Human Conduct,
   Human Constitution,
   Human Order
3. Problem – Analysis in the light of Samadhan – **Inhuman Conduct** (exploitation of nature, domination… are only the symptoms)
4. Effort for getting rid of problem – **Ensure Human Conduct through Human Education**

Managing Water

Some Efforts Within Existing System: About Water & Food

Farmland/Village

- Natural Farming (E.g. Maharashtra – Subhash Sharma)

Grassland

- Reversing Desertification (E.g. 15 mn hectares on 5 continents – Allan Savory) Video (18 mins)

Forest & Wetland

- Contribute to its right utilisation, protection and enrichment
- or just leave it to nature

Desert

- Water Management (E.g. Rajasthan – Anupam Mishra)

Urban Settlement

- Water harvesting (E.g. Karnataka – Vijayanagar, Bengaluru)

Example of a Study Project in dimension 3-production-work

"Sourabha" is located in southwestern part of Bangalore (Vijayanagar). Plot area is 2400 Sq. ft. (40 ft. x 60 ft.)

Constructed 1995

Entirely dependent on rainwater for all its needs since 1994 (including construction)

No Corporation or BWSSB water connection ever

Rainfall	~1000 mm/year
Collection	~2,23,000 lts/year
Need	~1,80,000 lts/year
Recharges	Ground Water

Videos

Societal Breakdown: Economics of Happiness (1 hr 9 min)

Efforts for Reversing Desertification, Allen Savory (23 min)

Example of Efforts for Preserving Nature

Our Role in Sustaining Harmony in the Nature

- Value education and awareness for the masses
- Value based living (free of obsession of consumption, profit and sensual pleasure, accumulation, domination, exploitation, wars etc.)
- Walking and cycling to the extent possible in our daily life
- Planting trees, reforestation and afforestation
- Protecting areas such as national parks and wildlife reserves, to conserve ecosystems and protect biodiversity
- Water harvesting
- Restoring wetlands
- Preserving rivers
- Sustainable agricultural practices
- Nurturing species of birds and animals
- Stopping poaching of animals
- Reduce, Recycle, Reuse
- Use of renewable material and energy

*There are several examples of governments, people and organizations working for the above cause too.

Typical Examples of Efforts in this Direction

- A person making nests for lacs of birds
- A person planting thousands of trees
- A person restoring rivulets
- A person restoring the water table in thousand of acres of land
- People of a country cycling mostly and roads and pavements being made accordingly
- Watershed programs, river restoration and other preservation efforts (e.g. wildlife) of the Governments around the world
- Efforts by various organizations and companies for reforestation and afforestation
- Water harvesting in the cities
- Campaigns to stop use of one-time use plastic
- Efforts for making eco-friendly houses
- …

Reversing Desertification

Allen Savory videos

Efforts by UHV Volunteers

A short 17-min film in Marathi with English subtitles on the initiative of Natural Farming/Production and Cooperative distribution of fresh natural (organic) produce to 1000 families in Pune by Pratibha and Mahesh Kolte of Pune

https://youtu.be/mzuR3Dd3I9E

A 2019 article in Times of India

https://timesofindia.indiatimes.com/city/pune/universe-seeker-to-clean-eating-advocate-astrophysicist-promotes-natural-farming/articleshow/72430717.cms