

# Medical Academy named after S.I.Georgievsky of Vernadsky



## CRIMEA FEDERAL UNIVERSITY

**TOPIC : MAN AS AN ECOLOGICAL FACTOR. MAIN DIRECTIONS  
AND RESULTS OF MAN MADE ENVIRONMENTAL CHANGES IN  
INDIA**

**SUBJECT : MEDICAL BIOLOGY**

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GROUP: 191B**

# Introduction

Environmental change is a change or disturbance of the environment most often caused by human influences and natural ecological processes. Environmental change does not only encompass physical changes, but it can be things like an infestation of invasive species is also environmental changes.

# Man as an ecological factor

Man is an important part of the ecosystem of nature. All cultural activity interferes with the ecological balance of the local environment, and every human society is more or less dependent on natural conditions and resources. In this context environment also includes neighbouring groups of people



**AIR POLLUTION**  
including indoors and outdoors



**CLIMATE CHANGE**

**INADEQUATE WATER, SANITATION**  
and hygiene



**BUILT ENVIRONMENTS**  
including housing and roads

**CHEMICALS**  
and biological agents



**AGRICULTURAL PRACTICES**  
including pesticide-use, waste-water reuse

**RADIATION**  
ultraviolet and ionizing



**COMMUNITY NOISE**



**OCCUPATIONAL RISKS**



# **Examples of man made environmental changes in India**

1. Climate change,
2. Freshwater shortages,
3. Loss of biodiversity (with consequent changes to function of ecosystems),
4. Water pollution
5. Soil pollution etc.,

# Man made environmental changes in India

Air pollution, poor management of waste, growing water scarcity, falling groundwater tables, water pollution, preservation and quality of forests, biodiversity loss, and land/soil degradation are some of the major environmental issues **India** faces today.

# Air pollution in india



# **Environmental changes leads to Climatic changes**

Climate Change one of the major areas that will be impacted by climate changes is India mainly because of its diverse terrain. 12

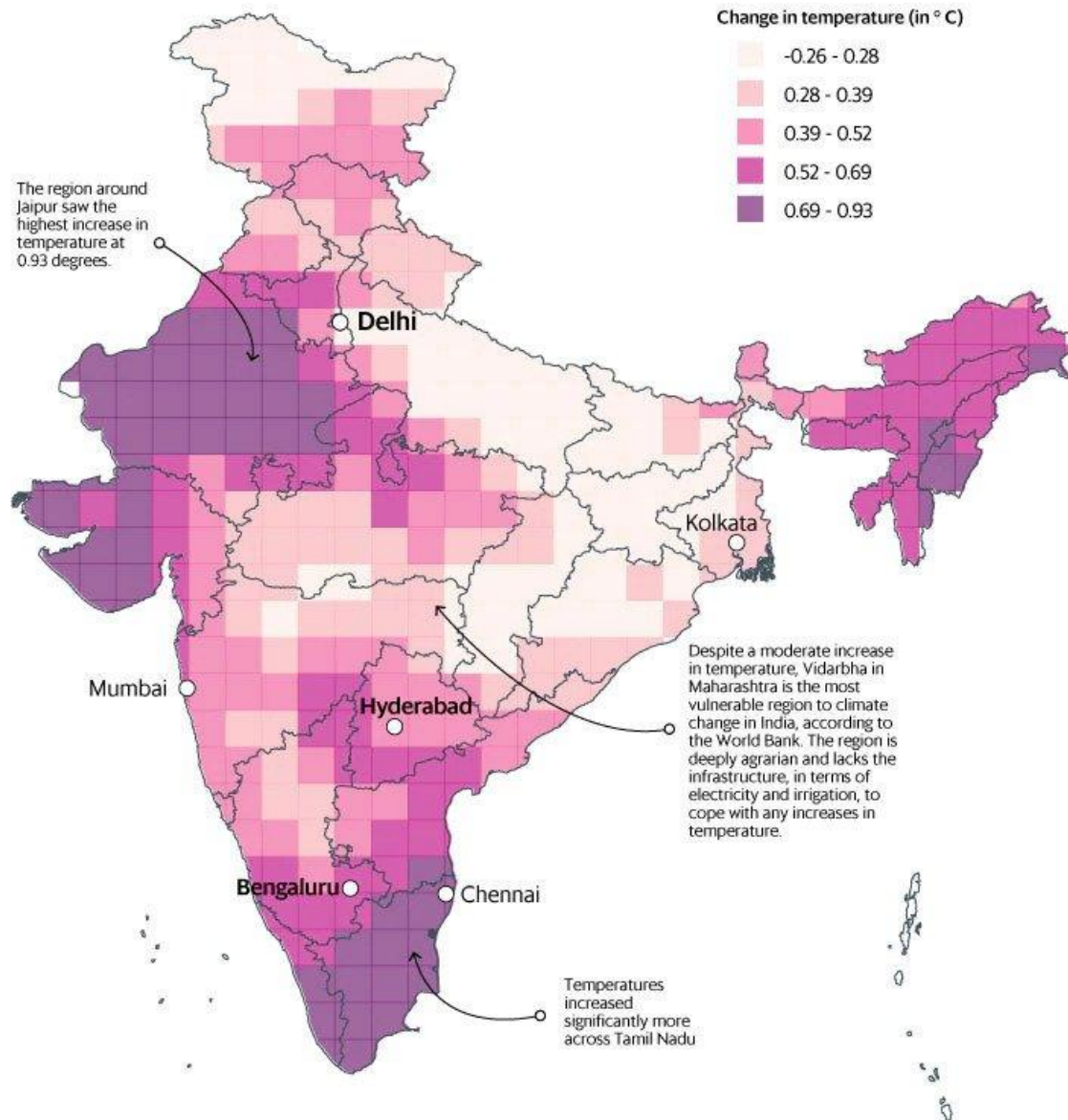
Climate change is expected to have a serious impact in this region as the country is rapidly exhausting its natural resources thereby destroying its environment mostly due to “urbanization, industrialization and economic growth.



Chart 2a

## Some parts of India are getting hotter

Changes in temperature between the last decade (2008-18) and 1950-80 calculated for 1° x 1° grid as provided by IMD



# Result of environmental changes in India

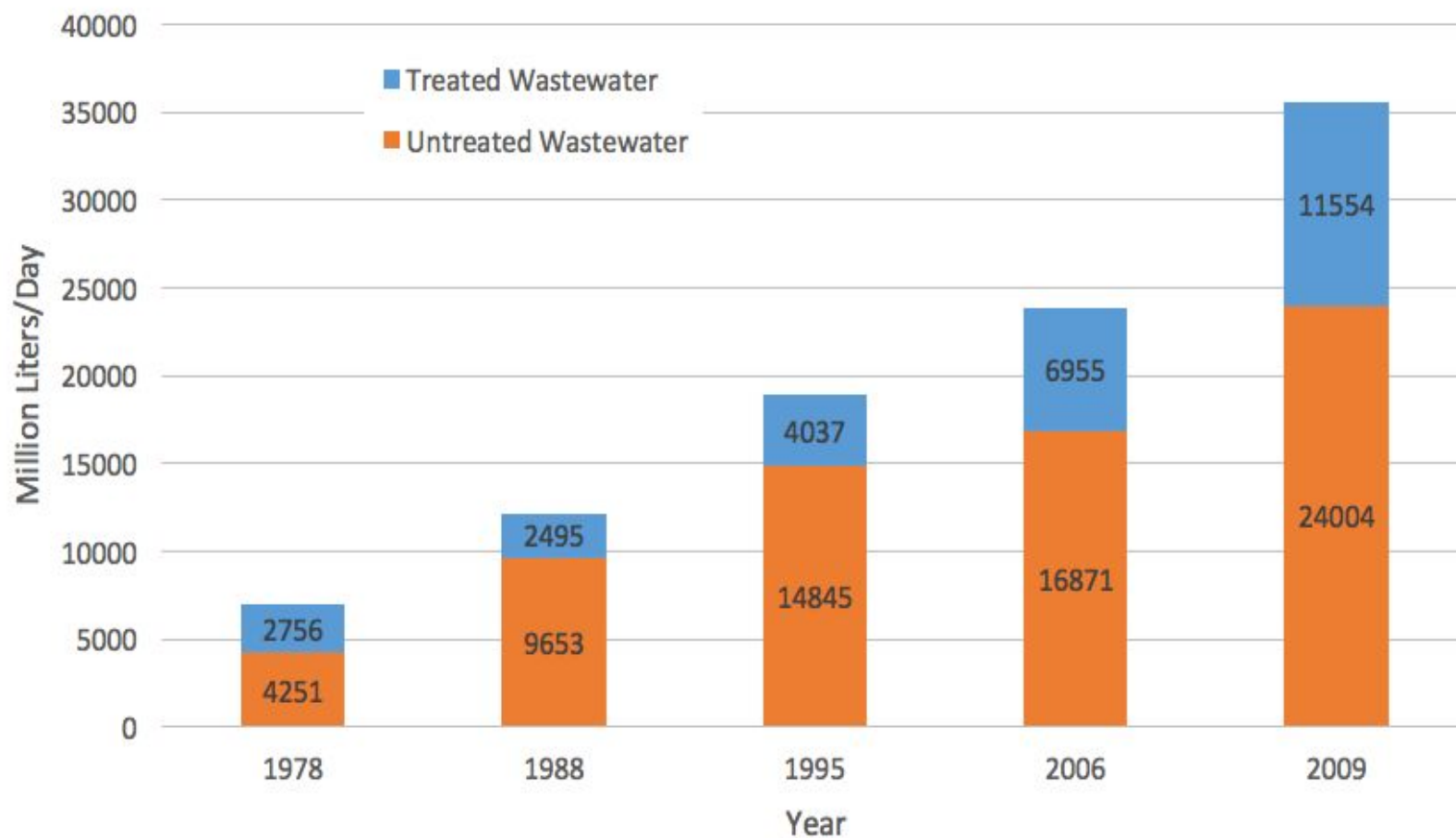
**Chennai Floods 2015:** “The city of Chennai recorded multiple torrential rainfall events during November-December 2015 that inundated the coastal districts of Chennai, Kancheepuram and Tiruvallur, and affected more than 4 million people with economic damages that cost around US\$3 billion.”<sup>26</sup> As per the Deputy Director General of the Delhi based Centre for Science and Environment, the Chennai floods were the direct outcome of the increasing global temperature breaking a 100 year old record with one day’s rainfall covering a month’s average.



# Water pollution in India

- The largest source of **water pollution** in **India** is untreated sewage. Other sources of pollution include agricultural runoff and unregulated small-scale industry. Most rivers, lakes and surface water in India are polluted due to industries, untreated sewage and solid wastes.

## Treated and Untreated Waste Water From Indian Cities (pop. > 100,000) 1978-2009

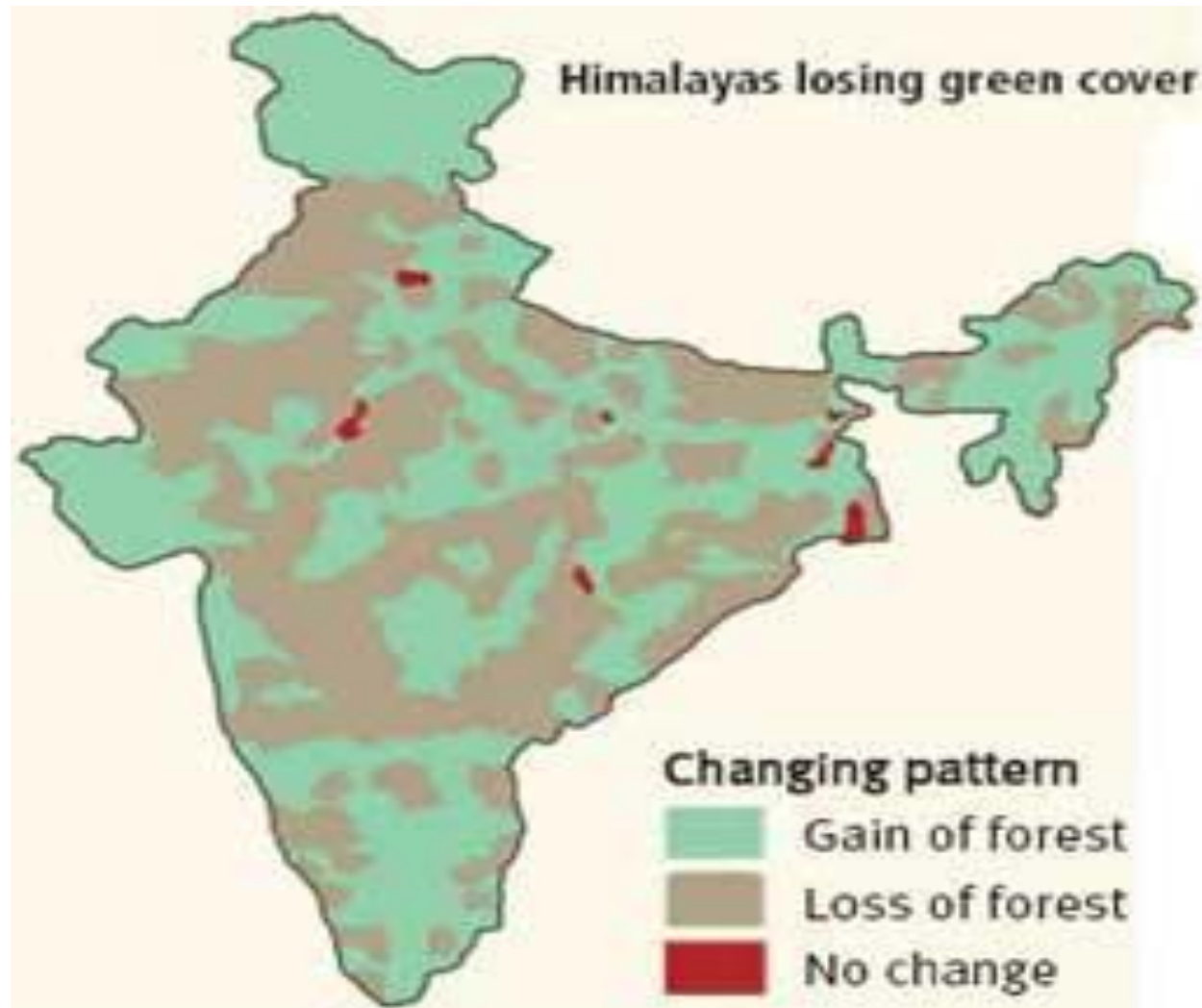


Ref: [http://www.sulabhervis.nic.in/Database/STST\\_wastewater\\_2090.aspx](http://www.sulabhervis.nic.in/Database/STST_wastewater_2090.aspx)

# Biodiversity loss

- **Biodiversity loss** is the extinction of species (plant or animal) worldwide, and also the local reduction or loss of species in a certain habitat. The latter phenomenon can be temporary or permanent, depending on whether the environmental changes that leads to the loss is reversible through ecological restoration/ecological resilience or effectively permanent.

# India losing biodiversity hotspots







Lets Go Green.....

Thank You











































