MEDICAL ACADEMY NAMED AFTER S.I. GEORGIEVSKY OF V.I. VERNANDSKY C.F.U

Influence of biological factors

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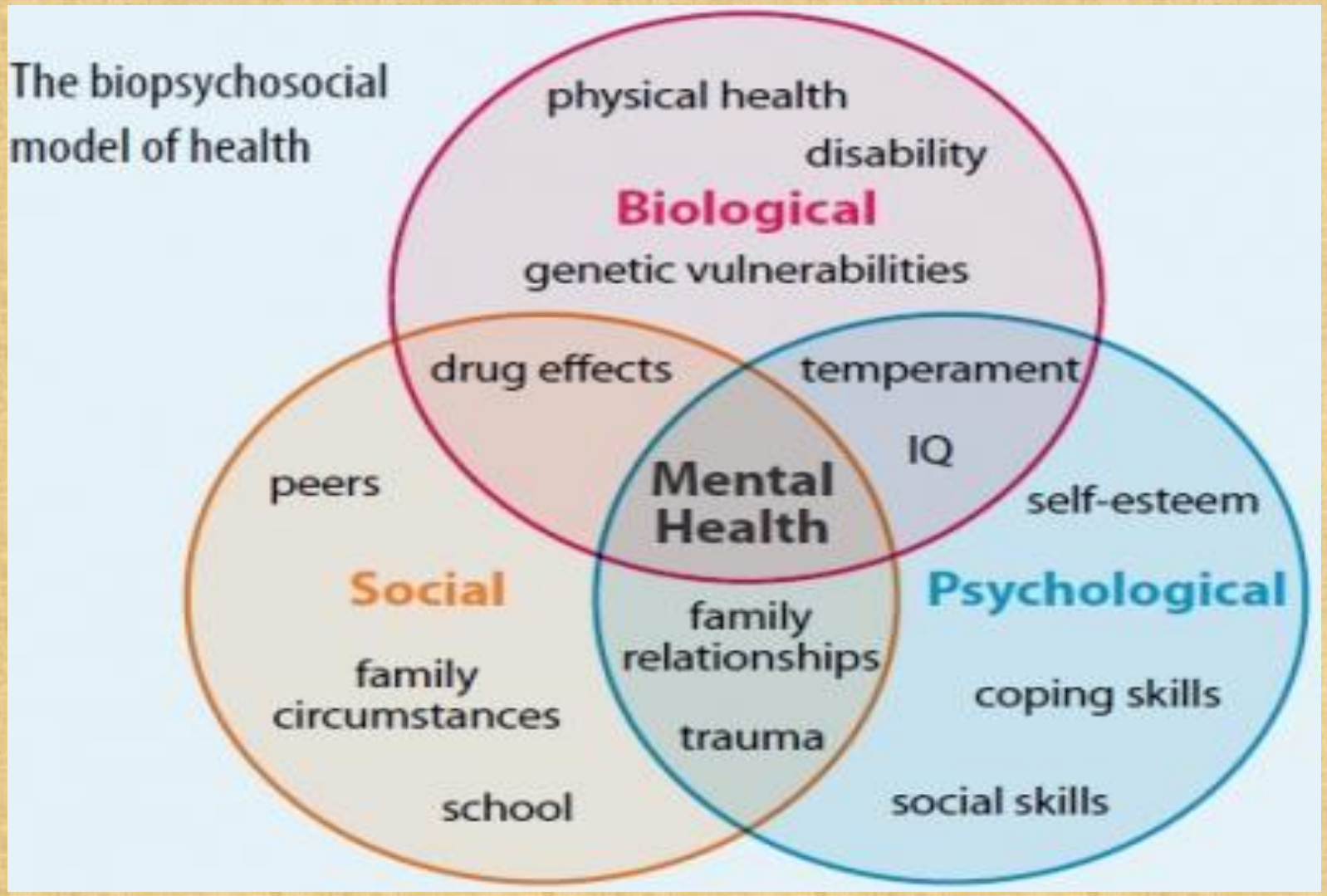
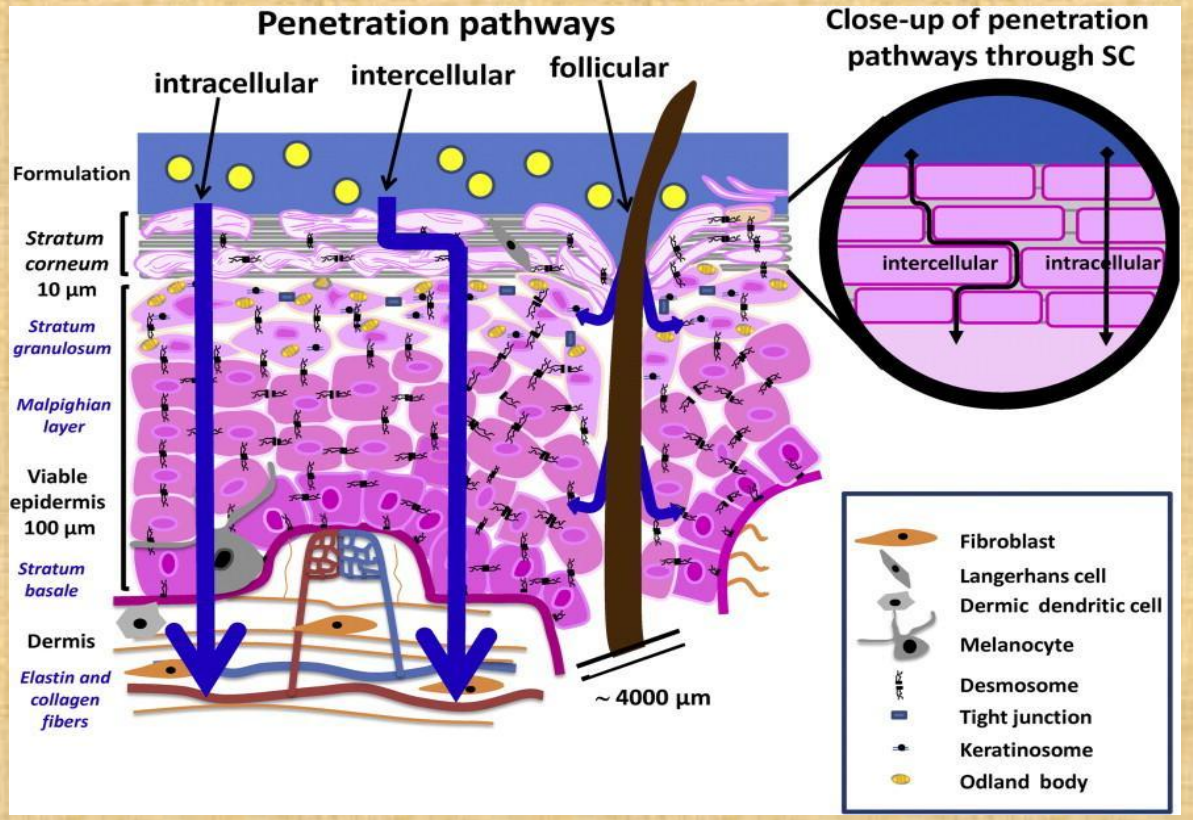

The biopsychosocial model of health
physical health
disability
Biological
genetic vulnerabilities
drug effects
temperament
IQ
peers
Mental Health
self-esteem
Social
Psychological
family relationships
family circumstances
coping skills
trauma
school
social skills

Microbial Agents of Infectious Disease

- Bacteria
- Viruses and rickettsia
- Mycoses (fungal diseases)
- Protozoa
- Helminths
- Arthropods

PENETRATION PATHWAYS

- The human body has three large epithelial surfaces namely skin,respiratory mucosa,and ailmentary tract
- They have two lesser surfaces namely genital tract and conjuctiva



Classification of infectious disease

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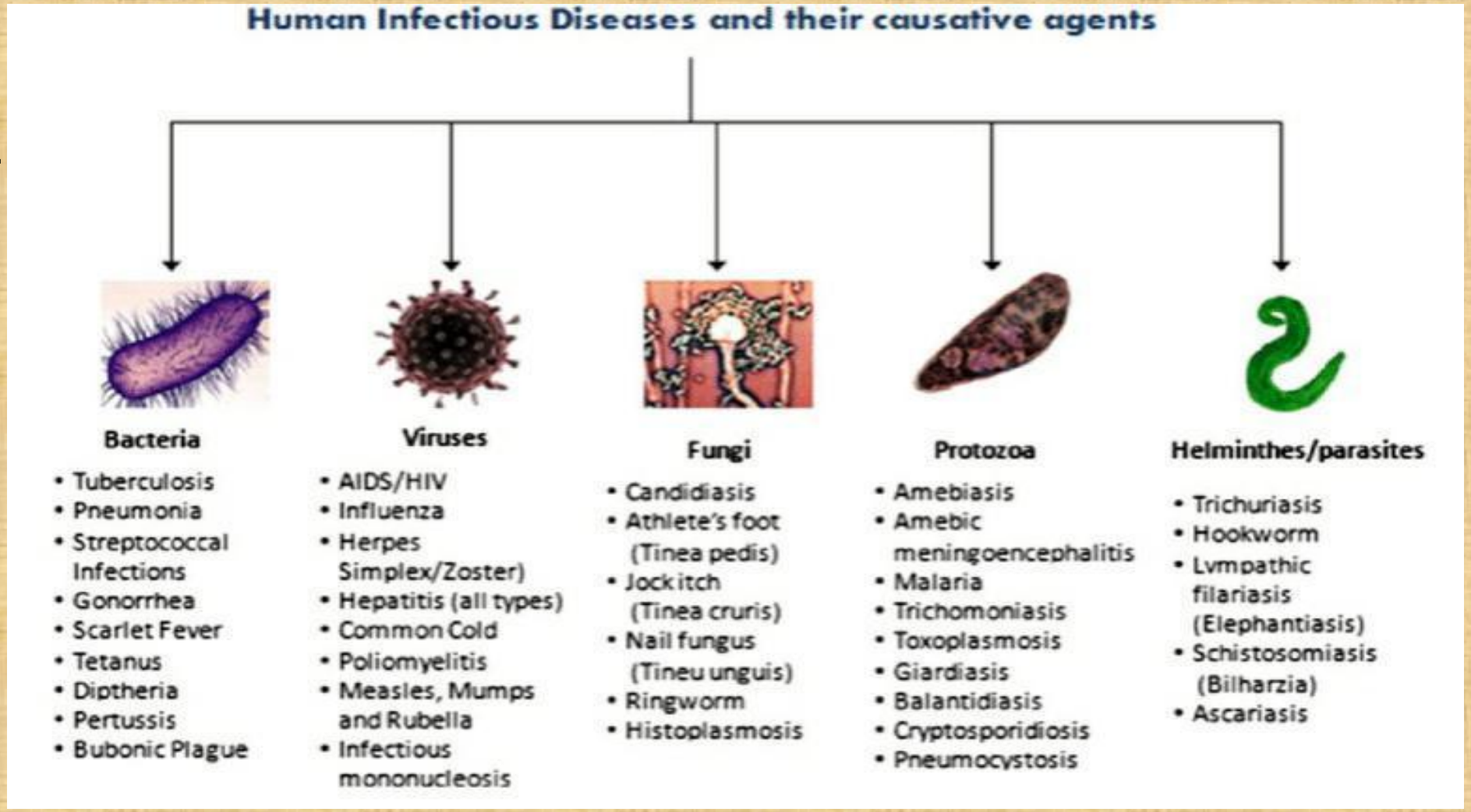
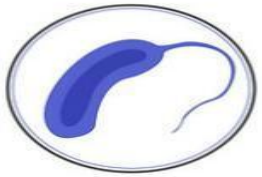
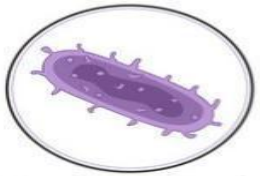


Causative agents of dangerous infectious diseases

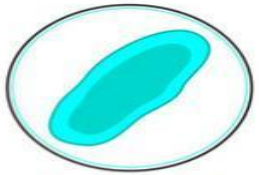
Meningococcus
(Meningococcal desease)



Vibrio Cholarae
(Cholera)



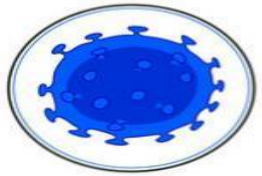
Yersinia Pestis
(Plague)



Francisella Tularensis
(Tularemia)

Variola Major
(Smallpox)

Plasmodium falciparum
(Malaria)

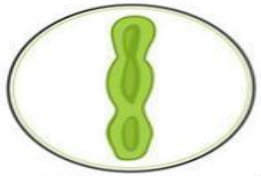


HIV
(AIDS)

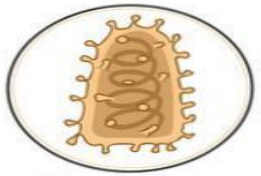
Mycobacterium
tuberculosis

Ebolavirus

Poliovirus
(Poliomyelitis)



Bacillus antracis
(Anthrax)



Lissavirus
(Rabies)

WORKS OF E.N. PAVLOVSKY

- The founder of school of thought Evgenni Nikanorovich Pavlovsky (1884 – 1965) worked at the zoological institue of the USSR academy of sciences from 1930 – 1965 and was the director of the institur from 1942 to 1962
- E.N. Pavlovsky was twice a prize winner of state price (1941, 1950) and lenin prize (1965). President of the all- union entamological socoietyu of the USSR sciences (1931 -1965)
- Major publications of E.N. pavlovsky
- Handbook on parasitology of man and theory on vectors of transmissive diseases
- Natural focality of transmisssive diseases

NATURAL FOCAL DISEASES

- The aim of this study is to identify the diversity and geography of natural focal diseases in Russia and to develop cartographic approaches for their mapping includng mathemetical cartographical modelling.
- Russian medico geographical mapping of natural-focal diseases is highly developed regionally and locally but extremely limited at the national level.
- To solve this problem a scientific team of the faculty of geography at loonosov moscow state university has developed and implemented a project of a medico-geographical Atlas of russia “Natural focal diseases”

LANDSCAPE SCIENCE

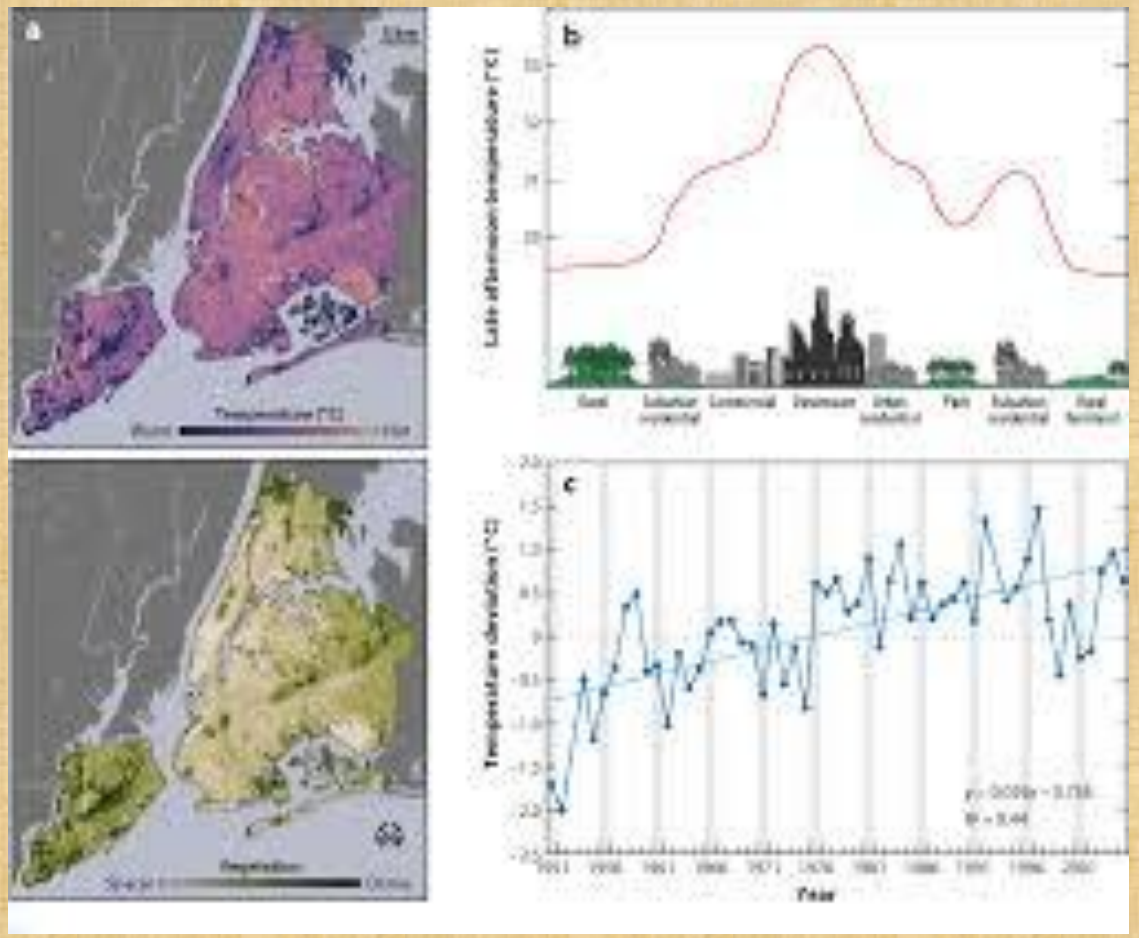
- The BASIS OF LANDSCAOE SCIENCE is the theory that the geographic landscape is the primary element in the physicogeographical differentiation of the earth.

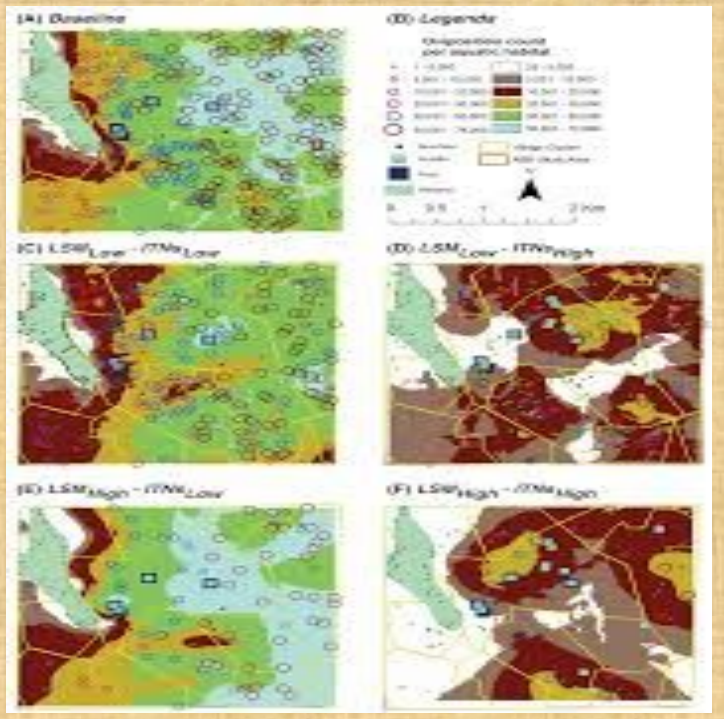
- Landscape science deals with the origin, structure, and dynamics of landscapes.

- Landscape science also deals with the study of zones, sectors, regions, provinces, and other higherbanking regional geosystems

TASKS OF LANDSCAPE SCIENCE

- ITS TASKS IS TO STUDY THE PARTS OF THE LANDSCAPE (the lowest level geosystems)
- Localities‘
- Natural boundaeies
- Their relative arrangement and interactions
- The types of spatial structures formed by lanscapes,


a
b
c
Year


(A) Baseline
(B) Legends
(C) LSM$_{Low}$ - ITN$_{Low}$
(D) LSM$_{Low}$ - ITN$_{High}$
(E) LSM$_{High}$ - ITN$_{Low}$
(F) LSM$_{High}$ - ITN$_{High}$

DYNAMICS OF INVASIVE DISEASES

- The dynamics of any infections disease are heavily dependant on the rate of transmission from infectious to susceptible hosts
- In many disease models, this rate is captured in a single compound parameter, the probability of transmission B
- Concepts underlying the different approaches to modeling disease transmission and by laying out why a more detailed understanding of the variables involved is usually desirable

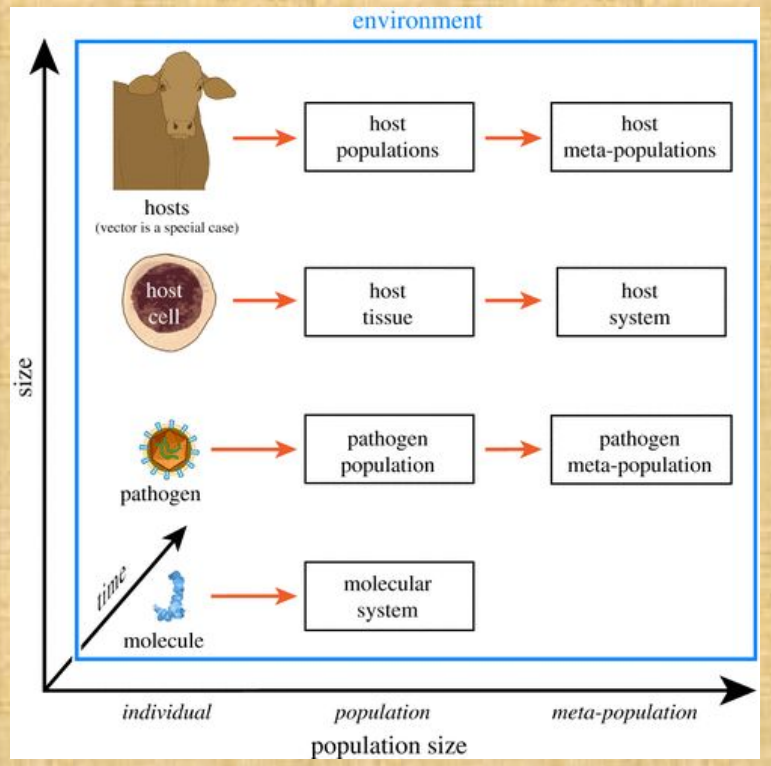
- Invasive species, disease vectors, and pathogens affect biodiversity, ecosystem function and services, and human health.

- Climate change, land use, and transport vectors interact in complex ways to determine the spread of native and non-native invasive species, pathogens, and their effects on ecosystem dynamics

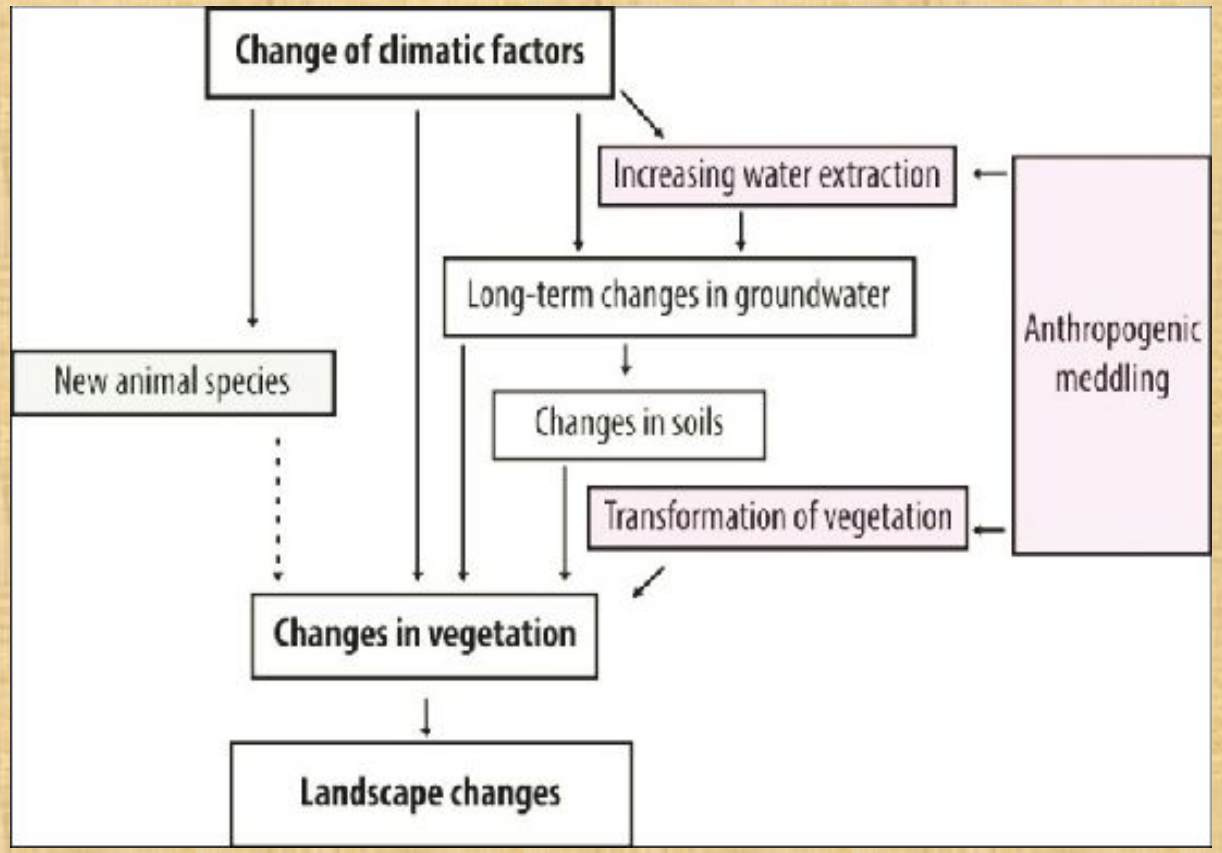
- Early detection and in-depth understanding of invasive species and infectious diseases will require an integrated network of research platforms and information exchange to identify hotspots of invasion or disease emergence

- Partnerships with state and federal agencies that monitor the spread and impacts of invasive species and pathogens will be critical in developing a national data

DYNAMICS OF NATURAL FOCI OF INFECTIOUS DISEASE



ANTHROPOGENIC LANDSCAPE DAMAGE



Poisons and allergens of plant origin

- The study of plant poisons is known as phytotoxicology.
- Most of the poisonous higher plants are angiosperms, or flowering plamts
- Poisonous plants may be classified according to the chemical nature of their toxic constituents

Toxic effects on humans

- Plants contain substances that may exert toxic effects on skin, lung, cardiovascular system, liver, kidney, bladder, blood, nervous system,bone, and the endocrine and reproductive systems
- Contact dermatitis and photosensitivity are common skin reactions with many plants
- Gastrointestinal effects range from local irritation to emesis and/or diarrhea

Poisons of animal origin(zootoxin)

- Venomous animals produce poison in a highly developed secretory gland or group of cells and can deliver their toxin during biting or stinging

CLASSIFICATION

- Zootoxins can be divided into several categories:
- (1) oral poisons—those that are poisonous when eaten;
- (2) parenteral poisons, or venomous—those that are produced by a specialized poison gland and administered by means of a venom apparatus;
- (3) crinotoxins—those that are produced by a specialized poison gland but are merely released into the environment, usually by means of a pore


Thank you!
grammarly