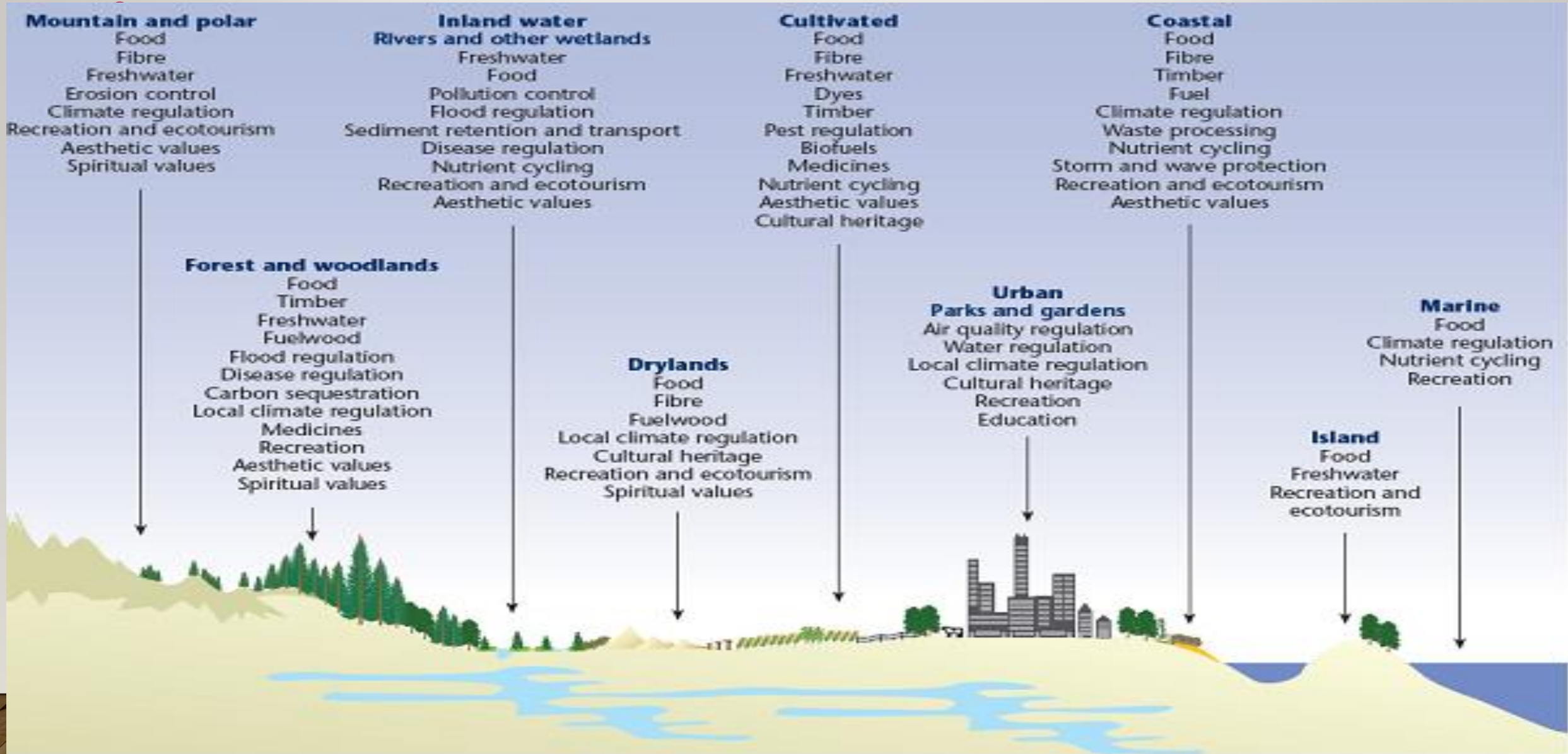


ENVIRONMENTAL POLITICS, GLOBAL GOVERNANCE AND DEVELOPMENT

IRL 4590 UNDERGRADUATE SEMINAR

FALL 2021

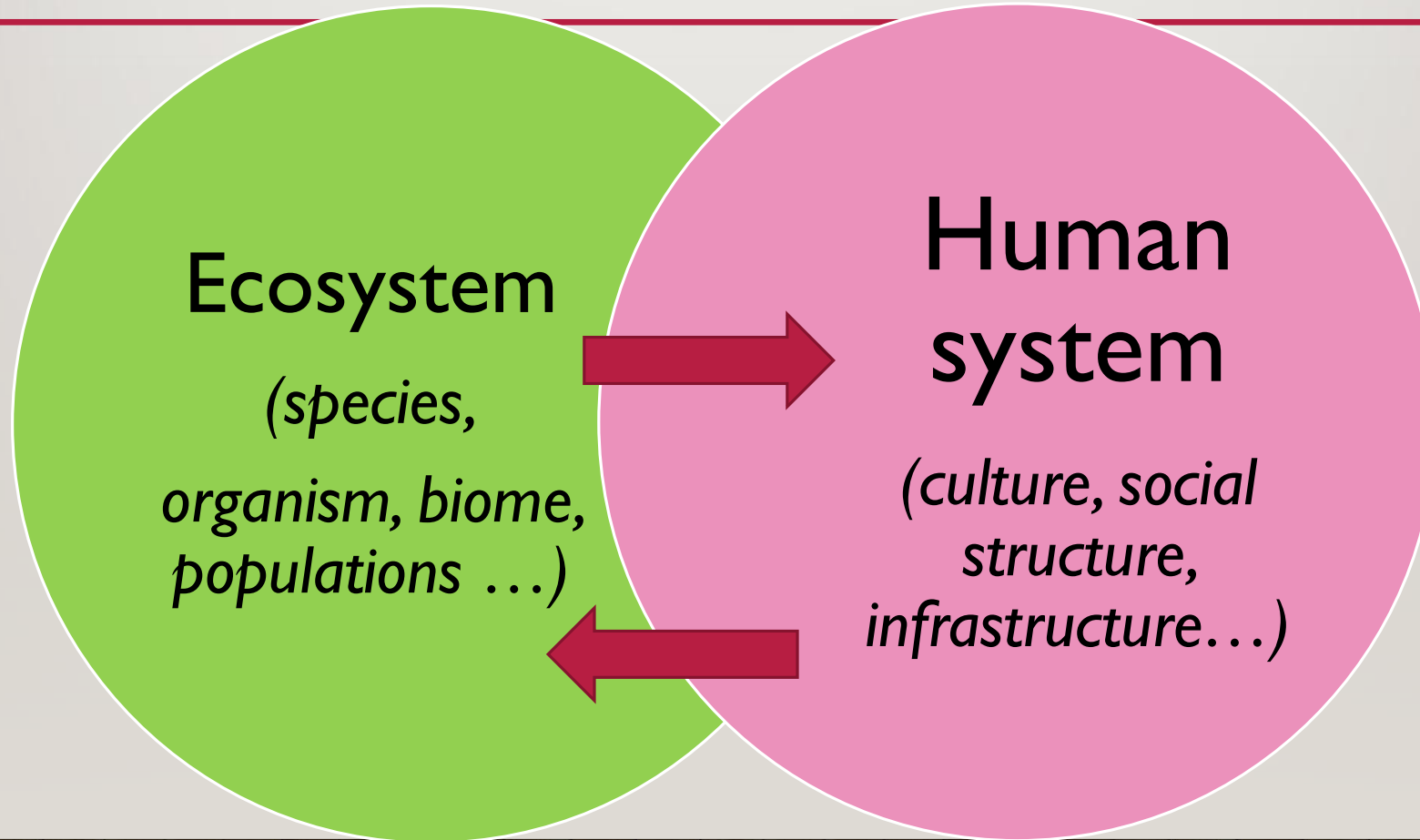
ECO-SYSTEM SERVICE



PART I: KEY TERMS, CONCEPTS, AND APPROACHES

Required reading: 'Ch. I. 'Environment, human systems and social science' in Harper, Charles (7th ed.) (2017) *Environment and Society: Human Perspectives on Environmental Issues*

INTERACTIONS



USE OF CONCEPTS & CONCEPTUALISATION

ECO-SYSTEM (COMPONENTS)

- **Organism:** individual form of life (plants, animals, *cf. human bodies*)
- **Species:** individual organisms of the same kind (*cf. human species*)
- **Population:** a collection of organisms of **the same** species living within a particular area

ECO-SYSTEM (COMPONENTS)

- **Community:** populations of **different** organisms living/interacting in an area at a particular time (a unit of eco-system)
- **Biome:** Large life and vegetation zones consisting of many smaller ecosystems (savannas, forests, prairie ...)
- **Habitat:** Specific location of an organism within an ecosystem (shrubs, high canopy, understory, ground feeders)

HABITAT (E.G. HIGH CANOPY; SHRUB)



HABITAT (E.G. UNDERSTORY; GROUND FEEDER)





ECO-SYSTEM

- **Definition of eco-system:**

“A basic unit of ecological analysis including all the varieties and populations of living things that are inter-dependent in a given environment; that is, a community of things that live and interact in parts of the geophysical environment with its own structure and hierarchy.”

EVOLUTION OF ECO-SYSTEM

- Biological species evolve (3 bil yrs) through ‘**natural selection and rare genetic mutations**’ = **co-evolution, reciprocal natural selection** (eg. food chain)
- Competition among species: ‘competition for available energy’ (nutrients and food) → ecological succession (= replacing one another)

HUMAN VS ECOSYSTEM

- **Human system? (substructure and infrastructure)**

<1> **Culture:** world views, ideologies, knowledge, values, languages, customs, etc.

<2> Social structure: nation, state, class, kinship, ethnicity, gender...

<3> Material infrastructure: wealth, technological subsistence, human population... (physical components)

- ***Plus, biophysical resources taken from nature (eg. land, forests, minerals)***

REFERENCE: LEARNING MATERIAL

- Textbook Chapter 1
- Table 1.1. p.3
- Table 1.2. p.11
- Figure 1.3

TEXTBOOK

TABLE 1.1 Elements of Sociocultural Systems

<i>Culture</i>	worldviews paradigms Ideologies knowledge, beliefs, values symbols, language
<i>Social structure</i>	world-system society nation state complex organizations (bureaucracies) social stratification systems (based on economic class, ethnicity, kinship, or gender) small groups kinship systems status-roles
<i>Material infrastructure</i>	wealth (tokens, wives, cattle, money) material culture, subsistence technologies (plows, computers) human population (size and characteristics) human–environment relations biophysical resources (land, forests, minerals, fish)

HUMAN'S BIAS IN RISK PERCEPTION

'real environment vs cognized environment'

- *'People exist in natural environments, but they live and act in worlds mediate and constructed by cultural symbols' (Berger and Luckmannm 1976; Schutz, 1932/1967; Thomas, 1923) There is an external biophysical environment independent of how people think about it, but people act on the basis of what they think the environment to be.'*
- *'To differentiate this imagined environment from the 'real environment', ... scholars have invented a rather awkward term, cognized environment, to mean **their human definitions and interpretations of the biophysical environment.**'*

HUMAN AND ECOSYSTEM

- **How are they inter-linked?**

e.g. water

(i) Essential for life of human (and animal and plants conditions)

(ii) Extracted from the nature (eg. glaciers, ice cap, rainfalls, ground, lakes, rivers, wetland, ocean)

HEP VS NEP

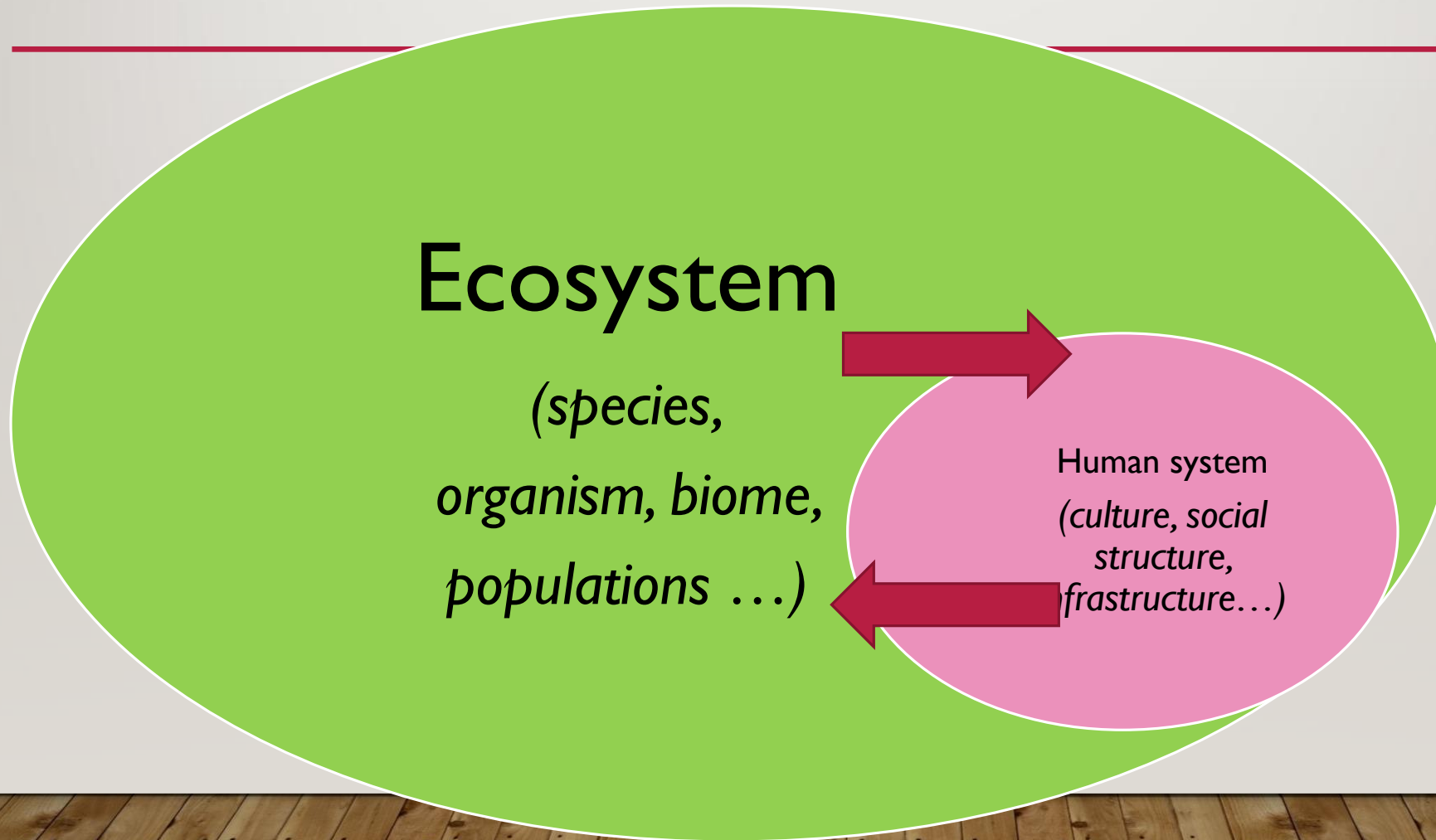
DISTINCTION PROPOSED BY DUNLAP & CATTON JR. (1979)

- HEP (human exceptionalism paradigm):
human are exempt from nature's influence, eg. physical environment, irrelevant for understanding social behavior

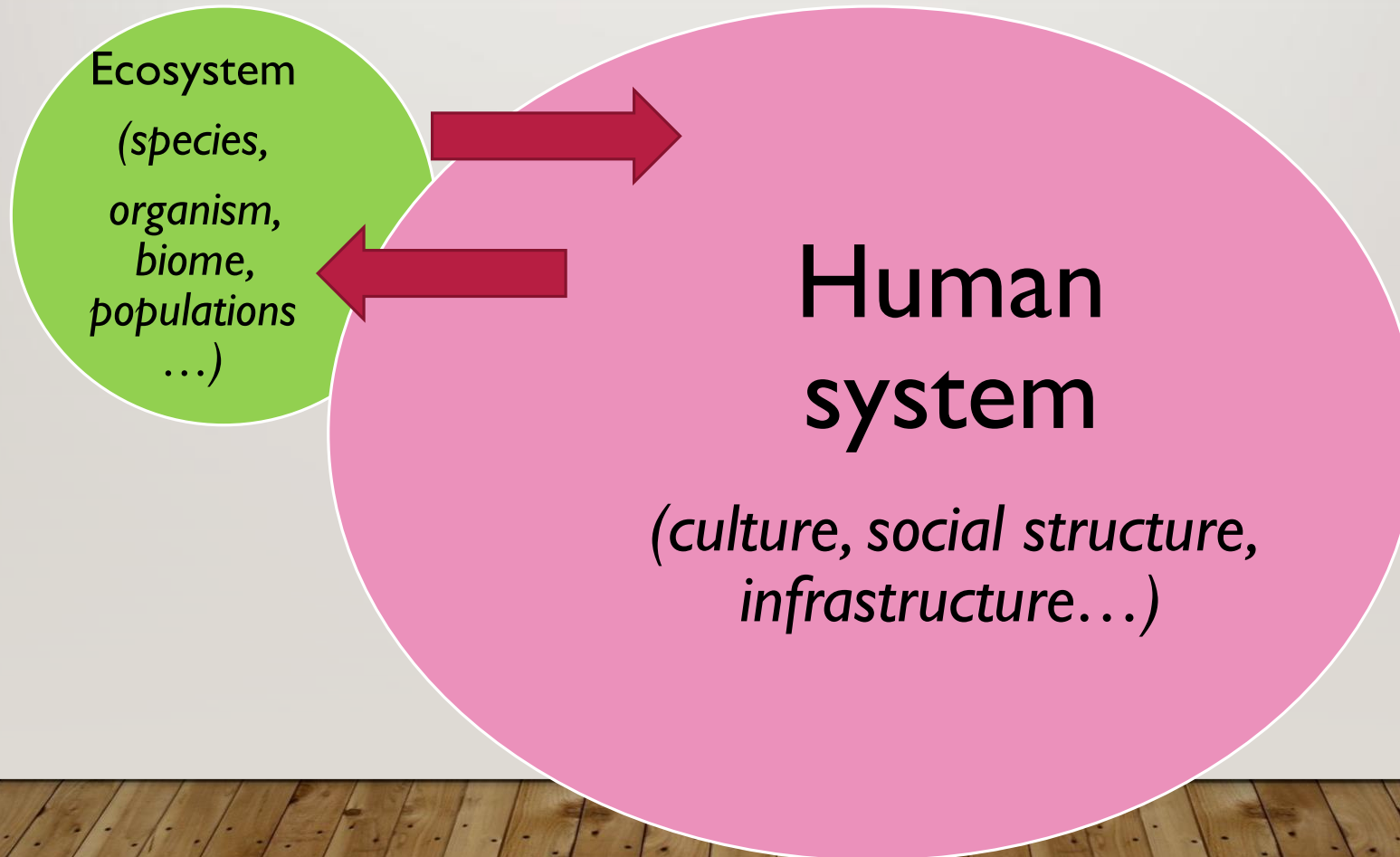
L. SEGHEZZO, (2009) 'THE FIVE DIMENSIONS OF SUSTAINABILITY' ENVIRONMENTAL POLITICS, P. 541

- NEP (new ecological paradigm):
one among many species →
thus influenced by the forces of nature (human as a part of nature)

INTERACTIONS (ECO-CENTRISM)



INTERACTIONS (ANTHROPO-CENTRISM/HUMAN EXCEPTIONALISM)



STUDENT'S EXERCISE/DISCUSSIONS

Identifying stakeholders in environmental decision

CONVERSION / LAND USE



STAKE-HOLDERS (ACTORS) AND INTERESTS

Actors	Interests
Federal judge, R. Desterro	
President, D. Rousseff	
BNDES, national development bank	
Environmentalists	
Indigenous people	
IBAMA, environmental agency	
Contractor, Sompanhia Hidro Electrica do Sao Francisco	
Celebrities, Sting, J. Cameron film director	

ISSUE-FINDING: AMAZON BELO MONTE DAM (BRAZIL, 2011)

- ✓ Plan of building a huge hydro-electric dam in the Amazon rainforest
- ✓ Funding an environmentally harmful project
- ✓ Political plan of upgrading nation's energy infrastructure
- ✓ Protection of the world's largest tropical rainforest
- ✓ Displacing tens of thousands of local indigenous people
- ✓ 29 environmental conditions to be met
- ✓ Disruption of the flow of the Xingu river
- ✓ Legal issues: e.g. injunctions blocking construction
- ✓ 11,000 megawatt dam = opportunity of development with job creation and providing electricity to 23 million homes
- ✓ Rise of environmental movements / protectionism
- ✓ Alliance with global groups
- ✓ Other environmental impacts : 50 sq km of land exposed to the risk of flood