

Development & Environmental Geography

1. Globalisation - definition, perspectives, history of globalisation and global change
2. Globalisation and technological change
3. Global value chains and production networks
4. Multinational corporations, tax havens and tax avoidance
5. Migration in the contemporary world
6. Cultural aspects of globalisation
7. Political aspects of globalisation
8. Poverty-environment nexus in developing countries
9. Specifics of development in drylands
10. Specifics of development in tropical forests
11. Traditional nature conservation in developing countries
12. Community-based natural resource conservation in developing countries
13. Market-based natural resource conservation in developing countries
14. Types of demographic data and their usability, historical evolution of demography
15. Population dynamics (birth rate, fertility, mortality, migration) and basic methods of their evaluation
16. Population structures (by sex, age, religion, education) and basic methods of their evaluation
17. Basics of population growth projections

Global Challenges

1. Evolution of life on the Earth, biological and cultural evolution
2. The illusion of unlimited economic growth
3. Determinants of population growth
4. Food production and its limits, food security
5. Energy security, sustainable energy
6. Epidemics and humankind – the big “regulator”
7. Water – the key determinant of development
8. Drought, desertification and degradation of land
9. Climate change in history, current changes (global warming), natural and anthropogenic factors of climate change
10. The synergy of global problems, the effect of “perfect storm”
11. The Gaia hypothesis according to James Lovelock
12. Collapse and regeneration of civilizations
13. Threats and opportunities of globalisation
14. Threats and opportunities of new technologies (biotechnology, nanotechnology, information technology)

Foresight, Social Changes

1. History of the futures research – from futurology to foresight
2. Foresight – definition, key elements of foresight, using of foresight in different fields of human activity
3. Characteristics of foresight methods (environmental scanning, Delphi method, text mining for technological foresight)
4. Characteristics of foresight methods (wild cards, scenarios, participatory methods, science and technology roadmapping)
5. Characteristics of key steps of foresight (framing, scanning, forecasting, visioning, planning, acting)
6. Modeling changes, principles of system and ecosystem thinking
7. Social and technological changes, their impact on development

8. Four dimensions of change (sources, time horizon, speed, the way of change)
9. The theory of interrupted equilibria
10. Theory of social change (progress theory, development theory, technology theory)
11. The theory of social change (culture theory, cycle theory, conflict theory)
12. The theory of social change (market theory, power theory, evolution theory, emergence theory)
13. Future studies - scanning and "weak signals", STEEP (social, technological, economic, environmental and political aspects of foresight)
14. Future studies - forecasting
15. Future studies - critical thinking and creativity
16. Future studies - alternative scenarios (possible, probable, preferred)
17. Influencing of the future - leadership, visions of the future
18. Influencing the future - strategic planning, change management
19. Economic Evaluation: Cost-Effectiveness Analysis
20. Economic Evaluation: Cost-Benefit Analysis

C.3.4 Quantitative Methods for Foresight

1. Descriptive statistics and probability
2. Correlation Analysis
3. Probability distributions (normal distribution, t distribution, chi-square distribution)
4. Simple linear regression analysis
5. Regressions - interval predictions and hypotheses testing
6. Regressions - predictions and modelling
7. Multiple regression analysis
8. Regressions - non-linear relationships

C.3.5 Qualitative Methods for Foresight

1. Theory and philosophy of science
2. Research project (formulation and operationalization of the research problem, methods of data collection and data analysis, time frame, feasibility)
3. Ethics in qualitative research (ethics with respect to participants, community, other researchers, management of information, informed consent, anonymization, covert research)
4. Quality indicators in the qualitative research
5. Research sample, sampling strategies
6. Methods of data collection - observation
7. Methods of data collection - interview
8. Methods of data collection - focus groups
9. Qualitative data analysis