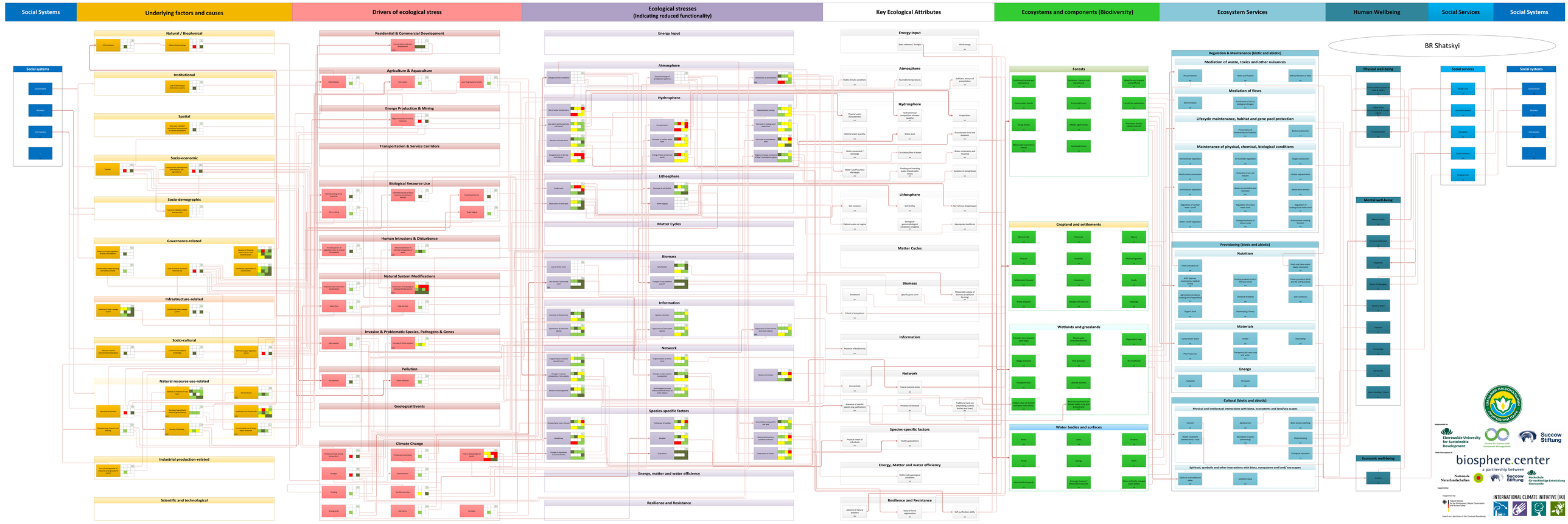
Social Systems
Underlying factors and causes
Drivers of ecological stress
Ecological stresses (Indicating reduced functionality)
Key Ecological Attributes
Ecosystems and components (Biodiversity)
Ecosystem Services
Human Wellbeing
Social Services
Social Systems
BR Shatskyi
Social systems
Government
Business
Civil Society
Natural / Biophysical
CO2 emissions
Global climate change
Institutional
Lack of financing of conservation systems
Spatial
Non-river (coastal, terrestrial ecosystems) fragmentation
Socio-economic
Tourism
Low economic development (long-lasting non-agricultural)
Socio-demographic
Temporal migration (labor emigration)
Governance-related
Absence of legal regulation of land consolidation
Absence of financial resources for large-scale conservation
Unsolicited market (being and selling of land)
Lack of control of natural resource use
Insufficient supervision of construction
Infrastructure-related
Absence of water storage system
Insufficient water storage system
Socio-cultural
Absence / lack of environmental education
Low level of ecological knowledge
No following of legislative norms
Natural resource use-related
Absence of removal of invasive species
Monocultures
Agricultural activities
Burning of agricultural residues (agriculture)
Ineffective use of peat soils
Illegal garbage disposal and burning
Burning of garbage
Uncontrolled use of long-term water resources
Industrial production-related
Lack of management of industrial and agricultural wastes
Scientific and technological
Residential & Commercial Development
Uncontrolled residential development
Agriculture & Aquaculture
Deforestation
Soil erosion
Lack of agricultural activity
Energy Production & Mining
Illegal extraction of mineral resources
Transportation & Service Corridors
Biological Resource Use
Overharvesting of fish resources
Unlimited harvest of flora (medicinal, ornamental, farmer)
Hunting (Lynx)
Clear cutting
Illegal logging
Human Intrusions & Disturbance
Tramping down or destruction of a part of grassland
Manipulations of natural hydrological water
Natural System Modifications
Hydrotechnical melioration (dewatering)
Destruction of hydrological structures (dams)
Forest fires
Peat cut fires
Invasive & Problematic Species, Pathogens & Genes
Alien species
Increase of forest pathogens
Pollution
Soil pollution
Water pollution
Geological Events
Climate Change
Increase of mean annual temperature
Temperature anomalies
Frost in late spring (an. peaks)
Drought
Desertification
Flooding
Rainfall anomalies
Strong winds
Hail storms
Tornados
Energy Input
Atmosphere
Changed climate conditions
Natural change of precipitation patterns
Uncertainness of precipitation
Hydrosphere
Rise of water temperature
Low water quality (particles and bacteria)
Decrease of water level
Disappearance of springs and streams
Eutrophication
Decrease in surface water level
Drying of lakes and private ponds
Sedimentation (silting)
Decrease in underground water level
Increase of groundwater level
Negative change (salinization of soil, hydrological regime)
Lithosphere
Eroded soils
Destruction of peat layer
Decrease of soil fertility
Water logging
Matter Cycles
Biomass
Loss of forest cover
Low harvest / decreased yield
Synsolution
Change in crop and flora species
Information
Decrease of biodiversity
Appearance of adventive species
Spread of invasive species
Appearance of alien plant species
Appearance of alien animal and insect species
Network
Fragmentation of alien grassland areas
Fragmentation of forest areas
Changes in species composition / new species
Changes in plant species composition
Absence of management
Anthropogenic activity and protected areas of water objects
Absence of animals
Species-specific factors
"Silencing" of meadow
Broad-blossoming anthropogenic and pest
Drying of pine trees / forests
Windthrow
Meadow
Crop failure
International sanitary condition of forests
Destruction of forests
Energy, matter and water efficiency
Resilience and Resistance
Energy Input
Solar radiation / Sunlight
Wind energy
Atmosphere
Stable climatic conditions
Favorable temperatures
Sufficient amount of precipitation
Hydrosphere
Physical water characteristics
Hydrochemical characteristics of water (quality)
Evaporation
Optimal water quantity
Water level
Groundwater level and dynamics
Water movement / exchange
Circulation/flow of water
Water reclamation and recycling
Water runoff (surface discharge)
Flooding and standing water (meadowlights and ponds)
Duration of spring floods
Lithosphere
Soil moisture
Soil fertility
Soil richness (trophotope)
Optimal water-air regime
Geological-geomorphological conditions (oxygen)
Appropriate landforms
Matter Cycles
Biomass
Deadwood
Specific grass cover
Measurable output of biomass (traditional use)
Extent of ecosystems
Information
Presence of biodiversity
Network
Connectivity
Typical (natural) biota
Presence of specific species (e.g. pollinators)
Presence of livestock
Traditional land-use (harvesting, cutting, buffer zones, fencing)
Species-specific factors
Physical health of individuals
Healthy populations
Energy, Matter and water efficiency
Stable hydro-geological conditions
Resilience and Resistance
Absence of natural disasters
Natural forest regeneration
Self-purification ability
Forests
Coniferous (natural and plantations)
Mixed(broad-leaved plantations)
Mixed forests (natural and artificial)
Conservation forests
Protected forests
Forests for vegetables
Young forests
Middle-aged forests
Premature forests (climax-natural)
Mature & overaged forests (climax)
Squatted forests
Cropland and settlements
Mineral soils
Peat soils
Quarry
Pasture
Hayfields
Abandoned gardens
Settlements (houses)
Cemeteries
Roads
Mines (polygons)
Dumps and waste pits
Swamps
Wetlands and grasslands
Lowpeat fens (boreal peat bogs)
Mesotrophic (transitional fens)
Oligotrophic bogs
Boggy grassland
Peat grassland
Dry heathland
Floodplain land
Alkaline meadow
Wet(waterlogged) or temporarily inundated grassland
Fallen crops or shrubs (scrub, trees/forest)
Water bodies and surfaces
Rivers
Lakes
Streams
Ponds
Springs
Wells
Small (artificial) ponds
Drainage Systems / Reclamation channels
Mine artificially changed water bodies
Regulation & Maintenance (biotic and abiotic)
Mediation of waste, toxics and other nuisances
Air purification
Water purification
Self-purification of lakes
Mediation of flows
Soil formation
Enrichment of soil by biological nitrogen
Lifecycle maintenance, habitat and gene pool protection
Preservation of biodiversity and habitats
Biotical production
Maintenance of physical, chemical, biological conditions
Microclimate regulation
Air humidity regulation
Oxygen production
Wind erosion prevention
Protection from soil erosion
Carbon sequestration
Soil moisture regulation
Water accumulation and retention
Meliorative services
Regulation of surface runoff and groundwater
Regulation of groundwater level
Regulation of underground water level
Water runoff regulation
Change/evolution of stream beds
Environment creating function
Provisioning (biotic and abiotic)
Nutrition
Fresh and clean air
Fresh and clean water (surface and groundwater)
NTFP (berries, medicinal herbs, etc.)
Hunting products (not in the core zone)
Fishery products (both private and business)
Agricultural products (agriculture/gardening)
Livestock breeding
Dairy products
Organic food
Beekeeping / Farming
Materials
Construction wood
Timber
Haymaking
Peat resources
Therapeutically used peat and water
Energy
Fuelwood
Firewood
Cultural (biotic and abiotic)
Physical and intellectual interactions with biota, ecosystems and land/sea scapes
Tourism
Agritourism
Bird watching
Health treatment (sanatoriums, resort)
Recreation / sports (swimming)
Photo hunting
Ecological education
Spiritual, symbolic and other interactions with biota, ecosystems and land/ sea scapes
Spiritual and traditional values
Aesthetic value
Physical well-being
Mental well-being
Economic well-being
Social services
Social systems
Government
Business
Civil Society
Implemented by
Ebenswolde University for Sustainable Development
Centre for Events and Ecosystem Management
Succow Stiftung
Under the aegis of
biosphere.center
a partnership between
Nationale Naturlandschaften
Succow Stiftung
Supported by
INTERNATIONAL CLIMATE INITIATIVE (IKI)
based on a decision of the German Bundestag