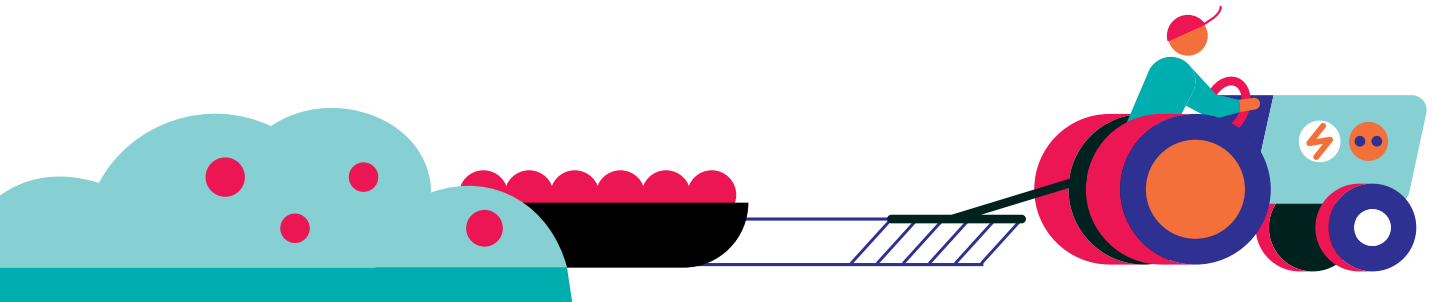


The Role of Business in Transforming Food Systems



Glossary

Abundance

The number of individuals or related measure of quantity (such as biomass) in a population, community or spatial unit.

Acidity

A measure of how acid a solution may be. A solution with a pH of less than 7.0 is considered acidic.

Adaptation

Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.; Genetically determined characteristic that enhances the ability of an organism to cope with its environment.; The process of change in structure and/or function that makes an organism or a population better suited to survive in a slow or rapidly changing environment. Adaptation may be achieved by phenotypic tuning to prevailing environmental conditions, or through evolutionary changes of genetic structure at the population level.; Adjustment in natural or human systems to a new or changing environment, including anticipatory and reactive adaptation, private and public adaptation, and autonomous and planned adaptation.; The morphological, physiological, and behavioural characteristics and processes organisms have acquired and utilize to survive.

Agricultural intensification

Agricultural intensification can be technically defined as an increase in agricultural production per unit of inputs (which may be labour, land, time, fertilizer, seed, feed or cash). For practical purposes, intensification occurs when there is an increase in the total volume of agricultural production that results from a higher productivity of inputs, or agricultural production is maintained while certain inputs are decreased (such as by more effective delivery of smaller amounts of fertilizer, better targeting of plant or animal protection, and mixed or relay cropping on smaller fields). Intensification that takes the form of increased production is most critical when there is a need to expand the food supply, for example during periods of rapid population growth. Intensification that makes more efficient use of inputs may be more critical when environmental problems or social issues are involved. In either case, changes caused by intensification are to be understood conceptually in contrast to extensive adjustments, which involve increases or decreases in the amount of inputs used.

Agroecology

Agroecology is the integrative study of the ecology of the entire food system, encompassing ecological, economic and social dimensions.; An interdisciplinary field of knowledge involving a set of concepts and principles oriented towards the design and management of sustainable ecosystems.; An integrated approach that simultaneously applies ecological and social concepts and principles to optimize interactions between plants, animals, humans and the environment while addressing social aspects to achieve sustainable and fair agri-food systems.

Agroecosystems

Organisms and environment of an agricultural area considered as an ecosystem.

Agroforestry

The intentional integration of trees and shrubs into crop and animal farming systems to create environmental, economic, and social benefits.

Anthropocene

A term used by scientists to name a new geologic epoch (following the most recent Holocene) characterized by significant changes in the Earth's atmosphere, biosphere and hydrosphere due primarily to human activities.

Arable land

Land under temporary crops (double-cropped areas are counted only once), temporary meadows for mowing or pasture, land under market and kitchen gardens, and land temporarily fallow (less than five years). The abandoned land resulting from shifting cultivation is not included in this category.

Bare soil

A land cover class that includes any geographic area dominated by natural abiotic surfaces (bare soil, sand, rocks, etc.) where the natural vegetation is absent or almost absent (covers less than 2 percent).

Billion

109 (1 000 000 000).

Biodiversity

The variety of life on Earth, including diversity at the genetic level, among species and among ecosystems and habitats. It includes diversity in abundance, distribution and behavior, as well as interaction with socio-ecological systems.

Biodiversity also incorporates human cultural diversity, which can both be affected by the same drivers as biodiversity, and itself has impacts on the diversity of genes, other species and ecosystems.; The variability among living organisms from all sources, including terrestrial, marine and other aquatic ecosystems, as well as the ecological complexes of which they are part. Biodiversity includes diversity within species, between species and of ecosystems.

Climate change

The UN Framework Convention on Climate Change defines climate change as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods."

Conservation

The protection, care, management and maintenance of ecosystems, habitats, wildlife species and populations, within or outside of their natural environments, in order to safeguard the natural conditions for their long-term permanence.

Coronavirus disease 2019 (COVID-19)

Illness caused by a novel coronavirus, 'severe acute respiratory syndrome coronavirus 2' (SARS-CoV-2), which was first identified amid an outbreak of respiratory illness cases in East Asia. The outbreak was first reported to WHO on 31 December 2019. On 30 January 2020, WHO declared the COVID-19 outbreak a global health emergency and the following March a global pandemic, WHO's first such designation since declaring H1N1 influenza a pandemic in 2009. From Medscape.

Crop

(the total amount collected of) a plant such as a grain, fruit, or vegetable grown in large amounts.

Degenerative food systems

Degenerative food systems produce food in ways that adversely affect habitats, biodiversity, land degradation and greenhouse gas emissions. They do not preserve the livelihoods of farmers, fishers, ranchers, and others who work to provide food.

Deforestation

Conversion of forested land to non-forest areas.

Detoxification

the process of removing toxic substances or qualities.

Driver

The overarching socio-economic forces that exert pressures on the state of the environment.

Ecosystem

A dynamic complex of plant, animal and micro-organism communities and their non-living environment, interacting as a functional unit.; Ecosystem: A dynamic complex of vegetable, animal and microorganism communities and their nonliving environment that interact as a functional unit. Ecosystems may be small and simple, like an isolated pond, or large and complex, like a specific tropical rainforest or a coral reef in tropical seas.

Ecosystem function

An intrinsic ecosystem characteristic related to the set of conditions and processes whereby an ecosystem maintains its integrity (such as primary productivity, food chain and biogeochemical cycles). Ecosystem functions include such processes as decomposition, production, nutrient cycling, and movements of nutrients and energy.

Ecosystem restoration

Process of reversing the degradation of ecosystems to regain their ecological functionality; in other words, to improve the productivity and capacity of ecosystems to meet the needs of society.; Encompassing a wide continuum of practices and targeted ecosystem conditions that contribute to conserving and repairing damaged ecosystems.

Environment

Surroundings including water, air, soil and their interrelationship as well as all relationships between them and any living organisms.

Environmental degradation

Environmental degradation is the deterioration in environmental quality from ambient concentrations of pollutants and other activities and processes such as improper land use and natural disasters.

Environmental health

Those aspects of human health and disease that are determined by factors in the environment. It also refers to the theory and practice of assessing and controlling factors in the environment that can potentially affect health. Environmental health includes both the direct pathological effects of chemicals, radiation and some biological agents, and the effects, often indirect, on health and well-being of the broad physical, psychological, social and aesthetic environment. This includes housing, urban development, land use and transport.

Environmental impact

The change in well-being of ecosystems, resulting from a process set in motion or accelerated by human actions.; Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's activities, products or services.

Environmental pressure

Pressure resulting from human activities which bring about changes in the state of the environment.

Equity

Fairness of rights, distribution and access. Depending on context, this can refer to access to resources, services or power.

Erosion

The wearing away of the land by running water, rainfall, wind, ice or other geological agents, including such processes as detachment, entrainment, suspension, transportation and mass movement. A further distinction can be made According to: the source: geologically, erosion is defined as the process that slowly shapes hillsides, allowing the formation of soil cover from the weathering of rocks and from alluvial and colluvial deposits. Erosion due to human activities as an effect of careless exploitation of the environment results in increasing runoff and declining arable layers.; The process of removal and transport of soil and rock by weathering, mass wasting, and the action of streams, glaciers, waves, winds, and underground water.

Eutrophication

The degradation of water or land quality due to enrichment by nutrients, primarily nitrogen and phosphorous, which results in excessive plant (principally algae) growth and decay. Eutrophication of a lake normally contributes to its slow evolution into a bog or marsh and ultimately to dry land. Eutrophication may be accelerated by human activities that speed up the ageing process.

Feedback

Where non-linear change is driven by reactions that either dampen change (negative feedbacks) or reinforce change (positive feedbacks).

Flood

Usually classified into three types: river flood, flash flood and storm surge. River floods result from intense and/or persistent rain over large areas. Flash floods are mostly local events resulting from intense rainfall over a small area in a short period of time. Storm surge floods occur when flood water from the ocean or large lakes is pushed on to land by winds or storms.

Food security

Physical and economic access to food that meets people's dietary needs as well as their food preferences.

Food system

Food systems are usually conceived as a set of activities ranging from production to consumption. It is a broad concept encompassing food security and its components – availability, access and utilization – and including the social and environmental outcomes of these activities. Food systems in developing countries have been largely transformed by globalization. This change offers tremendous opportunities for food workers to access new and better employments. Yet, small scale food producers and other food workers are still too often excluded from the benefits generated by food businesses.

Forest

Land spanning more than 0.5 hectares with trees higher than 5 metres and a canopy cover of more than 10 per cent, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban use.

Fragility

An ecosystem that is highly susceptible to degradation by anthropogenic activities.

Gender

Gender refers to the roles, behaviors, activities, and attributes that a given society at a given time considers appropriate for men and women. In addition to the social attributes and opportunities associated with being male and female and the relationships between women and men and girls and boys, gender also refers to the relations between women and those between men. These attributes, opportunities and relationships are socially constructed and are learned through socialization processes. They are context/ time-specific and changeable. Gender determines what is expected, allowed and valued in a woman or a man in a given context. Gender is part of the broader socio-cultural context, as are other important criteria for socio-cultural analysis including class, race, poverty level, ethnic group, sexual orientation, age, etc.

Genetic diversity

The variety of genes within a particular species, variety or breed.

Global warming

Increase in surface air temperature, referred to as the global temperature, induced by emissions of greenhouse gases into the air.

Governance

The act, process, or power of governing for the organization of society/ies. For example, there is governance through the state, the market, or through civil society groups and local organizations. Governance is exercised through institutions: laws, property-rights systems and forms of social organization.

Habitat

Part of an ecosystem with conditions in which an organism naturally occurs or can establish.; The place or type of site where an organism or population naturally occurs.

Human health

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

Human well-being

The extent to which individuals have the ability to live the kinds of lives they have reason to value; the opportunities people have to pursue their aspirations. Basic components of human well-being include: security, meeting material needs, health and social relations.

Infrastructure

The basic equipment, utilities, productive enterprises, installations, and services essential for the development, operation, and growth of an organization, city, or nation.

Institutions

Regularized patterns of interaction by which society organizes itself: the rules, practices and conventions that structure human interaction. The term is wide and encompassing, and could be taken to include law, social relationships, property rights and tenurial systems, norms, beliefs, customs and codes of conduct as much as multilateral environmental agreements, international conventions and financing mechanisms. Institutions could be formal (explicit, written, often having the sanction of the state) or informal (unwritten, implied, tacit, mutually agreed and accepted).

Land degradation

a long-term loss of ecosystem function and services, caused by disturbances from which the system cannot recover unaided.

Land sparing

Maximizing the land area available only for conservation purposes through more intensive agricultural production on the land area devoted to it.

Livelihood

(the way someone earns) the money people need to pay for food, a place to live, clothing, etc.

Mangrove

A tree or shrub that grows in chiefly tropical coastal swamps that are flooded at high tide. Mangroves typically have numerous tangled roots above ground and form dense thickets.

Marine

By marine is meant coastal and offshore waters in which the salinity is maximal and not subject to significant daily and seasonal variation.

Mitigation

In the context of climate change, a human intervention to reduce the sources, or enhance the sinks of greenhouse gases. Examples include using fossil fuels more efficiently for industrial processes or electricity generation, switching to solar energy or wind power, improving the insulation of buildings and expanding forests and other 'sinks' to remove greater amounts of CO₂ from the atmosphere.

Natural resources

materials or substances such as minerals, forests, water, and fertile land that occur in nature and can be used for economic gain.

Nature-based solution

Actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits.

Nutrient cycling

Biogeochemical cycle, in which inorganic nutrients move through soil, living organisms, air and water. In agriculture, it refers to the return of nutrients absorbed by plants from the soil, back to the soil. Nutrient cycling can take place through leaf fall, root exudation (secretion), residue recycling, and incorporation of green manure.

Nutrients

The approximately 20 chemical elements known to be essential for the growth of living organisms, including nitrogen, sulphur, phosphorus and carbon.

Organic agriculture

A production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of synthetic inputs.

Organizations

Bodies of individuals with a specified common objective. Organizations could be political organizations, political parties, governments and ministries; economic organizations, federations of industry; social organizations (non-governmental organizations (NGOs) and self-help groups) or religious organizations (church and religious trusts). The term organizations should be distinguished from institutions.

Pandemic

The worldwide spread of a new disease. An influenza pandemic occurs when a new influenza virus emerges and spreads around the world and most people do not have immunity. From WHO.

Planetary boundaries

A framework designed to define a safe operating space for humanity for the international community, including governments at all levels, international organizations, civil society, the scientific community and the private sector, as a precondition for sustainable development.

Policy

Any form of intervention or societal response. This includes not only statements of intent, but also other forms of intervention, such as the use of economic instruments, market creation, subsidies, institutional reform, legal reform, decentralization and institutional development. Policy can be seen as a tool for the exercise of governance. When such an intervention is enforced by the state, it is called public policy.

Pollution

The presence of minerals, chemicals or physical properties at levels that exceed the values deemed to define a boundary between good or acceptable and poor or unacceptable quality, which is a function of the specific pollutant.

Poverty

The state of one who lacks a defined amount of material possessions or money. Absolute poverty refers to a state of lacking basic human needs, which commonly include clean and fresh water, nutrition, health care, education, clothing and shelter.

Private sector

The private sector is part of a country's economy which consists of industries and commercial companies that are not owned or controlled by the government.

Public sector

The portion of society that comprises the general government sector plus all public corporations including the central bank.

Reach

A reach differs from crossover in that a reach refers to a long straight stretch of a river, whereas a crossover refers to the relatively short length in which curvature of flow is reversed.; Portion of a stream between two gauges.

Resistance

The capacity of a system to withstand the impacts of drivers without displacement from its present state.

Regenerative agriculture

Regenerative agriculture is an inclusive agroecosystems approach for conserving land and soil, biodiversity, and improving ecosystem services within farming systems. It focuses on the regeneration of living soil, improved micro hydrology, and conserving biodiversity at all levels while enhancing inputs use efficiency and ecosystem system services. The approach helps to achieve food and nutritional security with economically viable and ecological sustainable options. Practices presented in this webinar focus on experiences and lessons learned from the adoption of good practices related to regenerative agriculture.

Run-off

A portion of rainfall, melted snow or irrigation water that flows across the ground's surface and is eventually returned to streams. Run-off can pick up pollutants from air or land and carry them to receiving waters.

Scale

The spatial, temporal (quantitative or analytical) dimension used to measure and study any phenomena. Specific points on a scale can thus be considered levels (such as local, regional, national and international).

Sequestration

Sequestration refers to the capture of carbon dioxide in a manner that prevents it from being released into the atmosphere for a specified period of time.

Soil

The upper layer of the Earth's crust transformed by weathering and physical/chemical and biological processes. It is composed of mineral particles, organic matter, water, air and living organisms organized in genetic soil horizons.

Soil disturbance

Disturbance, such as displacement or compaction, which may or may not be intense enough to be detrimental soil impact.

Soil health

The capacity of soil to function as a living system.; The continued capacity of soil to function as a vital living system, within ecosystem and land-use boundaries, to sustain biological productivity, promote the quality of air and water environments, and maintain plant, animal, and human health.

Source

Any process, activity or mechanism that releases a greenhouse gas, an aerosol or a precursor of a greenhouse gas or aerosol into the atmosphere.

Sustainability

A characteristic or state whereby the needs of the present population can be met without compromising the ability of future generations or populations in other locations to meet their needs.

Sustainable agriculture

Sustainable Agriculture puts the emphasis on methods and processes that improve soil productivity while minimising harmful effects on the climate, soil, water, air, biodiversity and human health. It aims to minimise the use of inputs from nonrenewable sources and petroleum-based products and replace them with those from renewable resources. It Focuses on local people and their needs, knowledge, skills, socio-cultural values and institutional structures. It ensures that the basic nutritional requirements of current and future generations are met in both quantity and quality terms. It provides long-term employment, an adequate income and dignified and equal working and living conditions for everybody involved in agricultural value chains. It reduces the agricultural sector's vulnerability to adverse natural conditions (e.g. climate), socioeconomic factors (e.g. strong price fluctuations) and other risks.

Sustainable development

Development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.

System

A system is a collection of component parts that interact with one another within some boundary.

Technology

Physical artefacts or the bodies of knowledge of which they are an expression. Examples are water extraction structures, such as tube wells, renewable energy technologies and traditional knowledge. Technology and institutions are related. Any technology has a set of practices, rules and regulations surrounding its use, access, distribution and management.

Transformation

State of being transformed. In the context of GEO-5, transformation refers to a series of actions that explores opportunities to stop doing the things that pull the Earth System in the wrong direction and at the same time provide resources, capacity and an enabling environment for all that is consistent with the sustainable-world vision.

Trillion

10¹² (1 000 000 000 000).

Uncertainty

A cognitive state of incomplete knowledge that can result from a lack of information or from disagreement about what is known or even knowable. It may have many types of sources, from imprecision in the data to ambiguously defined concepts or terminology, or uncertain projections of human behaviour. Uncertainty can therefore be represented by quantitative measures (for example a probability density function) or by qualitative statements (for example reflecting the judgement of a team of experts).

Urbanization

An increase in the proportion of the population living in urban areas.

Volatile organic compound

Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate, which participates in atmospheric photochemical reactions, except those designated by EPA as having negligible photochemical reactivity.

Vulnerability

An intrinsic feature of people at risk. It is a function of exposure, sensitivity to impacts of the specific unit exposed (such as a watershed, island, household, village, city or country), and the ability or inability to cope or adapt. It is multi-dimensional, multi-disciplinary, multi-sectoral and dynamic. The exposure is to hazards such as drought, conflict or extreme price fluctuations, and also to underlying socio-economic, institutional and environmental conditions.

Wasteland

Land not used or not useable.; A barren or empty area of land.; Waste land is land that is naturally unfavourable for land-associated human activities - it cannot be used for cultivation under any conditions.

Wasting

Wasting is the impaired growth and development that children experience from poor nutrition, repeated infection, and inadequate psychosocial stimulation. Children are defined as wasted if their weight-for-height is more than two standard deviations below the WHO Child Growth Standards median. From AGR.

Water footprint

The water footprint of a person, company or nation is defined as the total volume of freshwater that is used to produce the commodities, goods and services consumed by the person, company or nation.; The total volume of freshwater used in the operations of an FVC, from the delivery of inputs at the production stage to consumption in end markets.

Water scarcity

Occurs when annual water supplies drop below 1 000 m³ per person, or when more than 40 percent of available water is used.

Water stewardship

There is no agreed definition for water stewardship, but it is a term that has been increasingly used by companies and NGO's to describe a growing private sector engagement with water issues. In essence, Water Stewardship can be described as actions on the part of companies who seek to improve the efficiency and cleanliness of their internal operations and in their supply chain, while also facilitating the sustainable management of shared freshwater resources through collaboration with other businesses, governments, NGOs, communities, and others. Stewardship recognises that business risk is ultimately created when water is poorly managed or over-exploited - creating changes in the physical nature of water that may have impact on society, business, government and the environment.

Wildlife

Wild animals collectively; the native fauna (and sometimes flora) of a region.

