Glossary

Abatement cost: See *Marginal abatement cost*.

Abundance: The total number of individuals of a taxon or taxa in an area, population, or community. Relative abundance refers to the total number of individuals of one taxon compared with the total number of individuals of all other taxa in an area, volume, or community.

Acidification: Acidification is a natural process. The term is used to describe the loss of nutrient bases (calcium, magnesium and potassium) through the process of leaching and their replacement by acidic elements (hydrogen and aluminium).

Adaptation: Adjustment in natural or human systems to a new or changing environment. Various types of adaptation can be distinguished, including anticipatory and reactive adaptation, private and public adaptation, and autonomous and planned adaptation.

Adaptive capacity: The general ability of institutions, systems, and individuals to adjust to potential damage, to take advantage of opportunities, or to cope with the consequences.

Adaptive management: A systematic process for continually improving management policies and practices by learning from the outcomes of previously employed policies and practices. In active adaptive management, management is treated as a deliberate experiment for purposes of learning.

Afforestation: Planting of forests on land that has historically not contained forests.

Agrobiodiversity: The diversity of plants, insects, and soil biota found in cultivated systems.

Alien species: Species introduced outside its normal distribution.

Alien invasive species: See *Invasive alien species*.

Aquaculture: Breeding and rearing of fish, shellfish, or plants in ponds, enclosures, or other forms of confinement in fresh or marine waters for the direct harvest of the product.

Biodiversity (a contraction of biological diversity)**:** The variability among living organisms from all sources, including terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part. Biodiversity includes diversity within species, between species, and between ecosystems.

Biofuels: Liquid fuels derived from biomass and predominantly used in transportation. The dominant biofuels are ethanol and biodiesel. Ethanol is produced by fermenting starch contained in plants such as sugar cane, sugar beet, maize, cassava, sweet sorghum or beetroot. Biodiesel is typically produced through a chemical process called trans-esterification, whereby oily biomass such as rapeseed, soybeans, palm oil, jatropha seeds, waste cooking oils or vegetable oils is combined with methanol to form methyl esters (sometimes called "fatty acid methyl ester" or FAME).

Biogeographic realm: A large spatial region, within which ecosystems share a broadly similar biota. Eight terrestrial biogeographic realms are typically recognised, corresponding roughly to continents (e.g. Afrotropical realm).

Biological diversity: See *Biodiversity*.

Biomass: The mass of tissues in living organisms in a population, ecosystem, or spatial unit.

Biome: The largest unit of ecological classification that is convenient to recognise below the entire globe. Terrestrial biomes are typically based on dominant vegetation structure (e.g. forest, grassland). Ecosystems within a biome function in a broadly similar way, although they may have very different species composition. For example, all forests share certain properties regarding nutrient cycling, disturbance, and biomass that are different from the properties of grasslands. Marine biomes are typically based on biogeochemical properties.

Biotechnology: Any technological application that uses biological systems, living organisms, or derivatives thereof to make or modify products or processes for specific use.

Capacity building: A process of strengthening or developing human resources, institutions, organisations, or networks. Also referred to as capacity development or capacity enhancement.

Capture fisheries: see *Fishery*.

Carbon sequestration: The process of increasing the carbon content of a reservoir other than the atmosphere.

Catch: The number or weight of all fish caught by fishing operations, whether the fish are landed or not.

Coastal system: Systems containing terrestrial areas dominated by ocean influences of tides and marine aerosols, plus nearshore marine areas.

Collaborative (or joint) forest management: Community-based management of forests, where resource tenure by local communities is secured.

Community (ecological): An assemblage of species occurring in the same space or time, often linked by biotic interactions such as competition or predation.

Community (human, local): A collection of human beings who have something in common. A local community is a fairly small group of people who share a common place of residence and a set of institutions based on this fact, but the word 'community' is also used to refer to larger collections of people who have something else in common (e.g. national community, donor community).

Conceptual Framework: Is a concise summary in words and pictures of the relationship between people and nature including key components of interactions between humans and ecological systems. Conceptual frameworks assist in organising thinking and structuring work when assessing complex ecosystems, social arrangements and human-environment interactions.

Condition of an ecosystem: The capacity of an ecosystem to yield services, relative to its potential capacity.

Condition of an ecosystem service: The capacity of an ecosystem service to yield benefits to people, relative to its potential capacity.

Contingent valuation: Economic valuation technique based on a survey of how much respondents would be willing to pay for specified benefits.

Cost-benefit analysis: A technique designed to determine the feasibility of a project or plan by quantifying its costs and benefits.

Cost-effectiveness analysis: Analysis to identify the least cost option that meets a particular goal.

Critically endangered species: Species that face an extremely high risk of extinction in the wild. See also *Threatened species*.

Cultural landscape: See *Landscape*.

Cultural services: The nonmaterial benefits people obtain from ecosystems through spiritual enrichment, cognitive

development, reflection, recreation, and aesthetic experience, including, e.g. knowledge systems, social relations, and aesthetic values.

Decision-maker: A person whose decisions, and the actions that follow from them, can influence a condition, process, or issue under consideration.

Decomposition: The ecological process carried out primarily by microbes that leads to a transformation of dead organic matter into inorganic mater.

Degradation of an ecosystem service: For *provisioning services*, decreased production of the service through changes in area over which the services is provided, or decreased production per unit area. For *regulating* and *supporting services*, a reduction in the benefits obtained from the service, either through a change in the service or through human pressures on the service exceeding its limits. For *cultural services*, a change in the ecosystem features that decreases the cultural benefits provided by the ecosystem.

Degradation of ecosystems: A persistent reduction in the capacity to provide ecosystem services.

Direct use value (of ecosystems): The benefits derived from the services provided by an ecosystem that are used directly by an economic agent. These include consumptive uses (e.g. harvesting goods) and nonconsumptive uses (e.g. enjoyment of scenic beauty). Agents are often physically present in an ecosystem to receive direct use value. (Compare *Indirect use value*).

Diversity: The variety and relative abundance of different entities in a sample.

Driver: Any natural or human-induced factor that directly or indirectly causes a change in an ecosystem.

Driver, direct: A driver that unequivocally influences ecosystem processes and can therefore be identified and measured to differing degrees of accuracy. (Compare *Driver, indirect*).

Driver, indirect: A driver that operates by altering the level or rate of change of one or more direct drivers. (Compare *Driver, direct*).

Ecological character: See *Ecosystem properties*.

Ecological degradation: See *Degradation of ecosystems*.

Ecosystem: A dynamic complex of plant, animal, and microorganism communities and their non-living environment interacting as a functional unit.

Ecosystem approach: A strategy for the integrated management of land, water, and living resources that promotes conservation and sustainable use. An ecosystem approach is based on the application of appropriate scientific methods focused on levels of biological organisation, which encompass the essential structure, processes, functions, and interactions among organisms and their environment. It recognises that humans, with their cultural diversity, are an integral component of many ecosystems.

Ecosystem assessment: A social process through which the findings of science concerning the causes of ecosystem change, their consequences for human well-being, and management and policy options are brought to bear on the needs of decision-makers.

Ecosystem change: Any variation in the state, outputs, or structure of an ecosystem.

Ecosystem function: See *Ecosystem process*.

Ecosystem interactions: Exchanges of materials, energy, and information within and among ecosystems.

Ecosystem management: An approach to maintaining or restoring the composition, structure, function, and delivery of services of natural and modified ecosystems for the goal of achieving sustainability. It is based on an adaptive, collaboratively developed vision of desired future conditions that integrates ecological, socioeconomic, and institutional perspectives, applied within a geographic framework, and defined primarily by natural ecological boundaries.

Ecosystem process: An intrinsic ecosystem characteristic whereby an ecosystem maintains its integrity. Ecosystem processes include decomposition, production, nutrient cycling, and fluxes of nutrients and energy.

Ecosystem properties: The size, biodiversity, stability, degree of organisation, internal exchanges of materials, energy, and information among different pools, and other properties that characterise an ecosystem. Includes ecosystem functions and processes.

Ecosystem resilience: See *Resilience*.

Ecosystem resistance: See *Resistance*.

Ecosystem robustness: See *Ecosystem stability*.

Ecosystem services: The benefits people obtain from ecosystems. These include *provisioning services* such as food and water; *regulating services* such as flood and disease control; *cultural services* such as spiritual, recreational, and cultural benefits; and *supporting services* such as nutrient cycling that maintain the conditions for life on Earth. The concept "ecosystem goods and services" is synonymous with ecosystem services.

Enabling conditions: Critical preconditions for success of responses, including political, institutional, social, economic, and ecological factors.

Endangered species: Species that face a very high risk of extinction in the wild. See also *Threatened species*.

Environmental settings: Are the locations and places where humans interact with each other and nature that give rise to the cultural goods and benefits that people obtain from ecosystems.

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

Eutrophication: The increase in additions of nutrients to freshwater or marine systems, which leads to increases in plant growth and often to undesirable changes in ecosystem structure and function.

Evapotranspiration: See *Transpiration*.

Existence value: The value that individuals place on knowing that a resource exists, even if they never use that resource (also sometimes known as conservation value or passive use value).

Externality: A consequence of an action that affects someone other than the agent undertaking that action and for which the agent is neither compensated nor penalised through the markets. Externalities can be positive or negative.

Final ecosystem service: Are the outcomes from ecosystems that directly lead to good(s) that are valued by people.

Fishery: A particular kind of fishing activity, e.g. a trawl fishery, or a particular species targeted, e.g. a cod fishery or salmon fishery.

Fish stock: See *Stock*.

Fixed nitrogen: See *Reactive nitrogen*.

Functional diversity: The value, range, and relative abundance of traits present in the organisms in an ecological community.

Geographic information system: A computerised system organising data sets through a geographical referencing of all data included in its collections.

Goods: Are all use and non-use, material and non-material outputs from ecosystems that have value for people.

Governance: The process of regulating human behaviour in accordance with shared objectives. The term includes both governmental and nongovernmental mechanisms.

Habitat: Is an ecological or environmental area that is inhabited by a particular animal or plant species. 'Broad Habitats' are used to classify different ecosystems for reporting.

Health, human: A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. The health of a whole community or population is reflected in measurements of disease incidence and prevalence, age-specific death rates, and life expectancy.

Heritage (cultural and natural): UNESCO defines heritage as 'our legacy from the past, what we live with today, and what we pass on to future generations'. Physical objects produced and used by past generations, ranging from small-scale domestic utensils to large-scale buildings, monuments, places and landscapes, may become valued as cultural heritage by their descendants. Equally, symbolic products of human creativity and imagination such as music, visual arts, poetry and prose, knowledge and know-how contribute to a society or group's understanding of its cultural heritage.

Human well-being: See *Well-being.*

Indirect use value: The benefits derived from the goods and services provided by an ecosystem that are used indirectly by an economic agent. For example, an agent at some distance from an ecosystem may derive benefits from drinking water that has been purified as it passed through the ecosystem. (Compare *Direct use value*).

Intermediate ecosystem services: Those whose ecological processes and functions support all life, and, by definition all other services.

Institutions: The rules that guide how people within societies live, work, and interact with each other. Formal institutions are written or codified rules. Examples of formal institutions would be the constitution, the judiciary laws, the organised market, and property rights. Informal institutions are rules governed by social and behavioural norms of the society, family, or community. Also referred to as organisations.

Integrated coastal zone management: Approaches that integrate economic, social, and ecological perspectives for the management of coastal resources and areas.

Integrated pest management: Any practices that attempt to capitalise on natural processes that reduce pest abundance. Sometimes used to refer to monitoring programs where farmers apply pesticides to improve economic efficiency (reducing application rates and improving profitability).

Integrated responses: Responses that address degradation of ecosystem services across a number of systems simultaneously or that also explicitly include objectives to enhance human well-being.

River basin management: Integration of water planning and management with environmental, social, and economic development concerns, with an explicit objective of improving human welfare.

Interventions: See *Responses.*

Intrinsic value: The value of someone or something in and for itself, irrespective of its utility for people.

Invasive alien species: An alien species whose establishment and spread modifies ecosystems, habitats, or species.

LA10,T: The A weighted level of noise exceeded for 10% of the specified measurement period (T). It gives an indication of the upper limit of fluctuating noise such as that from road traffic. LA10,18h is the arithmetic average of the 18 hourly LA10,1h values from 06.00 to 24.00.

LA90,T: The A weighted noise level exceeded for 90% of the specified measurement period (T). In BS 4142: 1990 it is used to define background noise level.

LAeq,T: The equivalent continuous sound level or ambient noise level is the sound level of a notional steady sound having the same energy as a fluctuating sound over a specified measurement period (T). LAeq,T is used to describe many types of noise and can be measured directly with an integrating sound level meter. It is written as Leq in connection with aircraft noise.

Land cover: The physical coverage of land, usually expressed in terms of vegetation cover or lack of it. Related to, but not synonymous with, *land use.*

Landscape: An area of land that contains a mosaic of ecosystems, including human-dominated ecosystems. The term cultural landscape is often used when referring to landscapes containing significant human populations or in which there has been significant human influence on the land.

Landscape unit: A portion of relatively homogenous land cover within the local-to-regional landscape.

Land use: The human use of a piece of land for a certain purpose (such as irrigated agriculture or recreation). Influenced by, but not synonymous with, *land cover.*

Marginal abatement cost: The cost of abating an incremental unit of, for instance, a pollutant or carbon.

Market-based instruments: Mechanisms that create a market for ecosystem services in order to improve the efficiency in the way the service is used. The term is used for mechanisms that create new markets, but also for responses such as taxes, subsidies, or regulations that affect existing markets.

Market failure: The inability of a market to capture the correct values of ecosystem services.

Marine system: Marine waters from the low-water mark to the high seas that support marine capture fisheries, as well as deepwater (>50 meters) habitats. Four sub-divisions (marine biomes) are recognised: the coastal boundary zone; trade-winds; westerlies; and polar.

Mitigation: An anthropogenic intervention to reduce negative or unsustainable uses of ecosystems or to enhance sustainable practices.

Net primary productivity: See *Production, biological.*

Nutrient cycling: The processes by which elements are extracted from their mineral, aquatic, or atmospheric sources or recycled from their organic forms, converting them to the ionic form in which biotic uptake occurs and ultimately returning them to the atmosphere, water, or soil.

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

Open access resource: A good or service over which no property rights are recognised.

Opportunity cost: The benefits forgone by undertaking one activity instead of another.

Organic farming: Crop and livestock production systems that do not make use of synthetic fertilisers, pesticides, or herbicides. May also include restrictions on the use of transgenic crops (genetically modified organisms).

Policy-maker: A person with power to influence or determine policies and practices at an international, national, regional, or local level.

Pollination: A process in the sexual phase of reproduction in some plants caused by the transportation of pollen. In the context of ecosystem services, pollination generally refers to animal-assisted pollination, such as that done by bees, rather than wind pollination.

Population, biological: A group of individuals of the same species, occupying a defined area, and usually isolated to some degree from other similar groups. Populations can be relatively reproductively isolated and adapted to local environments.

Population, human: A collection of living people in a given area. (Compare *Community (human, local)*).

Precautionary principle: The management concept stating that in cases "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation," as defined in the Rio Declaration.

Primary production: See *Production, biological*.

Production, biological: Rate of biomass produced by an ecosystem, generally expressed as biomass produced per unit of time per unit of surface or volume. Net primary productivity is defined as the energy fixed by plants minus their respiration.

Productivity, biological: See *Production, biological*.

Projection: A potential future evolution of a quantity or set of quantities, often computed with the aid of a model. Projections are distinguished from "predictions" in order to emphasise that projections involve assumptions concerning, for example, future socioeconomic and technological developments that may or may not be realised; they are therefore subject to substantial uncertainty.

Provisioning services: The products obtained from ecosystems, including, for example, genetic resources, food and fibre, and fresh water.

Public good: A good or service in which the benefit received by any one party does not diminish the availability of the benefits to others, and where access to the good cannot be restricted.

Reactive nitrogen (or fixed nitrogen): The forms of nitrogen that are generally available to organisms, such as ammonia, nitrate, and organic nitrogen. Nitrogen gas (or dinitrogen), which is the major component of the atmosphere, is inert to most organisms.

Regulating services: The benefits obtained from the regulation of ecosystem processes, including, for example, the regulation of climate, water, and some human diseases.

Resilience: The level of disturbance that an ecosystem can undergo without crossing a threshold to a situation with different structure or outputs. Resilience depends on ecological dynamics as well as the organisational and institutional capacity to understand, manage, and respond to these dynamics.

Resistance: The capacity of an ecosystem to withstand the impacts of drivers without displacement from its present state.

Responses: Human actions, including policies, strategies, and interventions, to address specific issues, needs, opportunities, or problems. In the context of ecosystem management, responses may be of legal, technical, institutional, economic, and behavioural nature and may operate at various spatial and time scales.

Riparian: Something related to, living on, or located at the banks of a watercourse, usually a river or stream.

Salinisation: The build-up of salts in soils.

Scenario: A plausible and often simplified description of how the future may develop, based on a coherent and internally consistent set of assumptions about key driving forces (e.g. rate of technology change, prices) and relationships. Scenarios are neither predictions nor projections and sometimes may be based on a "narrative storyline." Scenarios may include projections but are often based on additional information from other sources.

Security: Access to resources, safety, and the ability to live in a predictable and controllable environment.

Service: See *Ecosystem services*.

Shared social values: Refers to the fulfillment, meaning or significance of the collective needs of society in relation to social, health and cultural services.

Soil fertility: The potential of the soil to supply nutrient elements in the quantity, form, and proportion required to support optimum plant growth. See also *Nutrients*.

Species: An interbreeding group of organisms that is reproductively isolated from all other organisms, although there are many partial exceptions to this rule in particular taxa. Operationally, the term *species* is a generally agreed fundamental taxonomic unit, based on morphological or genetic similarity, that once described and accepted is associated with a unique scientific name.

Species diversity: Biodiversity at the species level, often combining aspects of species richness, their relative abundance, and their dissimilarity.

Species richness: The number of species within a given sample, community, or area.

Stock (in fisheries): The population or biomass of a fishery resource. Such stocks are usually identified by their location. They can be, but are not always, genetically discrete from other stocks.

Storyline: A narrative description of a scenario, which highlights its main features and the relationships between the scenario's driving forces and its main features.

Strategies: See *Responses*.

Subsidy: Transfer of resources to an entity, which either reduces the operating costs or increases the revenues of such entity for the purpose of achieving some objective.

Subspecies: A population that is distinct from, and partially reproductively isolated from, other populations of a species but that has not yet diverged sufficiently that interbreeding is impossible.

Supporting services: Ecosystem services that are necessary for the production of all other ecosystem services. Some examples include biomass production, production of atmospheric oxygen, soil formation and retention, nutrient cycling, water cycling, and provisioning of habitat.

Sustainable use (of an ecosystem): Human use of an ecosystem so that it may yield a continuous benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations.

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

Taxon (pl. taxa): The named classification unit to which individuals or sets of species are assigned. Higher taxa are those above the species level. For example, the common mouse, *Mus musculus*, belongs to the Genus *Mus*, the Family Muridae, and the Class Mammalia.

Threatened species: Species that face a high (*vulnerable species*), very high (*endangered species*), or extremely high (*critically endangered species*) risk of extinction in the wild.

Threshold: A point or level at which new properties emerge in an ecological, economic, or other system, invalidating predictions based on mathematical relationships that apply at lower levels. For example, species diversity of a landscape may decline steadily with increasing habitat degradation to a certain point, then fall sharply after a critical threshold of degradation is reached. Human behaviour, especially at group levels, sometimes exhibits threshold effects. Thresholds at which irreversible changes occur are especially of concern to decision-makers.

Total economic value framework: A widely used framework to disaggregate the components of utilitarian value, including *direct use value*, *indirect use value*, *option value*, *quasi-option value*, and *existence value*.

Total fertility rate: The number of children a woman would give birth to if through her lifetime she experienced the set of age-specific fertility rates currently observed. Since age-specific rates generally change over time, TFR does not in general give the actual number of births a woman alive today can be expected to have. Rather, it is a synthetic index meant to measure age-specific birth rates in a given year.

Trade-off: Management choices that intentionally or otherwise change the type, magnitude, and relative mix of services provided by ecosystems.

Travel cost analysis: Economic valuation techniques that use observed costs to travel to a destination to derive demand functions for that destination.

Uncertainty: An expression of the degree to which a future condition (e.g. of an ecosystem) is unknown. Uncertainty can result from lack of information or from disagreement about what is known or even knowable. It may have many types of sources, from quantifiable errors in the data to ambiguously defined terminology or uncertain projections of human behaviour. Uncertainty can therefore be represented by quantitative measures (e.g. a range of values calculated by various models) or by qualitative statements (e.g. reflecting the judgment of a team of experts).

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

Urban Heat Island: A metropolitan area which is significantly warmer than its surrounding rural areas.

Urban systems: Built environments with a high human population density.

Valuation: The process of expressing a value for a particular good or service in a certain context (e.g. of decision-making) usually in terms of something that can be counted, often money, but also through methods and measures from other disciplines (sociology, ecology, and so on). See also *Value*.

Value: The contribution of an action or object to user-specified goals, objectives, or conditions. (Compare *Valuation*).

Value systems: Norms and precepts that guide human judgment and action.

Voluntary measures/actions: Measures that are adopted by firms or other actors in the absence of government mandates.

Watershed (also catchment basin): The land area that drains into a particular watercourse or body of water. Sometimes used to describe the dividing line of high ground between two catchment basins.

Well-being: A context- and situation-dependent state, comprising basic material for a good life, freedom and choice, health and bodily well-being, good social relations, security, peace of mind, and spiritual experience.

Wetlands: Areas of marsh, fen, peatland, or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres. May incorporate riparian and coastal zones adjacent to the wetlands and islands or bodies of marine water deeper than six metres at low tide laying within the wetlands.

Abbreviations and Acronyms

AE	Actual Evaporation
AES	Agri-environment scheme
ANGSt	Accessible Natural Greenspace Standard
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
AoSP	Areas of Special Protection
ASNW	Ancient Semi-natural Woodland
ASSI	Area of Special Scientific Interest
AWI	Ancient Woodland Inventory
BAP	Biodiversity Action Plan
BARS	Biodiversity Action Reporting System
BBS	Breeding Bird Survey
BBSRC	Biotechnology and Biological Sciences Research Council
BMI	body mass index
BoBW	Best of Both Worlds
BOD	Biochemical Oxygen Demand
BRC	Biological Records Centre
BSBI	Botanical Society of the British Isles
BSE	Bovine Spongiform Encephalopathy
bTB	Bovine Tuberculosis
BTO	British Trust for Ornithology
BTV	Bluetongue Virus
CABE	Commission for Architecture and the Built Environment
CAMS	Catchment Abstraction Management Areas
CAMSAR	Condition and Management Survey of the Archaeological Resource
CAP	Common Agricultural Policy
CBA	cost-benefit analysis
CBD	Convention on Biological Diversity
CCW	Countryside Council for Wales
CD&E	construction, demolition and excavation
CDOM	co-varying coloured dissolved organic matter
CEA	cost-effectiveness analysis
CEFAS	Centre for Environment, Fisheries and Aquaculture Science
CEH	Centre for Ecology & Hydrology
CFP	Common Fisheries Policy
CGT	Capital Gains Tax
CHD	coronary heart disease

CHP	Combined Heat and Power
CI	confidence interval
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CME	Choice Modelling Experiments
CMS	Convention on the Conservation of Migratory Species of Wild Animals
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COGAP	Code of Good Agricultural Practice
Confor	Confederation of Forest Industries
COP	Conference of Parties
COPR	Control of Pesticides Regulations
CP	Charting Progress
CPRE	Campaign to Protect Rural England
CQC	Countryside Quality Counts
CRoW	Countryside and Rights of Way
CS	Countryside Stewardship
CSERGE	Centre for Social and Economic Research on the Global Environment
CSO	Central Statistics Office
CSS	Countryside Stewardship Scheme
DARD	Department of Agriculture and Rural Development
DCLG	Department of Communities and Local Government
DDT	dichlorodiphenyltrichloroethane
DECC	Department of Energy and Climate Change
Defra	Department for Environment, Food and Rural Affairs
DMG	Deer Management Group
DNA	deoxyribonucleic acid
DOC	dissolved organic carbon
DoE	Department of Environment
DON	dissolved organic nitrogen
EA	Environment Agency
EASAC	European Academies Science Advisory Council
EAU	Environmental Advisory Unit
EC	European Commission
ECG	electrocardiogram
ECN	Environmental Change Network
EEA	European Environment Agency
EEC	European Economic Community
EEZ	exclusive economic zone
EIA	environmental impact assessment
ELME	European Lifestyles & Marine Ecosystems
ELS	Entry Level Stewardship
ELVS	English Leisure Visits Survey
END	European Directive on the Assessment and Management of Environmental Noise
EQS	Environmental Quality Standards
ERICA	Environmental Risk from Ionising Contamination
ES	ecosystem service
ESA	Environmentally Sensitive Area
ESRC	Economic and Social Research Council
ET	evapotranspiration
EU	European Union
EUNIS	European Nature Information System
FC	Forestry Commission
FEPA	Food and Environmental Protection Act
FFCD	Foresight Flood and Coastal Defence
FGM	farm gross margin
FIO	faecal indicator organism
FIT	Feed-in Tariff
FLUF	Foresight Land Use Futures
FLUFP	Foresight Land Use Futures Project
FMD	Foot and Mouth Disease
FOG	Fire Operations Group
FSC	Forest Stewardship Council
FTE	full time employment
FWAG	Farm and Wildlife Advisory Group
FWC	forest-wood-chains
FWS	Farm Woodland Scheme
GAEC	Good Agricultural and Environmental Condition
GB	Great Britain
GCR	Geological Conservation Review
GDP	Gross Domestic Product
GF	*Go with the Flow*
GHG	greenhouse gas
GIS	geographic information system
GLUD	Generalised Land Use Database
GM	genetically modified
GMO	genetically modified organism
GNI	Global National Income
GPI	genuine progress indicator
GPL	*Green and Pleasant Land*
GPP	gross primary production
GPS	Global Positioning System
GVA	gross value added
GW	gigawatts
GWCT	Game & Wildlife Conservation Trust
ha	hectares
HAP	Habitat Action Plan
HaRPPS	information retrieval system to support management of habitats and rare priority protected species
HLS	Higher Level Stewardship
HMS	Harmonised Monitoring Scheme
HNV	High Nature Value
HPAI	Highly Pathogenic Avian Influenza
HRV	heart rate variability
HSW	Habitat Survey of Wales
HWP	Harvested Wood Products
ICES	International Council for the Exploration of the Sea
ICZM	Integrated Coastal Zone Management
IEEP	Institute for European Environmental Policy
IFM	Integrated Farm Management
IPC	Infrastructure Planning Commission
IPCC	Intergovernmental Panel on Climate Change
IPPC	Integrated Pollution Prevention and Control
ISPV	Israeli Acute Paralysis Virus
IT	Information Technology
ITS	internal transcribed sequences
IUCN	International Union for Conservation of Nature
IWA	Institute of Welsh Affairs
JNCC	Joint Nature Conservation Committee
JULES	Joint UK Land Environment Simulator
KE	knowledge exchange
Kw	kilowatt

LANR	Local Authority Nature Reserve
LCM	Land Cover Map
LCM2000	Land Cover Map 2000
LEAF	Linking Environment and Farming
LETS	Local Exchange Trading Systems
LFA	less favoured area
LNR	Local Nature Reserve
LS	*Local Stewardship*
LSOA	UK Census Lower Super Output Area
LU	Livestock Unit
LUCID	Local Urban Climate Model and its Application to the Intelligent Design of Cities
m^3	cubic metres
MA	Millennium Ecosystem Assessment
MACC	marginal abatement cost of carbon
MAFF	Ministry of Agriculture, Fisheries and Food
MCCIP	Marine Climate Change Impacts Partnership
MCS	Marine Conservation Society
MCZ	Marine Conservation Zone
MEEB	Minimum Entry Environmental Benefit
MEECE	Marine Ecosystem Evolution in a Changing Environment
MENE	Monitoring Engagement with the Natural Environment
MFA	Material Flow Analysis
MMH	Mountains, Moorlands and Heaths
MMO	Marine Management Organisation
MNR	Marine Nature Reserve
MOD	Ministry of Defence
MONARCH	modelling natural resource responses to climate change
MORECS	Met Office Rainfall and Evaporation Calculation System
MOSS	Management of Special Sites
MPA	Marine Protected Area
MSC	Marine Stewardship Council
MSFD	Marine Strategy Framework Directive
MSY	maximum sustainable yield
Mt	megatonnes
Mt CO_2	megatonnes of carbon dioxide
MtC	megatonnes of carbon
MtCO_2e	megatonnes of carbon dioxide equivalent
MW	megawatts
Mwe	megawatts equivalent
MWTP	marginal willingness to pay
NAEI	National Atmospheric Emissions Inventory
NAO	North Atlantic Oscillation
NBN	National Biodiversity Network
NCC	Nature Conservancy Council
NCMS	National Countryside Monitoring Scheme
NDVI	Normalised Difference Vegetation Index
NEA	National Ecosystem Assessment
NEE	net ecosystem exchange
NEP	net ecosystem productivity
NERC	Natural Environment Research Council
NERC	Natural Environment and Rural Communities
NGO	non-governmental organisation
NHS	National Health Service
NICE	National Institute for Health and Clinical Excellence
NICMS	Northern Ireland Countryside Management Scheme
NIEA	Northern Ireland Environment Agency
NI-NFFO	Non-Fossil Fuel Obligations
NISMR	Northern Ireland Sites and Monuments Record
NIWT	National Inventory of Woodlands and Trees
NLEPI	Net Landscape Ecological Potential Index
NM	nautical mile
NNR	National Nature Reserve
NOFS	New Organic Farming Scheme
NOx	nitrogen oxides
NP	National Park
NPP	net primary production
NPS	National Policy Statement
NRoSO	National Register of Sprayer Operators
NS	*National Security*
NSAs	Nitrate Sensitive Areas
NSTS	National Sprayer Testing Scheme
NTFP	non-timber forest product
NVC	British National Vegetation Classification
NVZ	Nitrate Vulnerable Zone
NW	*Nature@Work*
OAS	Organic Aid Scheme
OMHoPDL	Open Mosaic Habitats on Previously Developed Land
ONS	Office for National Statistics
OPW	Office of Public Works
OSNW	Other Semi-natural Woodland
OSPAR	Convention for the Protection of the Marine Environment of the North East Atlantic
OTMS	Over Thirty-Month Scheme
p.a.	per annum
PAN	Planning Advice Note
PAWS	Plantations on Ancient Woodland Sites
PCB	polychlorinated biphenyl
PDL	Previously Developed Land
PDV	Phocine Distemper Virus
PE	Potential Evaporation
PEFC	Programme for Endorsement of Forest Certification
PES	payment for ecosystem services
PFRA	Preliminary Flood Risk Assessment
PM	particulate matter
PM10	air pollution with particle diameter < 10 microns
PML	Plymouth Marine Laboratory
POC	particulate organic carbon
POM	particulate organic matter
POP	persistent organic pollutant
PPG	Planning Policy Guidance
PPS	Planning Policy Statement
PRD	partial root drying
QALY	Quality Adjusted Life Year
Ramsar	Convention on Wetlands of International Importance
RBMP	River Basin Management Plan
RCEP	Royal Commission for Environmental Pollution
REC	Regional Environmental Characterisation
REP	Rural Environment Protection
RFA	Renewable Fuels Agency
RHI	Renewable Heat Incentive

RHS	River Habitat Survey
RIG	Regionally Important Geological and Geomorphological Sites
RIMA	reflexive interventionist or multi-agent-based approach
RoTAP	Review of Transboundary Air Pollution
RPA	Rural Payments Agency
RPI	Retail Price Index
RSPB	The Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SAF	Single Application Form
SAMS	Scottish Association for Marine Science
SAP	Species Action Plan
SAS	Six Acre Standard
SCaMP	Sustainable Catchment Management Programme
SCC	social cost of carbon
SCORCHIO	Sustainable Cities: Options for Responding to Climate cHange Impacts and Outcomes
SDA	Severely Disadvantaged Area
SEA	Strategic Environmental Assessment
SEEA	System of Environmental and Economic Accounting
SEER	Social and Environmental Economic Research
SEP	Special Environmental Project
SEPA	Scottish Environment Protection Agency
SFM	sustainable forest management
SGM	Standard Gross Margin
SLNCI	Sites of Local Nature Conservation Importance
SMP	Shoreline Management Plan
SNG	semi-natural grassland
SOC	soil organic carbon
SP	Stated Preference
SPA	Special Protection Area
SPM	site prediction model
SPP	Scottish Planning Policy
SRDP	Scotland Rural Development Programme
SRP	soluble reactive phosphorus
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Urban Drainage Systems
SUE	Sustainable Urban Environment
TAG	Technical Advisory Group
TANs	Technical Advice Notes
TB	tuberculosis
TEEB	The Economics of Ecosystems and Biodiversity
TEV	Total Economic Value
TFR	Total Fertility Rate
TGF	trip generation function
THC	tetrahydrocannabinol
TMP	Tracking Mammals Partnership
TOC	total organic carbon
UHI	Urban Heat Intensity
UK	United Kingdom
UK NEA	United Kingdom National Ecosystem Assessment
UKBAP	United Kingdom Biodiversity Action Plan
UKCIP	United Kingdom Climate Impacts Programme
UKCP	UK Climate Projection
UKMMAS	United Kingdom Marine Monitoring and Assessment Strategy
UKTS	United Kingdom Tourism Statistics/Survey
UKWAS	UK Woodland Assurance Standard
UKWIR	UK Water Industry Research
UN	United Nations
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
US	United States
USA	United States of America
USD	United States dollar
UV	ultraviolet
UVB	ultraviolet B
VI	Voluntary Initiative
VMA	Valuation Meta-Analysis
VMNR	Voluntary Marine Nature Reserve
VMS	Vessel Monitoring System
VOC	volatile organic compound
VPF	value of a preventable fatality
VRP	Valleys Regional Park
VTG	vitellogenin
WAG	Welsh Assembly Government
WATER	Wetted Land Assessment and Techniques for Restoration
WFD	Water Framework Directive
WGS	Woodland Grant Scheme
WHO	World Health Organization
WHR	waist to hip ratio
WiSe	Wildlife SafE
WM	*World Markets*
WPZ	Water Protection Zone
WSSD	World Summit on Sustainable Development
WTP	willingness to pay
WWF	World Wide Fund for Nature
WWI	World War I
WWII	World War II
WWTW	wastewater treatment work

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