

Glossary of Terms

Accretion

In geography, accretion means the land increasing due to sediment being added to it.

Appropriate Assessment

A self-contained step in the wider decision making process required under Regulation 48 of The Conservation (Natural Habitats &c.) Regulations 1994. An Appropriate Assessment must be undertaken in respect of any plan or project which, either alone or in combination with other plans or projects, would be likely to have a significant effect on a European site, and is not directly connected with or necessary for the management of the site for nature conservation. The purpose of the Appropriate Assessment is to determine whether the proposals would adversely affect the integrity of the European site in regard to the habitats and species for which the site was designated.

Area of Outstanding Natural Beauty (AONB)

These areas were defined and declared by the Countryside Agency (now part of Natural England). The aim of declaring AONBs is to conserve and enhance the natural beauty of the landscape of an area without compromising the needs of those who work and live there. This is achieved through planning controls and practical countryside management guided by Natural England.

Asset

This refers to something of value and may be environmental, economical, social, recreational and so on.

Beach recharge

This is the management practice of adding to the natural amount of sediment (such as sand) on a beach by using material from elsewhere. This is also known as beach replenishment.

Behavioural systems approach

This is a method of looking at how a coast is changing and is likely to change in the future by assessing all the factors that affect its behaviour at a range of scales, both in terms of time and distance. This approach was adopted for the Futurecoast project, see definition below, (www.defra.gov.uk/environ/fcd/Futurecoast.htm) and the EU Life study 'Response' (Responding to the risks from climate change on the coast (www.coastalwight.gov.uk/response)).

Benefit-cost analysis

Comparison of present value scheme benefits and costs as part of an economic appraisal. The benefit cost ratio is the total present value benefits divided by the total present value costs.

Biodiversity

The total variety of life on earth. All genes, species, ecosystems and the ecological processes of which they are part.

Biodiversity Action Plan

A national action plan for a key habitat or species, approved by the government, as part of the overall UK Biodiversity Action Plan.

Biodiversity target

This target was approved by the World Summit on Sustainable Development.

Birds Directive

The abbreviated term for Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds. The Directive aims to protect bird species within the EU through the conservation of populations of, and the habitats used by certain species.

Breakwater

A rock or concrete armour-faced structure which may be aligned perpendicular or parallel to the coastline.

Breastwork

Vertical or raking timber or steel piled structures supporting horizontal planking and often with a rock infill.

Catchment

A river catchment is the whole area which drains, either naturally or with artificial assistance, to a river. It includes the drainage channels, tributaries, floodplains and washlands associated with a river, and an estuary where one is present.

Catchment flood management plans

Refers to the Environment Agency plans which provide a comprehensive framework for addressing all the Environment Agency's functions, including flood defence, within the catchment of a main river.

Climate change

Long-term changes in climate specifically linked to those changes resulting from human intervention in atmospheric processes through, for example, the release of greenhouse gases to the atmosphere from the burning of fossil fuels.

Coastal defence

A term used to encompass both coastal protection against erosion and sea defence against flooding.

Coastal defence strategy plan

A detailed assessment of the coastal defence options for a policy unit, based upon Defra guidance: FCDPAG2.

Coastal Habitat Management Plan (CHaMP)

A management plan that identifies the flood and coastal defence works that are likely to be required in a given area to conserve the nature conservation interest of a European site or group of such sites, particularly where the current defence line may be unsustainable.

Coastal process unit

A length of shoreline in which the physical processes are relatively independent from the processes operating in the adjacent coastal process units. For management purposes, coastal process units provide the framework for considering the potential wider impacts of policies in a particular management unit(s) on the adjacent shoreline. Where strategic

plans are to be developed following SMP completion, they may be on the basis of a coastal process unit.

Coastal squeeze

The process by which the coastal habitats and natural features are progressively lost or drowned, caught between coastal defences and rising sea levels.

Coastal Zone Management Plan

Plans through which local authorities and others implement planning objectives and policies for an area of the coast, which deal with a range of issues such as landscape management, development, recreation, conservation, etc.

Competent Authority

In relation to the Habitats Regulations, a Competent Authority is any Minister, Government Department, public or statutory undertaker, public body of any description or person holding public office. For a flood or coastal defence project, this includes at least the following organisations: the local planning authority (which decides on planning permission), the operating authority (which makes decisions about the design), and, if it has to decide whether to fund a scheme, Defra/National Assembly for Wales.

'Do-nothing' scenario

An option used in benefit-cost analysis to act as a baseline against which all other options are tested. It assumes that no action whatsoever is taken. In the case of existing works it assumes walk-away: cease all maintenance, repairs and other activities immediately. In the case of new works it assumes that there is no intervention in the natural processes. Politically this is often seen as a nonviable option but it is an important comparison tool in the benefit-cost analysis.

Downdrift effects

Impacts occurring in the lee of any coastal activity resulting from associated changes to coastal processes, particularly sediment supply.

Ecology

The study of the relationship between an organism and its environment.

Economic Assessment

An assessment that takes into account a wide range of costs and benefits, generally those which can be valued in money terms.

Ecosystem

A dynamic complex of biological (plant, animal, fungal and micro-organism) communities and their associated physical (non-living) environment interacting as an ecological unit.

Environment

This term encompasses all the facets of our surroundings: landscape/natural beauty, flora, fauna, geological or geomorphological features and buildings, sites and objects of archaeological, architectural; or historic interest.

Environmental Appraisal

The process whereby the environmental effects of a proposal are identified, measured, and assessed to determine their significance.

Environmental Impact Assessment

The specified process for undertaking the environmental appraisal when a proposed scheme is covered by the Environmental Impact Assessment (Land Drainage Improvement Works) Regulations 1999 or other Regulations implementing EC Directive 85/337, and the amending EC Directive 97/11.

Environmental Statement

A document that sets out the findings of the Environmental Impact Assessment, and is submitted with the planning application and/or grant application.

Epoch

This refers to a period of time. In the SMPs three epochs are defined- 0 to 20, 20 to 50 and 50 to 100 years from the present.

Erosion

The loss of land due to the effects of waves and, in the case of coastal cliffs, slope processes (such as high groundwater levels). This may include cliff instability, where coastal processes result in landslides or rock falls.

Estuary

A partially enclosed area of water and tidal shore and its surroundings. There is daily interchange of saline water from the sea and fresh water from rivers, land run-off or seepage.

EU Directive

A type of legislation issued by the European Union which obliges Member States to achieve specified results but which leaves to member States to determine the methods nationally e.g. EU Bathing Waters Directives.

European Site

Any site that has been officially named ('designated') as a site of international nature conservation importance, either as a special protection area (SPA), or a special area of conservation (SAC). When considering planning, it is government policy to treat possible SPAs, candidate SACs and listed Ramsar sites as if they were already designated.

Favourable conservation status

A range of conditions for a natural habitat or species at which the sum of the influences acting upon that habitat or species are not adversely affecting its distribution, abundance, structure or function throughout the EU in the long term. The condition in which the habitat or species is capable of sustaining itself on a long-term basis.

Flood defence

A structure which protects against flooding, by rivers as well as the sea.

Flooding

Refers to inundation by water, whether this is caused by breaches, overtopping of banks or defences or by inadequate or slow drainage of rainfall or underlying groundwater levels. Flooding due to blocked drains and sewers or the escape of water from a water

supply service will usually be the responsibility of the local water company and does not fall within the scope of a Shoreline Management Plan.

Futurecoast

A study Defra asked for to provide consistent information on coastal processes and possible future development of the coast, for the whole of England and Wales (www.defra.gov.uk/environ/fcd/Futurecoast.htm).

Gabion Mattress

Rock filled mesh baskets or linked pre-cast concrete units which act as a defence against scour.

Geomorphology

The study of landforms and land forming processes.

Greenhouse gases

Naturally occurring gases, such as carbon dioxide, nitrous oxide, methane and ozone, and man-made gases like chlorofluorocarbons, which absorb some of the sun's radiation and converts it into heat.

Groynes

Structures in rock and timber generally perpendicular to the shoreline used to control beach material movement.

Habitat

The characteristic dwelling place of a species or community.

Habitat Action Plan

A biodiversity action plan for a habitat

Habitats Directive

The abbreviated term for Council Directive 92/43/EEC OF 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora. It is the aim of this Directive to promote the conservation of certain habitats and species within the EU.

Habitat Regulations

The Conservation (Natural Habitats & c.) Regulations 1994. This transposes the Habitats Directive into UK Law.

Hard defences

Structures such as walls or banks designed to contain rivers or the energy of waves and tide.

Hazard

A situation with the potential to result in harm. A hazard does not necessarily lead to harm.

Heritage Coast

Heritage Coast is a national definition to cover the most unspoilt areas of undeveloped coastline around England and Wales.

High-level targets (HLTs)

HLTs have been developed with the Environment Agency, Defra, Association of Drainage Authorities and the Local Government Association as well as with the wider Flood Management Stakeholder Forum (see www.defra.gov.uk/environ/fcd/policy/forum.htm for details of its membership). They are not legal requirements but are important for delivering government policy so all operating authorities are expected to put them into practise. Further details on the targets can be found at www.defra.gov.uk/environ/fcd/hltarget/default.htm.

Intertidal

The area of land covered by water at high tide but exposed at low tide.

Local Nature Reserve

Areas of land of local importance declared by the local authority in consultation with English Nature under the provisions of the National Parks and Access to the Countryside Act 1949, which are managed to enhance their natural value.

Maintenance

Refers to the activities involved in keeping defence structures such as flood banks, walls, gates, etc. in a defined operational state, and in keeping the hydraulic performance of water courses within defined limits. It does not refer to improvements to such works to maintain the same level of protection against a new or increased risk.

Managed realignment

The management of a process of establishing a new defence line, often set back from the existing position, with the aim of improving the long-term sustainability of the defence, or contributing to other aims such as habitat creation.

Management plan

A plan that recommends prescriptive actions and nominates responsible parties and a timetable for action.

Management scheme

The framework established by the relevant authorities for a European marine site under which their functions are exercised to secure, in relation to that site, compliance with the requirements of the Habitats Directive.

Management unit

A length of shoreline with coherent characteristics in terms of coastal processes and assets at risk that can be managed efficiently. Where strategic plans are to be developed following SMP completion, they may be on the basis of an appropriate grouping of adjacent management units or for an individual management unit.

National Nature Reserve (NNR)

Areas that are managed for the benefit of natural features within them that are of national value. Unlike SSSI, NNRs are owned or leased by English Nature or an approved body, and they area managed primarily for conservation.

Natura 2000 site

A site which is either a SPA or a SAC. Also referred to as European sites.

Natural Processes

Those processes over which people have no significant control (such as wind or waves) and sea level rise.

Operating Authority

A body with statutory powers to undertake flood defence or coast protection activities, usually a maritime District Council or Unitary Authority or the Environment Agency.

Physical processes

Coastal phenomena such as sediment transport, erosion and accretion responsible for shaping the coast and underpinning its dynamic qualities. It refers to geological/earth science processes only.

Planning Policy Guidance/Statement

A series of notes issued by the government setting out national policy guidance on planning issues, such as the countryside, nature conservation, coastal planning, unstable ground, etc. These are gradually being replaced by Planning Policy Statements (PPS).

Post project evaluation

A procedure to review the performance of a project with respect to its original objectives and the manner in which the project was carried out.

Precautionary principle

An approach which takes avoiding action based on the possibility of significant environmental or other damage, even before there is conclusive evidence that the damage will occur.

Ramsar site

An internationally important wetland, designated under the Convention on Wetlands of International Importance especially as Wildfowl Habitat (Ramsar, Iran) 1971 and, as a matter of government policy, are afforded the same protection as a site designated under the EU Habitats and Birds Directives.

Residual life

The time until when a defence is no longer able to achieve minimum 'acceptable performance'.

Residual risk

The risk which remains after managing and reducing risks. It may include, for example, risk due to very severe storms or risks from unexpected hazards.

Return Period

The return period of an extreme event is usually expressed in years. For example, an event with a return period of 50 years has a probability of 1 in 50 of being exceeded in any given year. There can be no guarantee that such an event will not be exceeded more than once in 50 years.

Revetment

A cladding of stone, concrete or other material to stabilise and protect shorelines, embankments or shore structures against erosion by wave action or currents.

Risk

A combination of both the likelihood and consequences of an event.

Risk assessment

Consideration of the risks inherent in a project, leading to the development of action to control them (see FDCPAG4). Or Consideration of risks to people and the developed, historic and natural environment.

Risk management

The activity of mitigating and monitoring risks.

Scheme

In the context of flood and coastal defence and the FCDPAG series, a scheme usually relates to the implementation of works on the ground. It is normally the case that a scheme (or schemes) is identified as a consequence of a broad-based investigation and has quite specific objectives. Stages of scheme development may include pre-feasibility studies, detailed appraisal and construction.

Sea Defences

A structure that prevents the ingress of sea over the land.

Sea Level Rise (SLR)

Phenomenon mainly produced by isostatic movement (north-west Britain is rising following glacial withdrawal at the end of the last ice age, causing the south-east to sink), combined with subsidence of the coast associated with a tectonic fault between the Solent and north-east France, and more recently exacerbated by global sea level rise as a result of climate change. The combined effect of these changes are thought to result in an annual SLR of about 6mm per year but increasing over time.

Sediment cell

A length of coastline and its associated near shore area within which the movement of coarse sediment (sand and shingle) is largely self-contained. Interruptions to the movement of sand and shingle within one cell should not affect beaches in an adjacent sediment cell.

Shoreline

Interface between the land and sea.

Shoreline Management Plans

Refer to plans developed by members of coastal defence groups, covering a stretch of coastline, which address factors such as the geological structure of the coast, the natural processes which influence it, the land use in the area, development plans and the flood and erosion risks along the coast, and propose a strategy for the future approach to the defence of the coast where that is appropriate.

Site of Special Scientific Interest (SSSI)

An area of land or water notified by the Nature Conservancy Council or its successor country agencies under the Wildlife and Countryside Act 1981, as being of special nature or geological conservation importance.

Site of Importance for Nature Conservation (SINC)

Areas of land of local importance for the conservation of semi-natural habitats including mosaics of heathland, unimproved grassland, scrubland and plantation and/or habitats which support rare local wildlife species.

Soft defences

Those defences which generally rely on natural materials or use natural response mechanisms to control river and coastal flooding and erosion. For example, the encouragement of saltmarsh growth to protect the banks of estuaries, management of beaches to absorb wave energy, the use of water meadows and reed beds to reduce river flow velocities and the use of washlands to reduce peak river flows. Their effective use requires a thorough understanding of the natural forces and responses in the river or coastal system.

Special Area of Conservation (SAC)

A site of Community importance designated under the Habitats Directive by the Member States where the necessary conservation measures are applied for the maintenance or restoration, at a favourable conservation status, of the habitats and/or species for which the site is designated.

Special Protection Area (SPA)

A site designated under the Birds Directive by the Member States where appropriate steps are taken to protect the bird species for which the site is designated.

Standard of protection

The level of a defence required to provide the necessary protection for a particular return period event.

Strategic Coastal Defence Option

Generic term for any coastal management strategy, e.g. advance, retreat or hold the existing coastal defence line or no active intervention.

Strategic Environmental Assessment (SEA)

A process of assessing the environmental opportunities and restrictions of a project, and identifying and managing its implications. An SEA is a legal requirement of certain plans and programmes, under the Environment Assessment of Plans and Programmes Regulations 2004.

Strategy plan

A documented strategy which is developed from a strategic study of a problem and describes the course of action which has been determined to implement the preferred option.

Sustainability

The degree to which flood and coastal defence solutions avoid tying future generations into inflexible and/or expensive options for defence. This will usually include consideration of inter-relationships with other defences and likely developments and processes within a catchment or coastal cell. It will also take account of long-term demands for non-renewable materials.

Sustainable development

The use of resources to meet the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainable policies

Sustainable policies lead to coastal defence solutions that avoid tying future generations into inflexible and/or expensive options for defence. They will usually include consideration of interrelationships with other defences and likely developments and processes within a coastal cell or sub-cell. They will also take account of long-term demands for non-renewable materials.

Sustainable schemes

Schemes which take account of the interrelationships with other defences, developments and processes within a catchment or coastal sediment cell, and which avoid as far as possible tying future generations into inflexible and expensive options for defence.

Water Framework Directive

This Directive is European Union legislation which covers all inland and coastal waters. The Directive sets a framework which should provide substantial benefits for managing water over the long term. Further details can be found on Defra's website www.defra.gov.uk/environment/water/wfd.