

# GLOSSARY

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## **Aerenchymous species**

4 Species with morphological structures that enable enhanced gas exchange.

## **Aquic**

6 Soils having, or conditions of, restricted drainage leading to period flooding and anaerobic conditions (adapted  
7 from Table 2.3 2006GL, footnote).

## **Artificial drainage**

9 The removal of free water from soils having aquic conditions to the extent that water table levels are changed  
10 significantly in connection with specific types of land use (definition from USDA, 1999).

## **Aquaculture**

12 A range of practices that are commonly occurring in coastal wetlands, the most important of which are fish  
13 farming and shrimp ponds.

## **Autotrophic respiration**

15 Carbon losses from plant biomass due to internal metabolism (growth and maintenance)

## **Blanket bogs**

17 Bogs occupying large expanses of ground and occurring at variable depth

## **Bogs**

19 Nutrient-poor peatland

## **Chamber based techniques**

21 Gas-tight enclosures used to measure net ecosystem CO<sub>2</sub> exchange

## **Coastal Wetlands**

23 Organic and mineral soils vegetated by vascular plants that are covered or saturated for all or part of the year by  
24 tidal freshwater or salt water (>0.5ppt); the boundary is recognized as the landward extent of tidal inundation and  
25 extending seaward to the maximum depth of vascular plant vegetation.

## **Constructed Wetlands for Wastewater Treatment**

27 Engineered systems that have been designed and constructed to utilize the natural processes involving wetland  
28 vegetation, soils, and their associated microbial assemblages to assist in treating wastewater.

## **Created wetlands**

30 Land that was previously dry and/or unvegetated that has been converted to a wetland by establishing hydrologic  
31 and/or vegetation characteristic of a wetland.

## **Dams**

33 Constructed barrier that retains water flow

## **Denitrification**

35 Reduction of nitrate or nitrite to nitrogen gas

## **Dissolved Inorganic Carbon (DIC)**

37 Sum of all inorganic carbon species in solution (e.g. carbonate, bicarbonate, carbonic acid, carbon dioxide)

## **Dissolved Organic Carbon (DOC)**

39 Sum of all organic carbon molecules in solution that are smaller than a defined screen size (typically <45µm)

## **Discharge**

41 Release of water in environments; specifically, release of effluent resulting from anthropogenic activities

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43 **Ditch**

44 Small dam, in the field it can be a narrow furrow or trench

45 **Drainage**

46 The act, process, or mode of draining

47 **Drainage class**

48 The mean annual water table averaged over a period of at least three to five years.

49 **Drainage ditches**

50 Drainage canals

51 **Eddy covariance**

52 Micrometeorological method that utilizes turbulence in vertical flux of air to quantify gas exchange.

53 **Extraction**

54 Physical removal of biomass or soil involved in the construction of aquaculture ponds, salt production ponds;  
55 extraction can also have indirect effects on seagrass meadows (Chapter 4).

56 **Fens**

57 Nutrient-rich peatland

58 **Fish Ponds**

59 Type of aquaculture

60 **Flooded Lands**

61 Lands that are inundated

62 **Flooding**

63 Overflowing of water on land normally dry

64 **Floodplain**

65 Land adjacent to a stream or river that experiences flooding during periods of high discharge.

66 **Freshwater marsh**

67 Organic and mineral soils with vegetation dominated by marsh species (herbaceous, grass or sedge or shrubs)  
68 that are covered or saturated for all or part of the year by freshwater.

69 **Freshwater wetlands**

70 Organic and mineral soils vegetated by vascular plants that are covered or saturated by freshwater for all or part  
71 of the year.

72 **Heterotrophic**

73 Generating energy from the assimilation of organic matter and oxygen resulting in a release of CO<sub>2</sub>; also  
74 heterotrophic respiration

75 **HSSF**

76 Horizontal subsurface flow type of constructed wetland

77 **Hydroperiod**

78 Inundation frequency, differentiated by permanent and intermittent (see intermittent; inundation)

79 **Hydrologic Diversion**

80 Water flow or discharge blocked by structures or pumped

81 **Impoundment**

82 Body of water formed by impounding

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**84 Inundated; Inundation**

85 To be covered by water

**86 Mangrove forest**

87 Organic and mineral soils vegetated by mangrove species that are covered or saturated for all or part of the year  
88 by tidal freshwater or salt water (>0.5ppt); the boundary is recognized as the landward extent of tidal inundation

**89 Marshes**

90 Organic and mineral soils vegetated by herbaceous, grass or sedge species that are covered or saturated for all or  
91 part of the year by freshwater, tidal freshwater or salt water (>0.5ppt)

**92 Methanogens**

93 Microorganisms that produce methane

**94 Methanotrophs**

95 Microorganisms that utilize methane for metabolism

**96 Mineral soil**

97 All soils that do not meet the definition of *organic soils* (see *Organic Soils*)

**98 Minerotrophic**

99 Ecosystems supplied by streams or springs, often base-rich and high in nutrients

**100 National Territory**

101 National inventories include greenhouse gas emissions and removals taking place within national territory and  
102 offshore areas over which the country has jurisdiction. There are some special issues that are described in  
103 Section 8.2.1 of Volume 1 of the *2006 IPCC Guidelines*. For example, emissions from fuel use in road transport  
104 is included in the emissions of the country where the fuel is sold and not where the vehicle is driven, as fuel sale  
105 statistics are widely available and usually much more accurate.

**106 Nitrification**

107 The microbial oxidation of  $\text{NH}_4$  to  $\text{NO}_3$

**108 Nutrient Enrichment**

109 Excess nutrients introduced as a result of anthropogenic activities including aquaculture effluent

**110 Oil and gas extraction**

111 Example of a hydrologic/sediment diversion activity that results in coastal subsidence (loss of soil elevation)

**112 Ombrotrophic**

113 Ecosystems supplied with water mainly by precipitation, often acidic and low in nutrients

**114 Oligotrophic**

115 Trophic class of aquatic ecosystems in which chlorophyll and phosphorus content are low and water clarity is  
116 high; also nutrient deficient status

**117 Organic Soils**

118 In line with the *2006 IPCC Guidelines*, soils are organic if they satisfy the requirements 1 and 2, or 1 and 3  
119 below:

- 120 1) Thickness of organic horizon greater than or equal to 10 cm. A horizon of less than 20 cm must have 12  
121 percent or more organic carbon when mixed to a depth of 20 cm;
- 122 2) Soils that are never saturated with water for more than a few days must contain more than 20 percent  
123 organic carbon by weight (i.e., about 35 percent organic matter); and
- 124 3) Soils are subject to water saturation episodes and have either:
  - 125 a) At least 12 percent organic carbon by weight (i.e., about 20 percent organic matter) if the soil has no  
126 clay; or

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127 b) At least 18 percent organic carbon by weight (i.e., about 30 percent organic matter) if the soil has 60%  
128 or more clay; or

129 c) An intermediate proportional amount of organic carbon for intermediate amounts of clay.

**130 Paludiculture**

131 Peatland agriculture

**132 Particulate Organic Carbon (POC)**

133 Small pieces of organic carbon, larger than *Dissolved Organic Carbon*

**134 Peat compaction**

135 Compression of peat soil resulting in increased bulk density

**136 Peat consolidation**

137 See *peat compaction*

**138 Peat decomposition/oxidation**

139 Microbial mineralization of peat resulting in products such as CO<sub>2</sub>, DOC and DIC

**140 Peat extraction**

141 See *Extraction*

**142 Peat matrix**

143 The soil of a peatland that includes organic matter in various degrees of humification

**144 Peat subsidence**

145 The loss in peat elevation resulting from *peat compaction* and *peat oxidation*

**146 Prairie**

147 An extensive area of flat or rolling, predominantly treeless grassland; often considered to be part of the  
148 temperate grasslands, savannas, and shrublands biome.

**149 Refractory carbon**

150 The percent soil carbon does not oxidize within the time scale of the inventory.

**151 Rehabilitation**

152 The re-establishment, on formerly drained sites, of some of – but not necessarily all - the hydrological,  
153 biogeochemical and ecological processes and functions that characterized pre-drainage conditions

**154 Restoration**

155 The permanent re-establishment of hydrological and biogeochemical processes characteristic of saturated soils,  
156 as well as of the vegetation cover that pre-dated the disturbance of these areas.

**157 Rewetting**

158 The deliberate action of raising the water table on drained land to re-establish such saturated conditions, e.g. by  
159 blocking drainage ditches, disabling pumping facilities or breaching obstructions.

**160 Riparian**

161 Interface between land and a river/stream.

**162 Saline wetland**

163 Wetlands that accumulate salts in soils typically as a result of semi-arid to arid conditions.

**164 Salt production**

165 Salt exploitation sites or solar salterns where salt is produced by evaporating tidal water and commonly  
166 occurring in or displacing coastal wetlands

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**168 Seagrass meadow**

169 Organic and mineral soils vegetated by seagrass species that are covered or saturated, for all or part of each tidal  
170 cycle by seawater

**171 Sediment**

172 Solid fragments of inorganic or organic material that are carried and deposited by wind, water, or ice.

**173 Semi-natural treatment wetland**

174 Natural wetland systems that have been modified for wastewater treatment. The modifications made within these  
175 systems usually are based on increasing the volume reserved (i.e. dams) and constructing channels for targeting  
176 the influent and effluent. These systems can be found in both freshwater and coastal wetlands.

**177 SF**

178 Surface flow type constructed wetland

**179 Swamps**

180 Organic and mineral soils with vegetation dominated by woody species that are covered or saturated for all or  
181 part of the year by freshwater, tidal freshwater or salt water (>0.5ppt)

**182 Tidal freshwater wetlands**

183 Organic and mineral soils with vegetation dominated by tidal vascular plant species (woody, herbaceous, grass  
184 or sedge) that are covered or saturated for all or part of the year by tidal freshwater; the boundary is recognized  
185 as the landward extent of tidal inundation

**186 Tidal marsh**

187 Organic and mineral soils with vegetation dominated by tidal marsh species (herbaceous, grass or sedge) that are  
188 covered or saturated for all or part of the year by tidal freshwater or salt water (>0.5ppt); the boundary is  
189 recognized as the landward extent of tidal inundation

**190 TOC (total organic carbon)**

191 Carbon in organic matter

**192 VSSF**

193 Vertical subsurface flow type of constructed wetland

**194 Wastewater treatment plants**

195 A facility designed to receive wastewater and to remove materials that damage water quality and threaten public  
196 health and safety when discharged into receiving streams or bodies of water

**197 Waterborne carbon**

198 *DOC* or *POC* contained in or conveyed by water

**199 Wetlands**

200 Wetlands, as discussed in this supplement, are lands where soil saturation or inundation by water forces the biota,  
201 particularly rooted plants, to adapt to anaerobic processes (GPG 2003: Box 3.2.1 , Keddy 2010, see further Ch.  
202 1.4.1.). These lands include inland wetlands (such as swamps, marshes, fens, peatland, bogs and riparian  
203 environments), coastal and near-shore marine wetlands (such as mangrove forests, tidal freshwater wetlands,  
204 seagrass meadows), and human-constructed wetlands (such as fish ponds, wastewater treatment plants, dams and  
205 reservoirs). The IPCC land use category Wetlands includes areas of peat extraction and land that is covered or  
206 saturated by water for all or part of the year (e.g., peatlands) and that does not fall into the Forest Land, Cropland,  
207 Grassland or Settlements categories. It includes reservoirs as a managed sub-division and natural rivers and lakes  
208 as unmanaged sub-divisions.

**209 Wetland mineral soil**

210 Soils classified as "aquic soils" or "gleysols" according to the default mineral soil classification in Chapter 3,  
211 Annex 3A.5, Figures 3A.5.3 & 3A.5.4 of the 2006 IPCC Guidelines.

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