

GLOSSARY

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Aerenchymous species

3 Species with morphological structures that enable enhanced gas exchange.

Aquic

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

Artificial drainage

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

Aquaculture

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

Autotrophic respiration

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

Blanket bogs

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

Bogs

12 Nutrient-poor peatland

Chamber based techniques

13 Gas-tight enclosures used to measure net ecosystem CO₂ exchange

Coastal Wetlands

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

Constructed Wetlands for Wastewater Treatment

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

Created wetlands

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

Dams

21 Constructed barrier that retains water flow

Denitrification

22 Reduction of nitrate or nitrite to nitrogen gas

Dissolved Inorganic Carbon (DIC)

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

Dissolved Organic Carbon (DOC)

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

Discharge

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

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Second Order Draft

- 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 CO₂; 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
83

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 NH_4 to 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

Second Order Draft

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 CO₂, 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

167

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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