China's Three Gorges Dam

The Three Gorges Dam, sited on the middle reaches of the Yangtze River, is the world's largest hydroelectric project. Supporters say the $29bn-project provides critical flood control and much-needed hydroelectric power but critics predict an environmental disaster

Beijing
Shanghai
Yangtze River
500km
310 miles
CHINA

RESERVOIR
Length: **630km**
Flooded land: **1,000sq km** – world's largest inundated area by single project

Qutang Gorge
Wu Gorge
Resettlement area
Xiling Gorge
Yichang
Yangtze River
Wanxian
THREE GORGES DAM
Chongqing

Pool: **175m deep**
Dam height: **185m**
Dam length: **2,309m**
Shiplift: *For ships of up to 3,000 tons*
Shiplocks: *Double-way 5-step for ships of up to 10,000 tons*
Spillway
Power plants

Penstock
POWER PLANT CUT-AWAY
Power plant
Generator
Downstream outlet

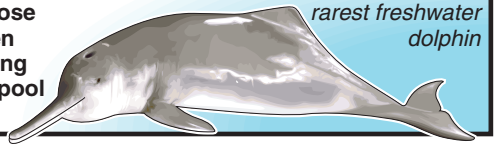
POWER GENERATION:
Twenty-six 700-megawatt generators bring overall capacity to 18,200MW, producing 84.7bn kilowatt hours of electricity annually – equivalent to 10% of China's electricity needs in 2009

Francis-type turbine
Shaft to generator
Water inlet
Waterflow

POPULATION
Project has required evacuation of 1.13 million people, sometimes by force.
Government says dam protects 15 million others from flood threat

ENVIRONMENT
Government says power plant will decrease CO2 emissions by 100m tons, lessening greenhouse effect.
Critics say Yangtze will lose ability to generate oxygen as dam slows river, turning reservoir into giant cesspool

Yangtze River Dolphin: *Increase in erosion downstream of dam could adversely affect habitat of world's rarest freshwater dolphin*



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