



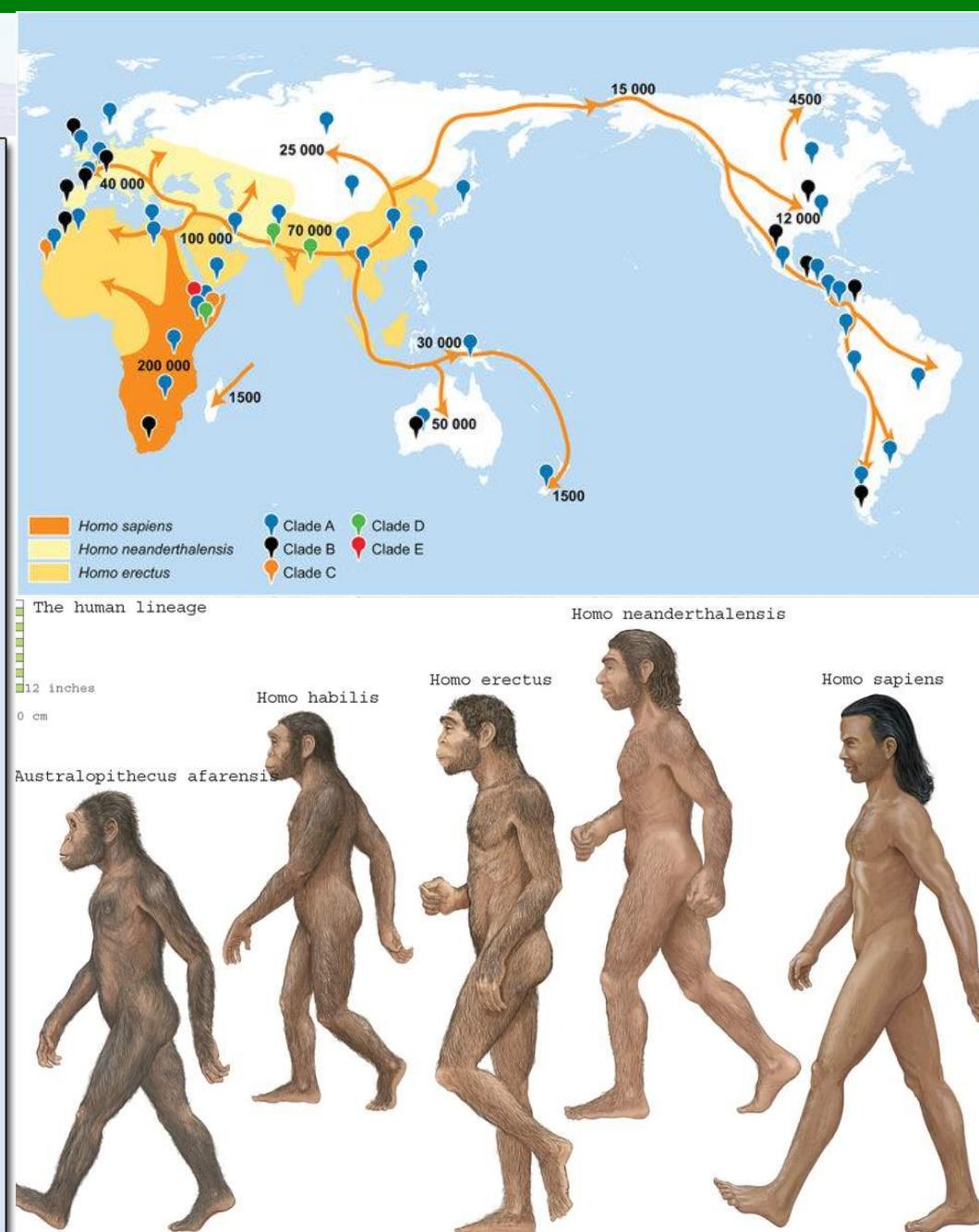
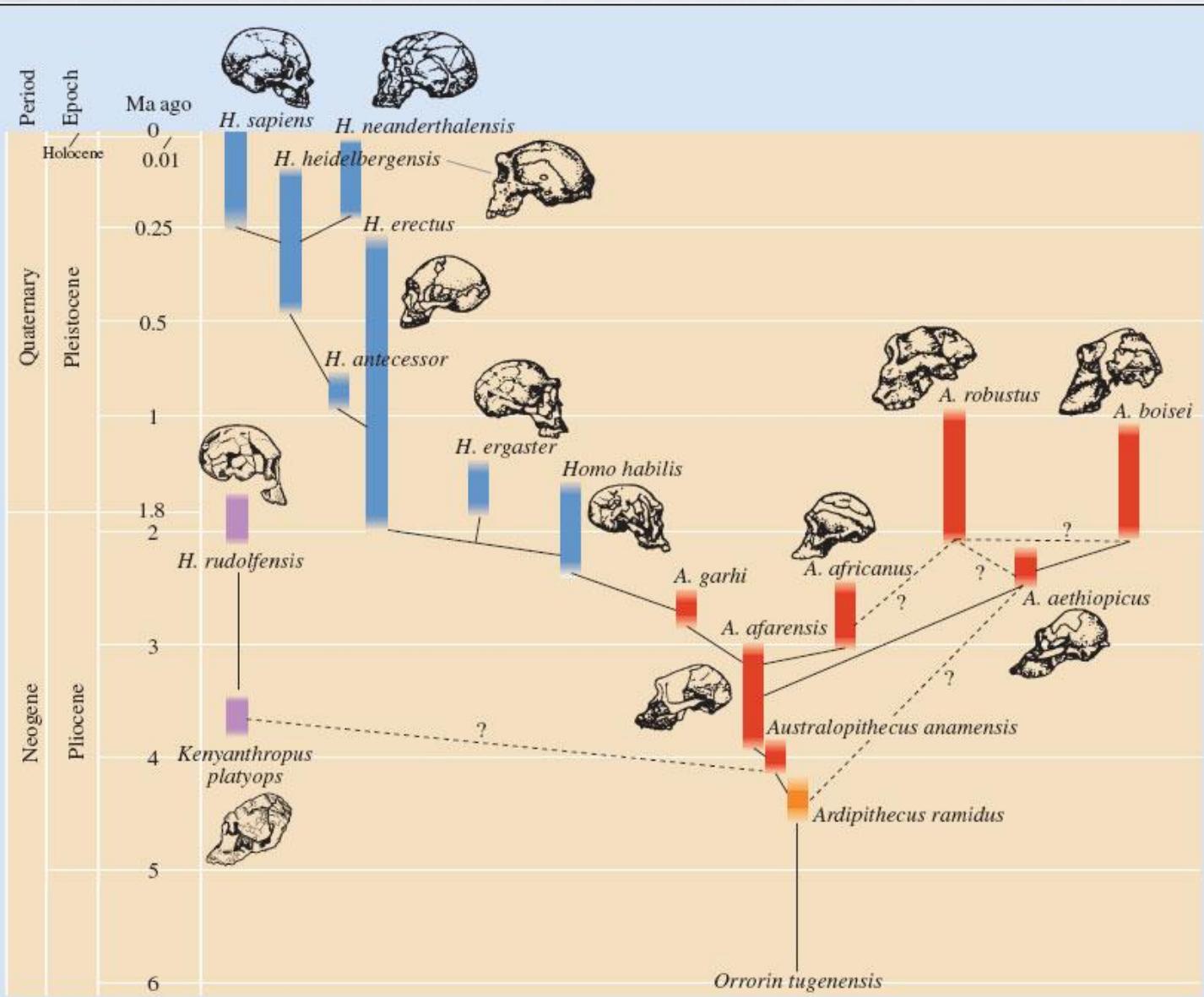
Landscape Evolution

Anthropogenic Landscapes

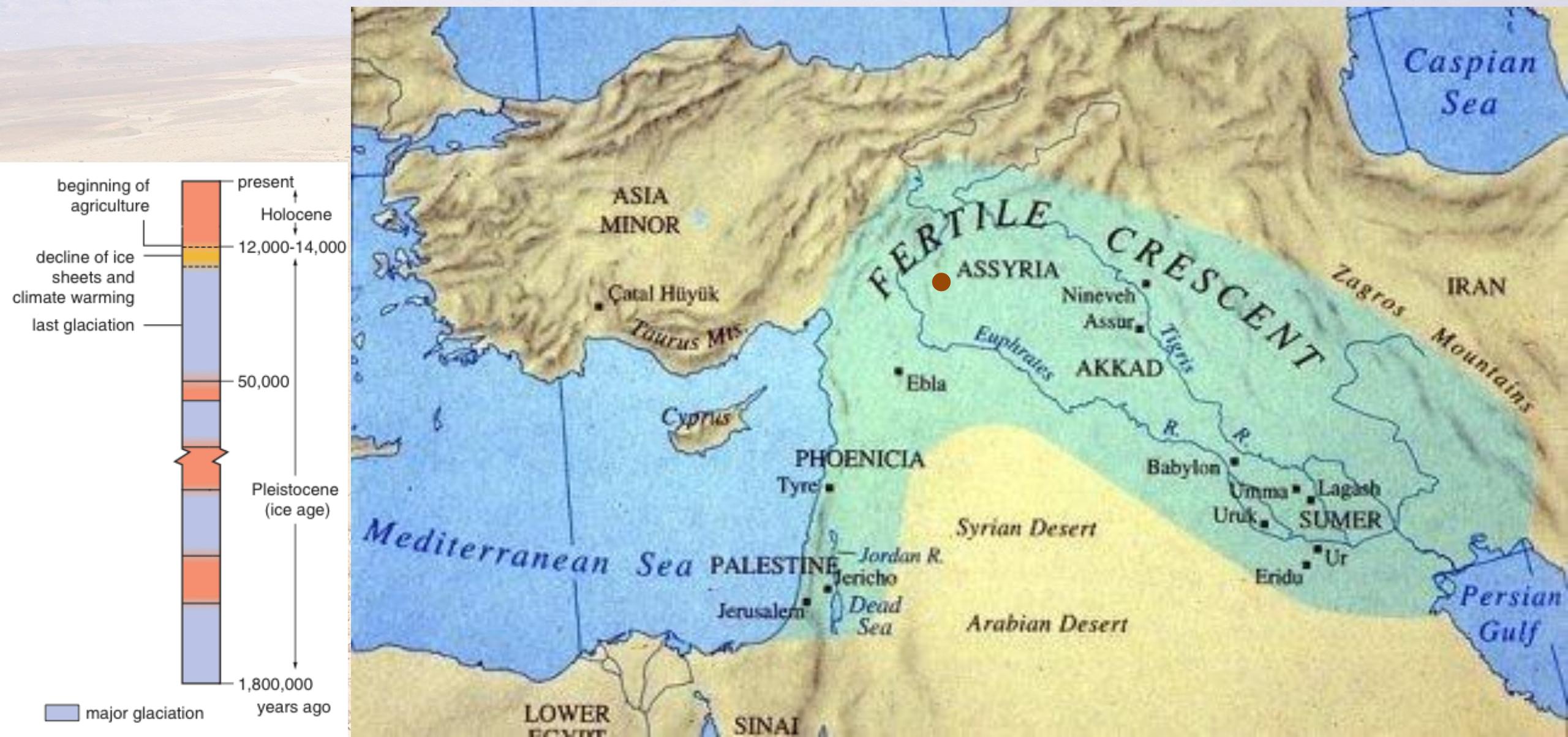
Anthropogenic Landscapes | The Anthroposphere

GY4027: Landscape Evolution

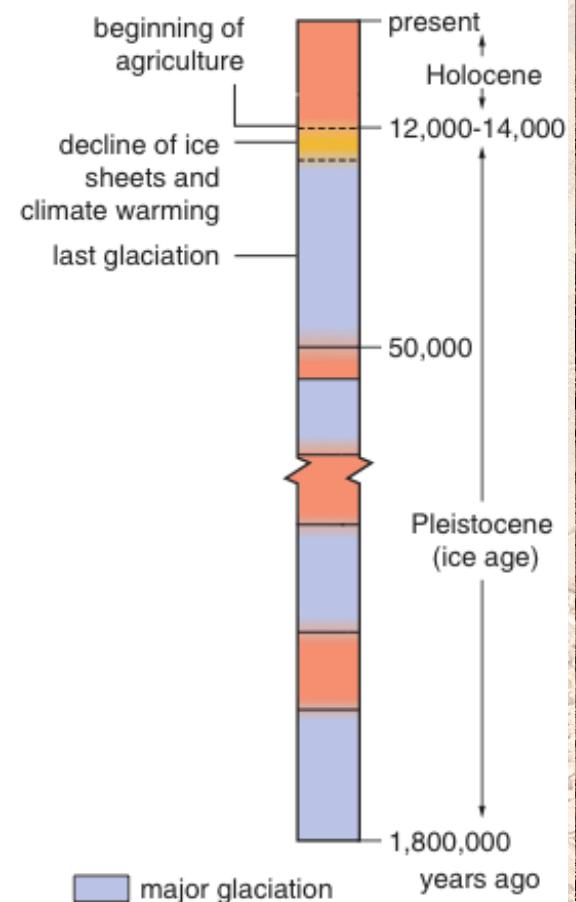
Humans



Domestication and Agriculture



Domestication and Agriculture: Göbekli Tepe



Teomancimit, CC BY-SA 3.0, via Wikimedia Commons

Anthropogenic Landscapes | Agriculture

GY4027: Landscape Evolution

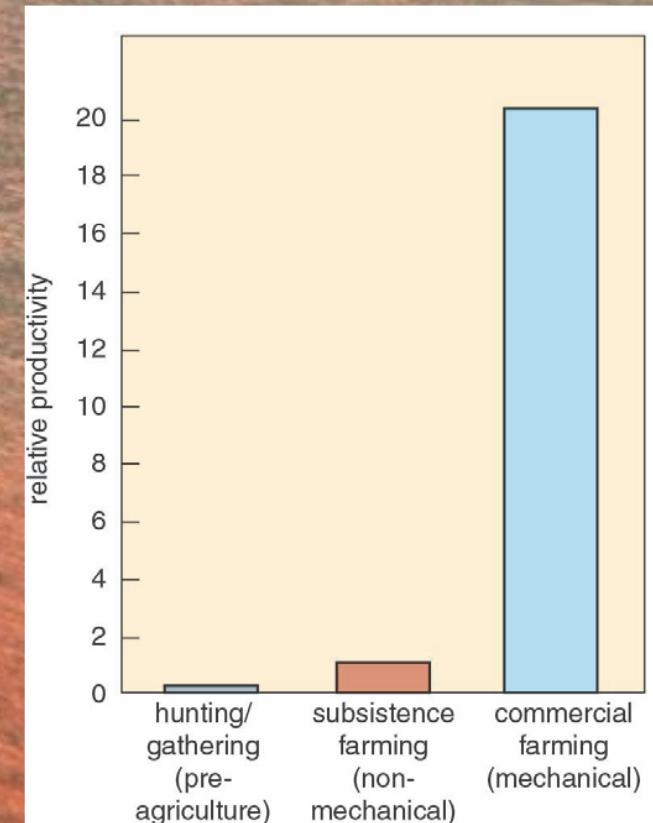
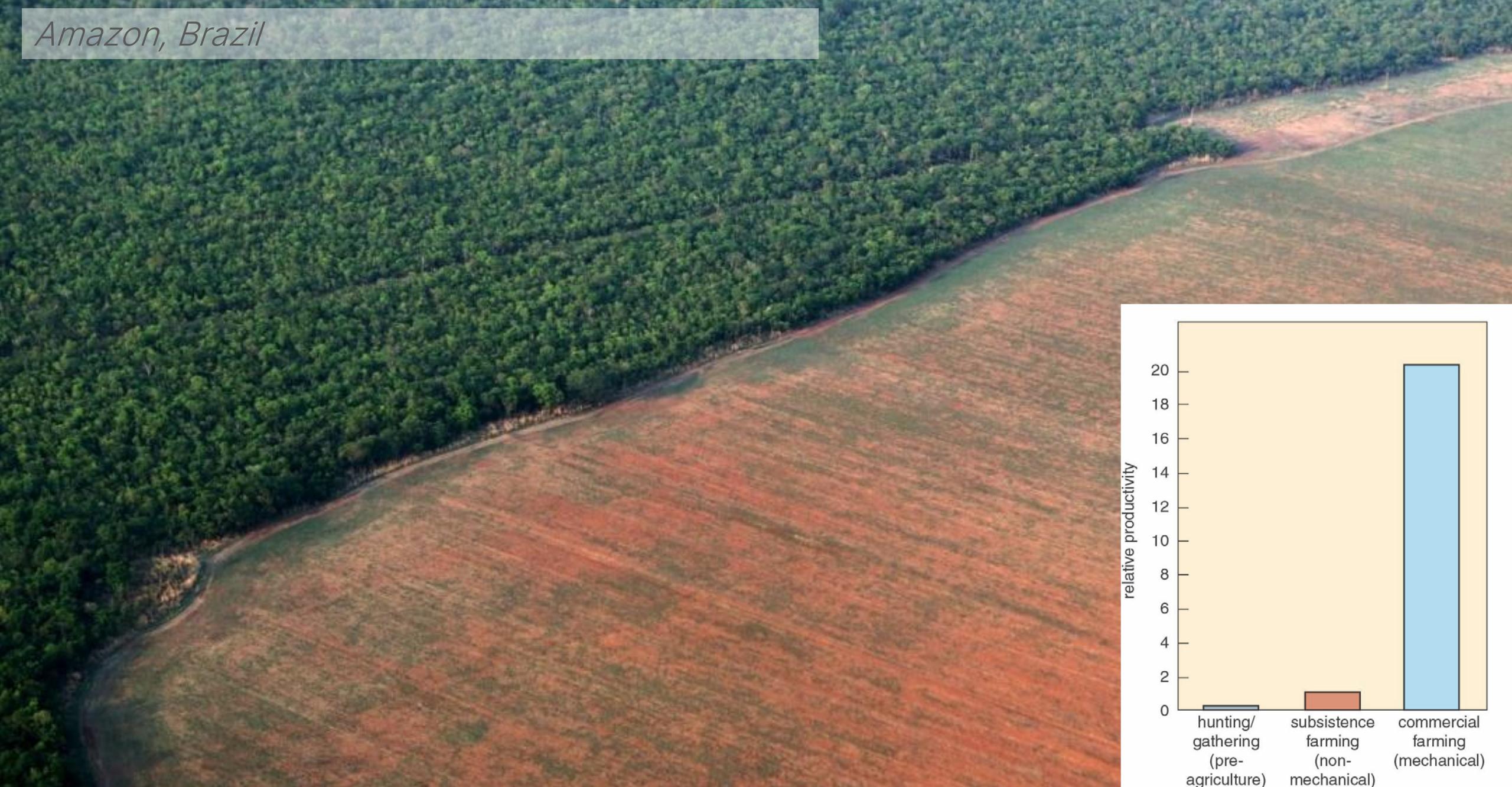
- *Crop farming*
- *Livestock farming*
- *Forest clearance*
- *Soil, water, plant management*



Anthropogenic Landscapes | Agriculture and Deforestation

GY4027: Landscape Evolution

Amazon, Brazil



Anthropogenic Landscapes | Agriculture and Deforestation

GY4027: Landscape Evolution

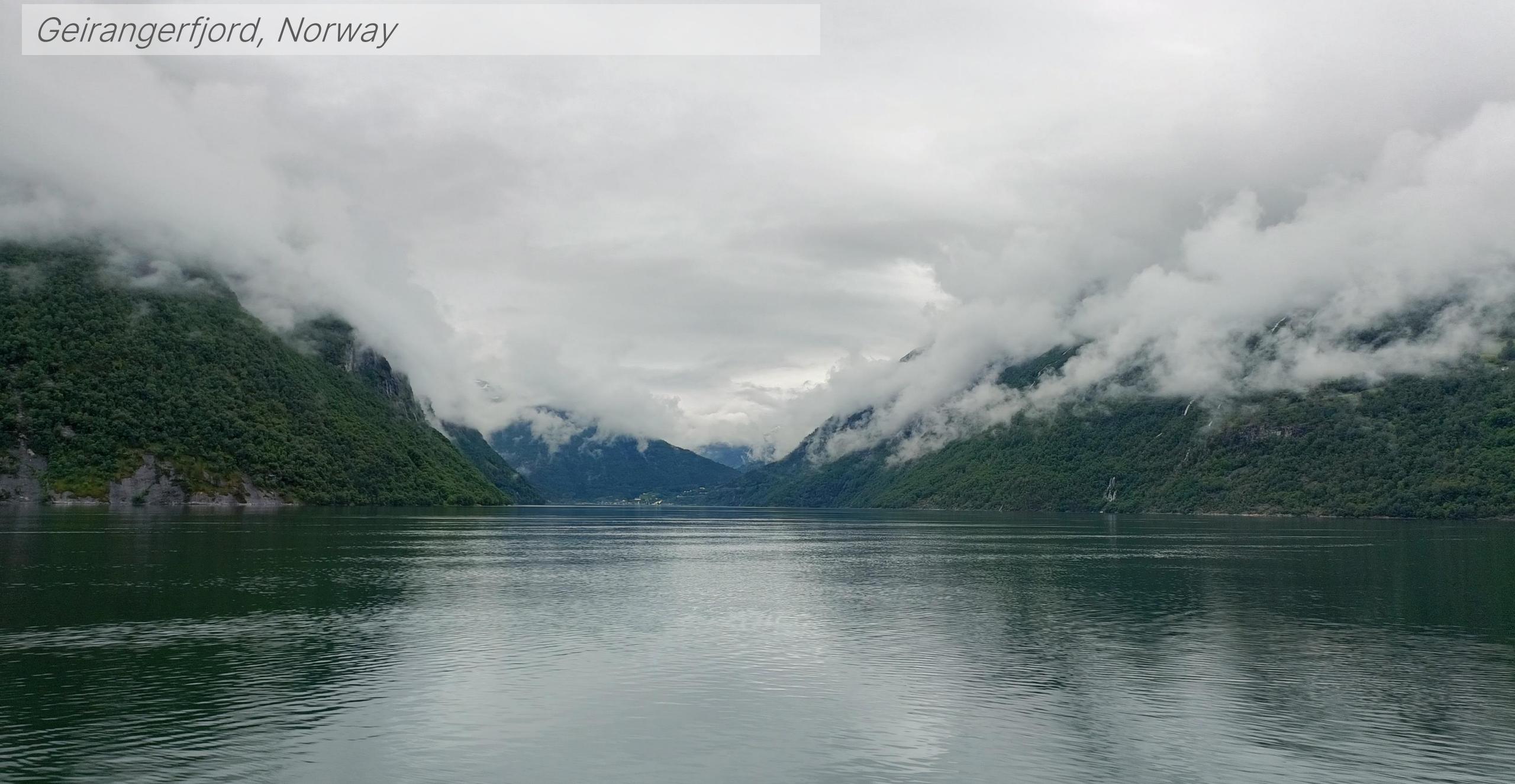
Killary Harbour, Galway



Anthropogenic Landscapes | Agriculture and Deforestation

GY4027: Landscape Evolution

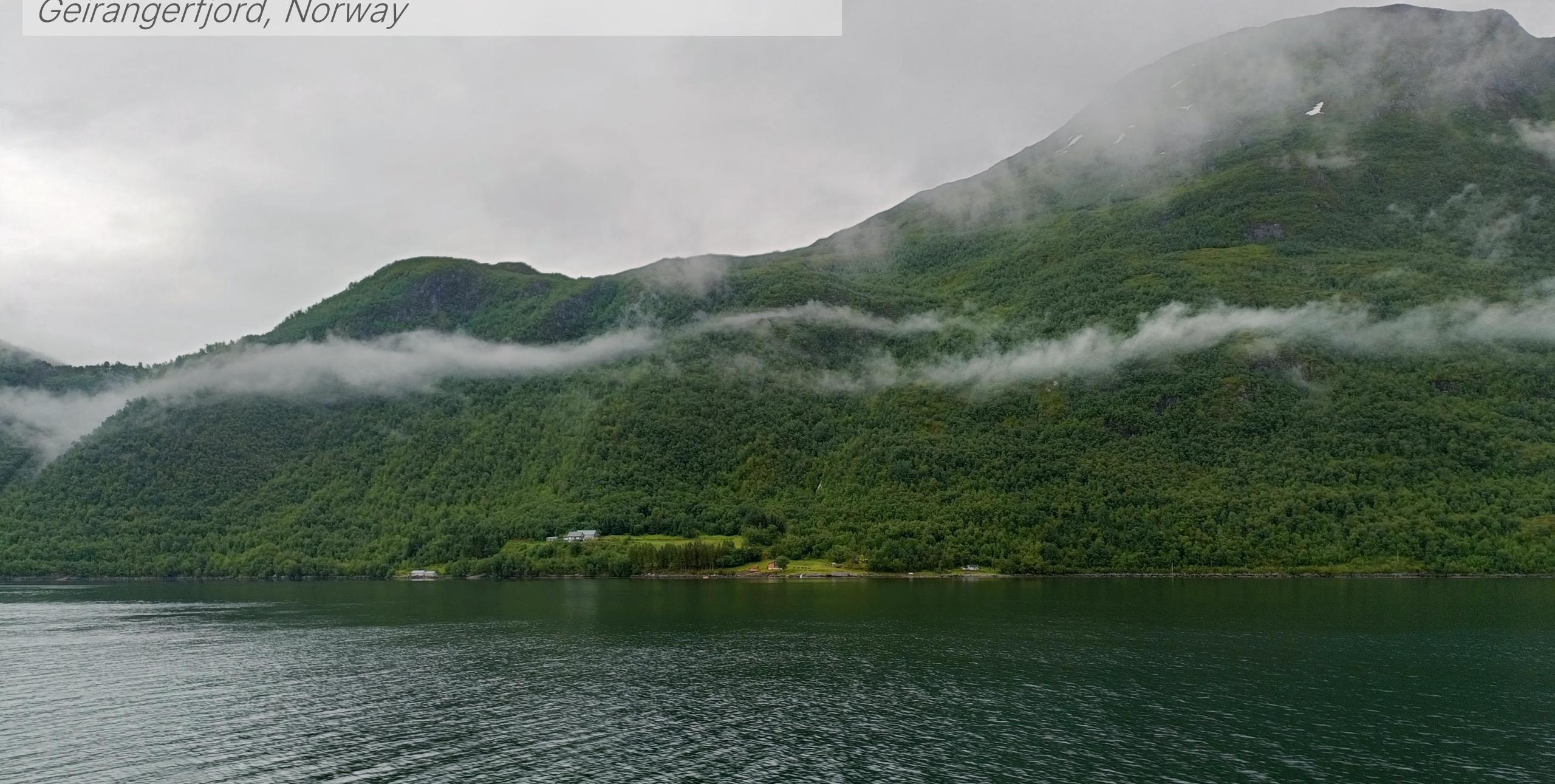
Geirangerfjord, Norway



Anthropogenic Landscapes | Agriculture and Deforestation

GY4027: Landscape Evolution

Geirangerfjord, Norway



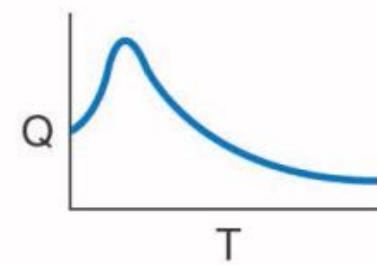
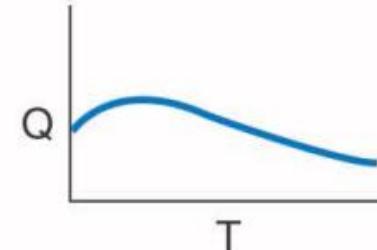
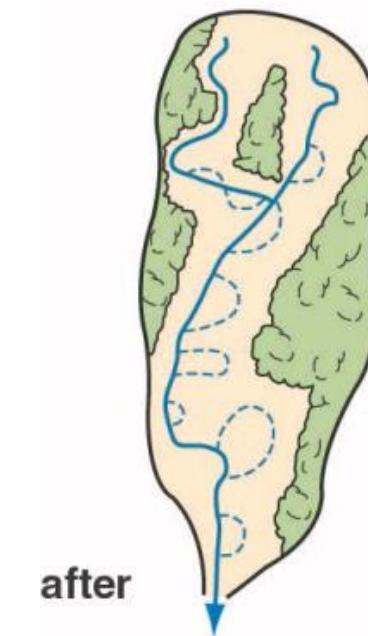
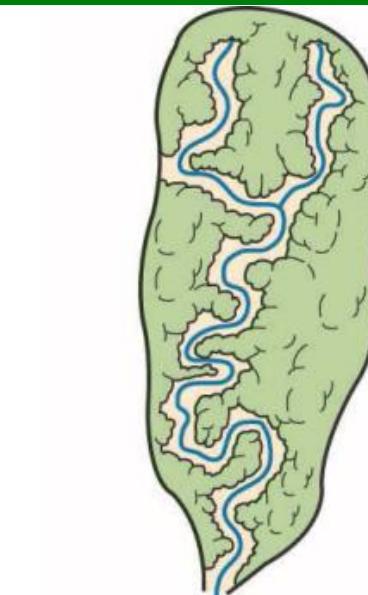
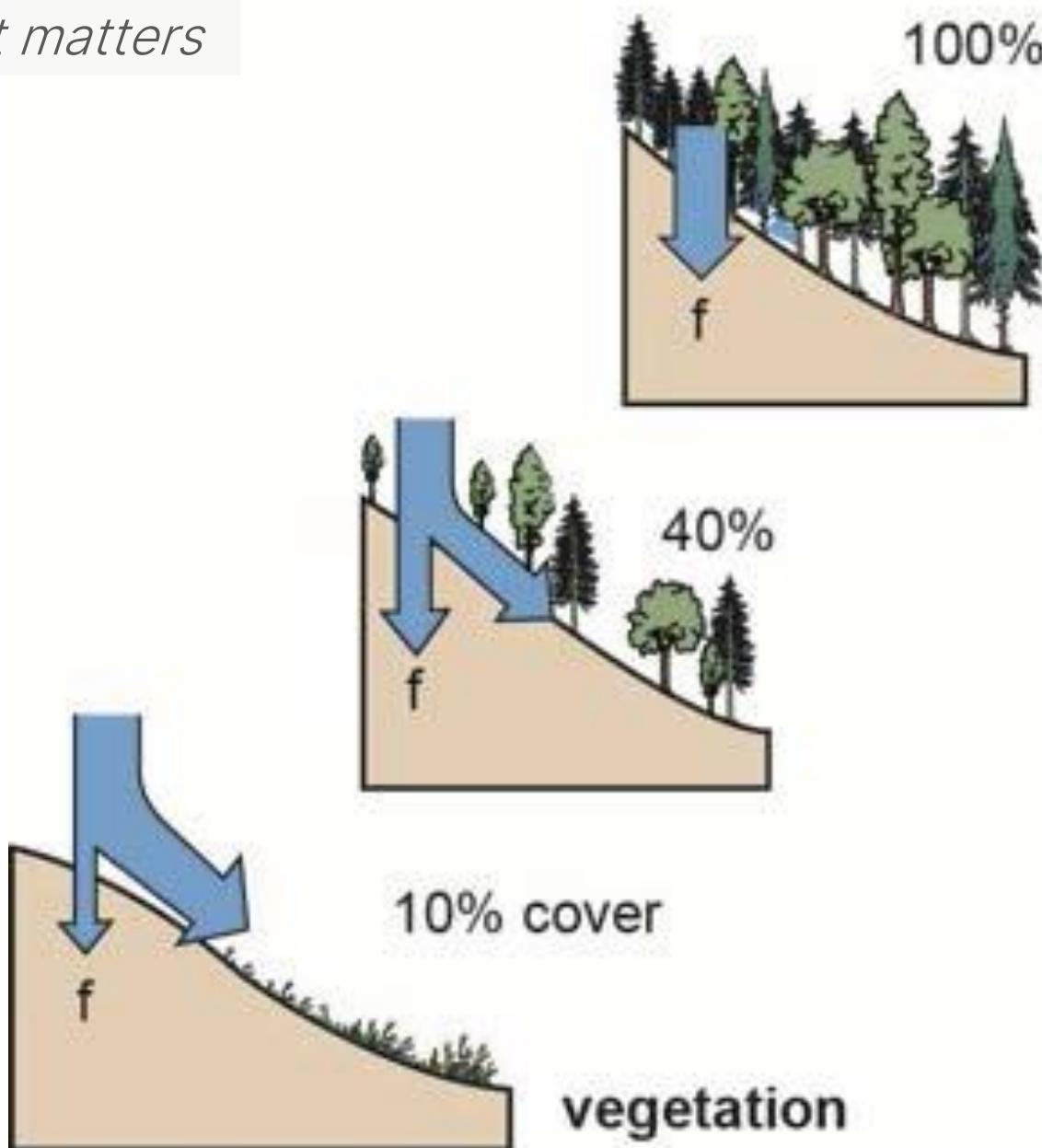
Connemara, Galway



Anthropogenic Landscapes | Deforestation

GY4027: Landscape Evolution

Why it matters



Kerry



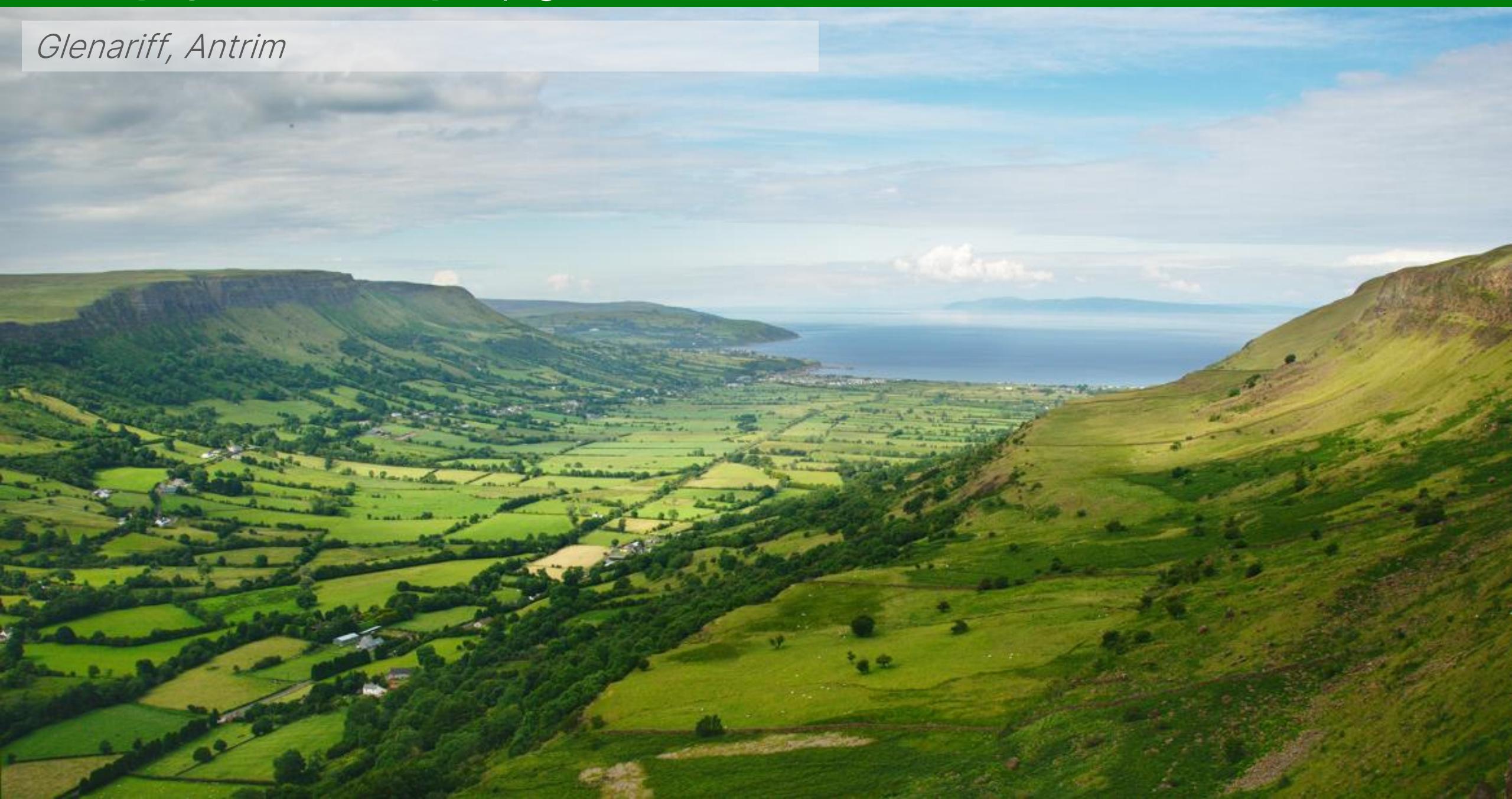
Great Blasket, Kerry



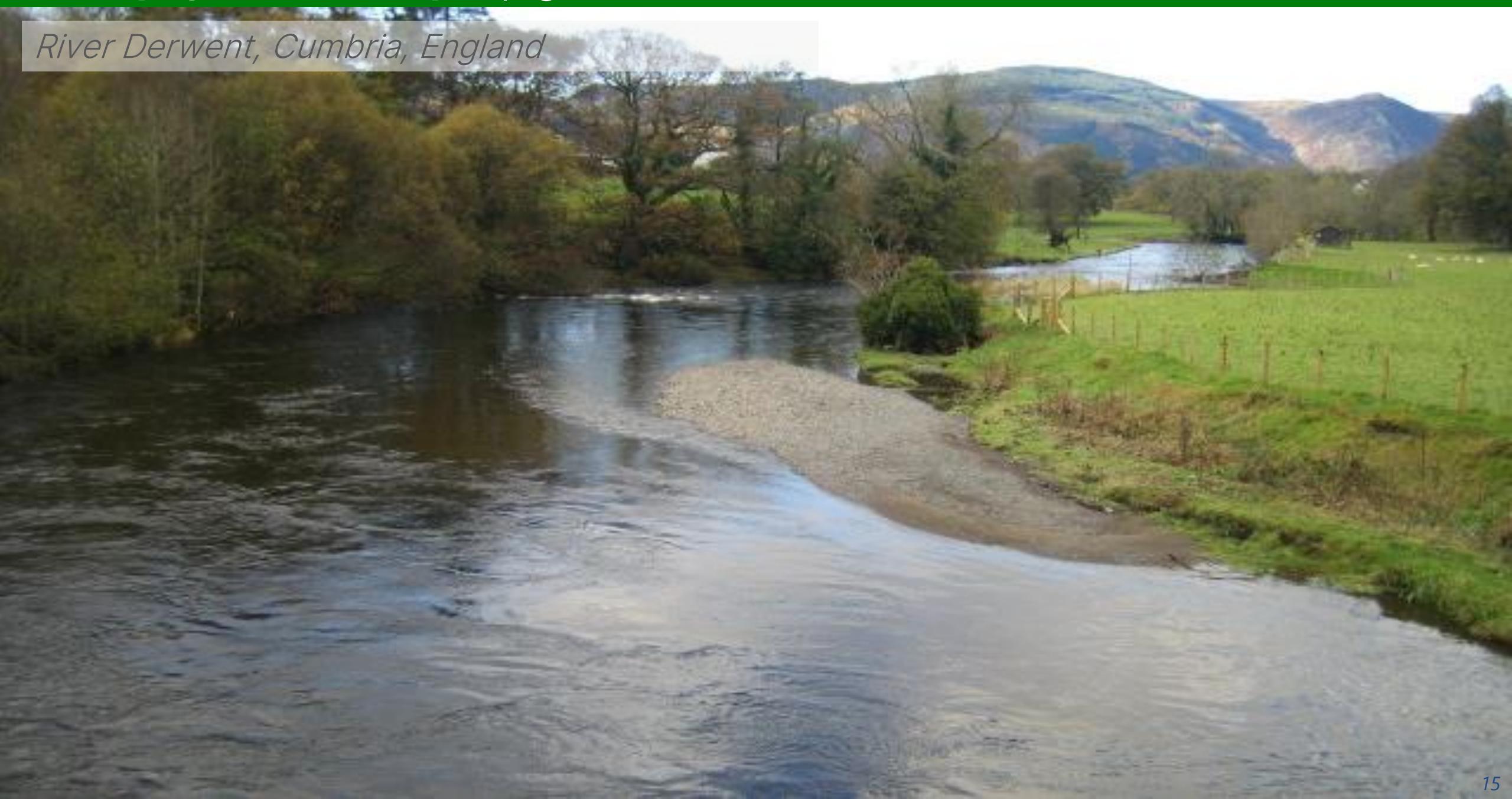
Anthropogenic Landscapes | Agriculture

GY4027: Landscape Evolution

Glenariff, Antrim



River Derwent, Cumbria, England



Anthropogenic Landscapes | Horticulture

GY4027: Landscape Evolution

Shilin, Yunnan, China



Anthropogenic Landscapes | Agriculture

GY4027: Landscape Evolution

Ourzazate, Morocco



Irrigation



Anthropogenic Landscapes | Tourism

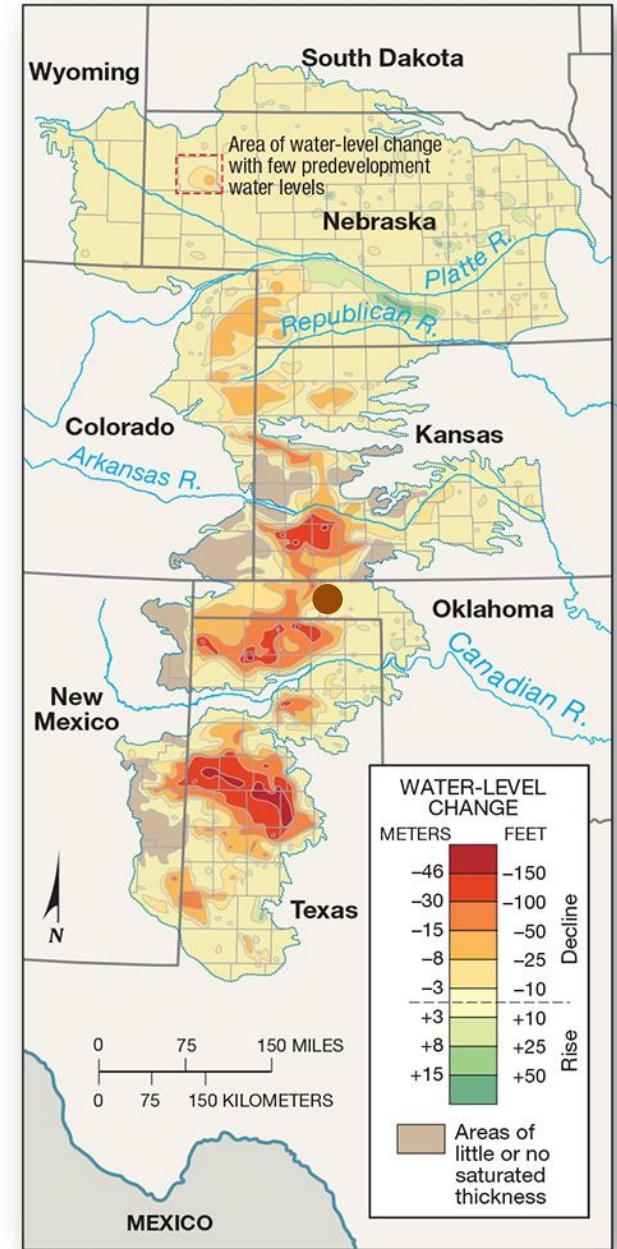
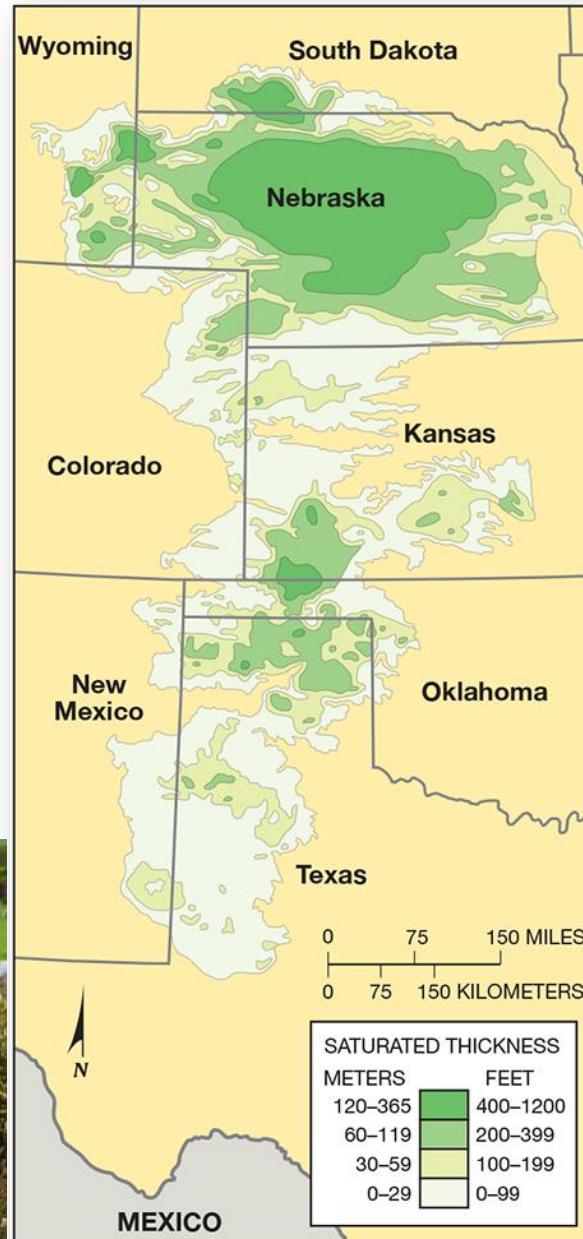
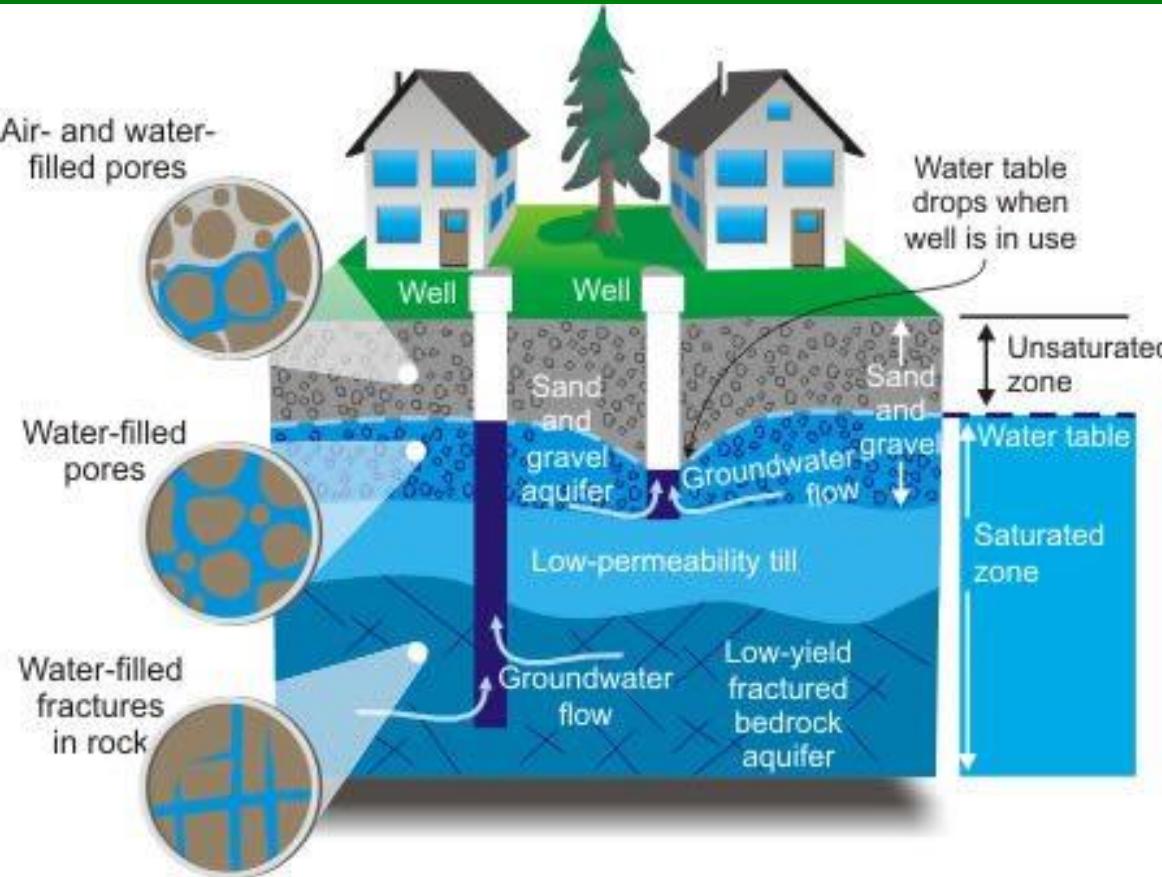
GY4027: Landscape Evolution

Las Vegas, USA



Anthropogenic Landscapes | Groundwater

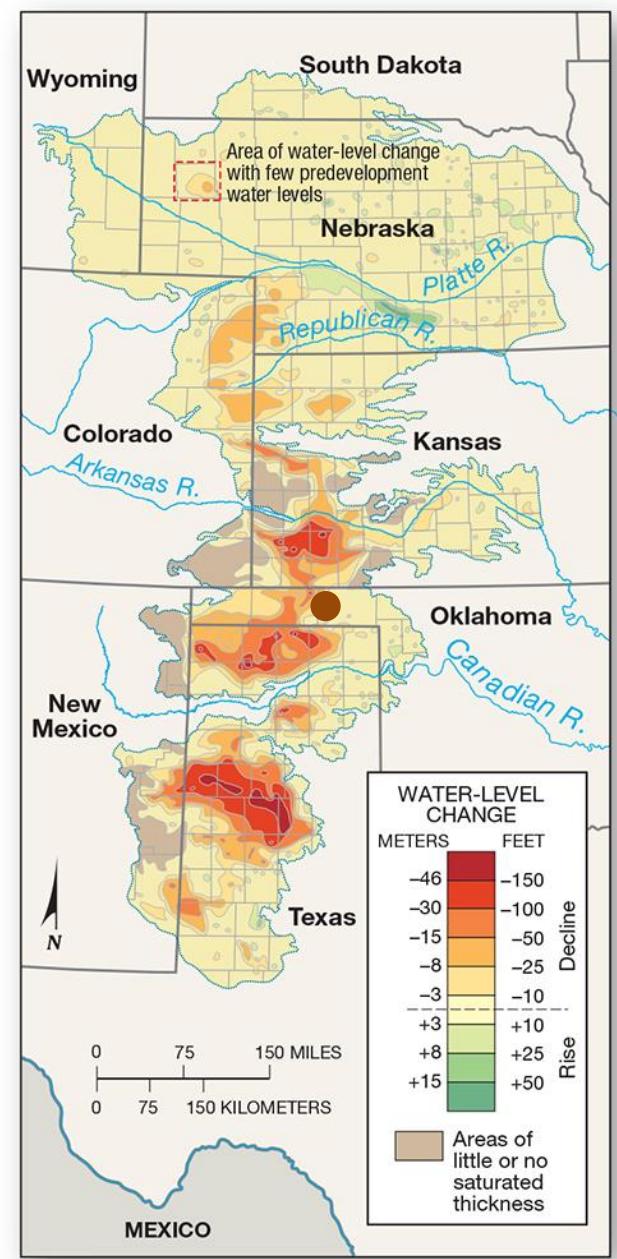
GY4027: Landscape Evolution



Optima "Lake", OK



Photo: U.S. Army Corps of Engineers Digital Visual Library (Public Domain) via [wikimedia](#)



California, USA



(a) Much of southern California's water arrives via canal from central California, the Sierra Nevada, and the Colorado River.

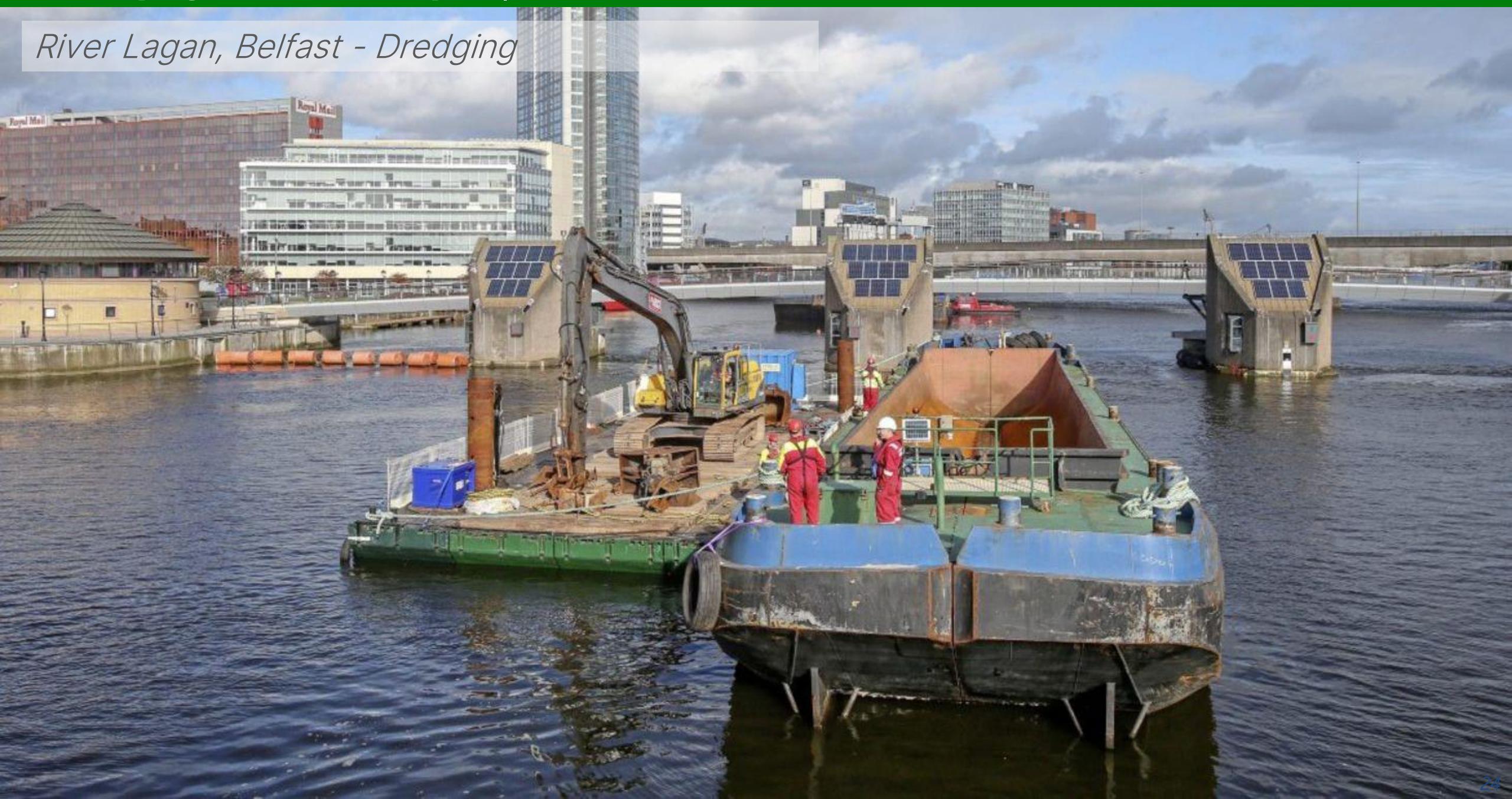


(b) The 1207-km-long (750-mi-long) California Aqueduct, shown here near Victorville.

California, USA



River Lagan, Belfast - Dredging



Tomar, Portugal

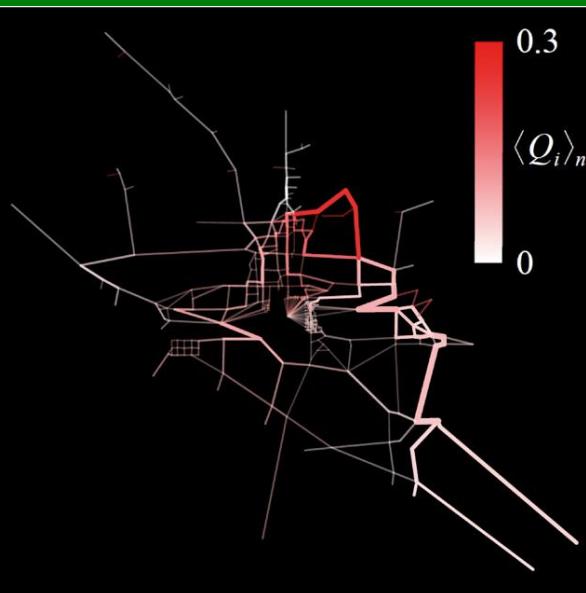
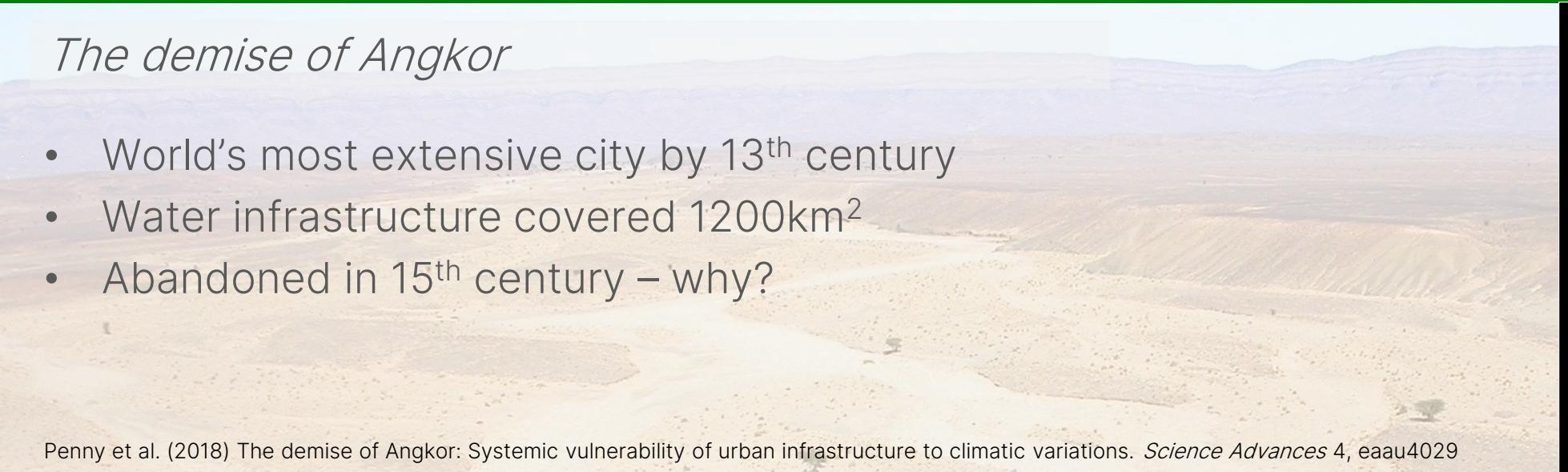


Nîmes, France



The demise of Angkor

- World's most extensive city by 13th century
- Water infrastructure covered 1200km²
- Abandoned in 15th century – why?



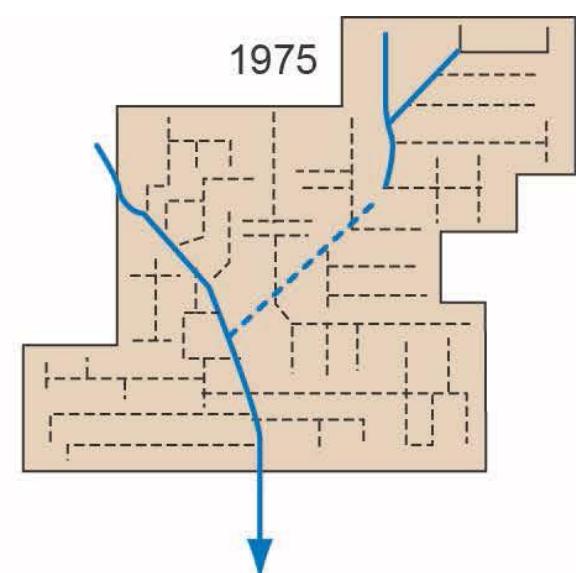
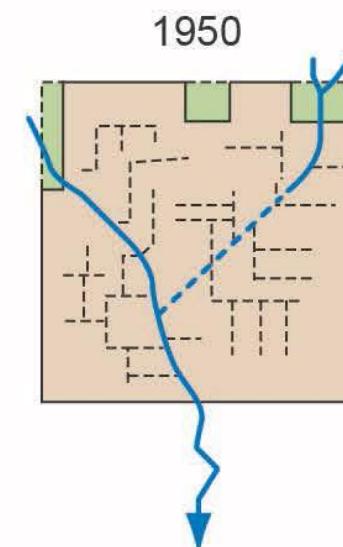
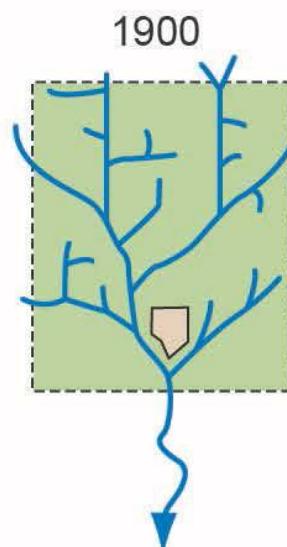
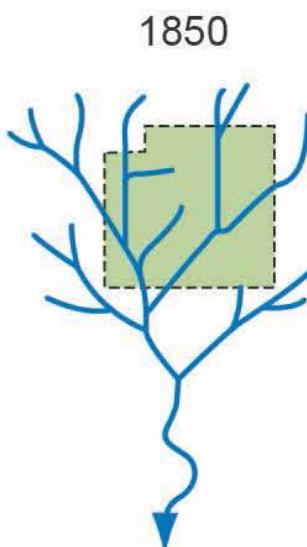
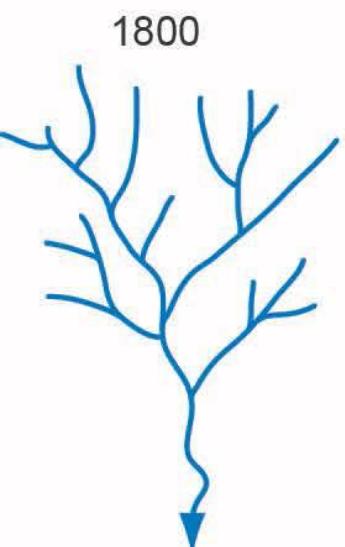
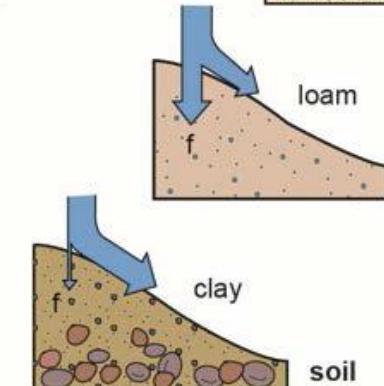
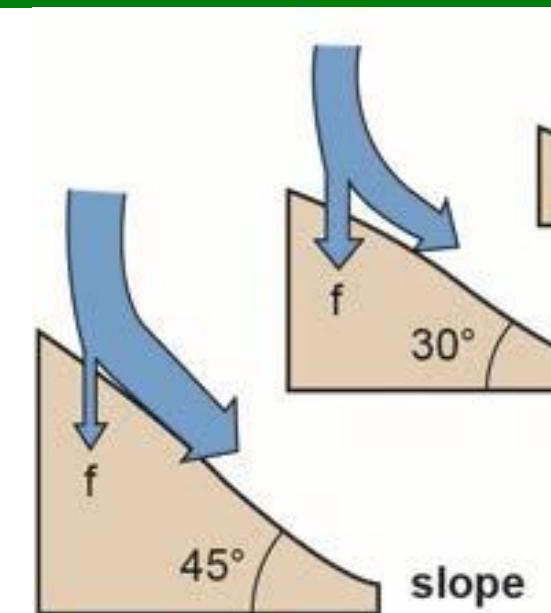
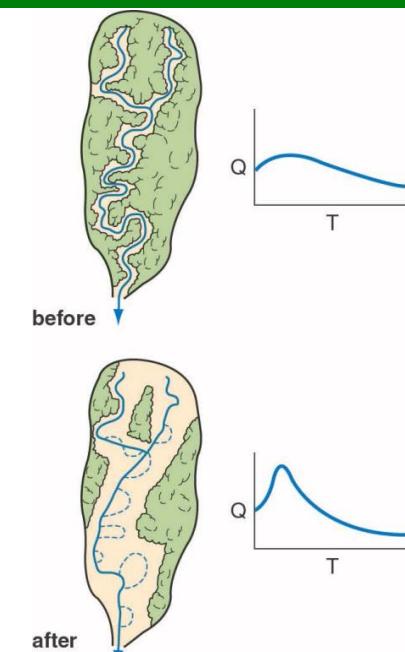
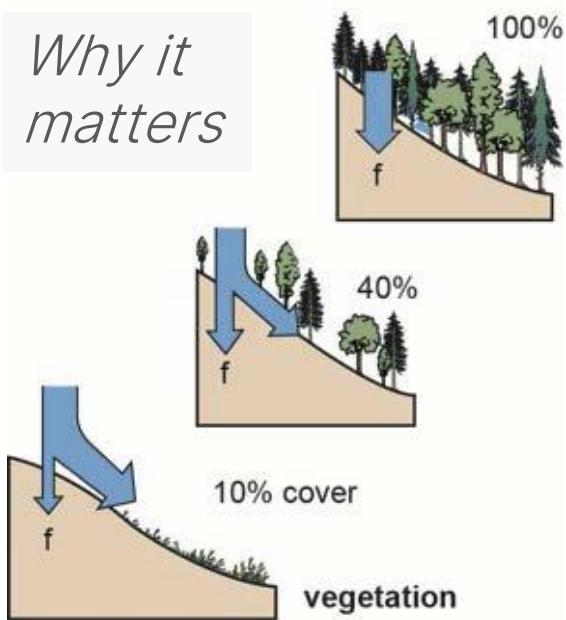
Penny et al. (2018) The demise of Angkor: Systemic vulnerability of urban infrastructure to climatic variations. *Science Advances* 4, eaau4029



Anthropogenic Landscapes | Water and Urbanisation

GY4027: Landscape Evolution

Why it
matters



natural streams

field ditches

storm sewers

agricultural land

urbanized land

Anthropogenic Landscapes | Water

GY4027: Landscape Evolution



Reservoir Dogs



Silent Valley Reservoir, Down



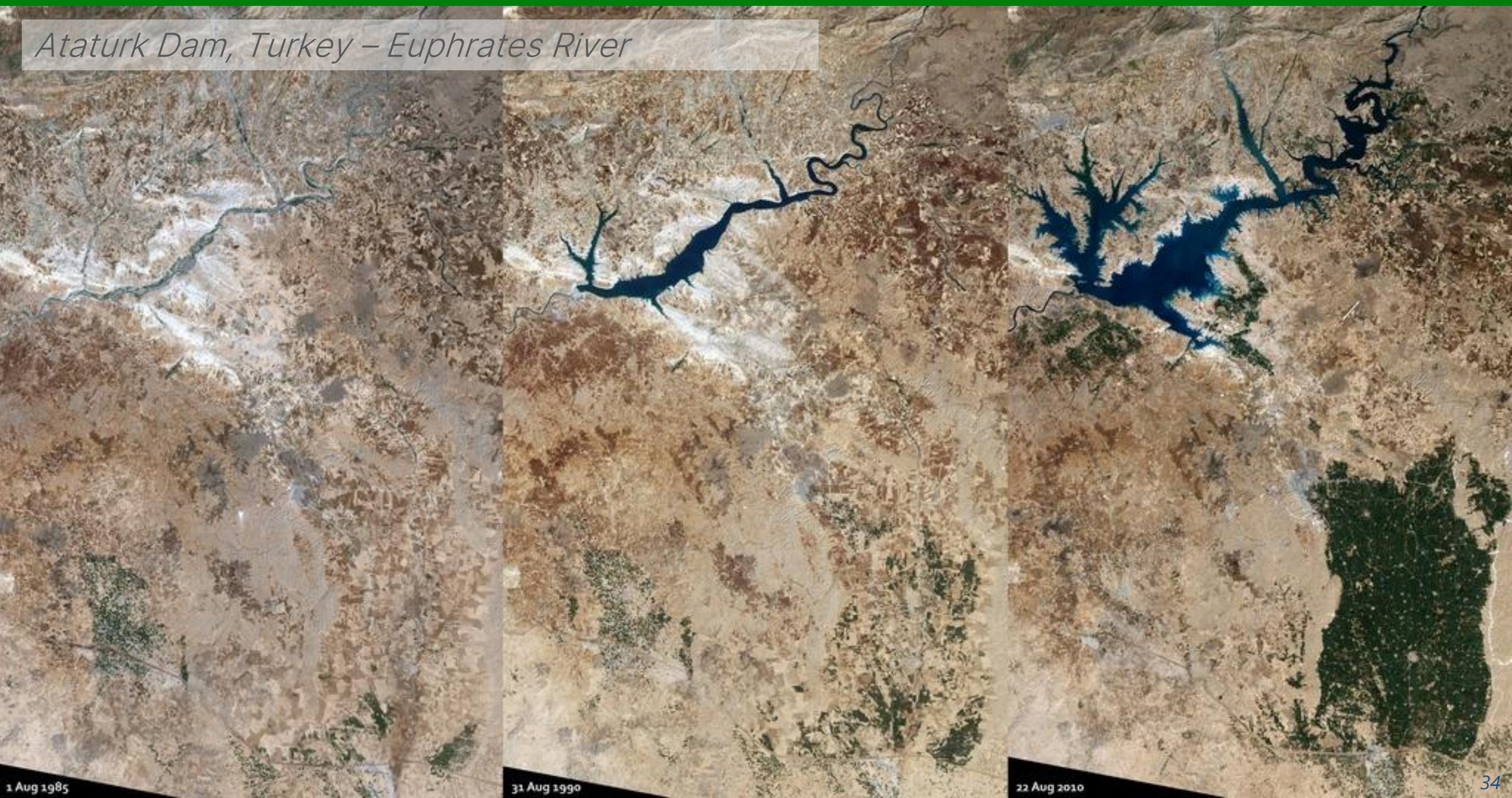
Three Gorges Dam, Yangtze River, China

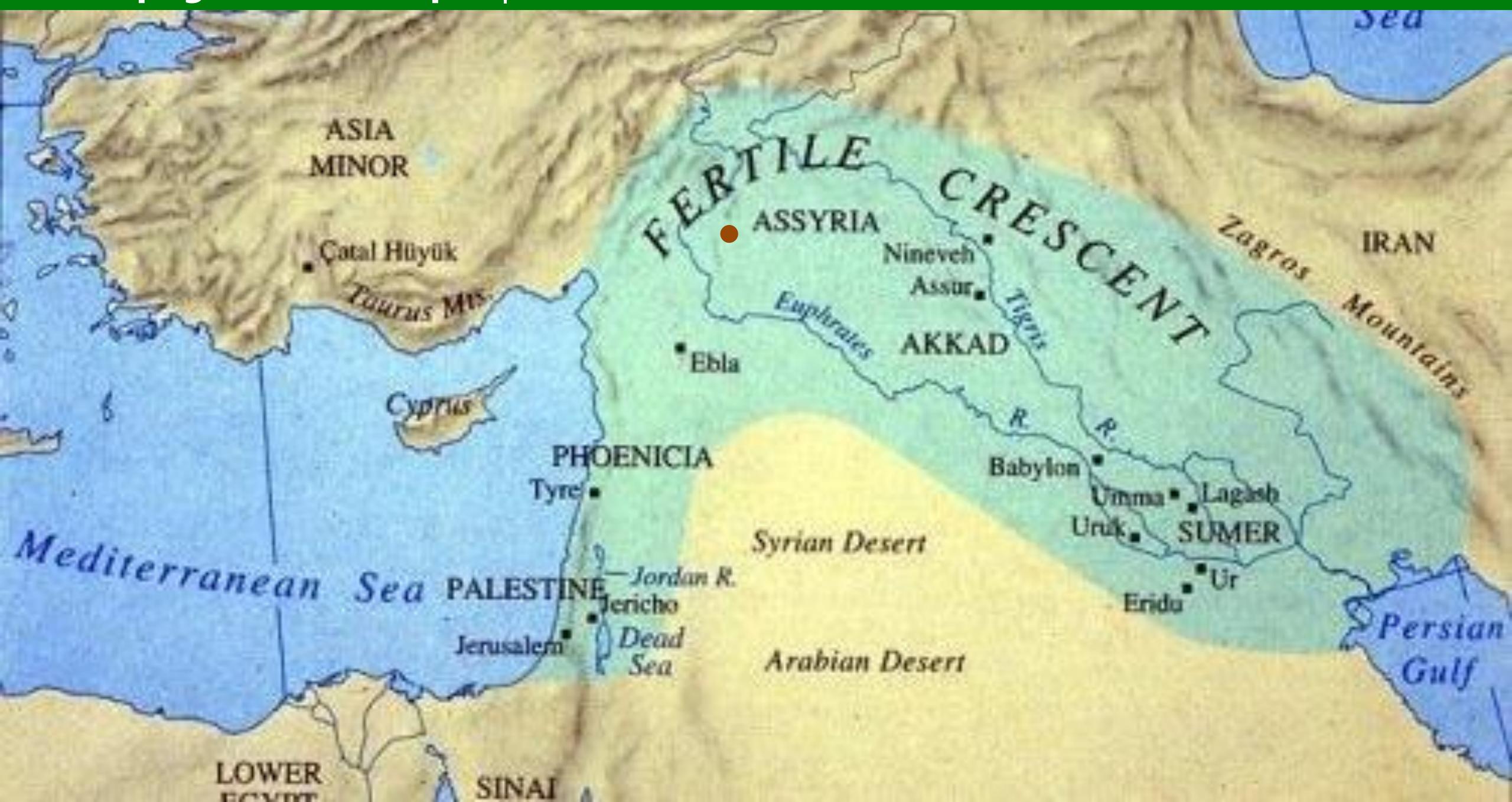


Ataturk Dam, Turkey – Euphrates River



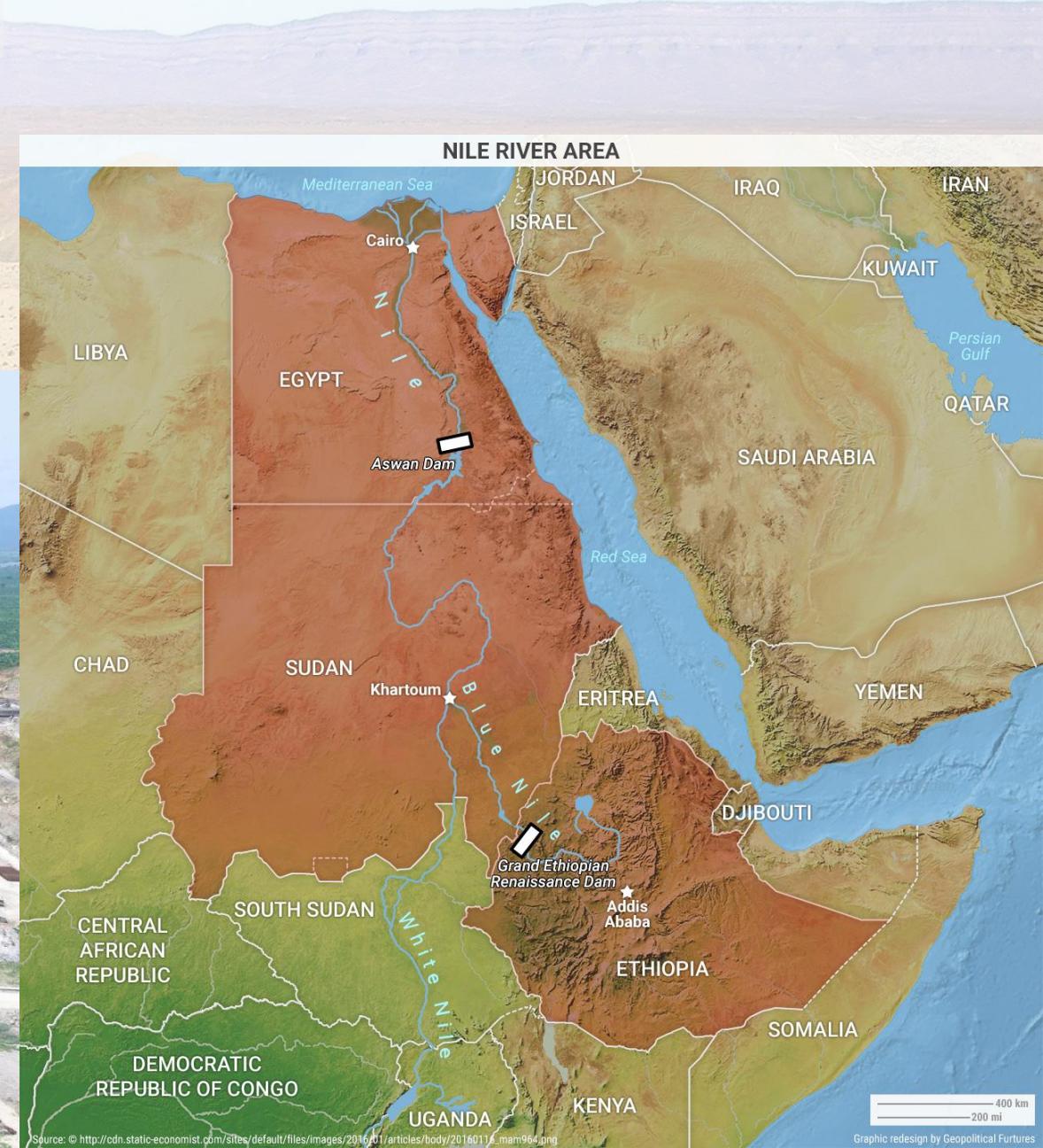
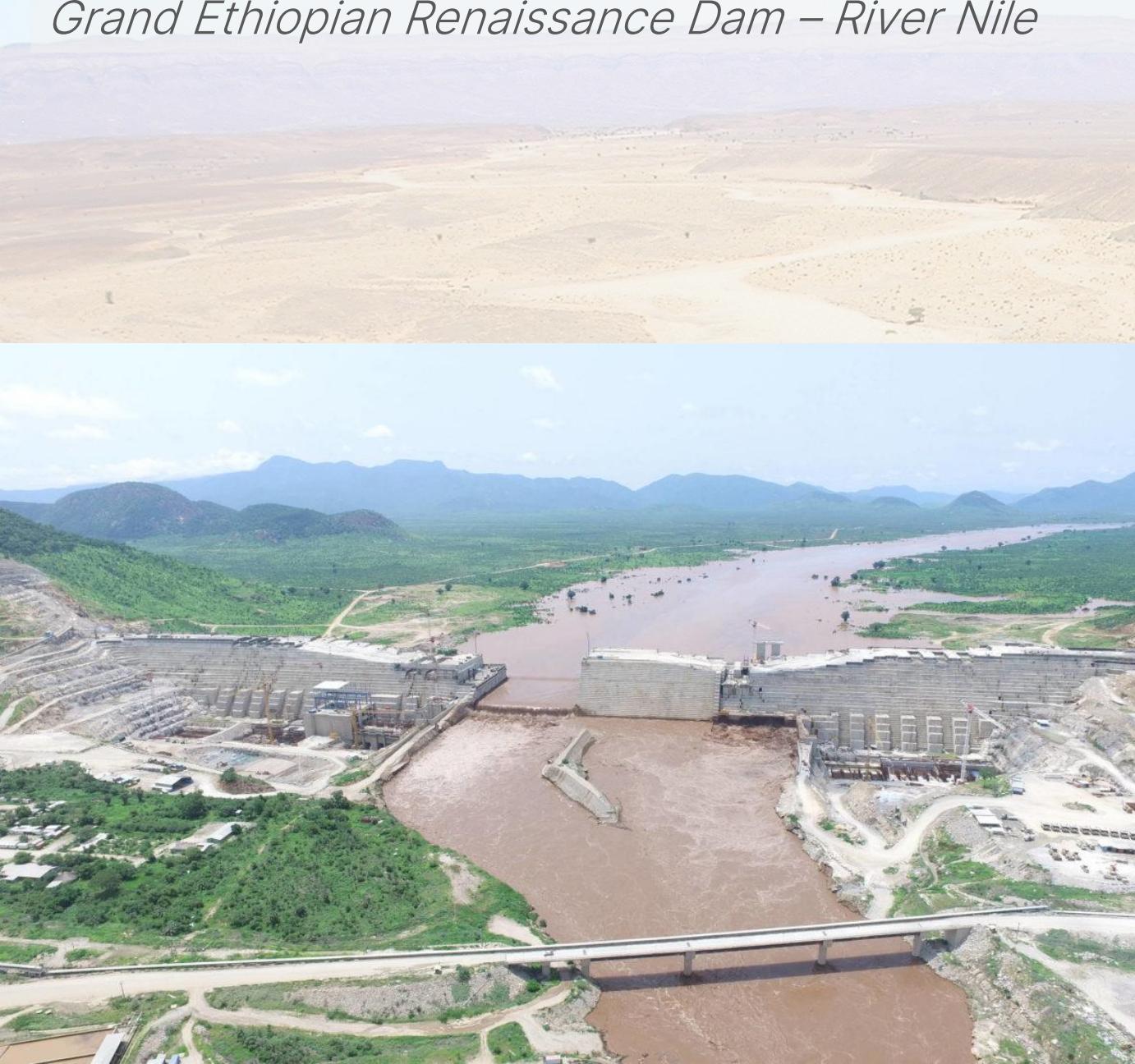
Ataturk Dam, Turkey – Euphrates River







Grand Ethiopian Renaissance Dam – River Nile

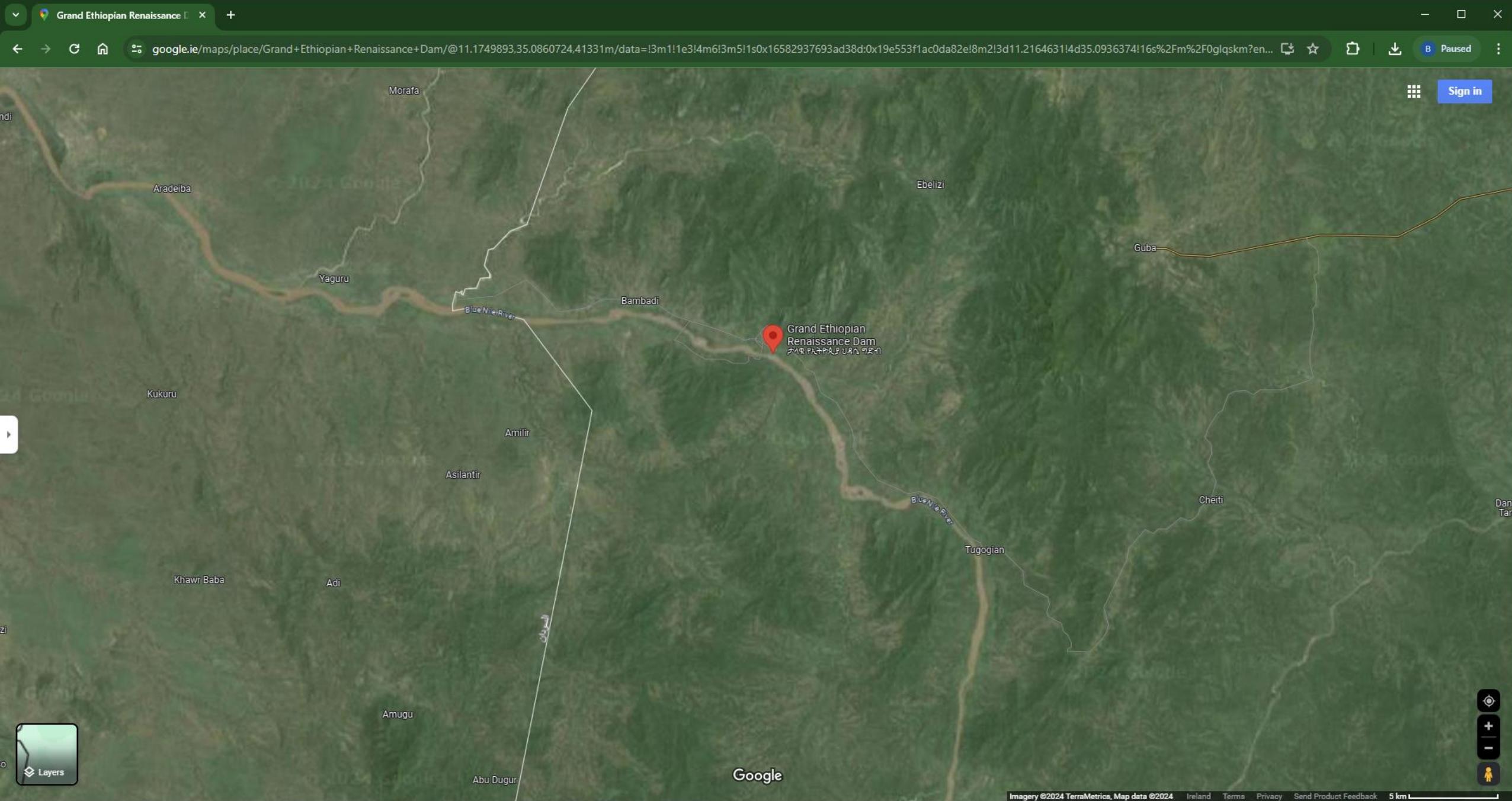


Source: © http://cdn.static-economist.com/sites/default/files/images/2016/01/articles/body/20160116_mam960.png

Graphic redesign by Geopolitical Futures

Anthropogenic Landscapes | Water

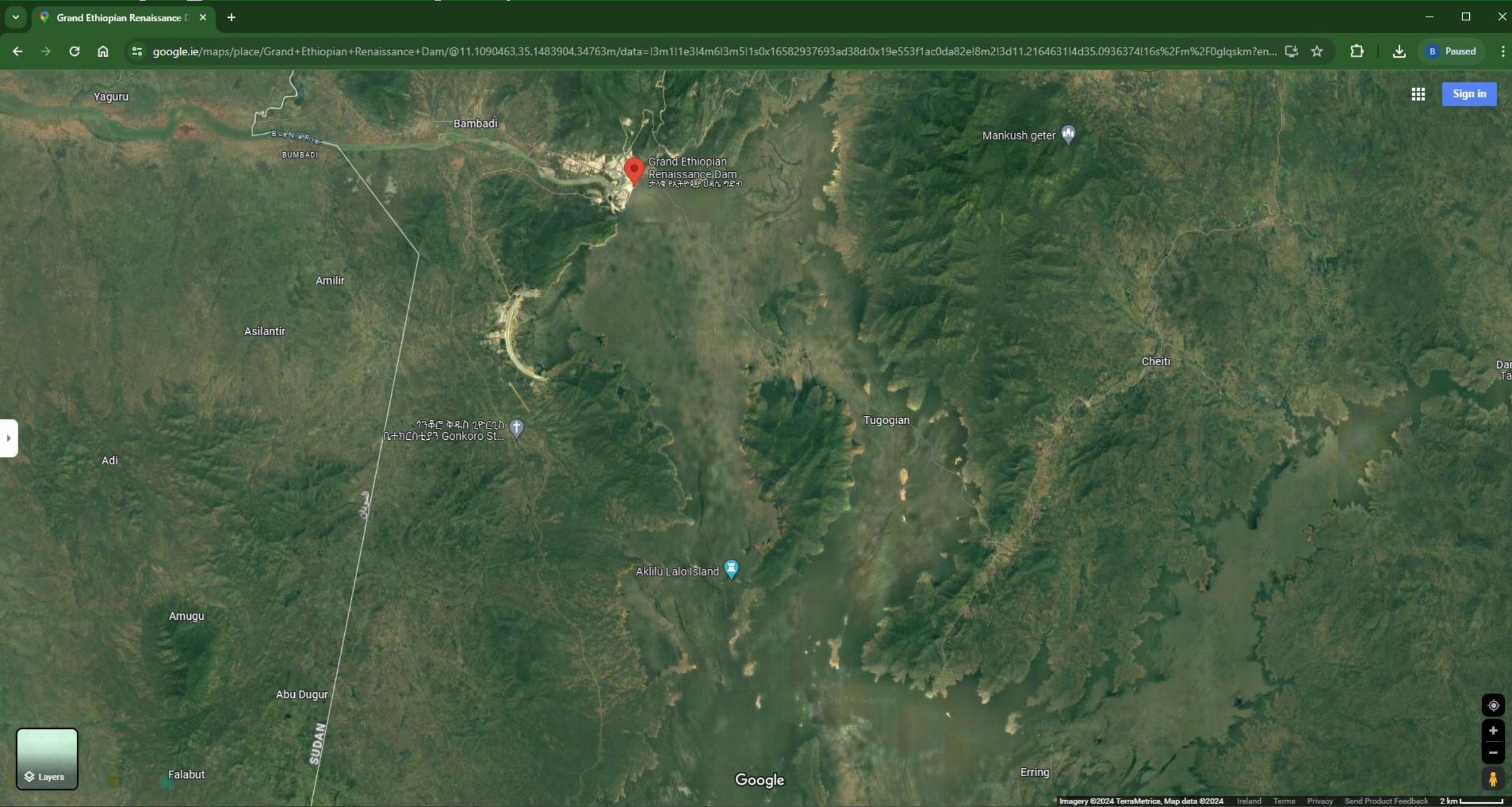
GY4027: Landscape Evolution



Google

Anthropogenic Landscapes | Water

GY4027: Landscape Evolution



QUANTUM OF SOLACE



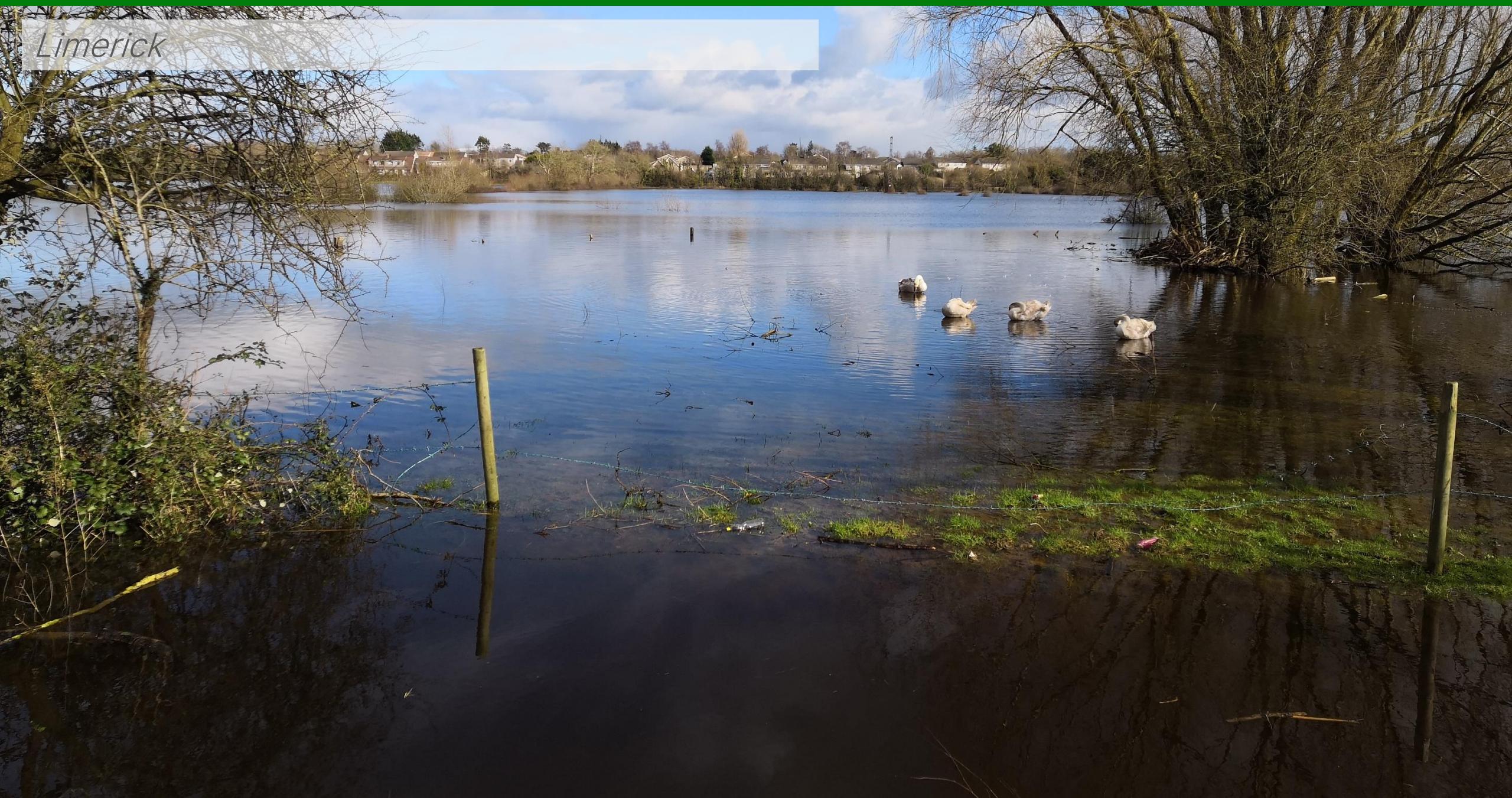
The James Bond logo, featuring a stylized '0' with a gun barrel through it, followed by a '0' and a registered trademark symbol.



Limerick



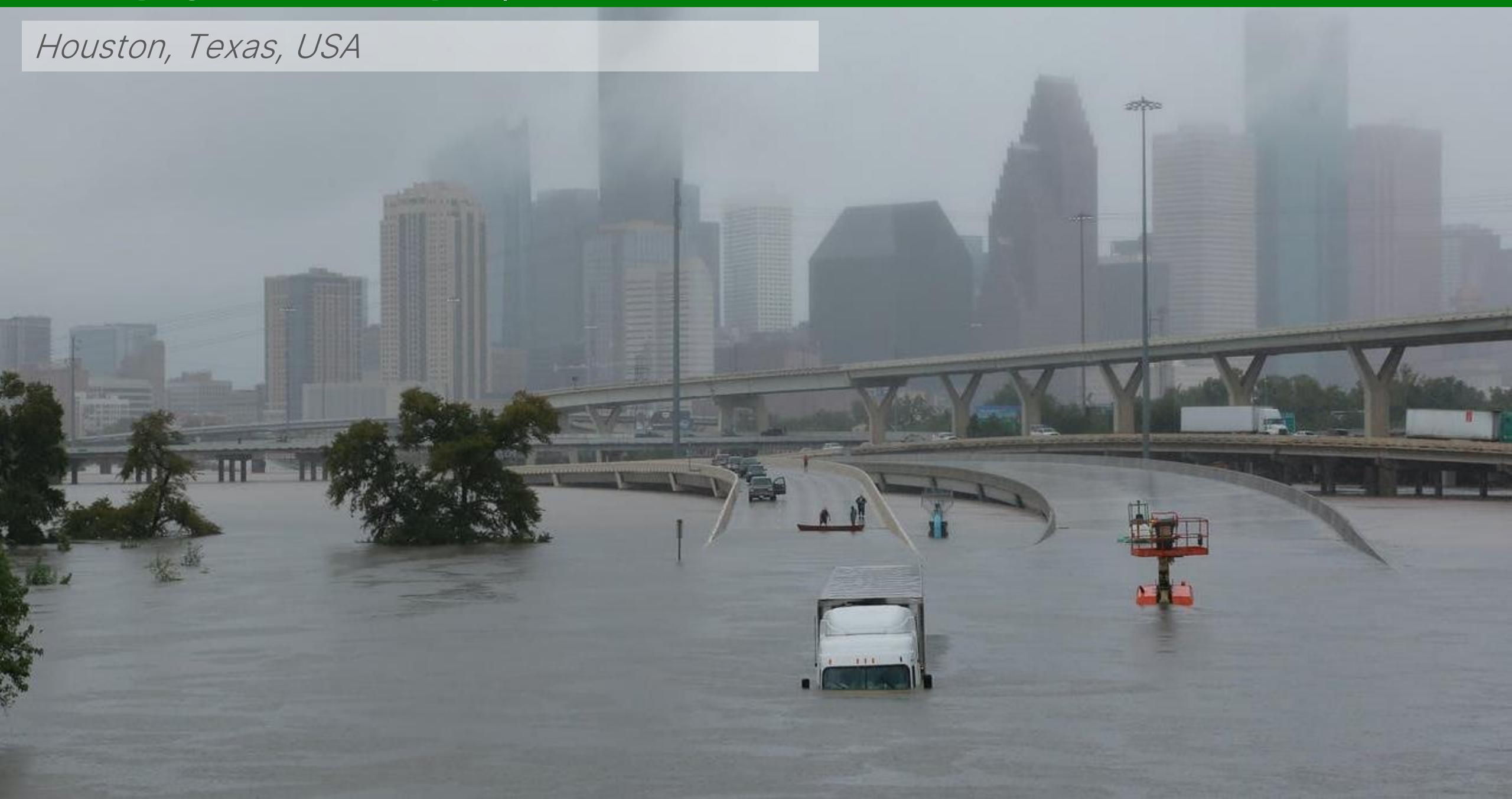
Limerick



Anthropogenic Landscapes | Urbanisation

GY4027: Landscape Evolution

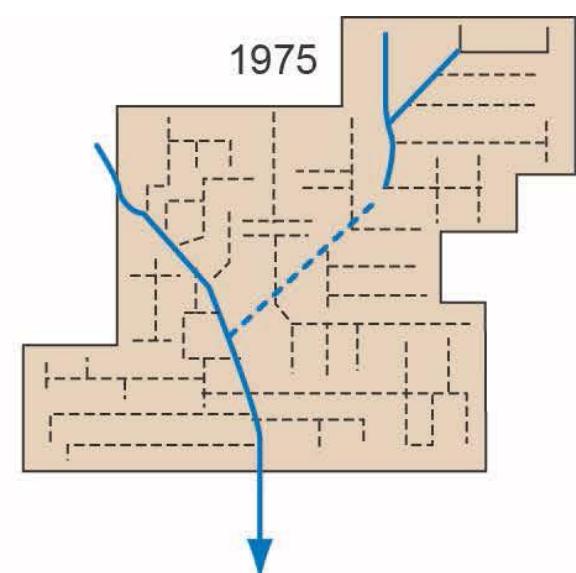
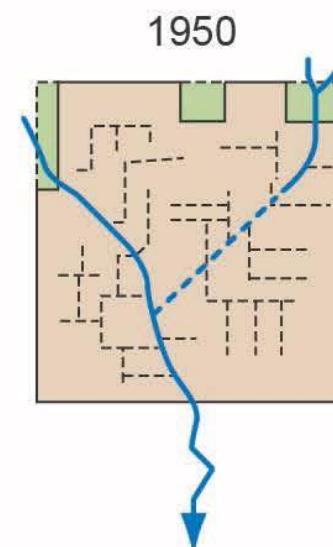
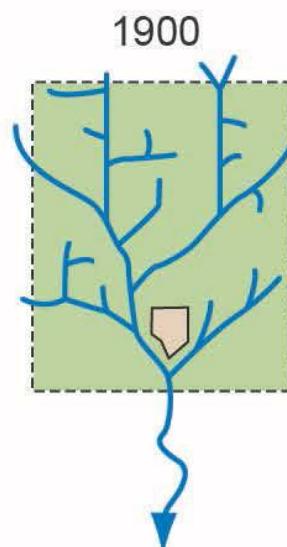
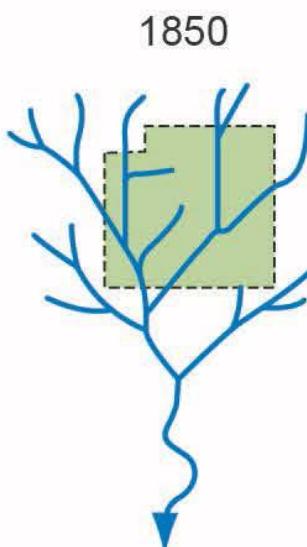
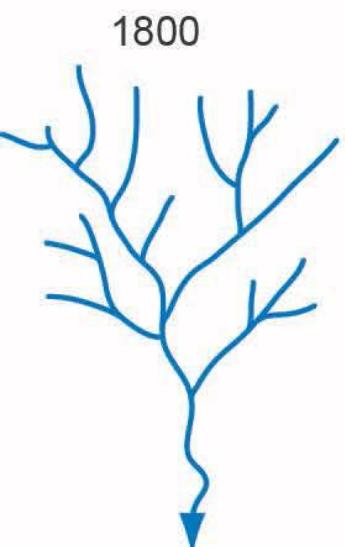
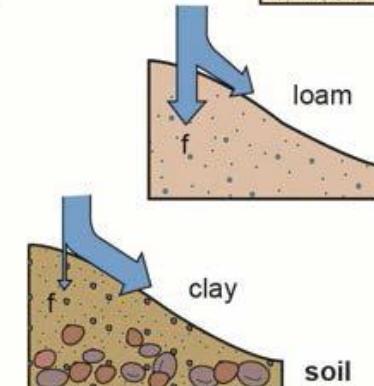
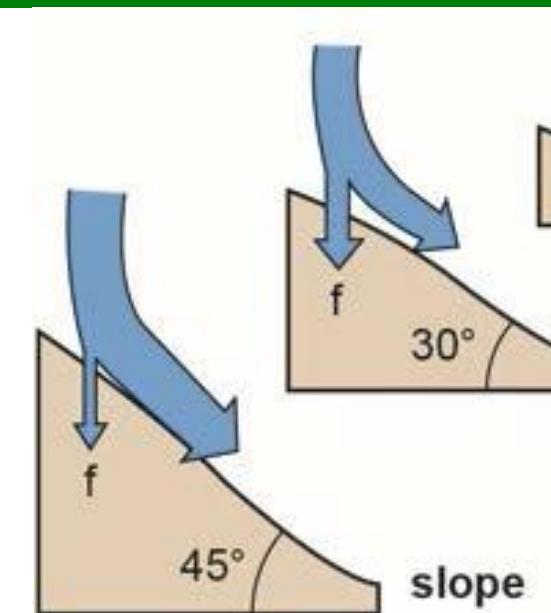
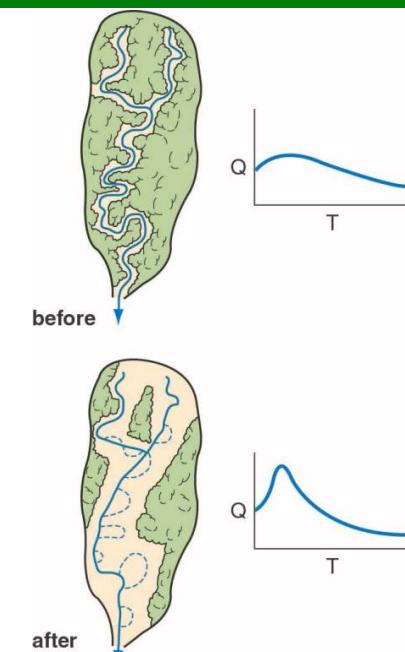
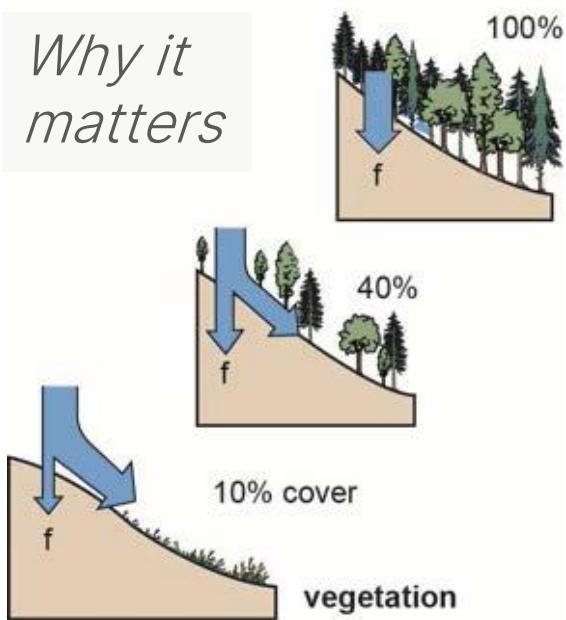
Houston, Texas, USA



Anthropogenic Landscapes | Water and Urbanisation

GY4027: Landscape Evolution

Why it
matters



natural streams

field ditches

storm sewers

agricultural land

urbanized land

Anthropogenic Landscapes | Urbanisation

GY4027: Landscape Evolution

Shanghai, China



Anthropogenic Landscapes | Urbanisation

GY4027: Landscape Evolution

Nantong, China



Anthropogenic Landscapes | Urbanisation

GY4027: Landscape Evolution

Hong Kong, China



New Territories, Hong Kong, China



Anthropogenic Landscapes | Urbanisation

GY4027: Landscape Evolution

Toronto, Canada



Anthropogenic Landscapes | Urbanisation

GY4027: Landscape Evolution

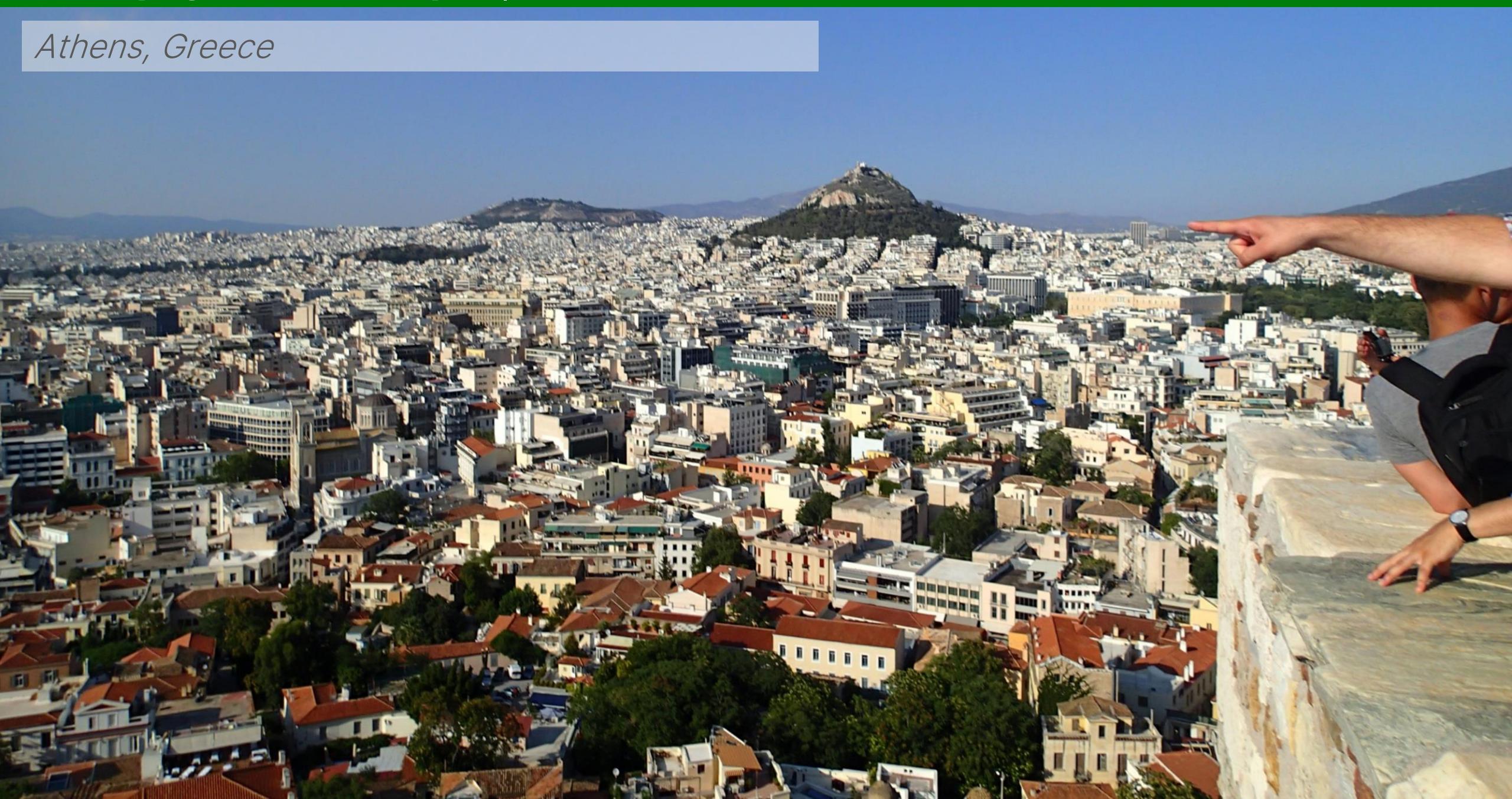
Edinburgh, Scotland



Anthropogenic Landscapes | Urbanisation

GY4027: Landscape Evolution

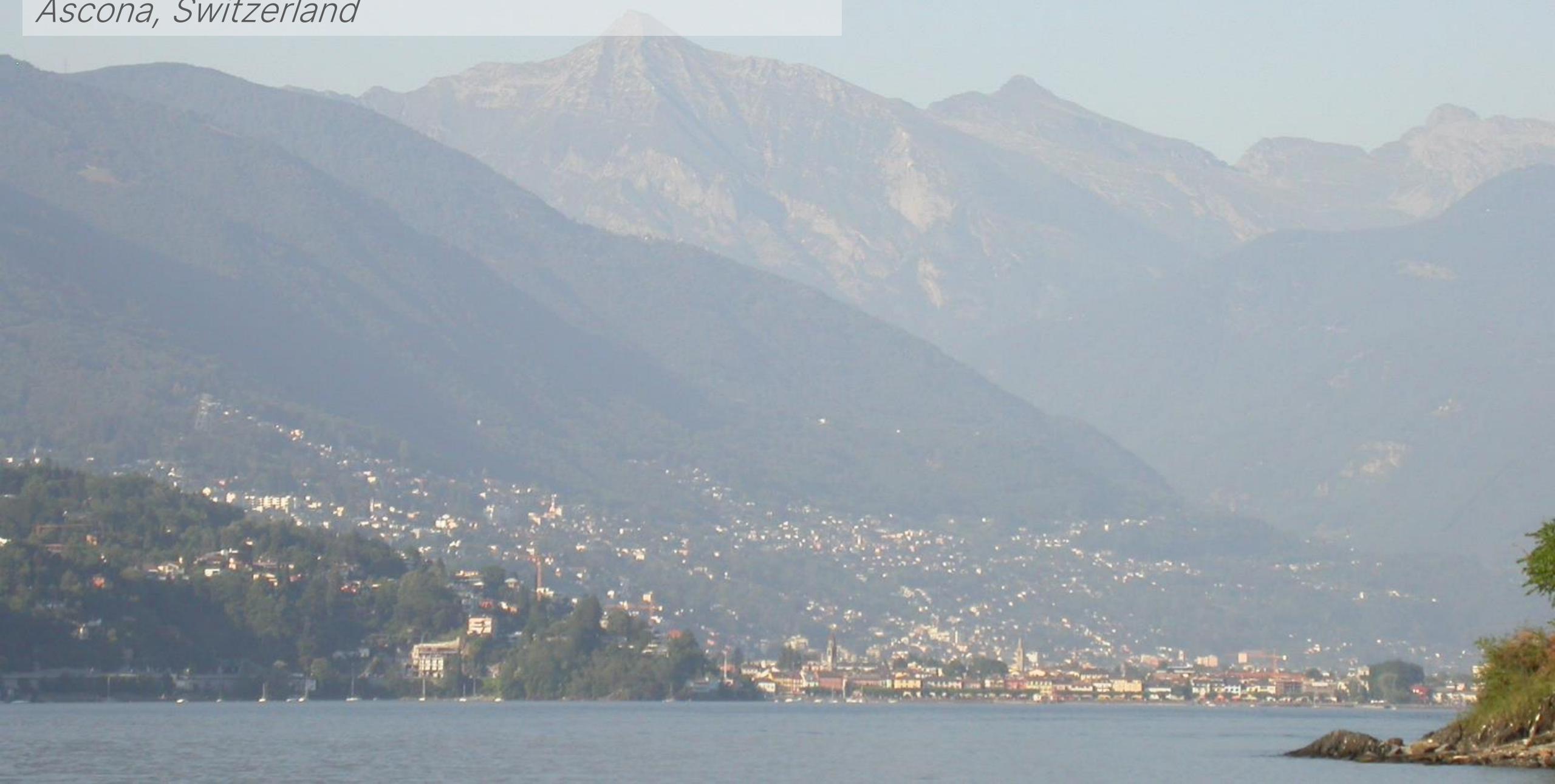
Athens, Greece



Tenerife, Spain



Ascona, Switzerland



Nant Ffrancon Valley, Wales



Anthropogenic Landscapes | Roads

GY4027: Landscape Evolution

Killary Harbour, Galway



Achill, Mayo



Daingean, Kerry



Anthropogenic Landscapes | All of the above!

GY4027: Landscape Evolution

Holme, Cumbria, England



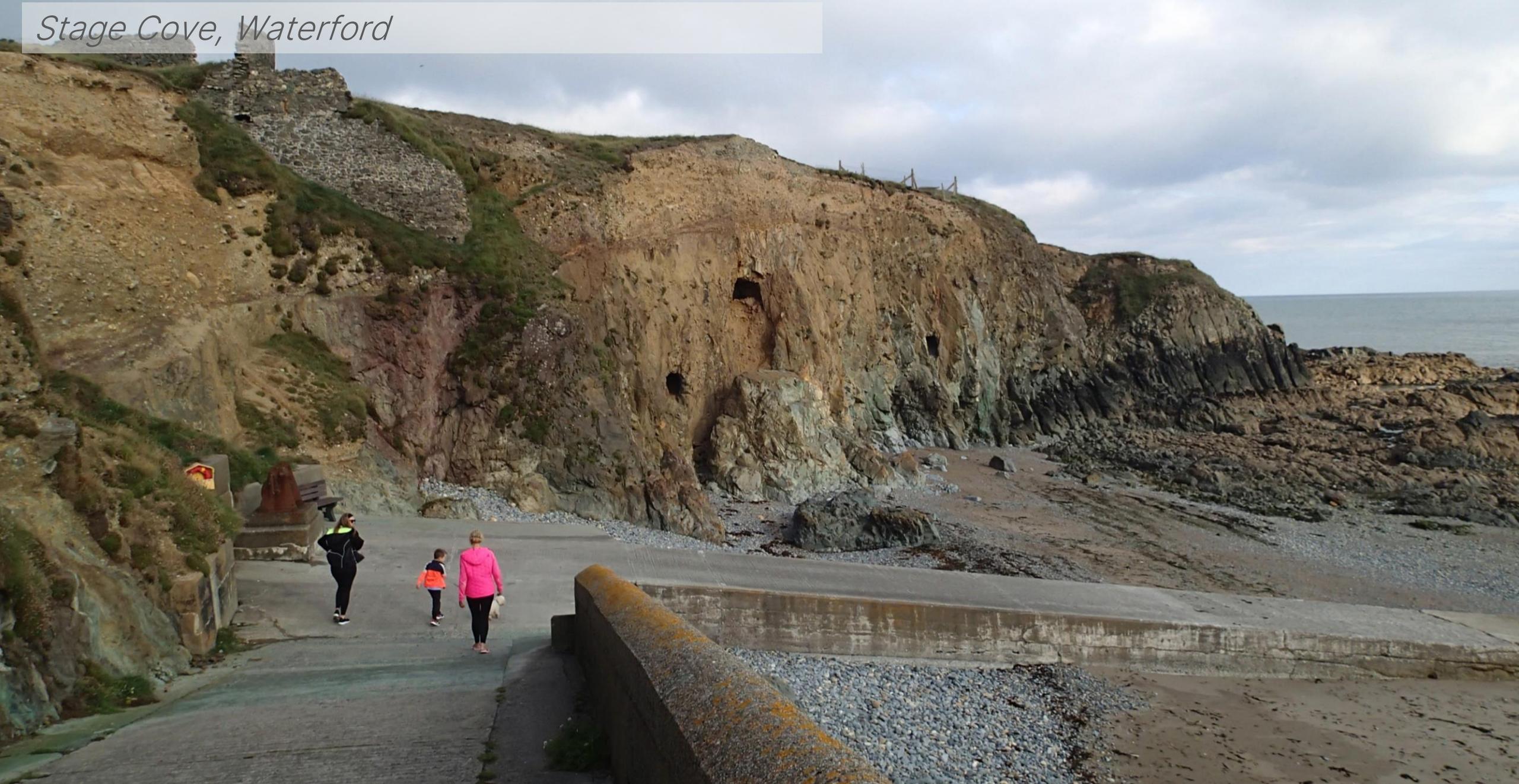
Anthropogenic Landscapes | Mining

GY4027: Landscape Evolution

Holme, Cumbria, England



Stage Cove, Waterford



Anthropogenic Landscapes | Mining

GY4027: Landscape Evolution

Parys, Anglesey, Wales



Llanberis, Wales



Dunluce Castle, Antrim



Giant's Causeway, Antrim



