Managing urban wetlands for conservation: challenges and approaches

FRIENDS OF SILVERMINE NATURE AREA

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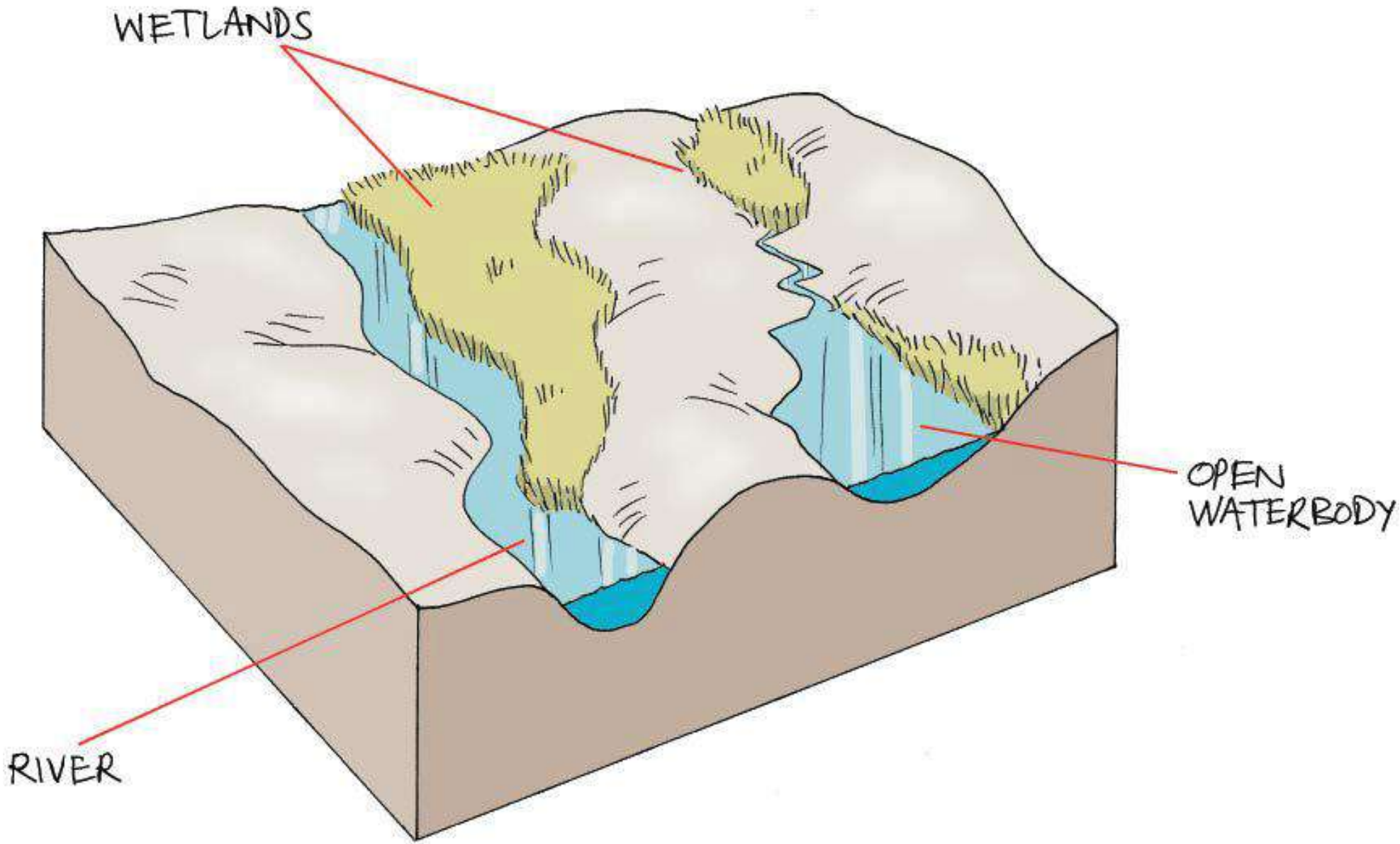
What counts as a wetland?

- Land consisting of marshes or swamps; saturated land
- SANBI
  - Wetland—land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil.
  - Aquatic ecosystem—an ecosystem that is permanently or periodically inundated by flowing or standing water, or which has soils that are permanently or periodically saturated within 0.5 m of the soil surface.

MAIN TYPES OF INLAND SYSTEMS

Simplistically



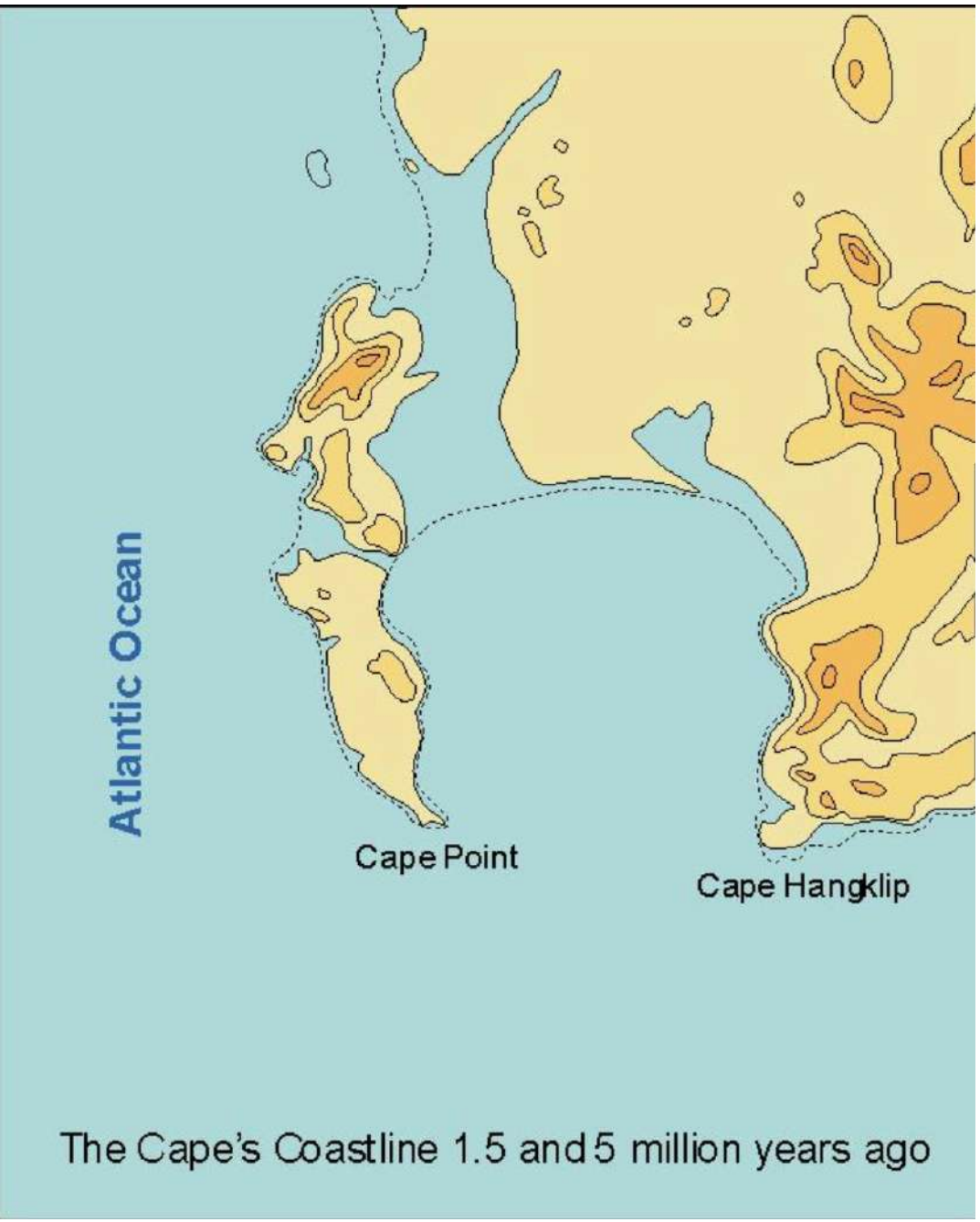
What counts as conservation?

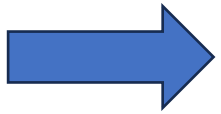
- Conservation refers to the protection, restoration and management of nature and natural phenomena in order to advance more sustainable benefits for present and future generations.
- What does this mean in practice
  - Minimize disturbance (but recognize that urban environments are massively disturbed anyway)
  - Where possible, use ecological insights, principles and processes to guide decision making
  - Minimize artificial, horticultural, agricultural or engineering related solutions except where necessary or other circumstances indicate their appropriateness
  - Understand the ways in which people value the focal ecosystem(s)

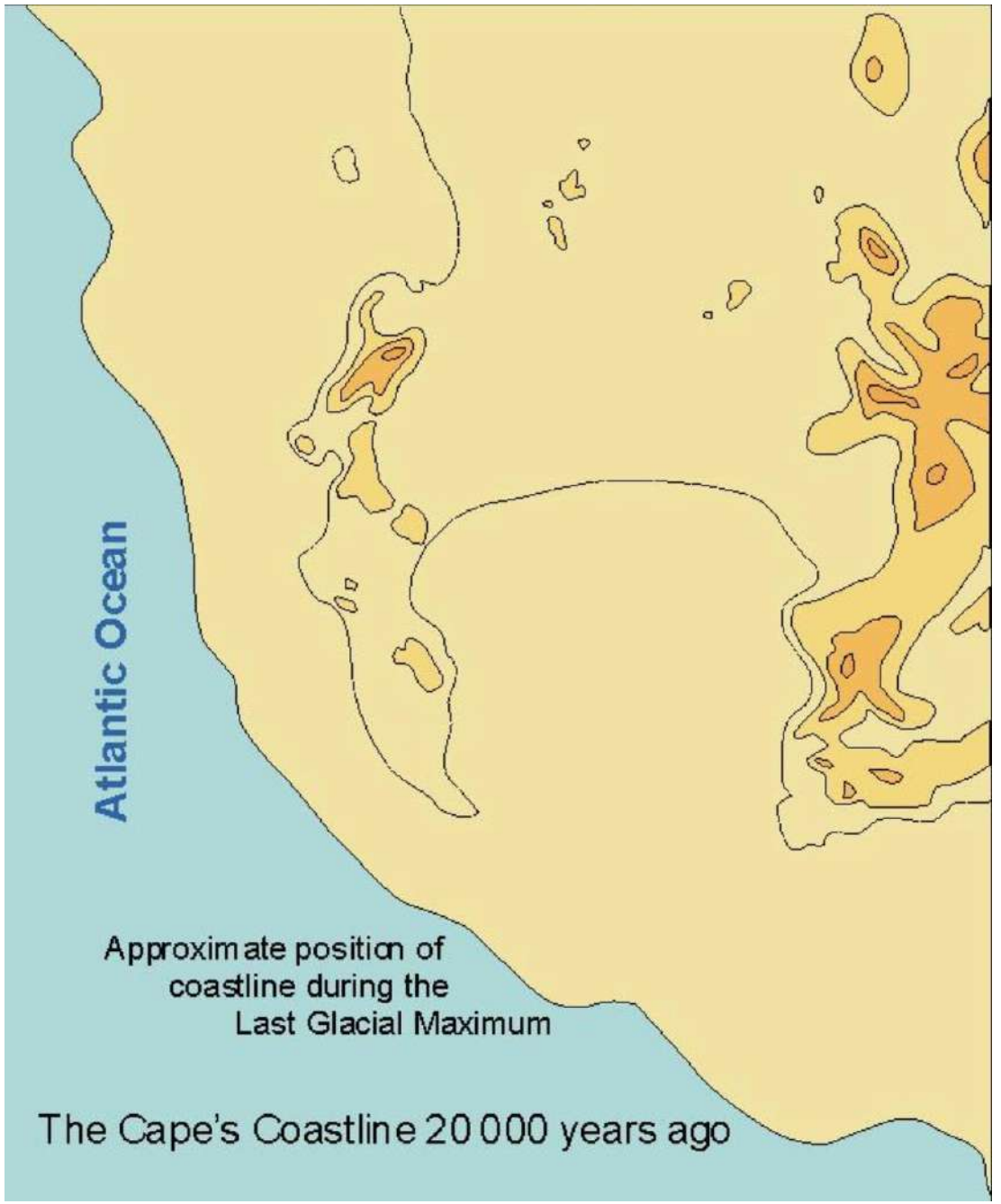
Lower Silvermine Wetlands

- A much-loved natural gem, the Lower Silvermine Wetland is a rehabilitated urban floodplain between Clovelly and Fish Hoek.

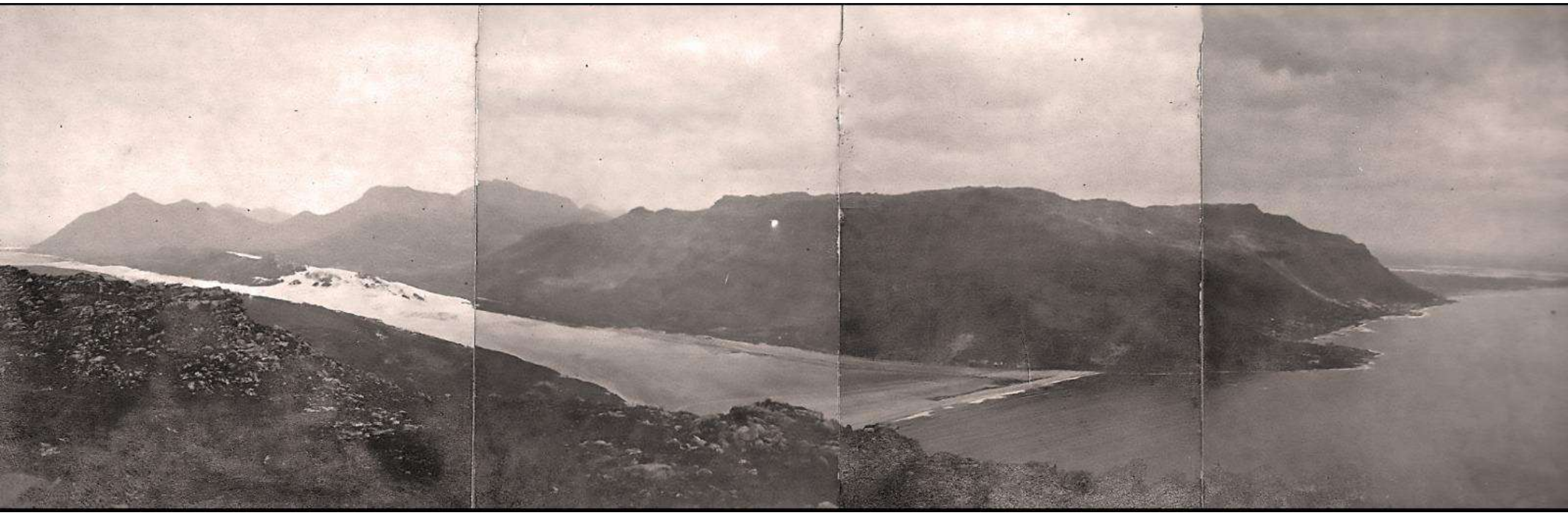
  - But what is natural and how do you tell – how far back do you go?
  - 20 years? - in 2000, the lower Silvermine River was rehabilitated to become a wetland, having previously been an alien-infested sand canal – so now it is more natural than it was then. Or is it?
  - 40 years? – in 1982, as part of a national survey of estuaries, the LSW estuary was considered to extend 62m inland, was 15m wide and was 2m deep at its deepest point. Was that the natural state?


Atlantic Ocean
Cape Point
Cape Hangklip
The Cape's Coastline 1.5 and 5 million years ago

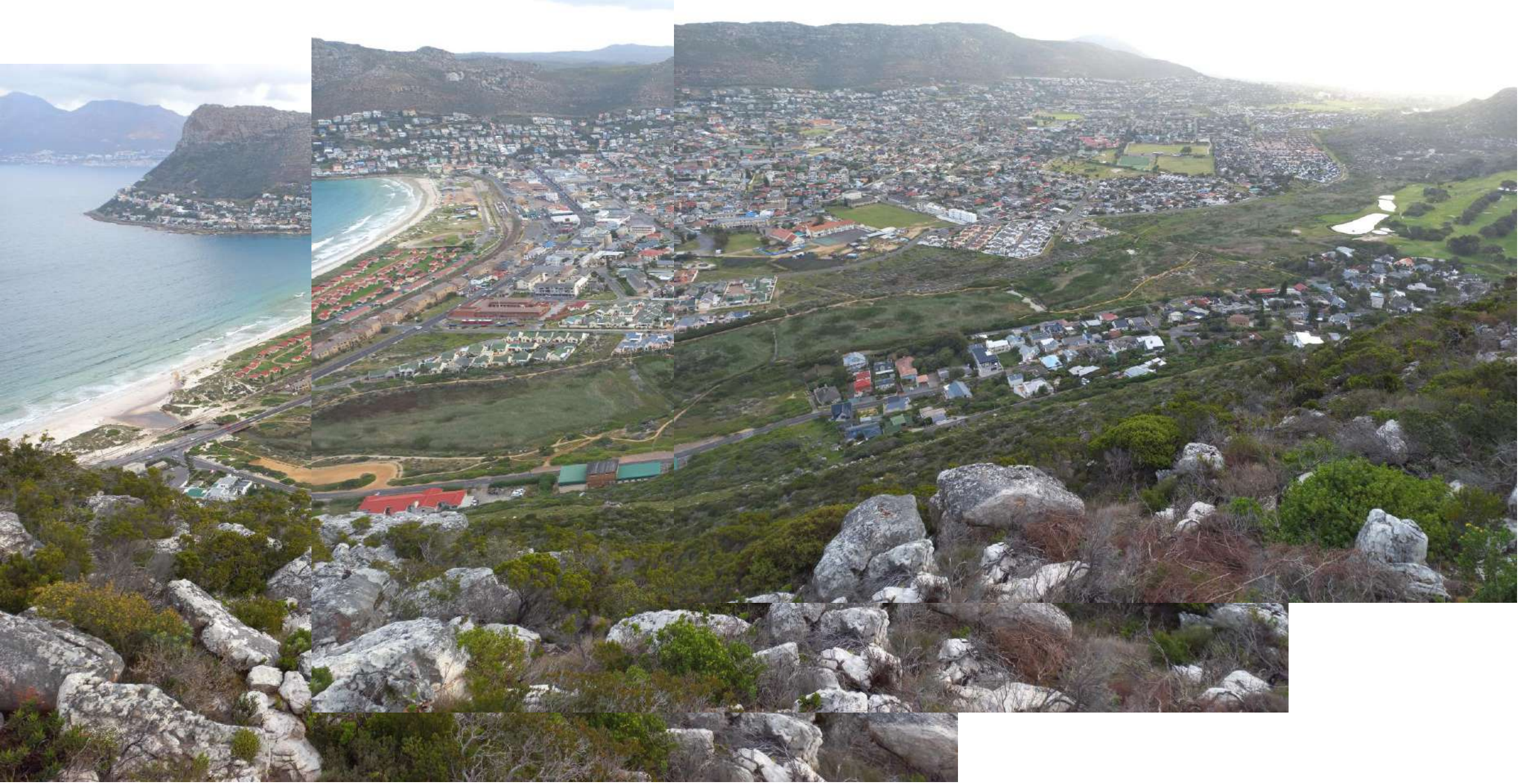



Atlantic Ocean
Approximate position of
coastline during the
Last Glacial Maximum
The Cape's Coastline 20 000 years ago

100 years ago (*ca* 1920)



100 years ago (*ca* 1920)



Urban wetland conservation - challenges

We need to answer the questions

- What are we dealing with?
- What do we want?
- How do we get there?

In many ways the answers to these questions have been imposed on us by the past half century or more of development

So, what has changed?

- Mobile dunes (flood plain) massively restricted,
- The bare sand, and the wetland, has become vegetated,
- Exit point of the river into the sea has been locked into place,
- Buildings close to river channel have been subjected to flood risk,
- Engineering structures introduced to attenuate peak flood water flow,
- Alien plants are a feature of the Silvermine River Valley,
- Nutrient enrichment (from many sources)

What do we want?

The CoCT has not yet defined an objective for the area

There is no correct answer to this – but through FOSNA

- Adequate hydraulic control to prevent damage to housing etc.
- Safe space to relax (for many groups within society),
- An area that continues to provide habitat for Western Leopard Toads and other important species,
- An area that provides a variety of habitats for bird and aquatic life and is free of alien invader species,
- An area that is free of litter and inappropriate nutrification

What is happening

Take home message

- I hope that I:
- Prompted you to think slightly more broadly about what uraban conservation can entail
- Gave you a sense of some of the complexities involved
- Encouraged you to think about how all this can happen without citizen participation – and what role you can play in this

Thank you