



Scoping the potential for an integrated landscape approach to addressing risks

Dugald MacTavish
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The 10 Principles of a Landscape Approach

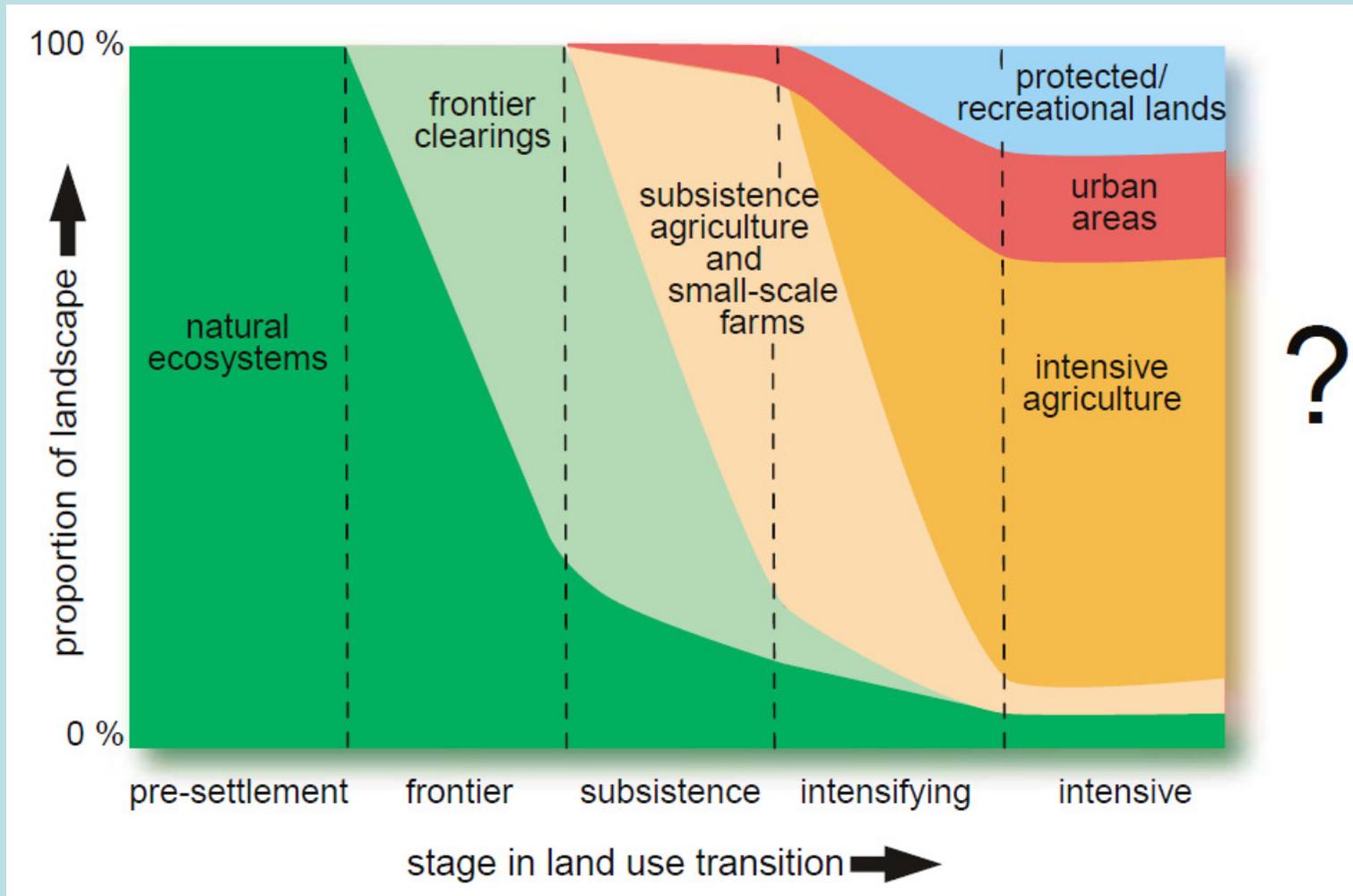


Key big picture risks implied for landusers

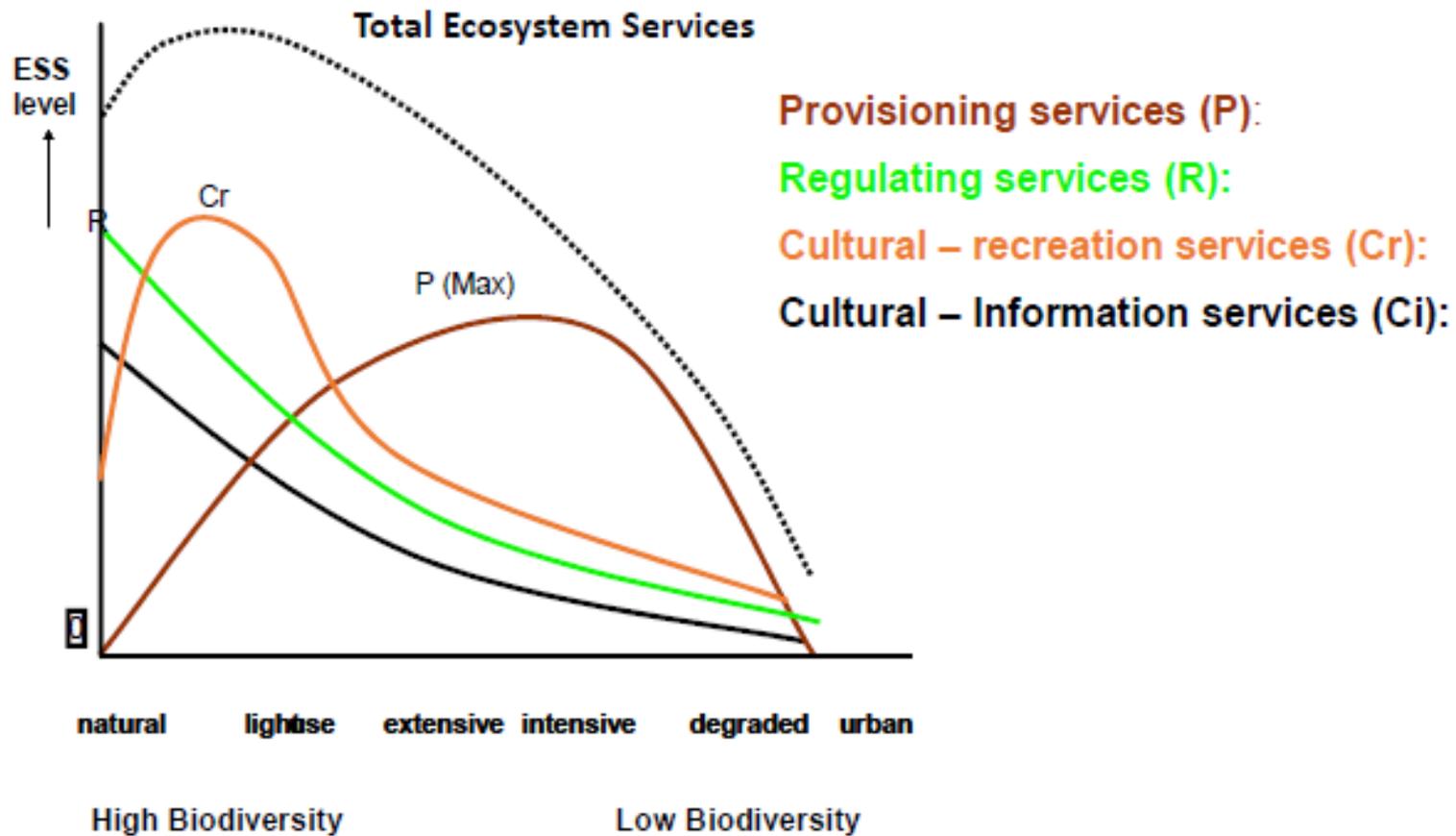
- Climate change (temperatures, extreme/unseasonable events)
- Fuel shocks or allocation limits (calorie deficit)
- Shortages of critical inputs (oil derivatives)
- Loss of biodiversity, ecosystem function and services
- Market volatility

What might a landscape approach contribute to mitigating such risks?

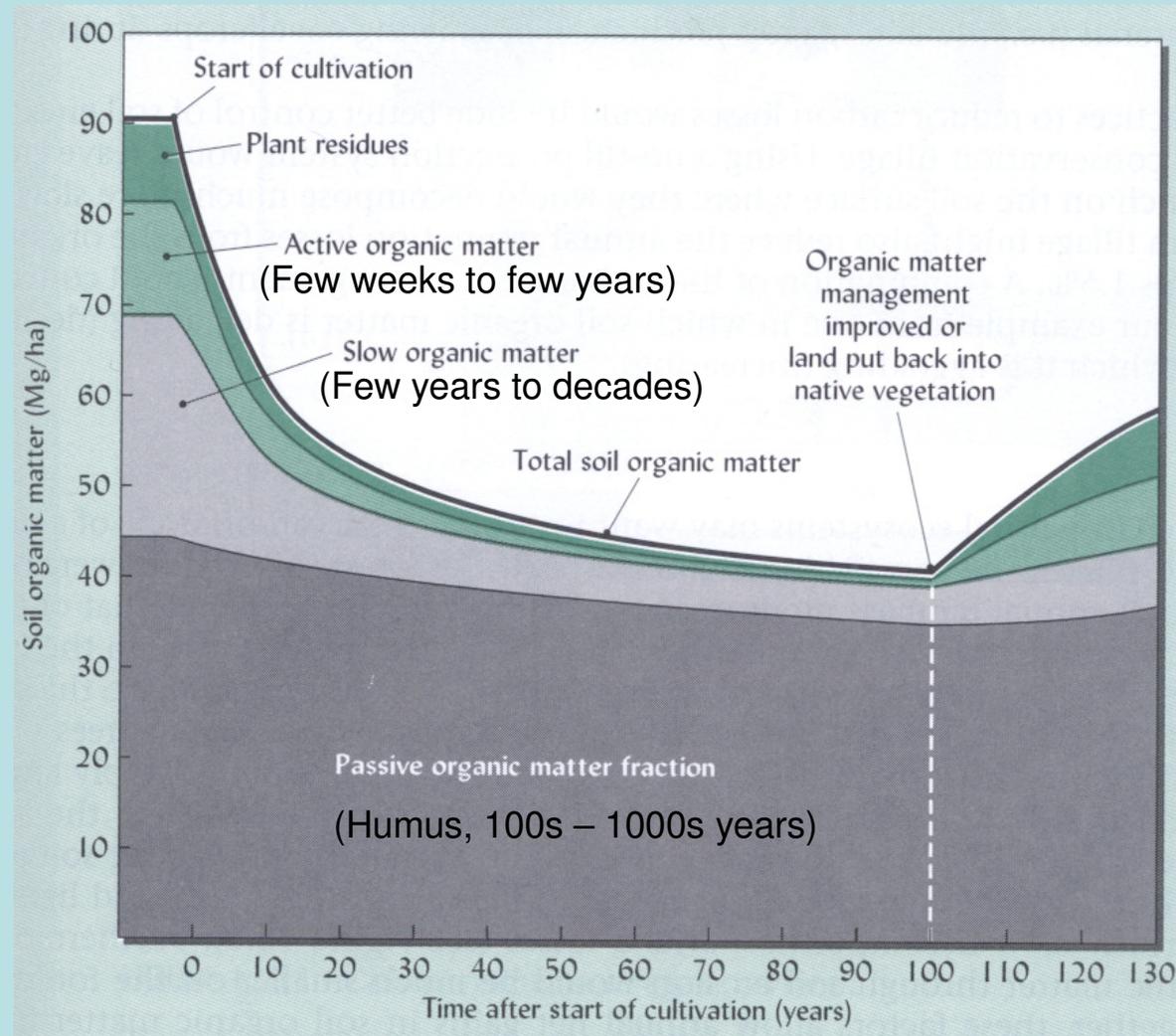
General pattern of landuse transition



Ecosystem Services across land-use



Land Use impacts on Soil Carbon

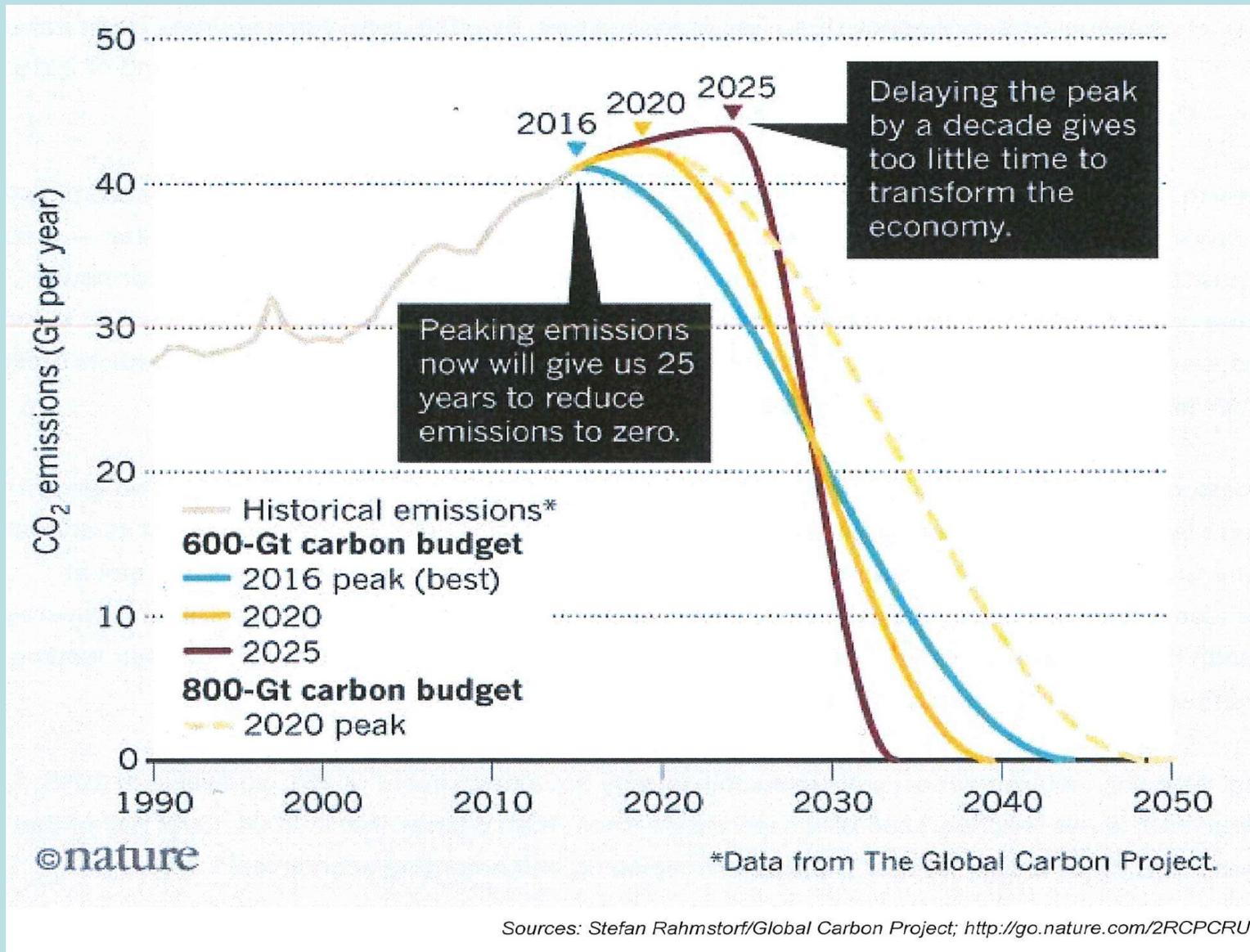


(Brady and Weil, 1999)

Identifying a “common concern” entry point to ILM

- Carbon
- Water quality or quantity
- Well being
- Biodiversity
- Other?

Budget for <2 degrees



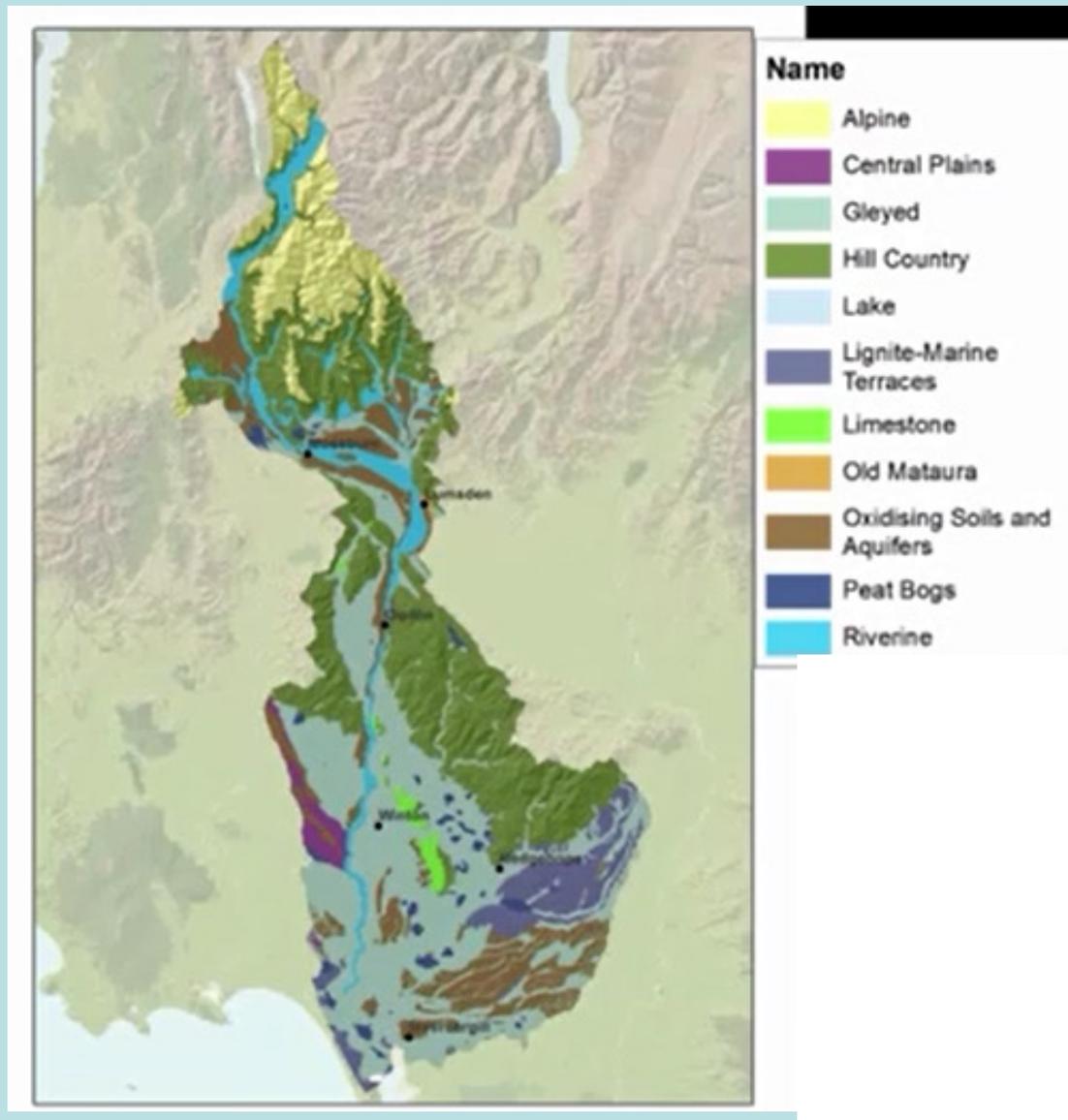
What sort of benefits might be expected to more carbon in soils?

- improves water holding capacity, infiltration rate, stability and fertility

- Climate mitigation (GHG sequestration)
- Climate adaptation (eg drought-resistance)
- water quality, recharge and regulation of water in time
- control erosion and siltation
- biodiversity and farming diversity
- integration between ecology, agriculture and agroforestry
- less need for fertilizer, herbicides and other fossil fuel derivatives
- public health

Examples of an Integrated landscape Approach

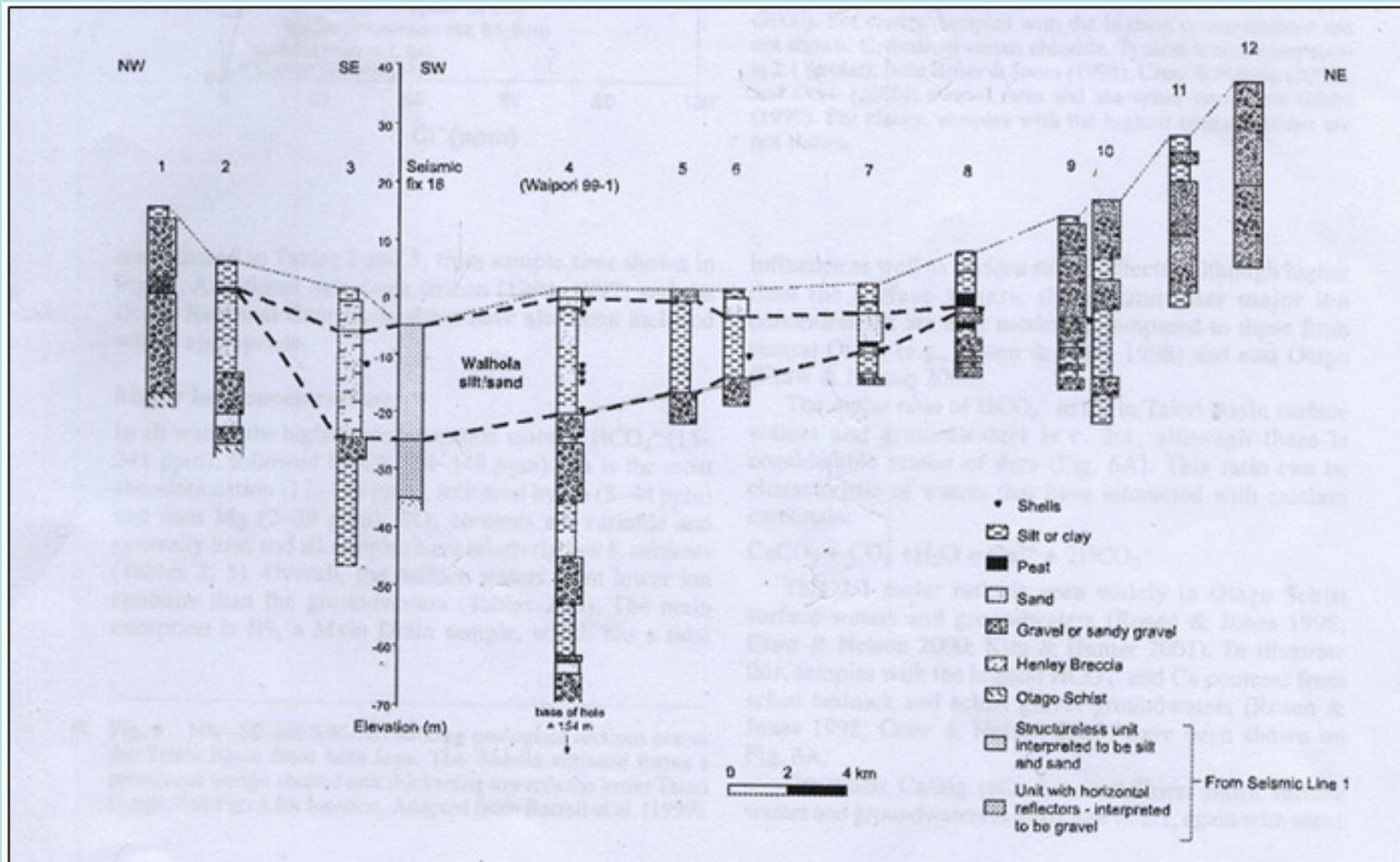
“Physiographic Zoning” - Southland



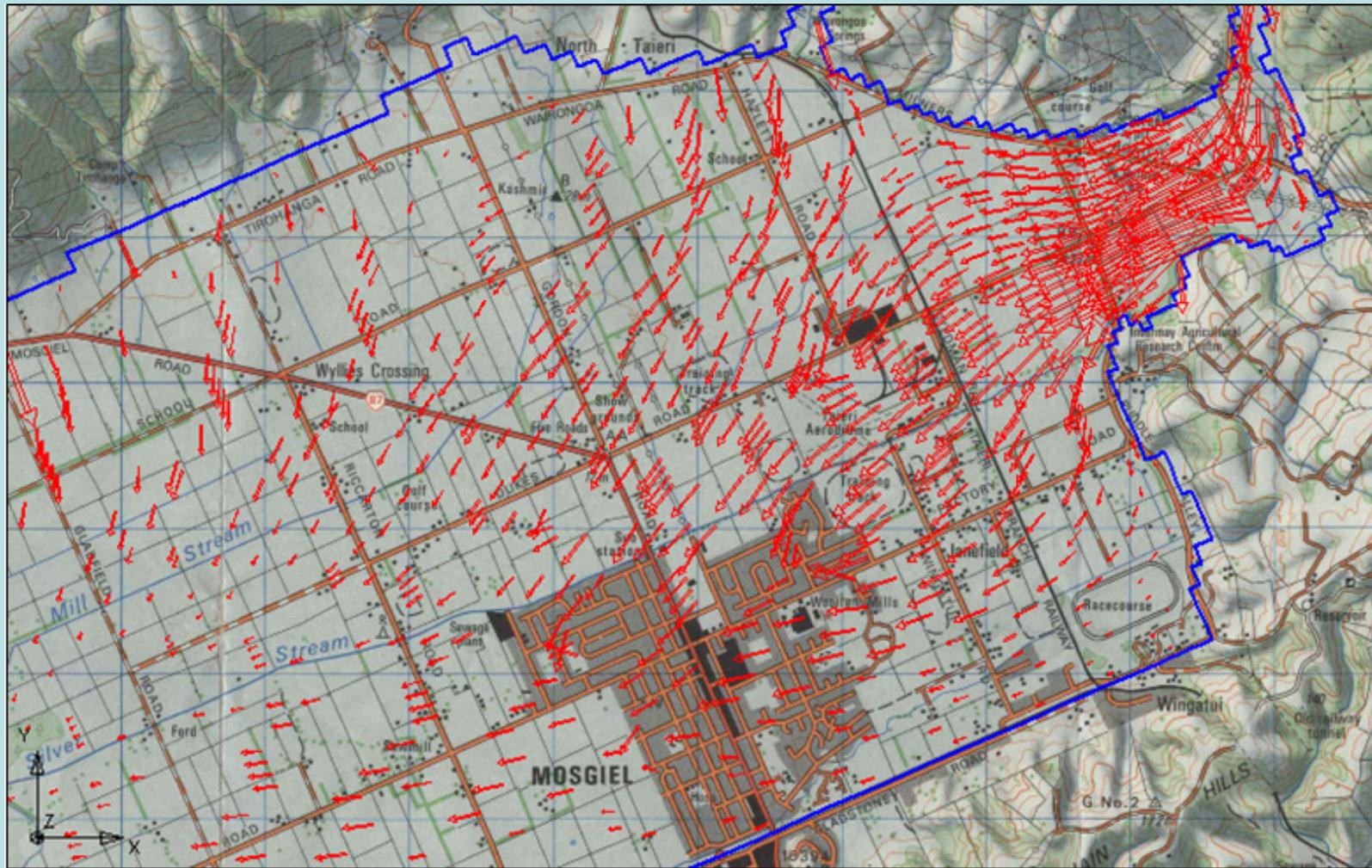
Example, Taieri Plain hydrology: ILM opportunity?



Geological long section of the Lower Taieri Plain



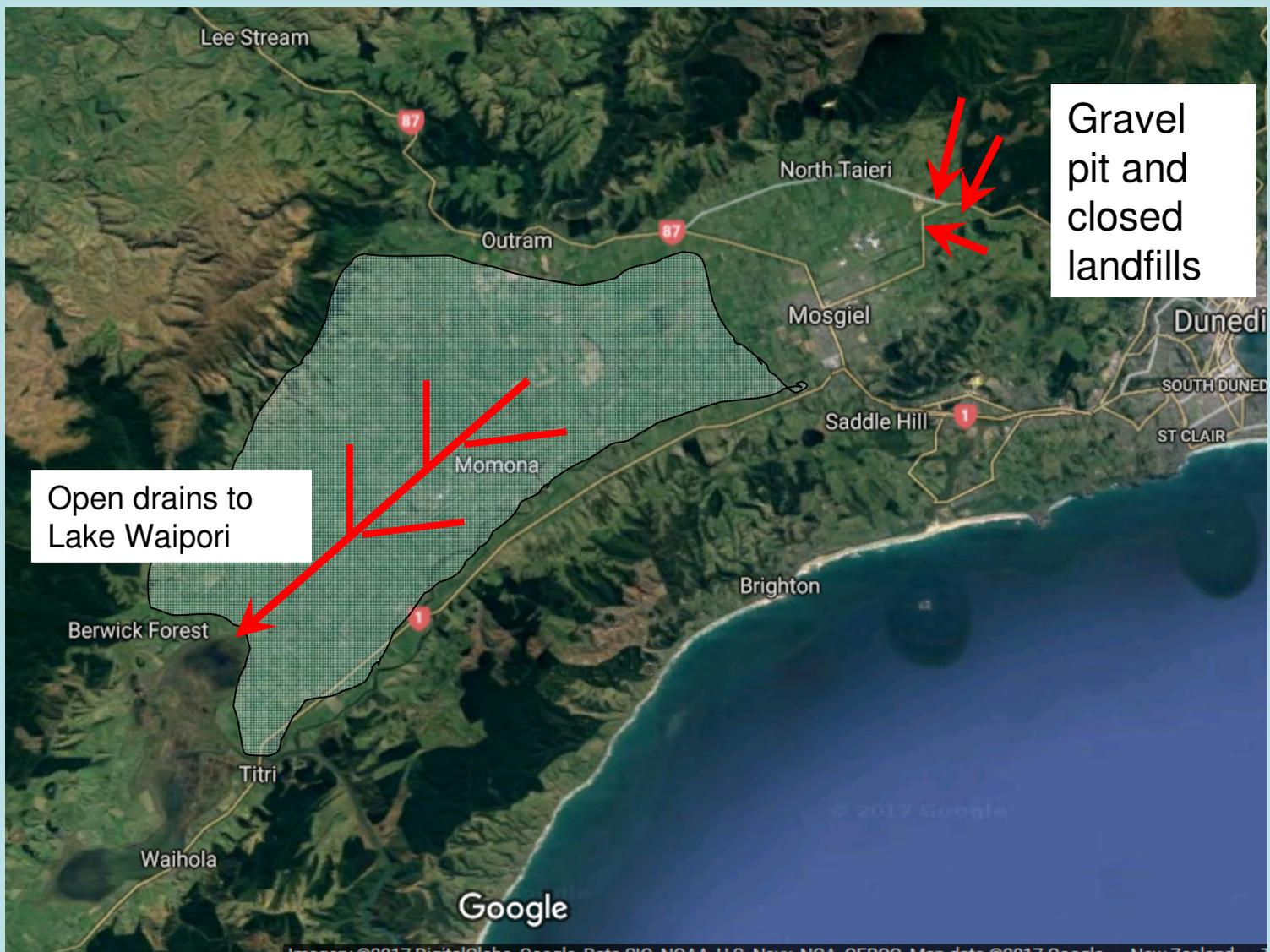
Aquifer flow vectors in East Taieri



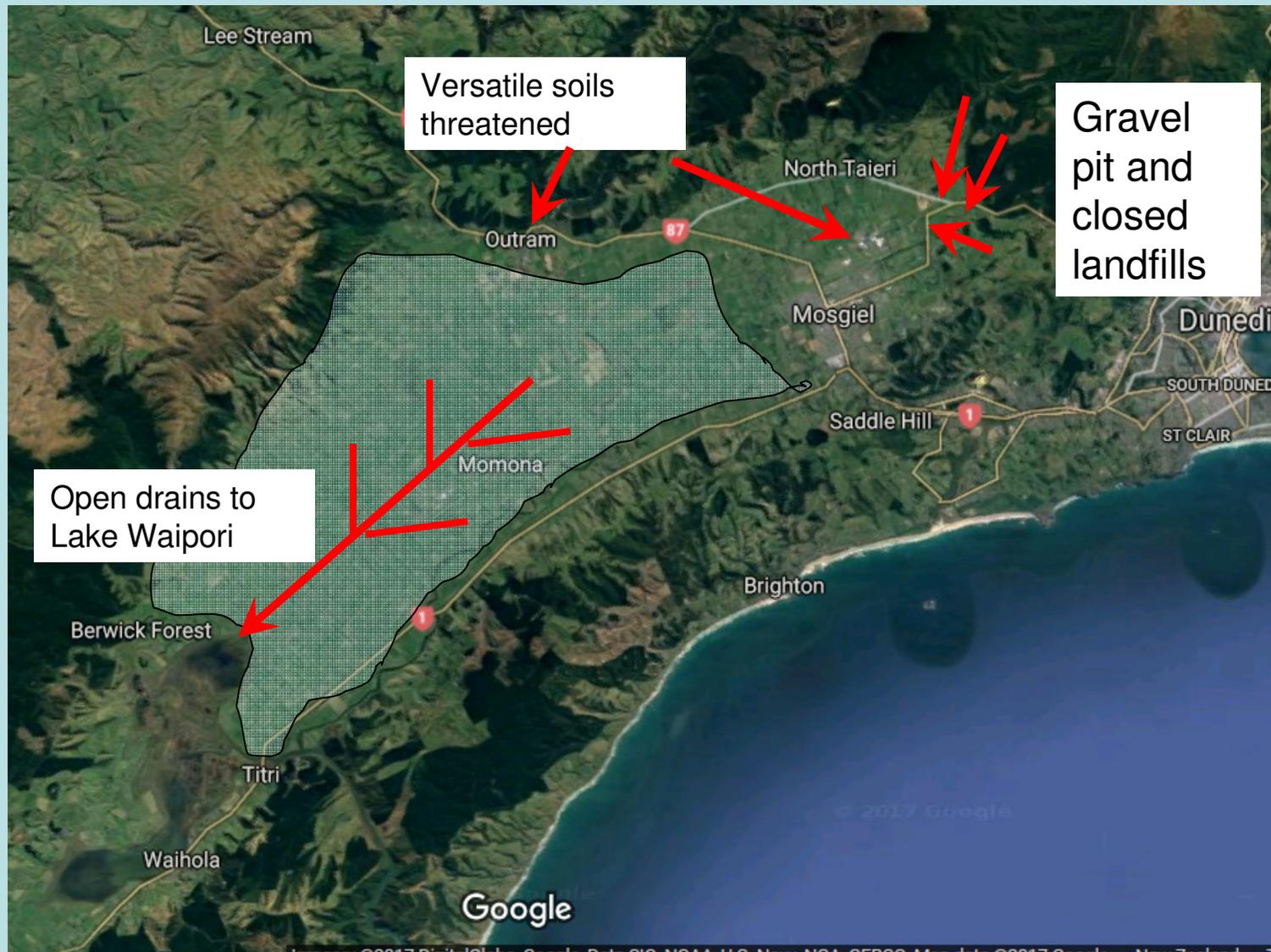
Threats to groundwater quality



Threats to surface water quality



Threats to versatile soils



Discussion questions

1. *To effectively achieve integrated management of resources, does it imply the need for a structured approach at scale like ILM?*
2. *What issues and opportunities do you see in ILM? Is there a “common concern” entry point?*
3. *Given ILM's community-wide implications, how would that breadth of support be secured within the necessary timeframe? (i.e. asap)*
4. *How to ensure that the ILM response was grounded in real biophysical imperatives (e.g. safe emissions and renewables) and continues so?*
5. *Is it worth pursuing and ILM approach further and if so, how? By whom?*