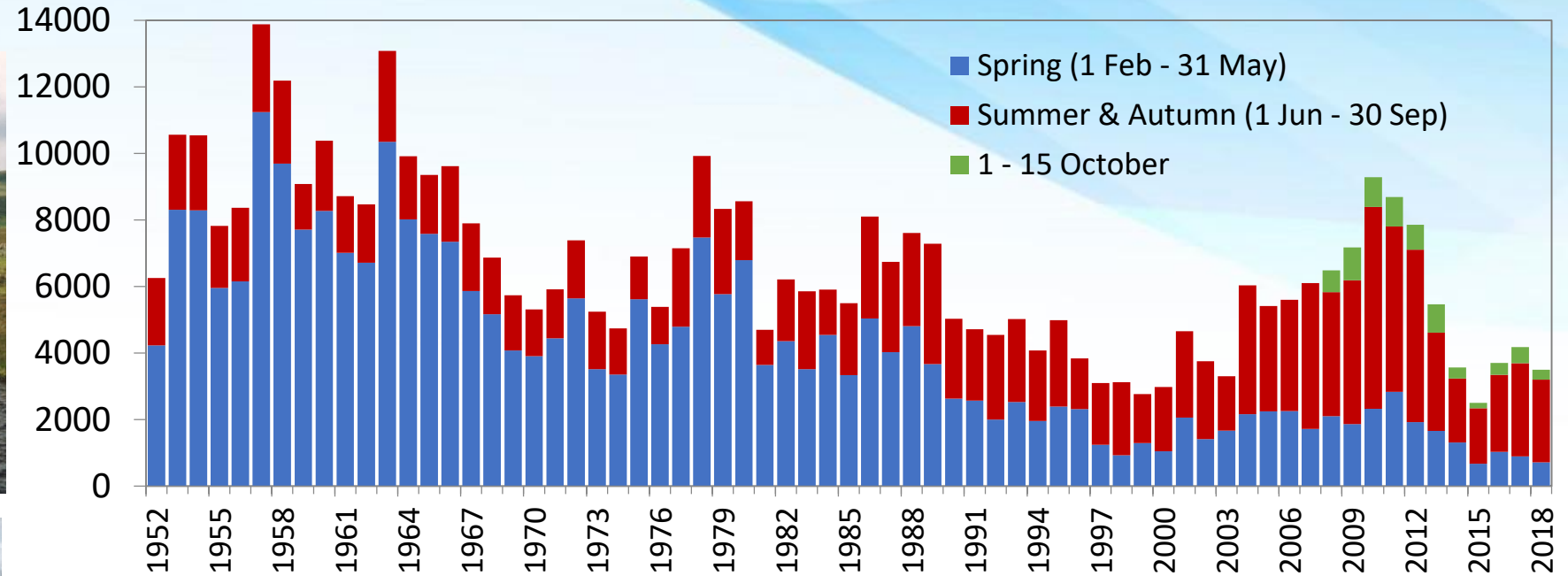


# Habitat Restoration – Background



- Started habitat restoration late 90's due to decline in Salmon stocks.
- Early work concentrated on middle and lower catchment.
- Started tree planting in the uplands around 2015.

# Habitat Restoration – Large Scale Enclosures

- Due to high grazer numbers all riparian woodland has to be protected.
- Preferred method is large scale tree enclosures.
- Funded through various means, forestry/agri schemes, Woodland Trust, SNH.
- Over 175,000 native trees planted within large enclosures.
- Work with land managers.
- Maintenance.



# Habitat Restoration – Small Enclosures

- Where we can't get agreement for large enclosure we use small enclosures.
- Stock fenced, typically 4.5 x 4.5m, 20 – 30 trees per enclosure, tube & stake.
- 1,315 small enclosures to date, 33,000 trees.
- Funded through companies, individuals and habitat schemes.
- Issues - not functioning woodland, expensive and maintenance requirements.
- But they start the process of getting trees established, seed source.
- Also trial funded by CNPA using mob planting technique.



## Habitat Restoration – Large Woody Structures

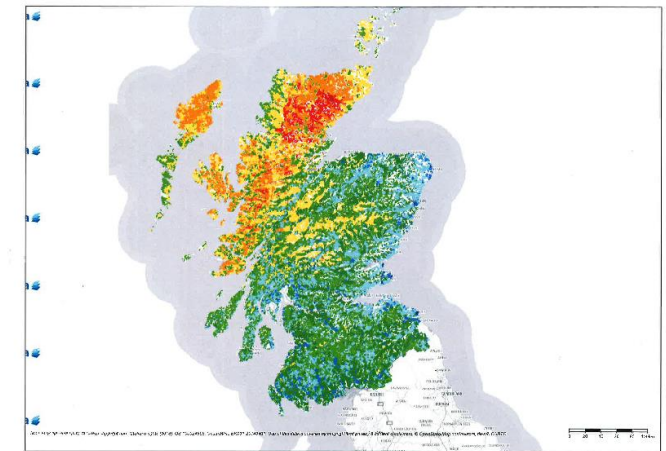
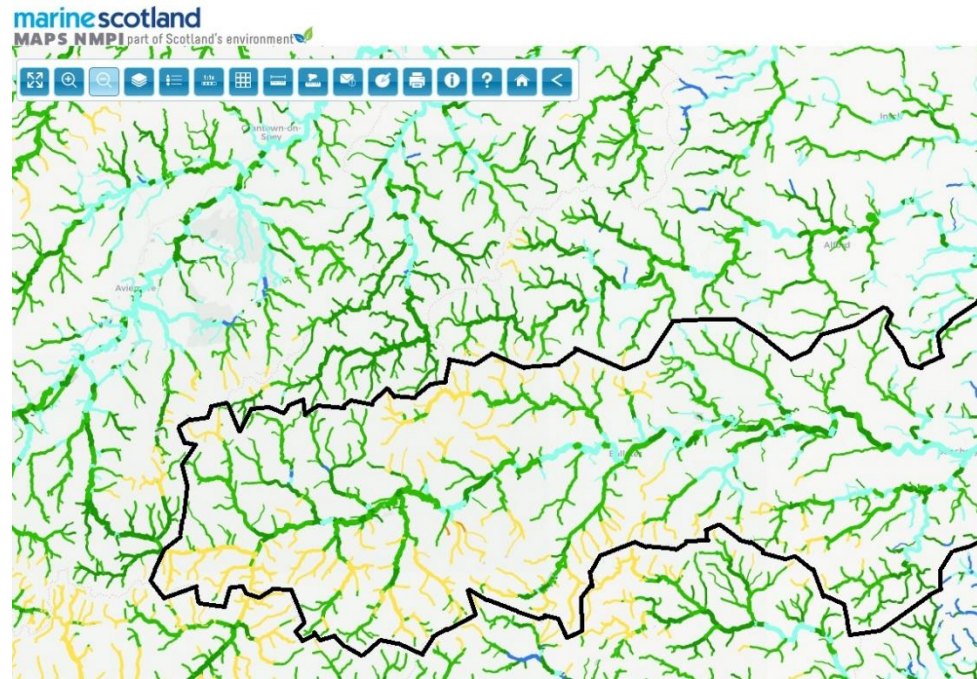
- Rare habitat that would have once been very common feature of our rivers.
- Fallen trees and large wood in a stream are the building blocks of instream habitat complexity.
- LWS create cover from predators, deep cool pools, help create spawning sites and trap nutrient.
- Designed and anchored properly.
- 64 LWS created in last 2 years.
- Generally supported by land managers.
- Monitored by PHD students, RDT and cbec.



# Habitat Restoration – Why?



- Rivers in the Cairngorms have been substantially altered from their natural state.
- Summer peak temperatures potential stress on salmon, 27.5°C recorded on Gairn.
- 50% shading can reduce summer temperatures by 2 - 3°C
- UP to 50% of the energy in a stream can be provided by good bankside vegetation.
- Rivers without trees are typically 30% wider than tree lined rivers.
- To re-instate a healthy river with natural process, more resilient to climate change.
- NFM, improved water quality, increased biodiversity, linking habitats and store carbon.



## Habitat Restoration – Long Term Strategy



- 1 million riparian trees by 2035.
- Created more large wood structures.
- Reinstated wetland, bog and flood plain connectivity and function.
- Restore functioning natural river process.
- Restore abundant salmon population, not just a marine survival issue.

## Habitat Restoration – Long Term Strategy



- Keystone species at crisis point.
- Economic & Cultural importance.
- Work within existing land use to establish planting sites.
- To achieve a functioning riparian zone in Upper Deeside would require less than 1% of the land.
- Saving the salmon and reinstating abundance will be transformative.

