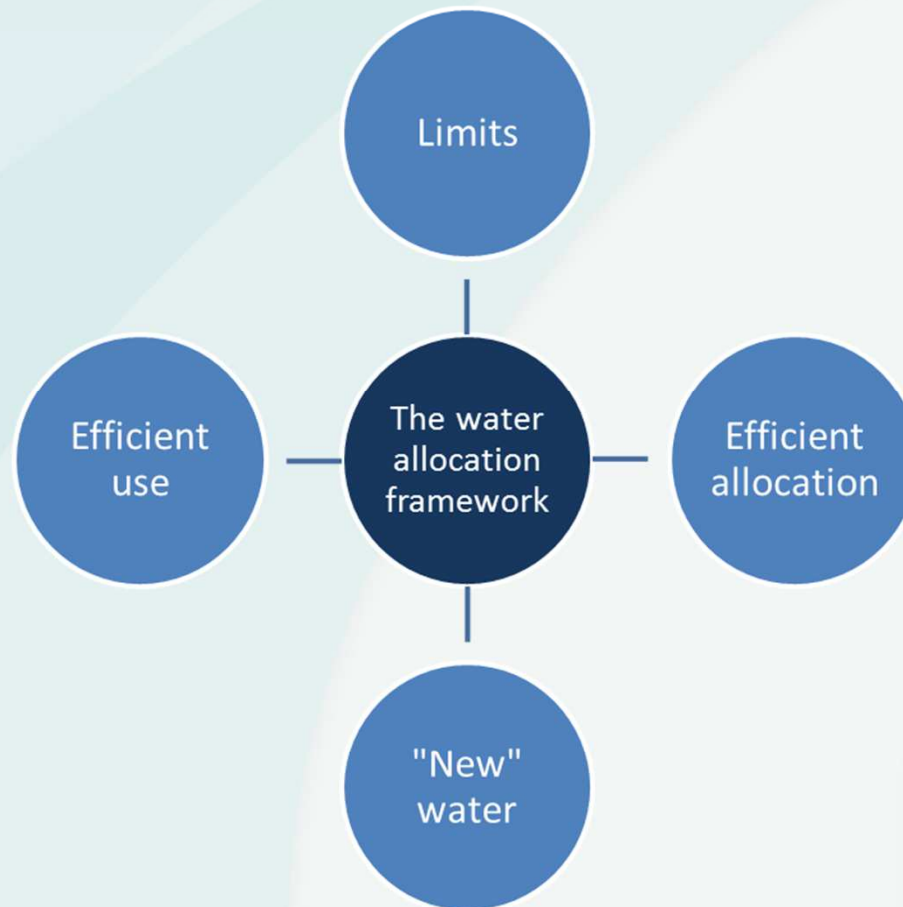
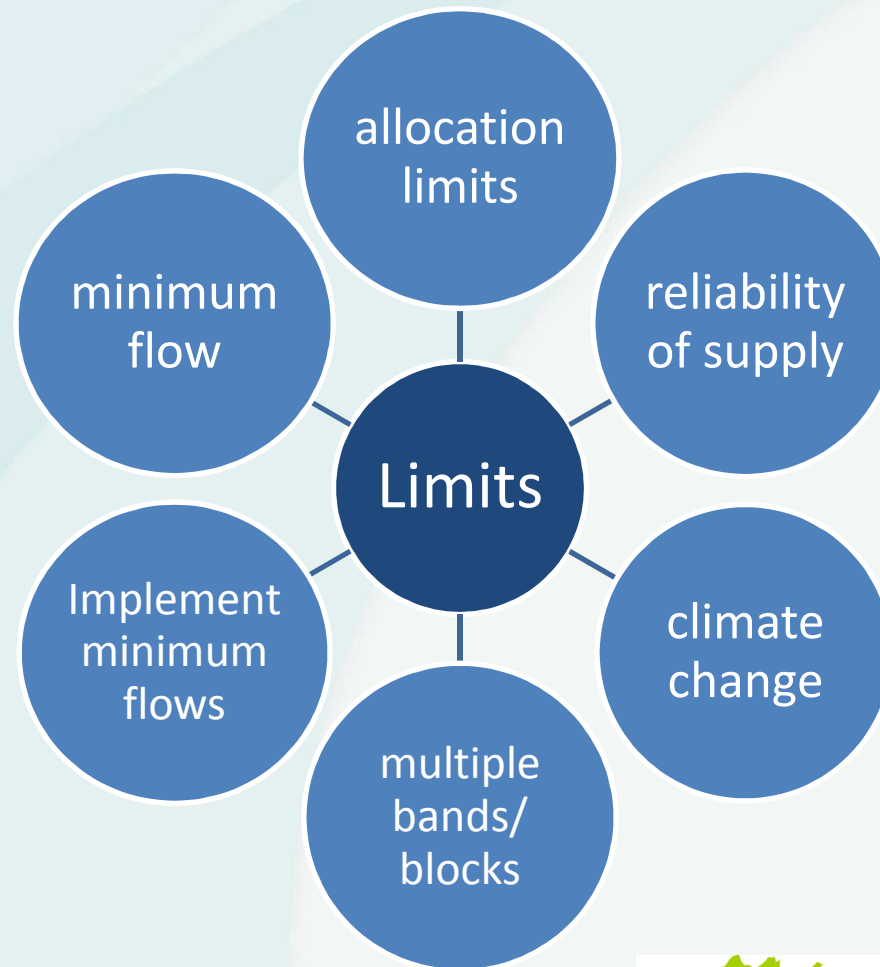


# The water allocation framework

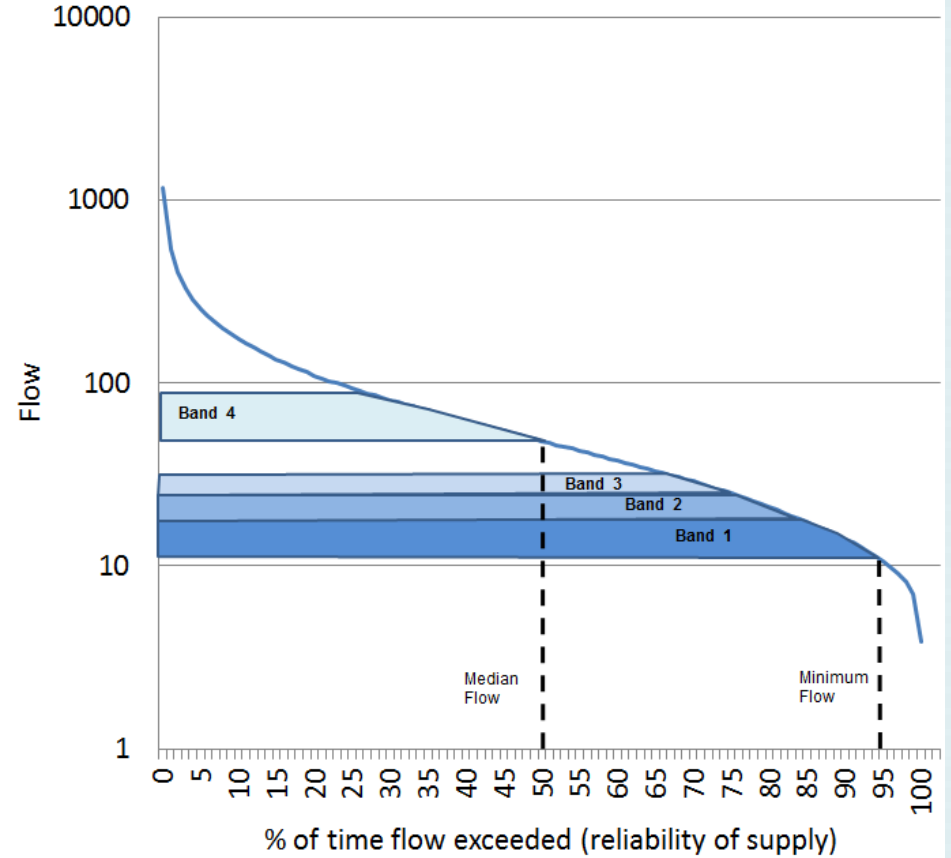
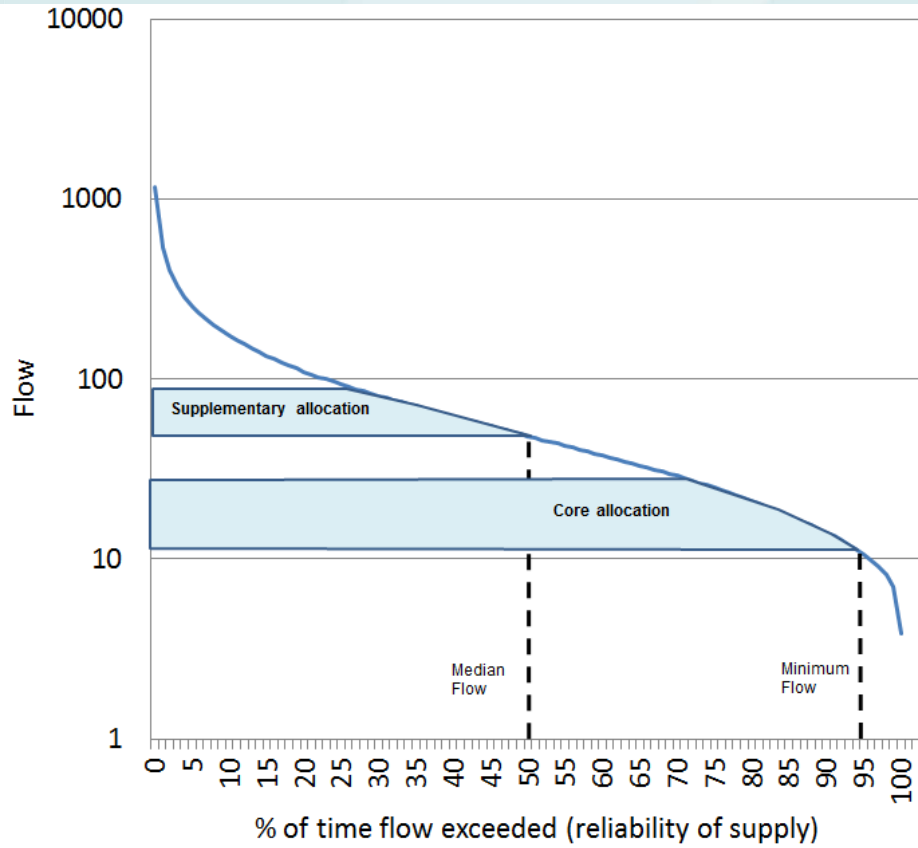


# Limits

(the size of the pie)

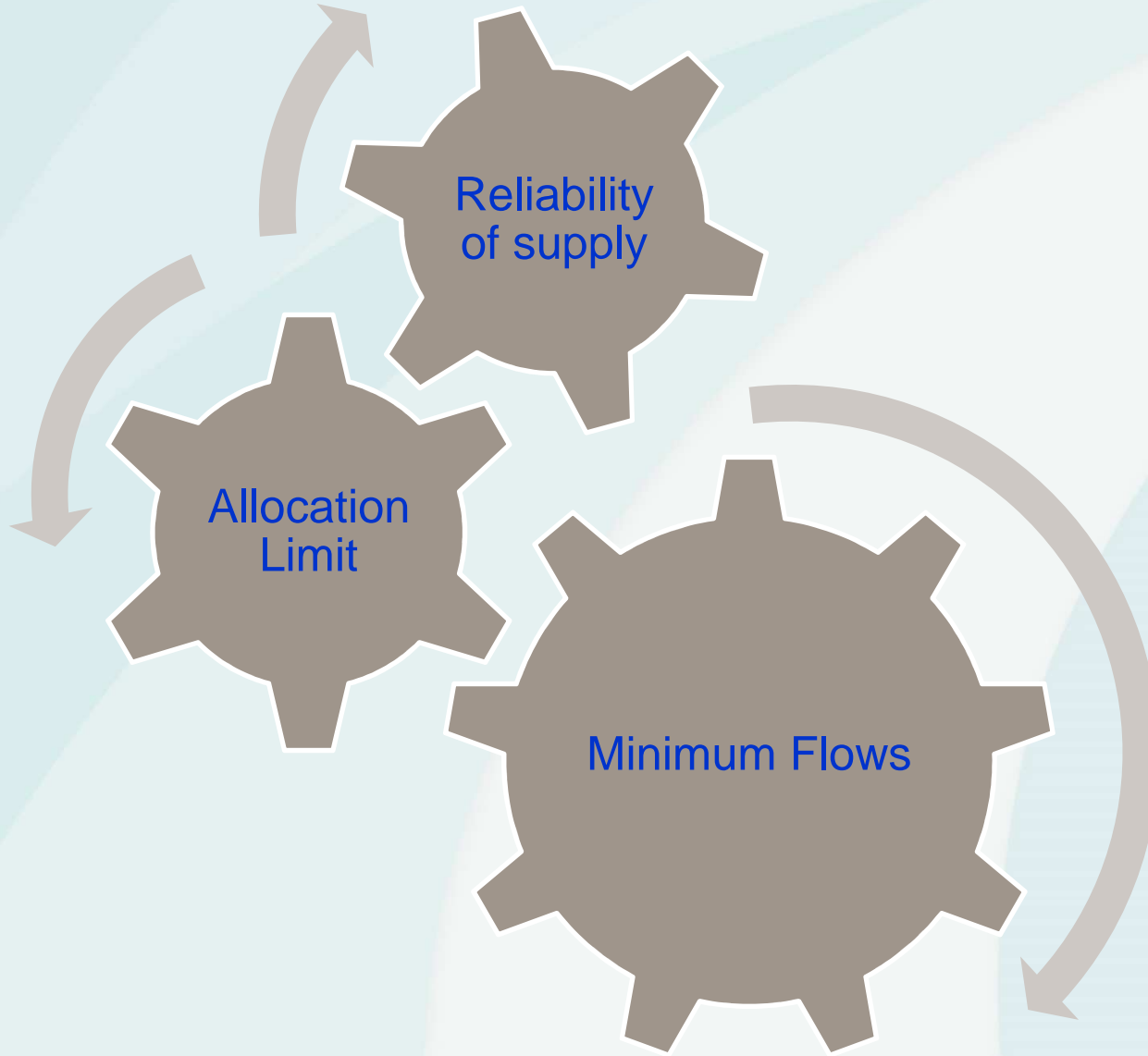


# Multiple bands/block

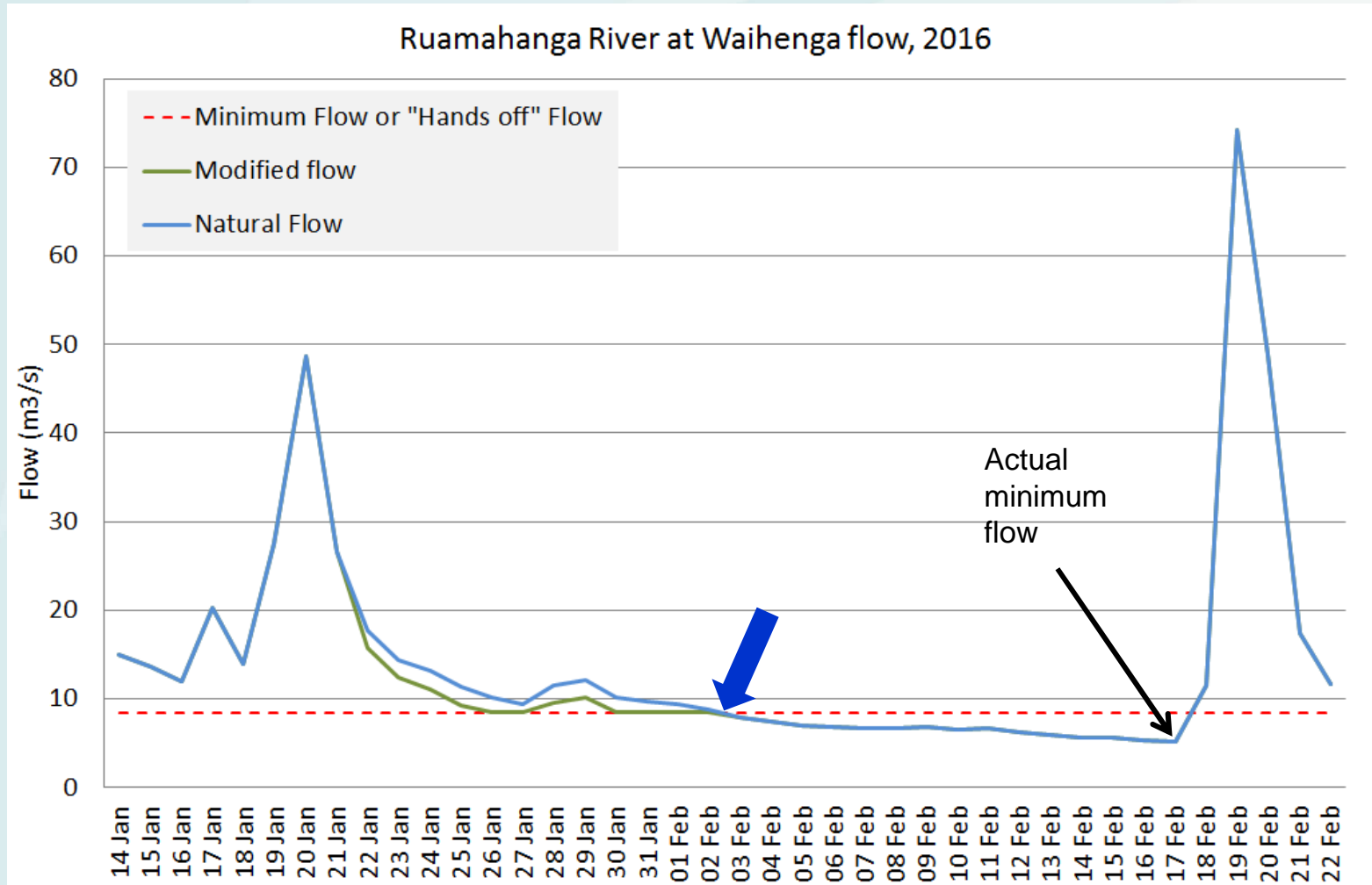


# How and where to set the limits?

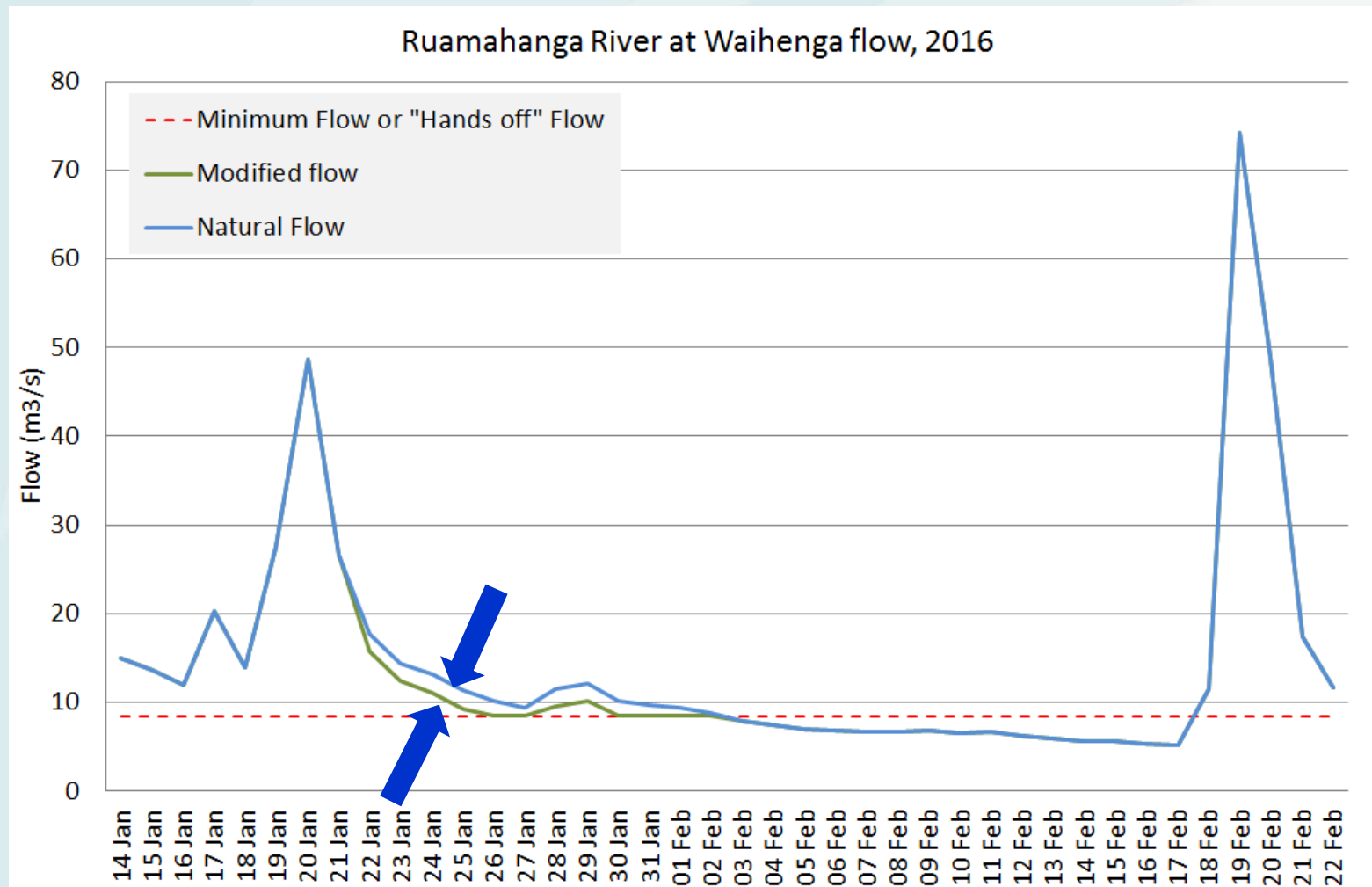




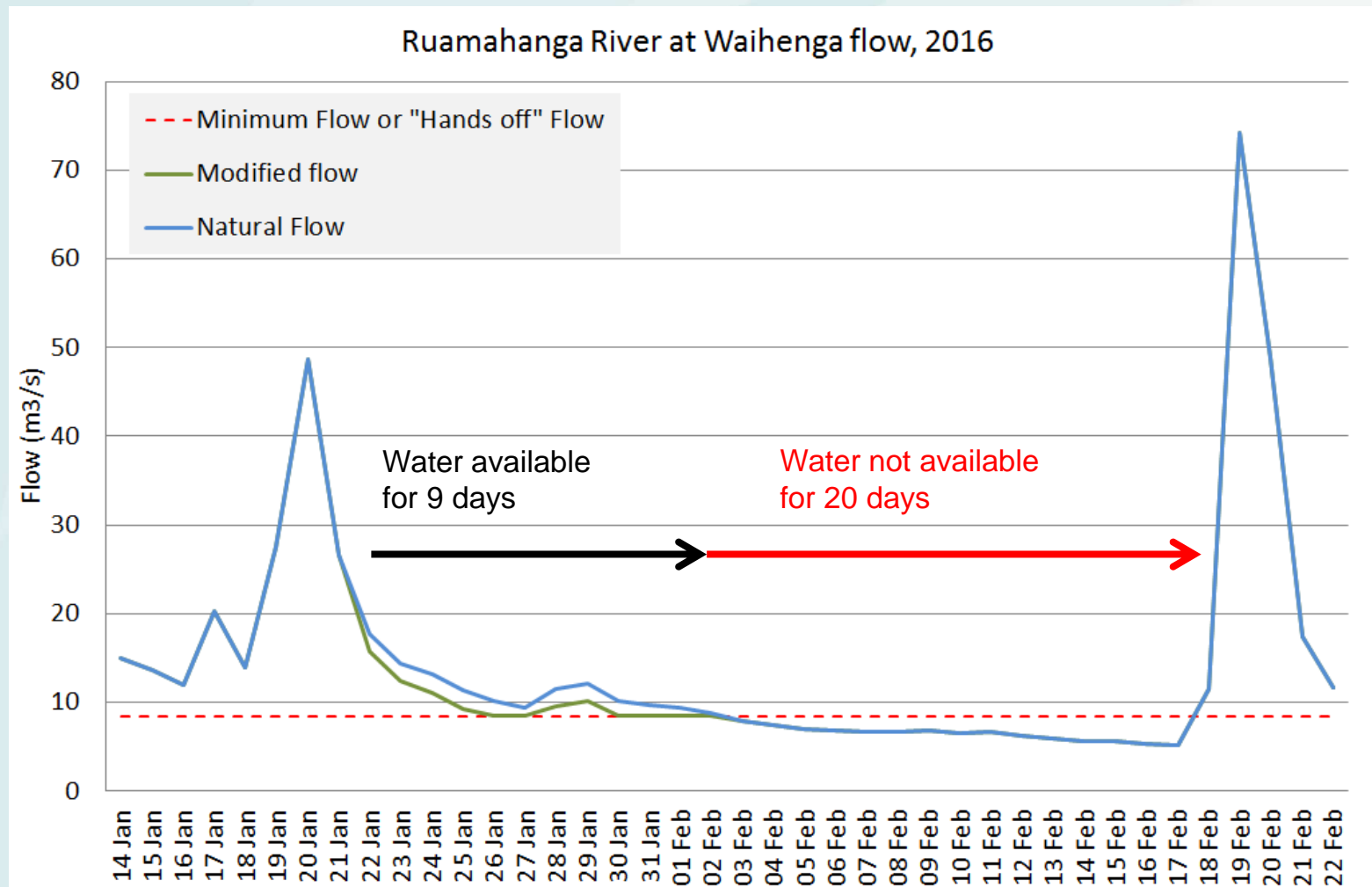
# Minimum flows



# Allocation limit

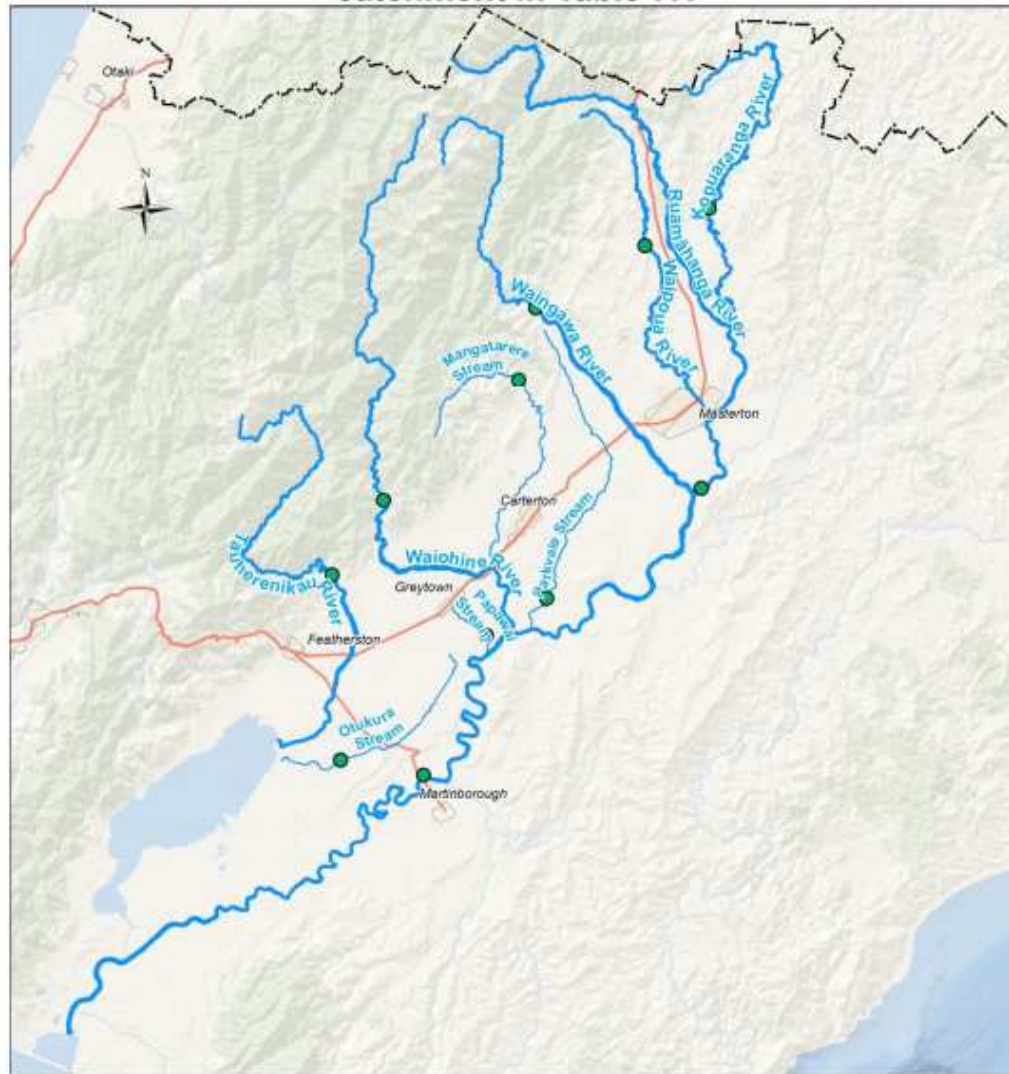


# Reliability of supply





**Figure 7.1: Rivers with minimum flows in the Ruamāhanga catchment in Table 7.1**



This version of the map is not complete. The version of this map available online through the online web map viewer shows the complete, detailed information on a GIS overlay that is not shown on this hard copy. The online version is available on the Council's website at <http://mapping.gw.govt.nz/gwrc/> (select theme Proposed Natural Resources Plan 2015) and can be accessed from the Council offices or public library.

- State Highway
- River with minimum flows
- Urban Areas
- - - Region boundary line
- River flow management sites

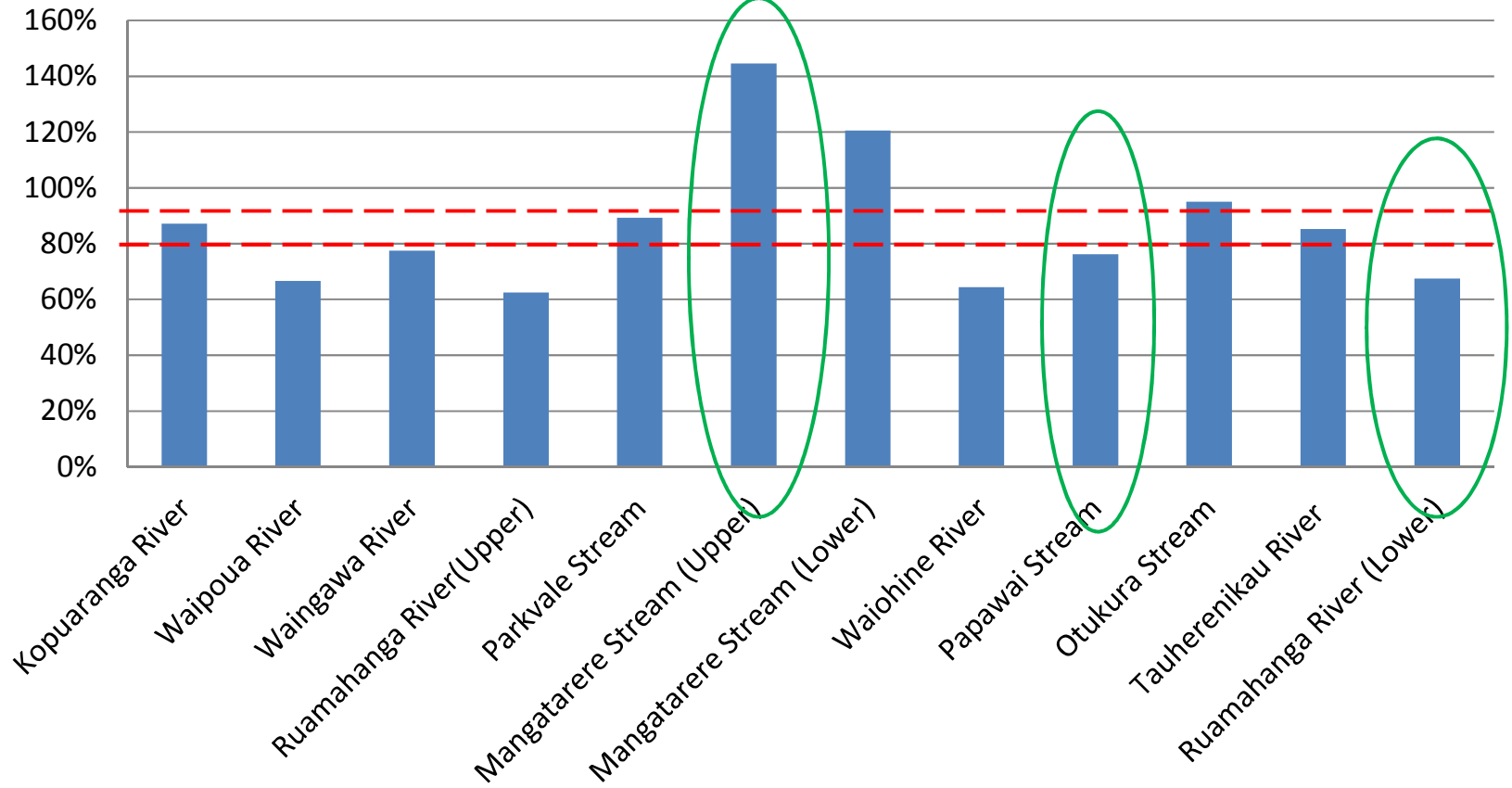


Basemap: World Ocean Base  
Projection: NZTM 2000



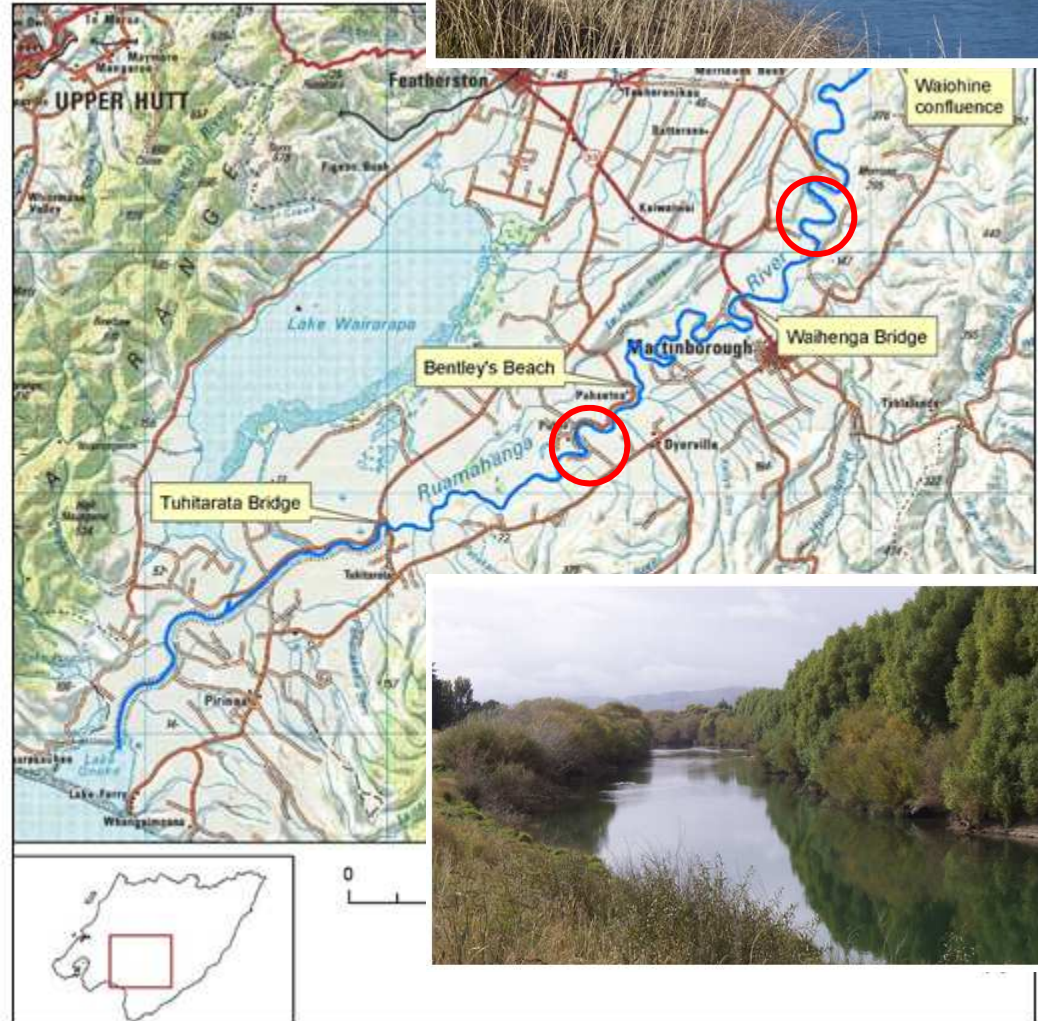
Copyright  
Basemap: Esri, DeLorme, GEBCO, NOAA, NGDC,  
and other contributors  
Topographic and Cadastral: LINZ & CoreLogic Ltd

### Minimum flow as % of 7dMALF



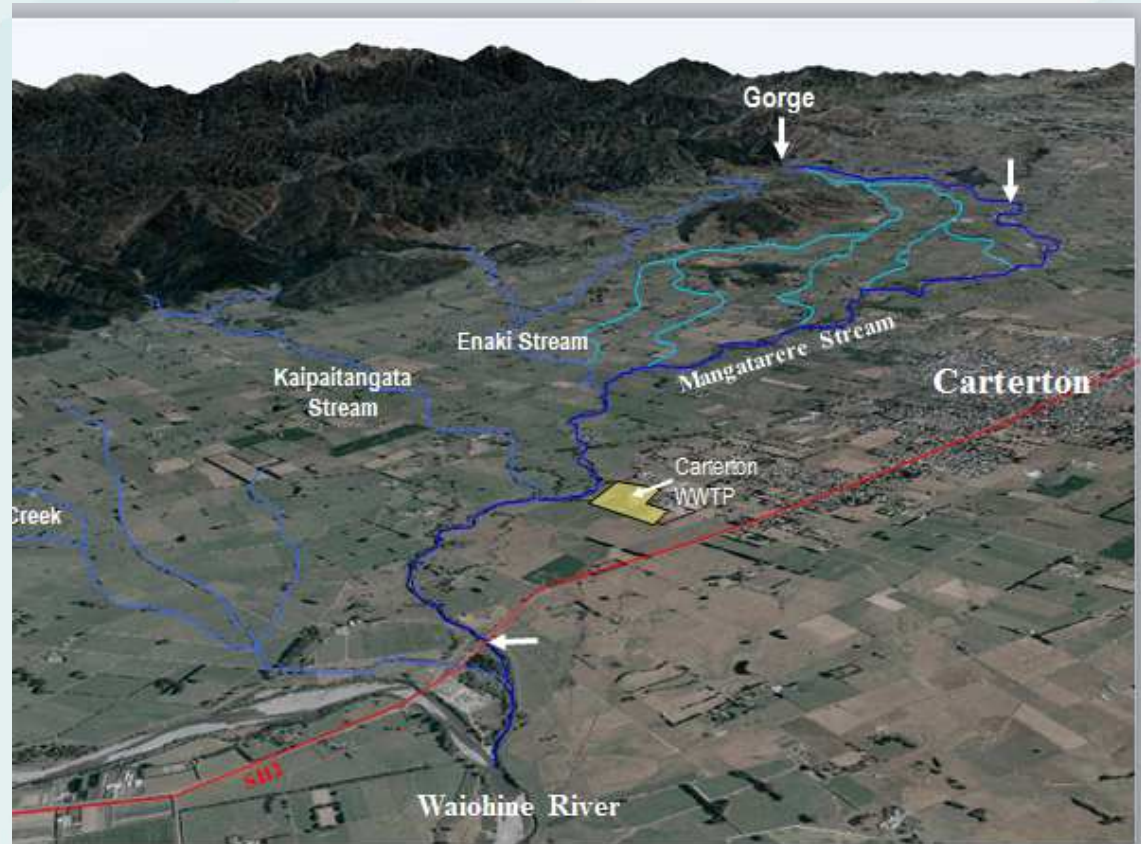
# Lower Ruamahanga River

- Minimum flow 8.5 m<sup>3</sup>/s at Waihenga
- Instream values and IFIM studies in 2007
- Adult brown trout identified as primary flow value
- 90% habitat retention level selected. DO and water temp considered as well as boating and fish passage



# Mangatarere River

- Minimum flow 0.24 (upper) and 0.20 m<sup>3</sup>/s (lower)
- IFIM & WAIORA late 1990s. CAP 2003
- Trout habitat & spawning an important feature
- Dilution of CDC discharge also considered

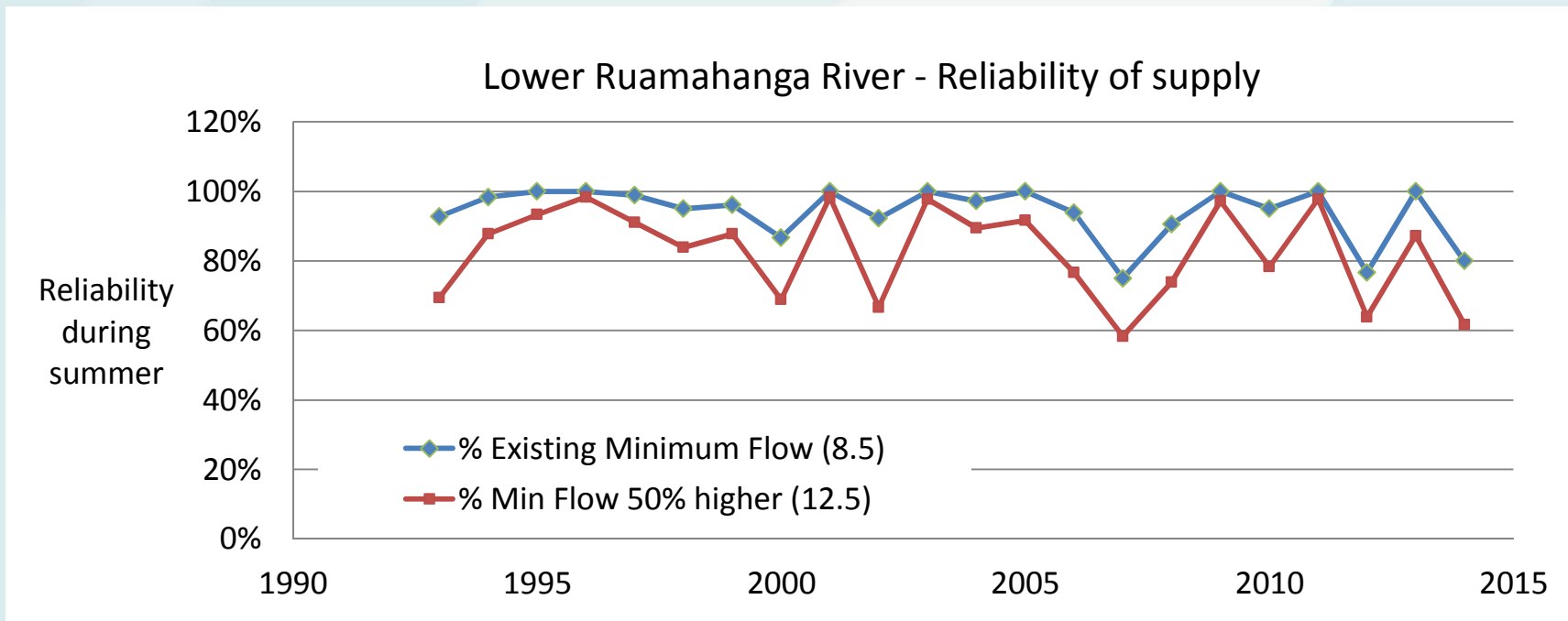


Base photo courtesy of Geographx



# Lower Ruamahanga

- Existing average reliability = 93%
- Min Flow  $\uparrow$  50%, Reliability  $\downarrow$  10%





10 Feb 2015  
~12 cumecs

19 Feb 2015  
~4 cumecs

07 March 2015  
~3.2 cumecs

08 March 2015  
~50 cumecs

# How do outcomes change with different combinations of limits?

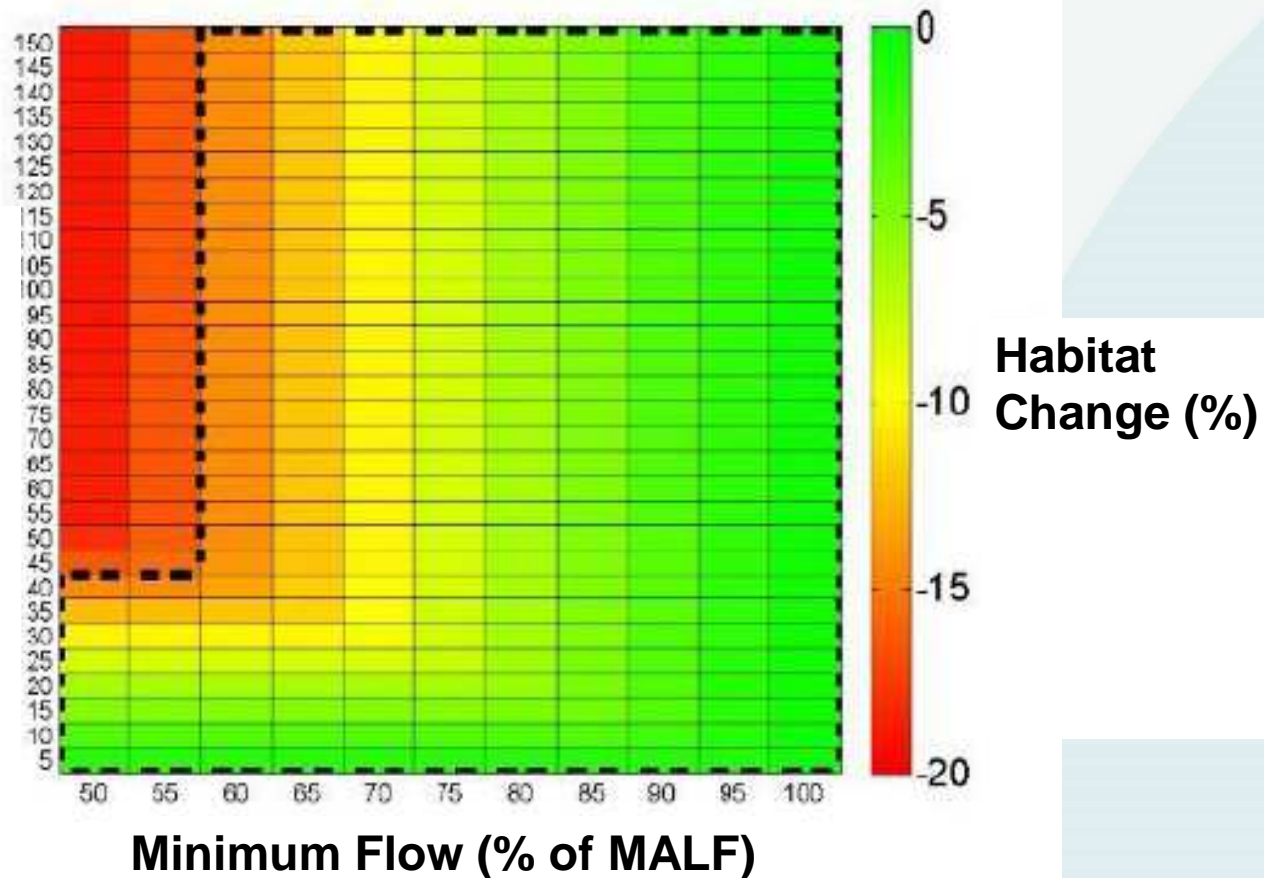




# Testing limit scenarios

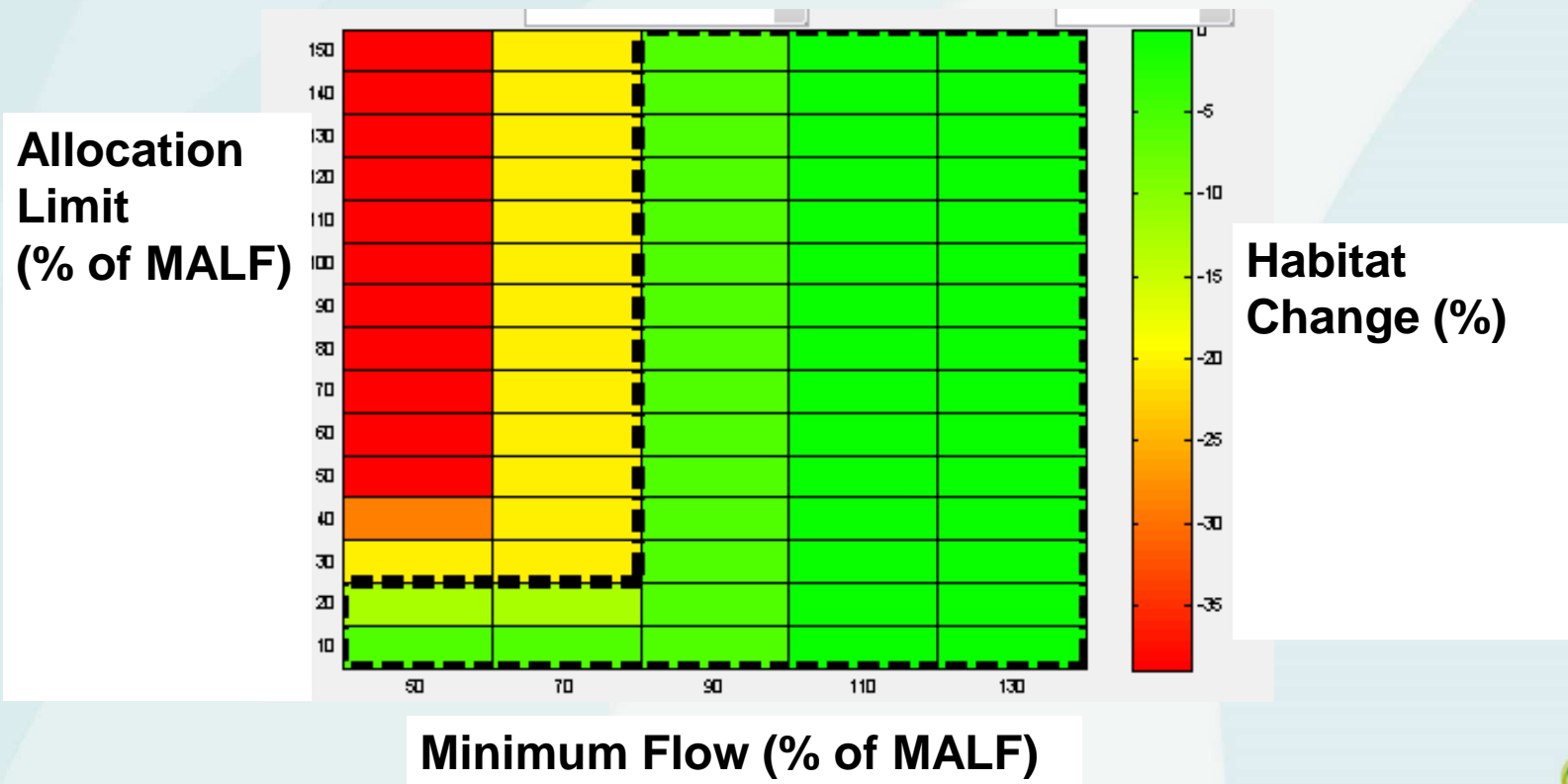
**Objective 1a.** Loss of long fin eel habitat is <15% of that available at MALF

Allocation  
Limit  
(% of MALF)



# Testing limit scenarios

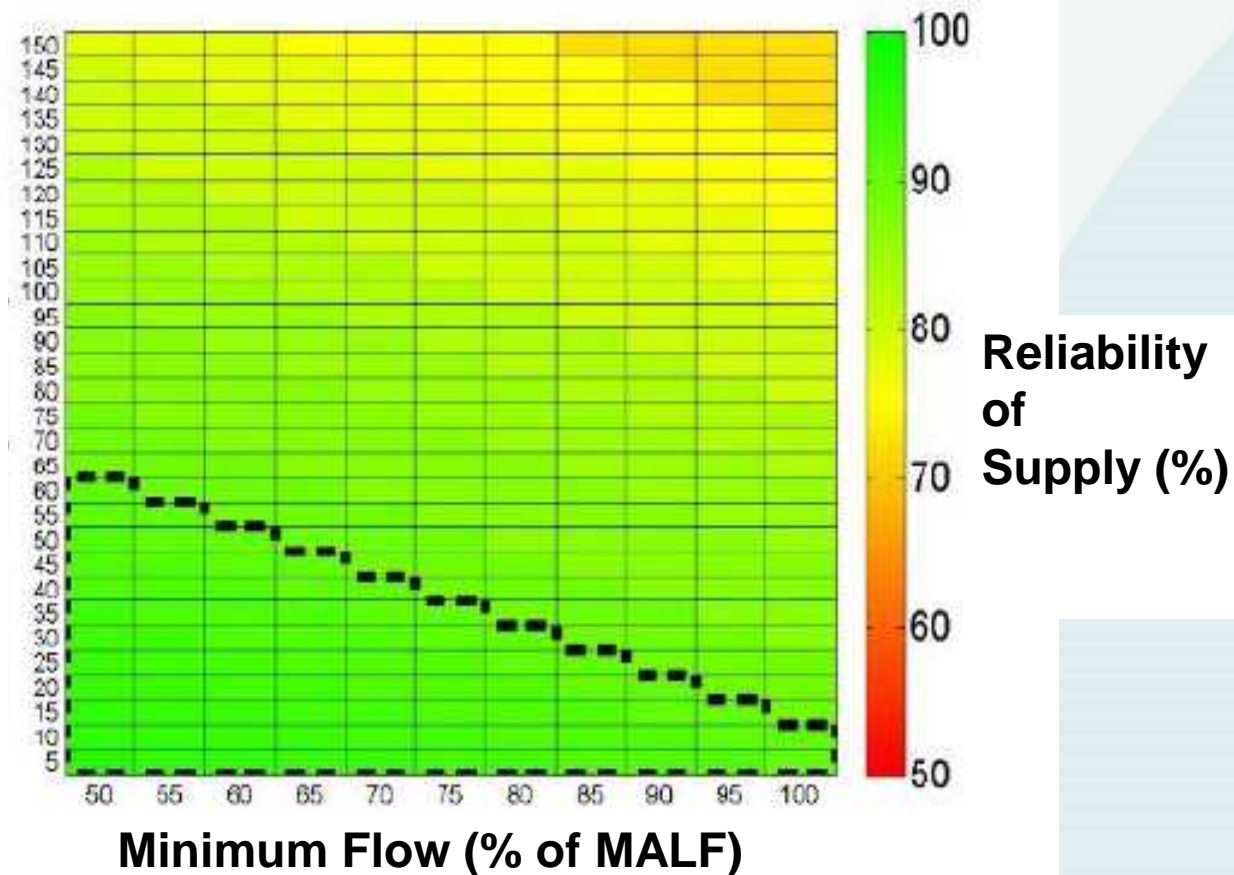
**Objective 1b.** Loss of torrent fish habitat is  $<15\%$  of that available at MALF



# Testing limit scenarios

**Objective 2.** Reliability of full supply of >90%

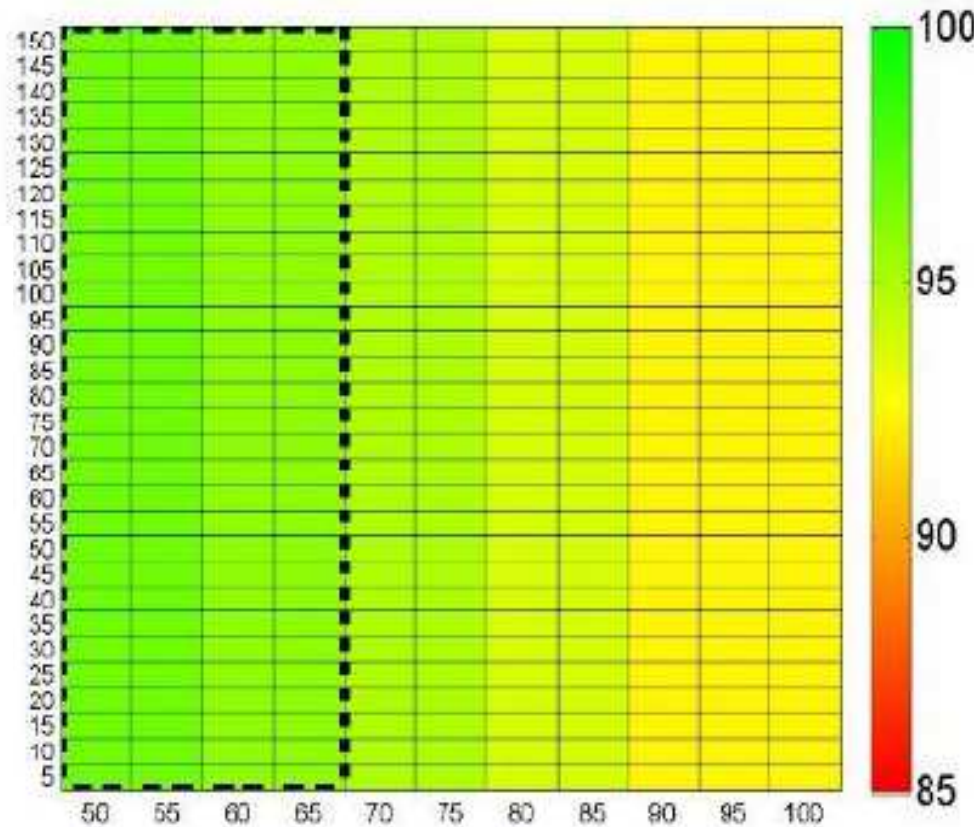
**Allocation  
Limit  
(% of MALF)**



# Testing limit scenarios

**Objective 3.** Reliability of partial supply of >95%

**Allocation  
Limit  
(% of MALF)**

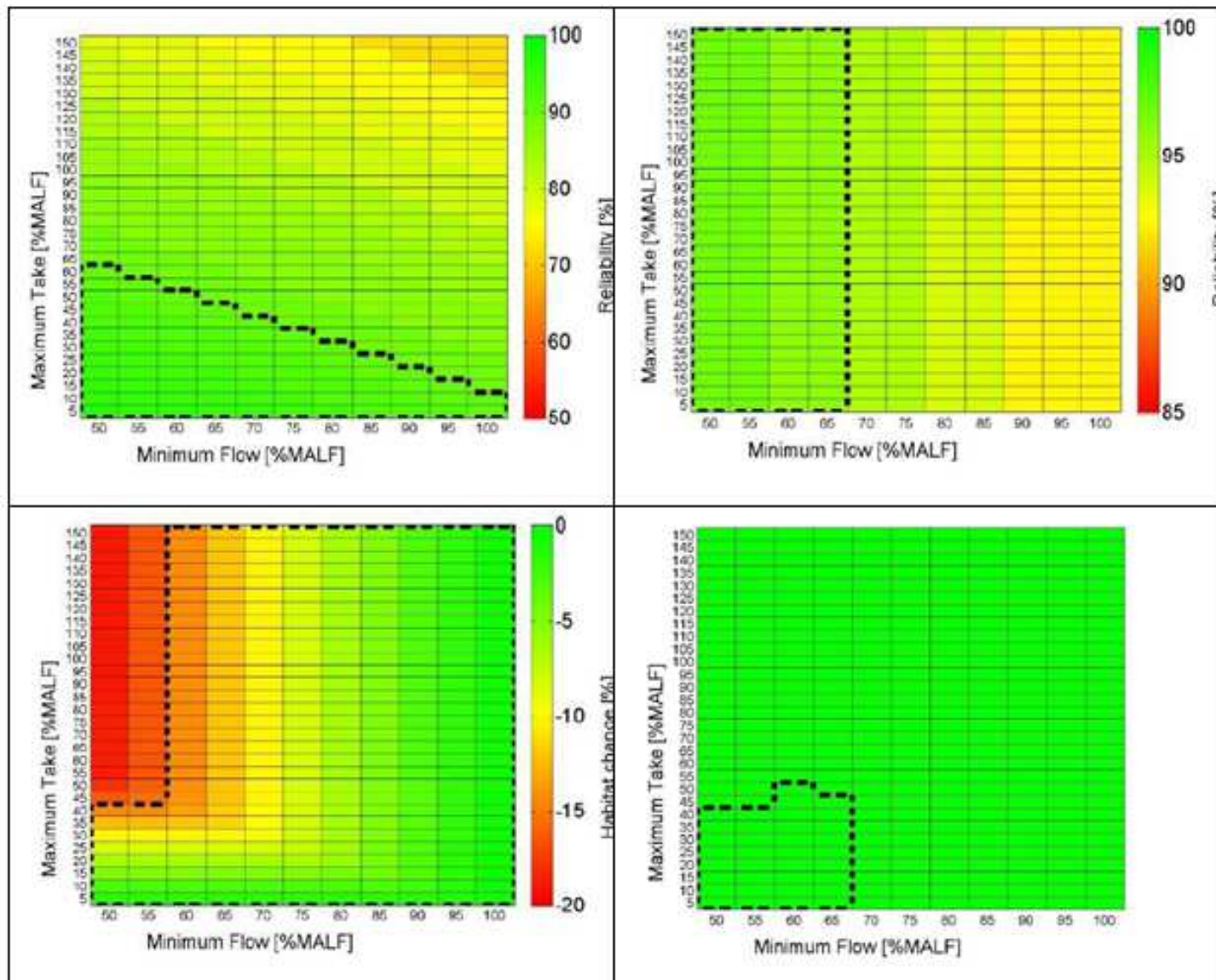


**Reliability  
of  
Supply (%)**

**Minimum Flow (% of MALF)**



# Testing limit scenarios



# **Allocation efficiency**

**(the framework – dividing up the pie)**

**How is water allocated when it becomes available on common expiry dates for resource consents**



# Current water availability at full allocation

**No water available to new users when resource consents expire because:**

- existing users can retain their water
- the sinking lid

# Potential policy direction

**The maximum amount of water available for allocation (core allocation) shall not exceed whichever is the greater of:**

- The total amount allocated by resource consents
- The limit identified in the Plan



**When considering an application [for renewal of resource consent] ... a consent authority must have regard to the value of the investment of the existing consent holder (RMA s104 (2A))**

# Key considerations

**How will the Committee address allocation on expiry of resource consents?**

- Potential allocation approaches:
  - status quo
  - market e.g. auction, tender
  - administrative e.g. priority allocation system, user groups, ballot, transfer
- Equity vs existing investment?