

Riparian Vegetation Classification and Enhancement Opportunities

Sherry River, Motueka Catchment

Integrated Catchment Management Programme



Lisa Langer
Forest Research,
P.O.Box 29 237,
Christchurch.



Bronwyn Rodgers
Forest Research,
Private Bag 3020,
Rotorua.

Woody riparian vegetation provides:

- Channel and bank stability and reduced sediment in stream water
- Stream shade and lower stream temperature
- Source of carbon for biota (litter and woody material)
- Buffer to flood flows and the input of nutrients (such as nitrate)
- Terrestrial habitat for invertebrates and micro fauna
- Native plant corridor for birds
- Biodiversity of flora and fauna
- Protection of culturally significant plants
- Native vegetation provides an aesthetically pleasing environment for recreation.



Areas of Indigenous forest, including pockets of mature beech trees offer good opportunities to enhance riparian vegetation.

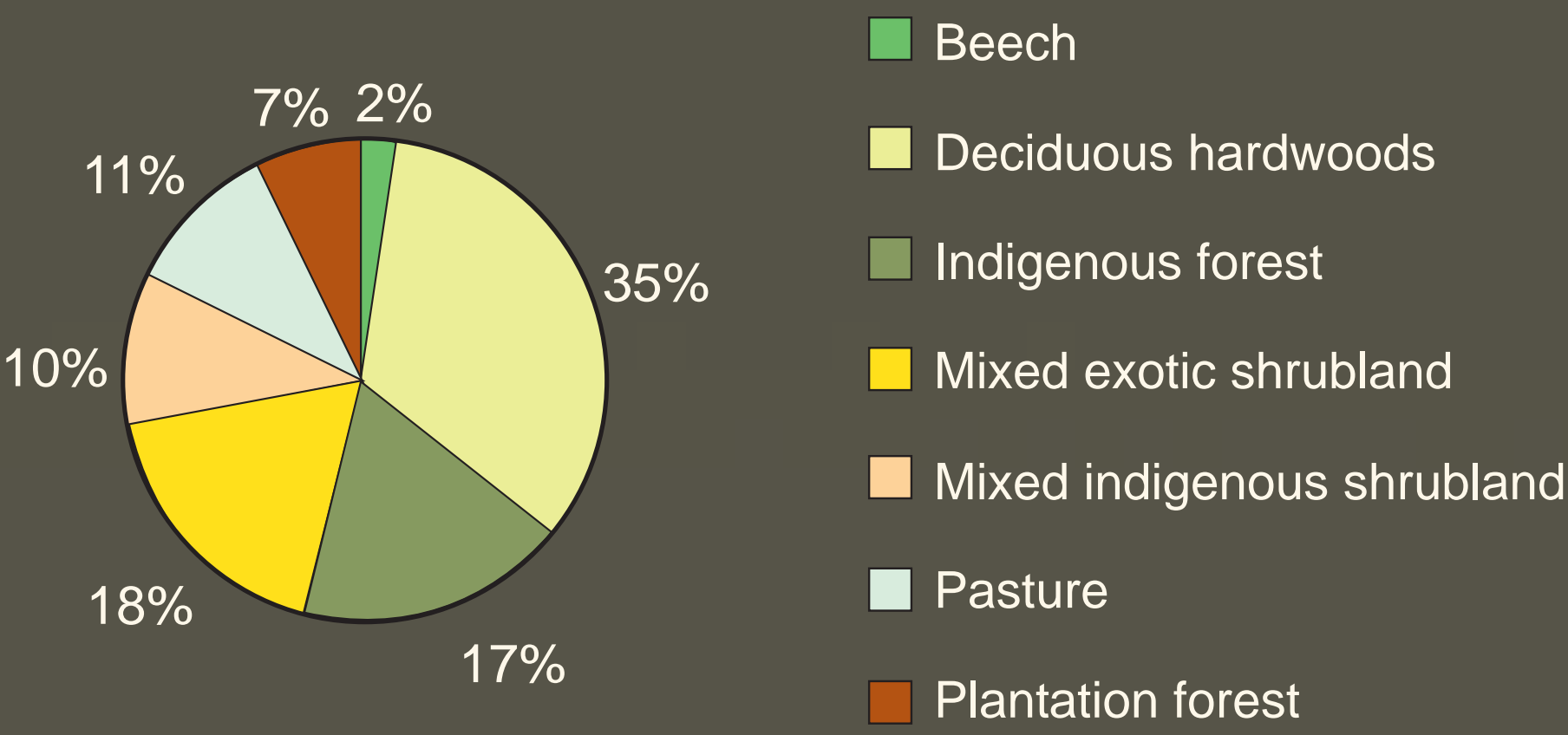
CLASSIFICATION METHODS

A method has been designed to classify riparian vegetation. Tasman District Council colour orthophotographs of the Sherry River were examined and riparian vegetation was grouped into seven broad classes. Ground truthing corrected misinterpretations. Transects have been established in non-pasture riparian vegetation to provide a more detailed description of the vegetation within each class and an understanding of opportunities for enhancement.



Example of a Sherry River orthophotograph showing riparian vegetation classes.

Vegetation Class (length of Sherry River).



Vegetation Class	Area (m²)	Av. width (m)
Beech	13,092	4
Deciduous hardwoods	323,110	5
Indigenous forest	247,232	6
Mixed exotic shrubland	111,453	5
Mixed indigenous shrubland	60,614	6
Pasture	67,503	4
Plantation forest	64,964	6

Acknowledgement: Funding for this research was provided by the Foundation of Research, Science and Technology under the Landcare Research ICM programme.

ENHANCEMENT OPPORTUNITIES

11% of the length of the Sherry River is pasture and has no woody riparian vegetation.

Over a third of the riparian vegetation has been classified Deciduous hardwood. Deciduous hardwood vegetation is generally about 5 m wide and consists mainly of crack willow trees draped in old man's beard. It often has a thick ground cover of blackberry. Weed management is essential if more desirable riparian vegetation to be established.

The mixed Indigenous shrubland vegetation is in the upper part of the catchment, and contains some native species such as kanuka and Coprosmas.



Cracked willow clothed in old man's beard.



Deciduous hardwood riparian vegetation in the Sherry River.

Indigenous forest exists along about 17% of the length of the river and consists of beech and podocarp trees, some native understory species, with few weeds present. This vegetation has an average width of 6 m. Individual beech trees also occur intermittently along the length of the river.

These areas offer good opportunities for riparian enhancement with native species. Weed management will be less difficult, and a native seed source already exists.

Riparian enhancement considerations:

- Adjoining land management objectives
- Potential riparian values
- Proximity to native vegetation
- Stock exclusion
- Weed and pest management
- Willow management/removal
- Use of nurse crops
- Planting/seeding of natives
- Community motivation.

Riparian enhancement potential will be identified and ICM team members will work with Landcare Trust staff to discuss community-based rehabilitation opportunities in the Sherry River.