

# Assessing the non-market values of forest products, goods and services

## New Zealand's experience

Ian Payton  
Ministry for Primary Industries  
Christchurch, New Zealand

A satellite-style aerial photograph of Kahurangi National Park in the northwest of the Nelson region of New Zealand. The terrain is rugged and mountainous, covered in dense green forest. A prominent feature is a large, dark blue fjord-like inlet on the eastern side of the park. The surrounding ocean is a deep blue. The text 'Kahurangi National Park, NW Nelson' is overlaid in yellow on the left side of the image.

**Kahurangi National Park,  
NW Nelson**



**Kaiangaroa Forest**

**Urewera Ranges**

An aerial photograph of a lush green valley. The central part of the image shows a river winding through a series of terraced fields. The surrounding areas are covered in dense, vibrant green vegetation, likely rice paddies. The overall scene is a typical representation of a rural, agricultural landscape in a mountainous region.

**Maungatautari**



## Maungatautari



## Maungatautari





## Maungatautari





## Maungatautari





# Maungatautari Ecological Island Trust

An aerial photograph of a mountainous region, likely Maungatautari in New Zealand. The terrain is rugged and covered in dense green forest. A prominent valley runs through the center of the image, with a river or stream visible at the bottom. The overall scene is lush and natural.

## 1. Market value

### Visitor charges

- Adults \$15.00
- Children \$6.00

### Member subscriptions

### Merchandise

### Corporate sponsorship

**Total c. \$ 3.6 million per annum**

# Maungatautari Ecological Island Trust

An aerial photograph of a forested landscape, likely Maungatautari Ecological Island. The terrain is characterized by a central valley or depression, surrounded by rolling hills and dense green vegetation. The lighting creates a sense of depth and texture in the forest canopy.

## 2. Non-market values

### a) Use values

“What are people prepared to pay to do the things on offer?”

- walking
- tramping
- wildlife watching
- photography
- environmental education
- relaxing

# Maungatautari Ecological Island Trust

## 2. Non-market values

### a) Use values

“What are people prepared to pay to do the things on offer?”

- walking
- tramping
- wildlife watching
- photography
- environmental education
- relaxing

Answer:      c. \$27 per person per recreation day  
                  c. \$2.8 million per annum

# Maungatautari Ecological Island Trust

An aerial photograph of a forested landscape. The central part of the image is a large, dark green, rectangular area, possibly a forest reserve or a specific ecological zone. This central area is surrounded by a lighter green, more textured forest. The overall scene is a dense, green forest with varying shades and textures.

## 2. Non-market values

### a) Non-use values

“What are people prepared to pay for this block of forest to be retained, even if they never intend to make use of it?”

# Maungatautari Ecological Island Trust

## 2. Non-market values

### a) Non-use values

“What are people prepared to pay for this block of forest to be retained, even if they never intend to make use of it?”

Answer:

Estimates range from c. \$13 to \$21 per household per annum  
c. \$1.6 to \$2.6 million per annum

# Maungatautari Ecological Island Trust

## 3. Ecosystem Services

The benefits the ecosystem, in this case an old growth indigenous forest, generates for the local, regional or national economy

- reduced erosion
- reduced flooding during high rainfall events
- improved quality, quantity and regulation of water supply
- preservation of genetic diversity
- habitat refugia for desirable plant and animal species

# Maungatautari Ecological Island Trust

## 3. Ecosystem Services

The benefits the ecosystem, in this case an old growth indigenous forest, generates for the local, regional or national economy

- reduced erosion
- reduced flooding during high rainfall events
- improved quality, quantity and regulation of water supply
- preservation of genetic diversity
- habitat refugia for desirable plant and animal species

Answer:      c. \$2,000 per ha per annum  
                  c. \$6.8 million for the reserve

# Whakarewarewa Forest





# Whakarewarewa Forest



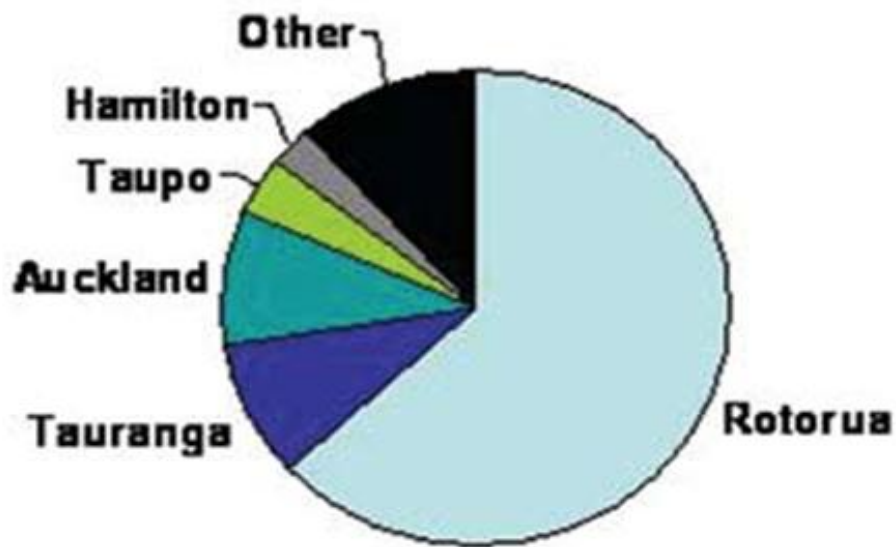
# Whakarewarewa Forest

1. What value do forest users place on recreation in Whakarewarewa forest?
2. What features would they like to see improved?
3. How much would they be willing to pay for these improvements?

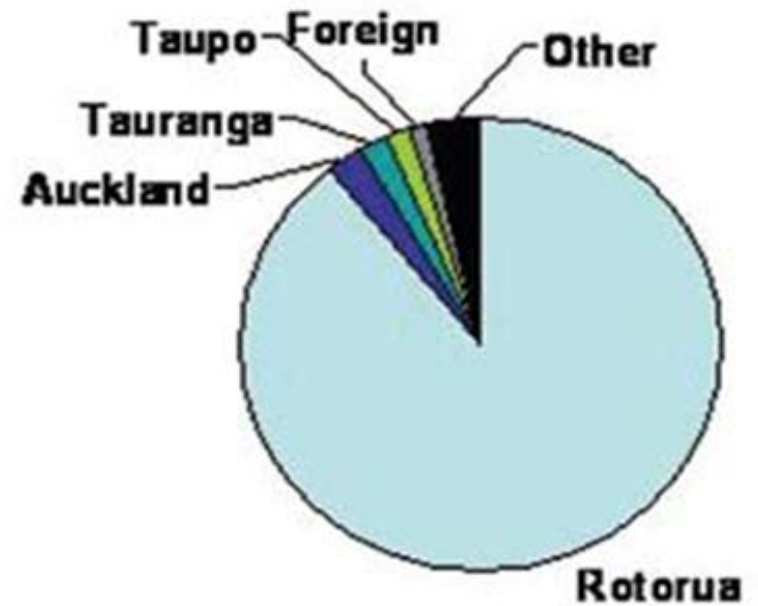


# Whakarewarewa Forest

Mountain Bikers



Walkers



# Whakarewarewa Forest

## 1. What value do forest users place on recreation in Whakarewarewa forest?













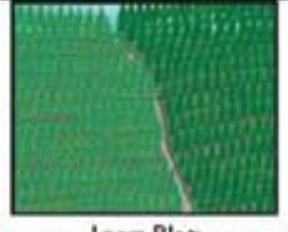

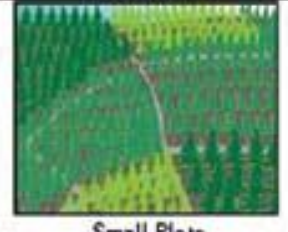
Walkers	\$61 per visit
Mountain bikers	\$120 per visit

### Annual economic benefit

Walkers	c. \$5.2 million
Mountain bikers	c. \$10.2 million

# Whakarewarewa Forest

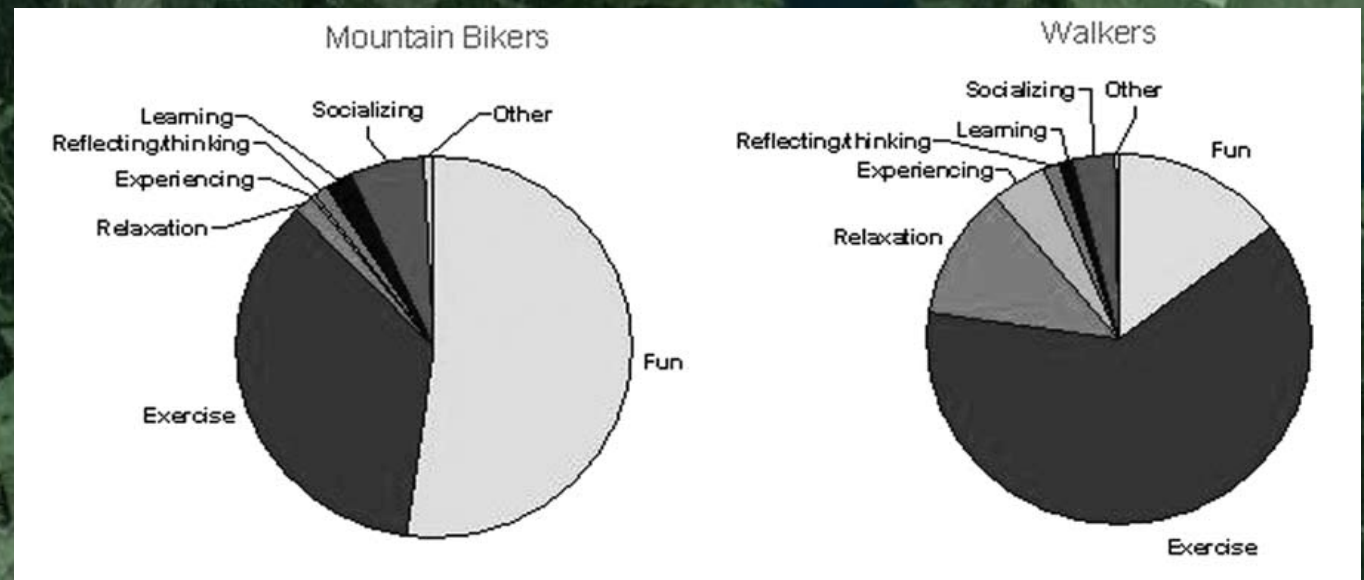
2. What features did people want to see improved?

Attribute	Status Quo Level	Changed Level 1	Changed Level 2
Tree ages in the forest	 Same Age Trees	 Two Age Groups	 Three or More Age Groups
Species in the forest	 Same Tree Species	 Two Tree Species	 Three or More Tree Species
Tree density in the forest	 High Density, Poor Understorey	 Medium Density, Medium Understorey	 Low Density, Rich Understorey
Species in the forest lan dcape	 70% Radiata Pine	 50% Radiata Pine	 30% Radiata
Plot sizes in the forest lan dcape	 Large Plots (Greater than 30 ha)	 Medium Plots (about 20ha)	 Small Plots (less than 10 ha)

# Whakarewarewa Forest

3. How much would they be willing to pay for these improvements?

Answer: little or nothing



**Maungatautari**



**Whakarewarewa**



# Maungatautari



# Whakarewarewa





# Maungatautari



# Whakarewarewa



# Maungatautari



# Whakarewarewa





## Maungatautari



## Whakarewarewa

### Take home messages

1. Attempts to assess the non-market values of New Zealand forests are still in their infancy
2. There is no general agreement on the methodologies for assessing or reporting non-market values
3. New Zealand is a long way from being able to report the non-market value of its forests at a national scale