# **Future Coasts**

Aotearoa



#### After each throw

<sup>1.</sup>Repair

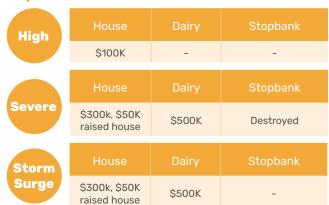
3. Get revenue

<sup>2.</sup> Stay or sell

<sup>4.</sup>Choose option

<sup>5.</sup> Throw the dice

#### **Repair costs**



#### Revenue (per throw)

	No event	High flood	Severe flood		
Intact farm boundaries	\$500K	\$400K	\$300K		
Nature-based solution	\$400K	\$400K	\$400K		
Groundwater incursion	\$100k loss zone 5, \$200K on 6th zone				

Buying other properties is also an option including a safer dairy farm on high ground.

#### Sell

Undamaged farm	Undamaged with stopbank/ seawall	High flood damage	Severe flood damage	Sea level at farm boundary	Sea level 1 zone over farm boundary
\$2M	\$2.5M	\$1M	\$500K	\$1M	\$0

#### Stay & choose

Adaptation pathway options	Safe from	Cost (Individual)	Cost (Govt Support)*
Do nothing		-	-
Raise farmhouse floor	1 level of flood, storm surge and sea level rise	\$200K	-
Move house to flood safe zone	All floods but not sea level rise/storm surge	\$500K	-
Move cow shed	All floods but not sea level rise/storm surge	\$1M	-
Drainage and pumping	Gain 2 zones of protection from groundwater incursion	\$550k set up costs/power then \$50k for power per turn	-
Build stopbank	High flood, but stopbank destroyed in a severe flood	\$600K	50/50 split \$300K
Seawall	2 zones of protection from SLR and storm surge. No effect on groundwater	\$500K	50/50 split \$250K
Nature-based solution for river flooding - Move farmhouse \$500K, \$200K plants/contouring	Gain one level of protection from flood	\$700K	Up to \$600k
Natural solution for sea (moves)	Protected from all storm surge damage other than cyclone. Cyclone destroyed. Groundwater effects still in play	\$200K	50/50 split \$100K

<sup>\*</sup>When the game is in 'government' mode, the government contributes 50% towards an adaptation option that impacts the whole community. The player must pay to move their own house.





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# Player Menu Card Kaumātua, Whānau Land & Property Decision Maker

#### After each throw

<sup>1.</sup>Repair

3. Get revenue

<sup>4.</sup>Choose option

5. Throw the dice

#### **Repair costs**

High	Wharenui \$100K	Wharekai -	Papakaianga -	Urupā -
	Wharenui	Wharekai	Papakaianga	Urupā
Severe	\$300K or \$50K raised house	500K	-	-
Storm	Wharenui	Wharekai	Papakaianga	Urupā
Surge	\$300K or \$50K raised house	500K	\$500K	-

#### Revenue (per throw)

\$500K

### Stay & choose

Adaptation pathway options	Safe from	Cost (Individual)	Cost (Govt Support)*
Do nothing		-	-
Raise wharenui	1 level of flood, storm surge and sea level rise	\$200K	-
Move wharenui to safe zone	All hazards	\$500K	-
Move wharekai to safe zone	All hazards	\$1M	-
Move urupā to safe zone (takes 2 turns)	All hazards	\$50K	-
Move papakaianga to safe zone	All hazards	\$1M	-
Nature-based solution for river flooding - Move wharenui \$500k and urupā \$50K, \$200K plants/contouring	Gain one level of protection from flood, 2 levels storm surge	\$750K	Up to \$650k
Natural solution for sea-level rise (moves)	Protected from all storm surge damage other than cyclone. Cyclone destroyed. Groundwater effects still in play	\$200K	50/50 split \$100K
Build stopbank	High flood, but stopbank destroyed in a severe flood	\$600K	50/50 split \$300K
Build seawall	2 zones of protection from SLR and SS. No effect on ground water	\$200K	50/50 split \$100K

<sup>\*</sup>When the game is in 'government' mode, the government contributes 50% towards an adaptation option that impacts the whole community. The player must pay to move the wharenui and urupā, if required.





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#### After each throw

<sup>1.</sup> Repair

<sup>3.</sup>Get revenue

<sup>2.</sup> Stay or sell

<sup>4.</sup>Choose option

<sup>5.</sup> Throw the dice

## **Repair costs**

Event	House
High Flood	\$100K
Severe Flood	\$300K, \$50K raised house
Storm Surge	\$300K, \$50K raised house

## Revenue (per throw)

\$200K

Sell

\$1M (minus repair costs)

#### Stay & choose

Adaptation pathway options	Safe from	Cost (Individual)	Cost (Govt Support)*
Do nothing		-	-
Raise house floor	1 level of flood, storm surge and sea level rise	\$200K	-
Move house back on section	High flood but not sea level rise/storm surge	\$500K	-
Build stopbank	High flood, but stopbank destroyed in a severe flood	\$200K	50/50 split \$100K
Build seawall	2 zones of protection for each level from SLR and SS. No effect on groundwater	\$200K	50/50 split \$100K
Nature-based solution for river flooding - Move house \$500K, \$100K plants/contouring	Gain one level of protection from flood	\$600K	Up to \$550k
Natural solution for sea (moves)	Protected from all storm surge damage other than cyclone. Cyclone destroyed. Groundwater effects still in play	\$200K	50/50 split \$100K

<sup>\*</sup>When the game is in 'government' mode, the government contributes 50% towards an adaptation option that impacts the whole community. The player must pay to move their own house.

#### Other buying options

Dairy farm	Riverside home	Riverside home (further back)	Family home	Luxury home	Lifestyle home	Townhouse in the city	House in the city
\$3M	\$1M	\$1.2M	\$1.2M	\$2M	\$2M	\$500K	\$2M
No flood hazard, late SLR/GW, safe areas	No SLR but high and severe flood	No SLR but severe flood	No river flood risk, but late SLR, SS & GW risk	Safe	Safe	Safe	Safe



