

Changing Minds, Changing Worlds: The Living Standards Framework and its Implications for Decision-making

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Definition: Natural Capital

“... a set of natural resources that form an asset class comparable to man-made physical and financial assets, and less tangible assets of human capital and social (and/or institutional) capital. It is primarily a stock measure, but it generates flows of goods and services of use to people and it both supplies current consumption and can be degraded by it (OECD, 2013).”

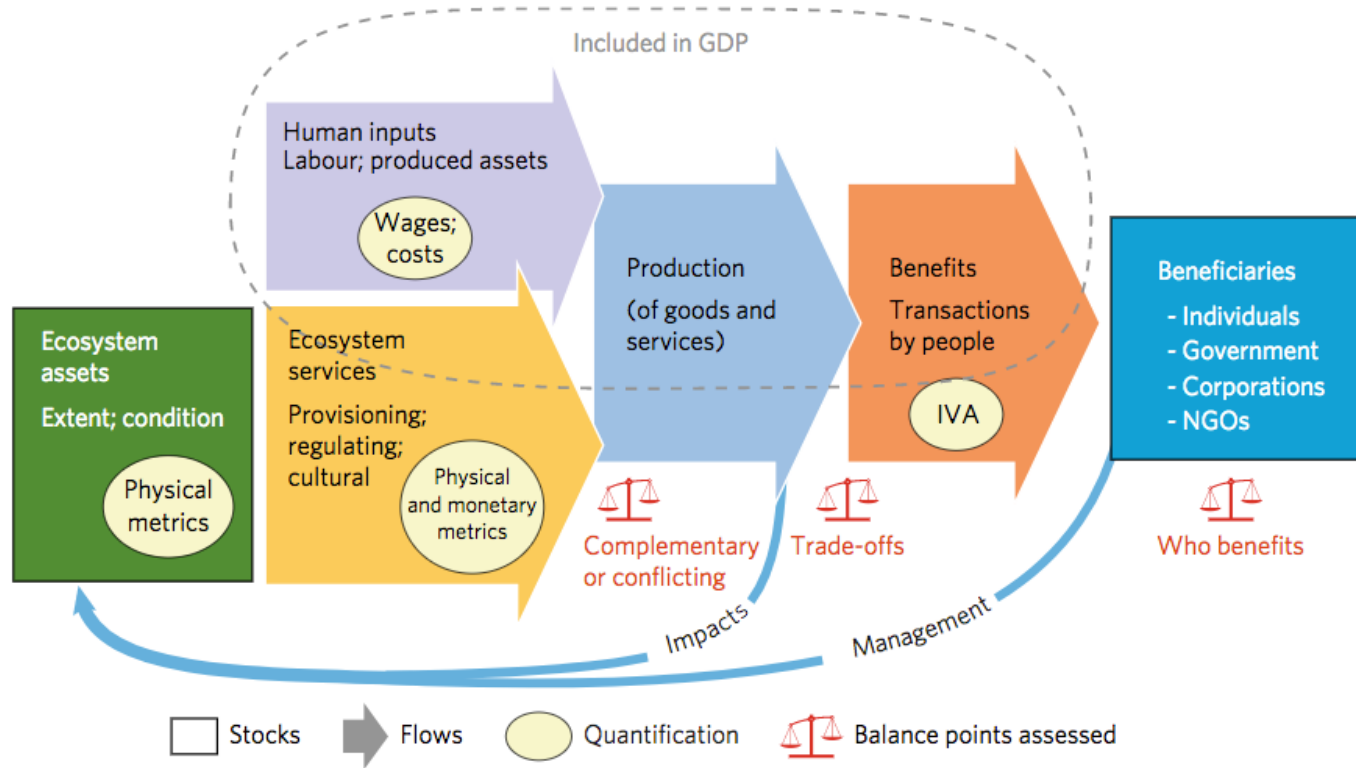
—NZ Treasury (2017). The Start of a Conversation on the Value of New Zealand's Natural Capital

Natural capital stocks and flows

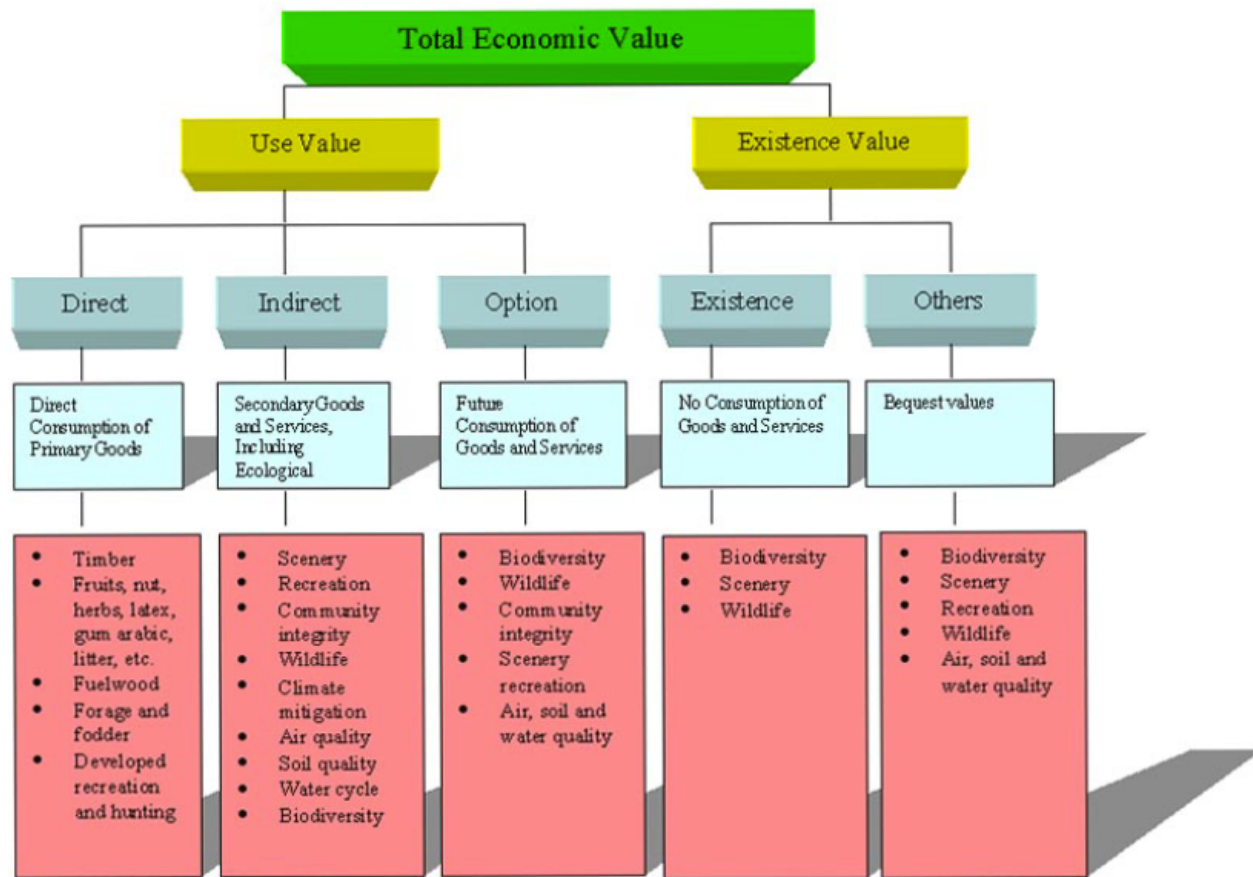


Source: Forum for the Future (2013).

Ecosystem accounting model



Source: Heather Keith et al. (2017). Ecosystem accounts define explicit and spatial trade-offs for managing natural resources. *Nature Ecology and Evolution*, 1: 1683–1693.



Source: FAO TEV of environmental resources (2002)

The Point is to Change the World

- In 2009 in Oxford, Amartya Sen was asked why he had resisted the attractions of purely theoretical philosophy...
- The 76-year-old replied with great force, thumping the lectern: “Because there are things to be done!”

Influence on policy process

- **Alignment:** of intended outcomes across government agencies (i.e. joined-up policy)
- **Analysis:** of policy options and their consequences at strategic and technical levels
- **Accountability:** for the outcomes of policy (i.e. monitoring and evaluation framework)

Native Forest Bond Scheme

A better way to finance permanent forest in Aotearoa.

MōHIO

G.I.F.T. Gulf Innovation
Fund Together > A Foundation
North initiative

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Location: East Cape



Location: East Cape



30,000 ACRES

Location: Pukatora Station, East Coast Region

The Wider Context

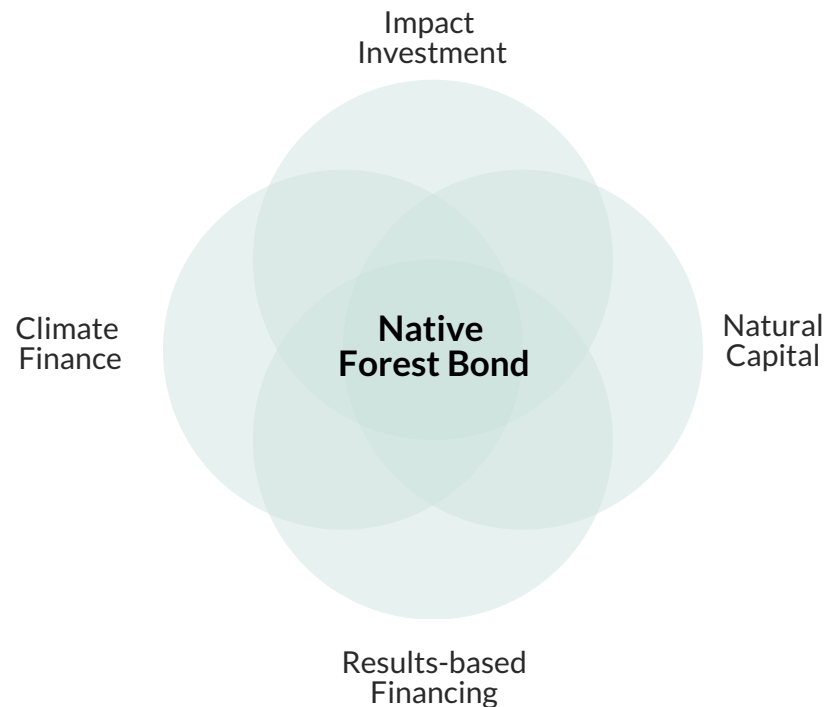
International

- Paris Agreement
- UN Sustainable Development Goals

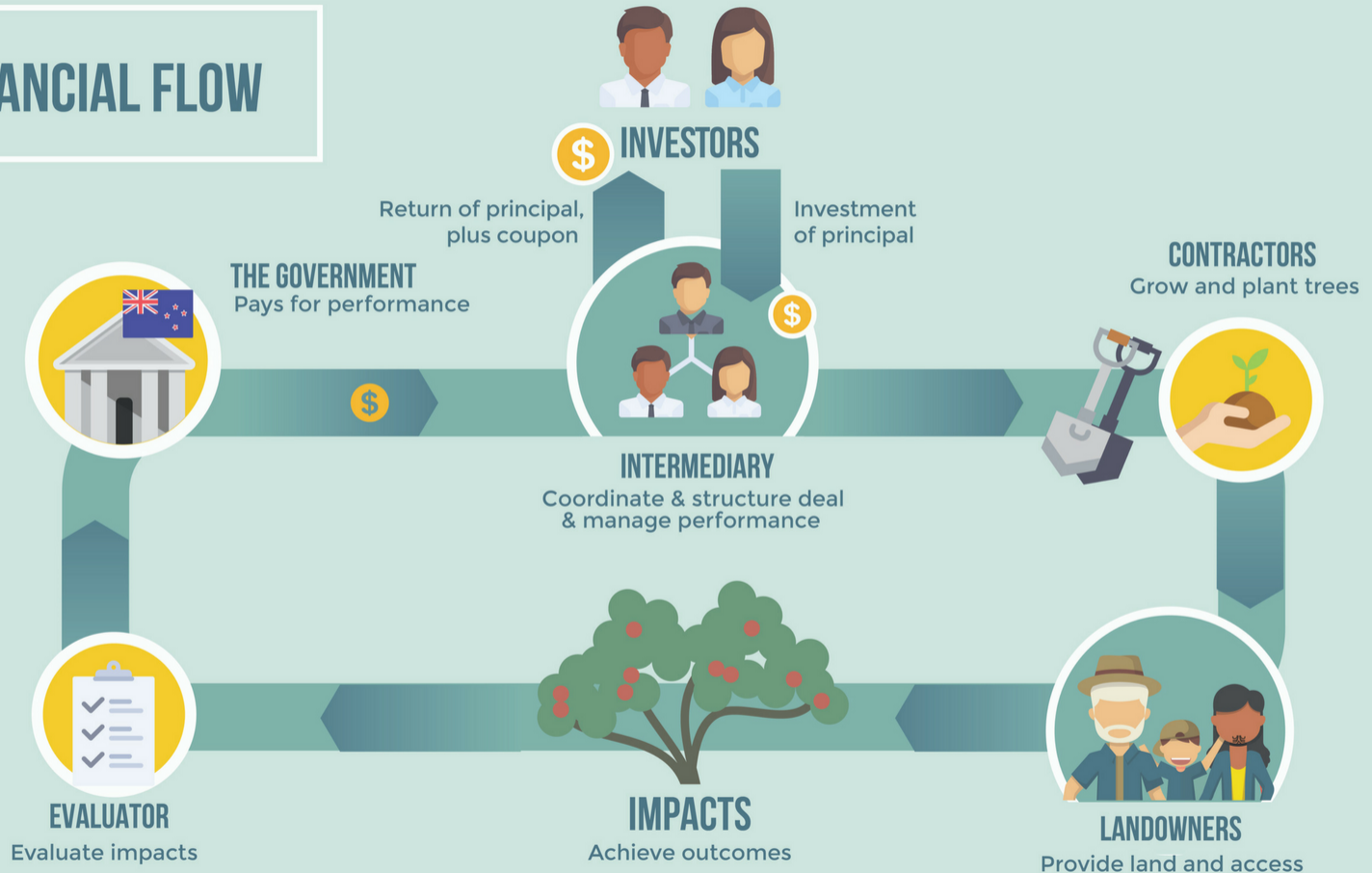
Domestic

- One Billion Trees Programme
- 1.1 Million Hectares of Erosion-Prone Land
- Provincial Growth Fund
- Green Investment Fund
- Living Standards Framework

Closing the Financing Gap



FINANCIAL FLOW



OUTCOMES STACK

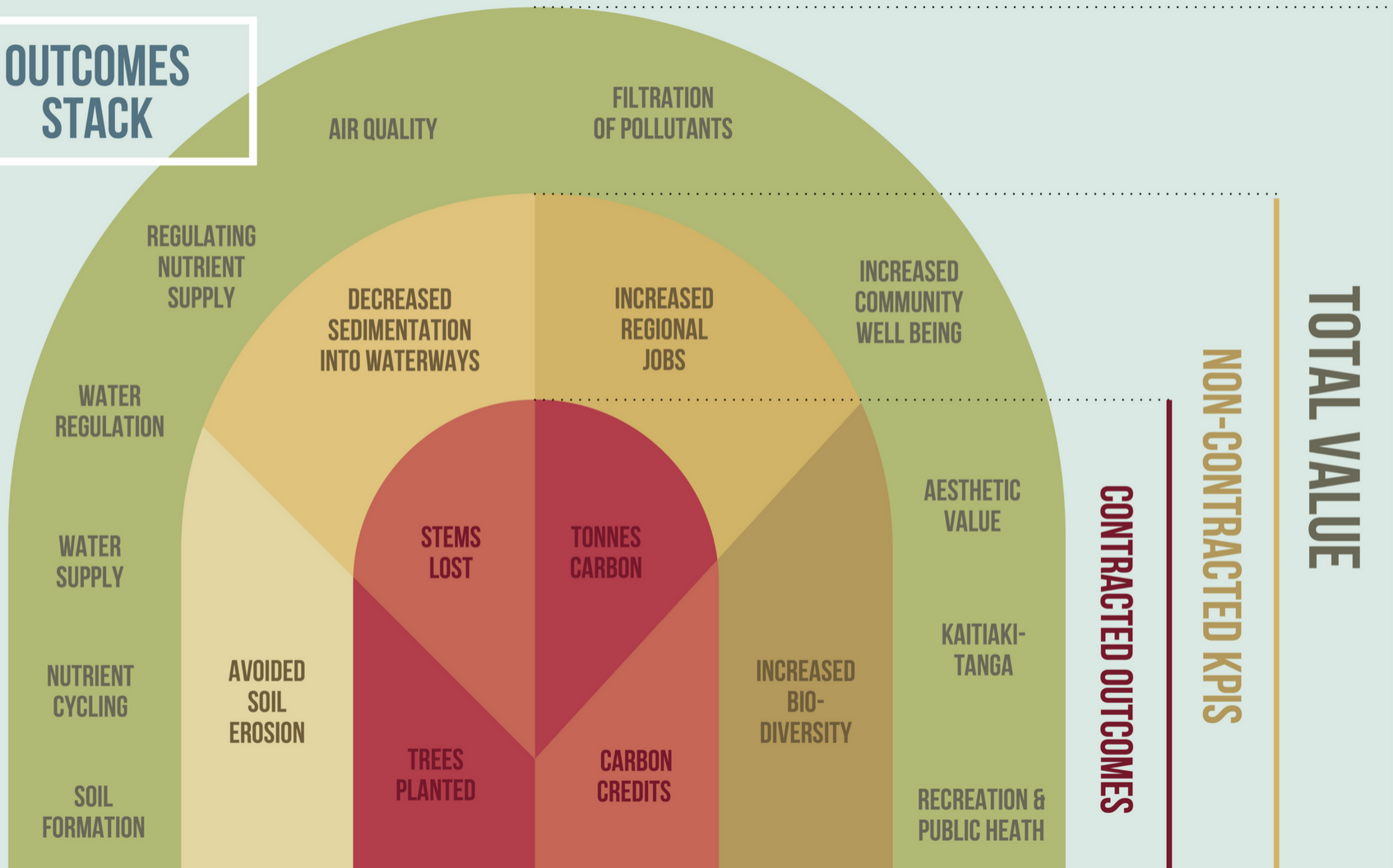


Table 3. Indicative values (in \$ per ha per year) of key ecosystem services in the Ōhiwa catchment.

Ecosystem service		Land use ¹							Total
Type	Details	Productive				Natural			
		Dry stock	Exotic forestry	Dairy	Horticulture	Indigenous forest	Scrub	Wetlands and mangroves	
Provisioning	Food, wool, wood, pulp	158	483	1,686	8,810				11,137
Regulating	Carbon sequestration/ emission and GHG regulation	-16	48	-41					-9
	Avoided erosion and flood/disturbance regulation		121			166	166	12,737	13,190
	Regulating nutrient (nitrogen) supply (e.g. avoided leaching)	-3,200	2,800	-12,000	10,000	2,800	2,800		-16,800
	Pollination	69	206	69	233	206	206		989
	Water regulation ²	8	6	8		6	6	42	76
	Waste treatment		244			244	244	11,721	12,453
	Pest and disease regulation/ Biological control	164	11	105	65	11	11		367
	Water supply		8			8	8	10,664	
	Social	Recreation		900			1,800		1,978
	Species conservation		257			414		494	1,165
Supporting	Nutrient cycling		994			994	994		2,982
	Soil formation	3	14	3	6	28	28		82
Net ES Value (\$/ha/yr)		-2,814	6,092	-10,170	-885	6,677	4,463	37,636	40,990
Area (ha)		4,914	3,201	2,854	51	3,576	2,380	316	17,292
TOTAL VALUE (\$ per land use per year)		-13,827,996	19,500,492	-29,025,180	-45,145	23,876,952	10,621,940	11,892,976	22,993,580

¹ Blank cells indicate that there were no appropriate data found to represent those values. A blank space does not necessarily mean that the ecosystem service has no value. It is very likely the non-market of that particular ecosystem service can be estimated because that value had already been estimated for other land uses.

² Water regulation is defined in the MEA (2005) as "The timing and magnitude of runoff, flooding, and aquifer recharge can be strongly influenced by changes in land cover, including, in particular, alterations that change the water storage potential of the system, such as the conversion of wetlands or the replacement of forests with croplands or croplands with urban areas."

Source: Richard Yao and Sandra Velarde (2014).

Influence of Living Standards Framework

- Alignment, analysis, accountability and...

Influence of Living Standards Framework

- Alignment, analysis, accountability and...
- **Additionality**: the property of an activity being additional (or greater, faster, wider, better) to business-as-usual as a consequence of an intervention.

Political judgment

- **Emancipation:**
- “Development consists of the removal of various types of unfreedoms that leave people with little choice and little opportunity of exercising their reasoned agency.”
 - Sen (1999). *Development as Freedom*.

Political judgment

- **Prudence:**
 - “neither the private nor the public accounting systems were able to deliver an early warning, and did not alert us that the *seemingly* bright growth performance of the world economy between 2004 and 2007 may have been achieved at the expense of future growth.”
 - Stiglitz, Sen and Fitoussi (2009). *Report by the Commission on the Measurement of Economic Performance and Social Progress*.

Political judgment

- **Opportunity cost:**
- Cumulative forward liability of erosion damage, sedimentation, purchase of international carbon credits, and so on.

Political judgment

- **Reputation:**
 - “A potent means of commitment, and sometimes the only means, is the pledge of one’s reputation.”
 - Thomas Schelling (1960). *The Strategy of Conflict*.

Political judgment

- **Shame:**
 - “Exposure is the essence of shaming... [Public shame] is possible because an audience is exposed to a transgression.”
 - “Shaming... is a form of punishment, and like all punishment, it is used to enforce norms.”
 - Jennifer Jacquet (2015). *Is Shame Necessary?*

**Ngā mihi nui.
Thank you.**

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