

Framework for the assessment of RCA project* impacts

* More manageable to start with impact assessments on per-project basis instead of for whole RCA programme

Outline

- What are 'impacts'?
 - Types of impact
 - How are impacts generated?
- Frameworks for evaluation of impacts
- Challenges
- Discussion of next steps for RCA and recommendations to the NRM

What are impacts?

Impact: Positive* and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended.

OECD 2002

(Definition now adopted across UN)

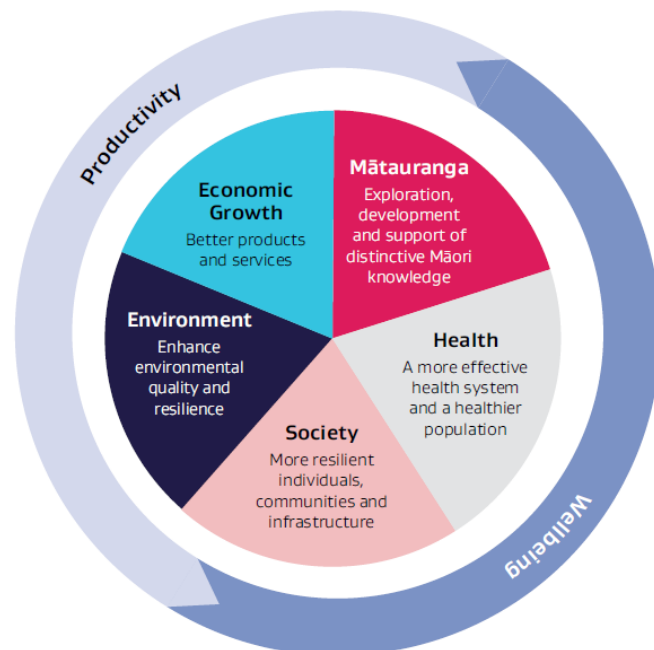
* We could use the word **Benefits** for positive impacts

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Impact: the direct and indirect 'influence' of an intervention, or its effect on an individual, a community, or society as a whole, including benefits to our economic, social, human and natural capital.

Types of impact →

NZ National Statement of Science Investment (NSSI) 2015



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Types of impact

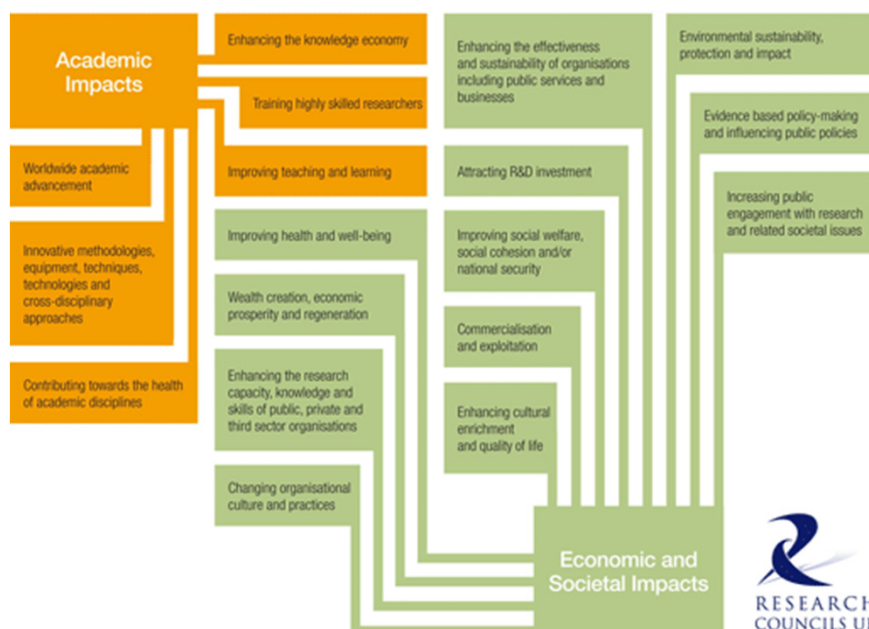
NZ NSSI 2015

ECONOMIC	ENVIRONMENTAL	HEALTH & WELLBEING	SOCIAL
New/improved products and services	Reduced or mitigated environmental impact	Improved population health and health status for disadvantaged groups	Increased knowledge of and interest in science
Reduced operating costs or commercial risk	Reduced or mitigated environmental risk	Reduction in health maintenance costs	Understanding of and resilience to real or perceived communal risk
New job opportunities	Improved condition of an environmental asset	Early detection and mitigation of health risks	Stronger social and infrastructure systems and improved techniques for delivery of public services
Improved business and industrial processes	Better understanding of the environment, and characterisation and management of natural capital	Improved wellbeing through development of human and social capital, and removal of institutional barriers	
Value extraction from existing science			
Improvements in public policy advice			
VISION MĀTAURANGA			
Indigenous innovation: economic growth through distinctive R&D	Taiao: sustainability through iwi and hapū relationships with land and sea	Hauora/Oranga: improved health and social wellbeing	
Mātauranga – explore indigenous knowledge for science and innovation			

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Types of impact

RCUK 2014



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17 Sustainable Development Goals (UN)

THE SUSTAINABLE DEVELOPMENT GOALS			
 1 NO POVERTY  7 AFFORDABLE AND CLEAN ENERGY  11 SUSTAINABLE CITIES AND COMMUNITIES	1. End poverty in all its forms everywhere	8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development
	2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture	9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
	3. Ensure healthy lives and promote well-being for all at all ages	10. Reduce inequality within and among countries	16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
	4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	11. Make cities and human settlements inclusive, safe, resilient and sustainable	17. Strengthen the means of implementation and revitalize the global partnership for sustainable development
	5. Achieve gender equality and empower all women and girls	12. Ensure sustainable consumption and production patterns	
	6. Ensure availability and sustainable management of water and sanitation for all	13. Take urgent action to combat climate change and its impacts	
	7. Ensure access to affordable, reliable, sustainable and modern energy for all		

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Recognised challenges in impact evaluation

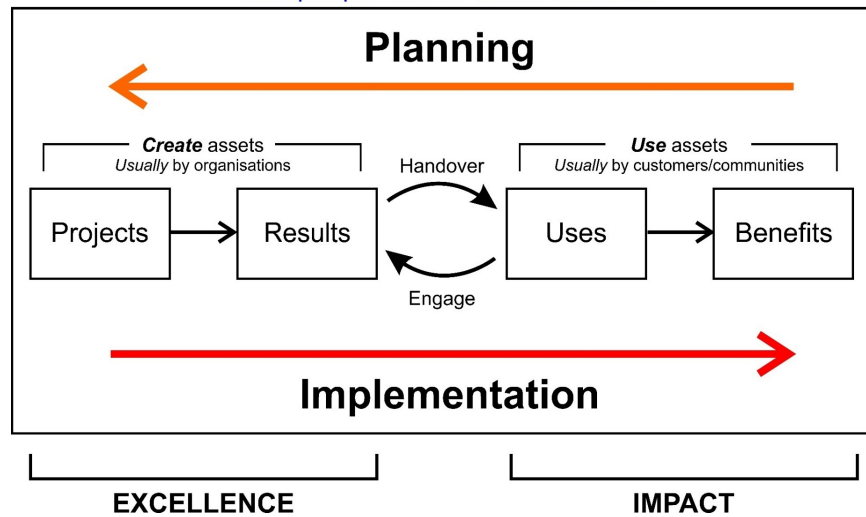
- **Project outputs need to be adopted to create impact**
 - The people that drive the intervention are not the same people who create the impact
- **Long time from intervention to impact**
- **Achievement of one impact may have required many different interventions**
- **One intervention may lead to many different impacts**

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How are impacts generated?

Benefit = Positive Impact

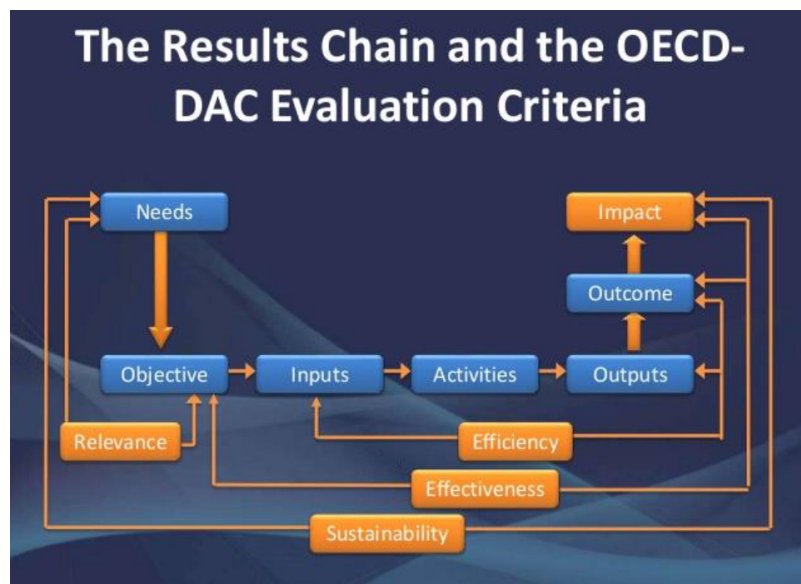
Organisations run **P**rojects to create **R**esults (assets, knowledge etc) that people **U**se to create **B**enefits



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How are impacts generated?

OECD 2002



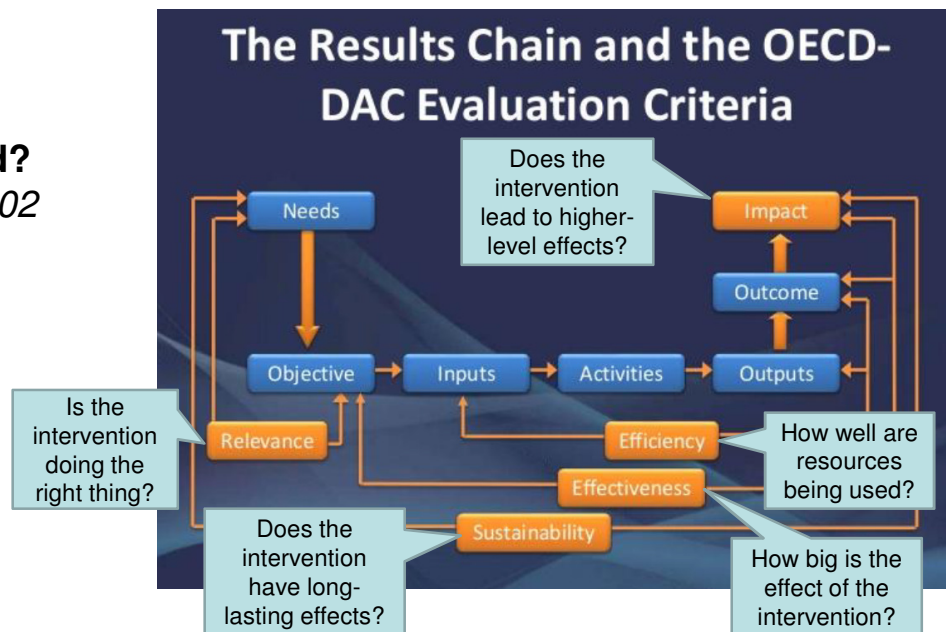
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How are impacts evaluated?

- **Two main overlapping approaches:**
 - OECD-DAC only uses the 'factual' to relate cause to effect
 - Used by UN
 - International Initiative for Impact Evaluation (3iE) also requires explicit comparison to the 'counterfactual'
- **Both require the intervention logic (also known as results chain) to be defined and then used in the impact evaluation**

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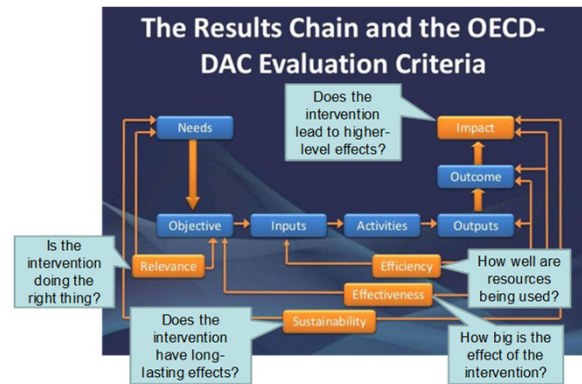
How are impacts evaluated? *OECD 2002*



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Impact Evaluation Design

1. The assumption of how cause relates to effect (also known as intervention logic or results chain)
2. The evaluation criteria and questions relating to them
3. Definition of data necessary to examine the theory
4. Framework and tools for analyzing the data to assess performance vs. theory



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Evaluation principles and standards

- Objectivity
- Independence of evaluators
- Participation of all parties concerned in entire process
- Transparency and focus
- Reliability
- Completeness and clarity of reports
- Fairness and protection of the interests of parties involved
- Utility

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Frameworks and tools for impact evaluation

1

• Quantitative methods

- Statistical difference between factual and counterfactual
- Statistical improvement relative to baseline
- Best for:
 - interventions that have 1-to-1 relationship to impacts
 - Impacts that can be readily measured (e.g. patient survival rates)
 - Interventions that affect many people (so statistical power is large)
- Probably not so useful for most RCA projects

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Frameworks and tools for impact evaluation

2

• Qualitative methods

- Realist Evaluation, General Elimination Methodology, Process Tracing, Contribution Analysis
- Best for:
 - Interventions with many-to-1 relationships to impacts
 - Interventions across complex boundaries e.g. social, geographic, sector
- Useful for RCA projects, but would require experts to perform

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Frameworks and tools for impact evaluation

3

- **Participatory methods to establish stakeholder perception**
 - Appreciative Inquiry, Beneficiary Assessment, Participatory Impact Monitoring
 - Best for:
 - Obtaining the perspectives of the stakeholders involved
 - Useful for RCA projects, but would require input from stakeholders

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Frameworks and tools for impact evaluation

- Each of the previously listed frameworks has strengths and weaknesses (e.g. biases)
- It is recommended to apply different frameworks and ‘triangulate’ the findings
- Quality controls and standards need to be applied in impact evaluation – guidelines are available

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SECURING AUSTRALIA'S WATER RESOURCES → PROTECTING ADELAIDE'S DRINKING WATER

450
kilotonnes

Amount of salt removed from the Murray River by salt interception schemes each year

200
EC

Reduction in salinity in the Murray River at Morgan, South Australia from 1988 to 2010



- 1960s–80s
Salinity in the Murray River regularly recorded above World Health Organisation guidelines
- 1988
Murray-Darling Basin Authority sets 800 EC target at Morgan, SA
- 1990s
Geoscience Australia and collaborators identify areas of salinity hazard and calculate salt load
- 1990s
Salt interception schemes built along the Murray River in South Australia
- 2010–14
Water at Morgan, SA meets salinity target

*Value to the Nation,
Geoscience Australia
(2015)*

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Timing for development of Project Designs

1 Aug 2018	NRs submit 1 st draft Project Designs for 2020/21 TC Cycle to Chair RCA PAC Members for review.
Sep 2018	GCM, where NRs evaluate PAC feedback on 1 st draft Project Designs
Nov 2018	Project Design Meeting
Mar 2019	NRM, where NRs decide which Project Designs to submit to Agency

So if we are going to provide input into Project Designs we need to get NR agreement at GCM, then allowing action to be taken at Project Design Meeting

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Suggested recommendations to NRM

- **Endorse a feasibility study on impact evaluation with results to be reported back to GCM**
 - Use OECD-DAC impact evaluation framework
 - Test application to one RCA thematic area as an example
 - Evaluate progress towards stated objectives of the project, using SDGs indicators as potential metrics
 - Report on if/how the project could have been designed differently to facilitate impact evaluation, e.g. better baseline data and impact indicators
- **Pending results of the pilot study, incorporate appropriate features into Project Designs for 2020/21 to facilitate future impact evaluation**

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Discussion: Impact Evaluation for RCA projects

- **How can we trial the different impact evaluation frameworks for the RCA projects and programme?**
- **Are any modifications require to the project design methodology to ensure the necessary data will be available for impact evaluation later?**
- **Would the RCA benefit from expert input on these topics?**

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