

Monitoring and evaluation of a just transition in Scotland – summary report on international lessons

 Anne Marte Bergseng, ClimateXChange
April/2023

1 Executive summary¹

1.1 Aims and findings

The Scottish Government has eight National Just Transition Outcomes that will guide sector Just Transition Plans and climate action across a range of policy areas to reach net zero by 2045.

A number of jurisdictions are developing just transition policy and associated monitoring and evaluation frameworks. This report considers three case study approaches from the European Union, British Columbia in Canada and Taranaki in New Zealand.

The three case studies have different approaches to their Just Transition policy, which impacts on how they develop monitoring and evaluation. However, a common theme is supplementing environmental and greenhouse gas emissions data with indicators across work force participation, income, health and wellbeing.

The approaches can be described as:

- Managing the social impacts of environmental policy and improving well-being (EU)
- Inclusive and life-enhancing economic growth (British Columbia)
- Visions for development and transition (Taranaki)

Scotland has a set of national Just Transition Outcomes with a number of relevant National Performance Framework Outcomes and underlying indicators. There is also some overlap with the Climate Change Plan and the Climate Change Adaptation Programme, see mapping in annex 1. This is a good basis for identifying a set of high-level indicators that can measure to what extent net zero policy in Scotland is socially just across the Just Transition Sector Plans, the Climate Change Plan, The Climate Change Adaptation Programme and other relevant policies.

In the short term the Scottish Government could:

¹ This report is a summary of desk research into international examples of just transition monitoring and evaluation for ClimateXChange in 2022. It is an interim output and a first step in developing a monitoring and evaluation framework as the original research aims were not met.

- 1) Link National Performance Framework Outcomes to Just Transition Outcomes as a first step to a set of success criteria for the Just Transition Outcomes.
- 2) Measure the social impact of net zero policies by adding relevant indicators from the National Performance framework to environmental and greenhouse gas reporting, particularly around fair work, inclusion, health and social inclusion.
- 3) Assess the indicators' ability to capture regional impacts
- 4) Develop process indicators to capture empowerment and participation further to the current 'social capital' indicator.

Contents

1	Executive summary.....	1
1.1	Aims and findings	1
2	Introduction	3
3	Monitoring just transition policies	3
3.1	Approaches to just transition policies.....	3
3.2	International approaches	4
4	International lessons on monitoring and evaluation.....	5
4.1	EU	5
4.1.1	Policy approach.....	5
4.1.2	Monitoring approach.....	5
4.1.3	Lessons for Scotland.....	8
4.2	British Columbia, Canada	8
4.2.1	Policy approach.....	8
4.2.2	Monitoring approach.....	9
4.2.3	Lessons for Scotland.....	10
4.3	Taranaki, New Zealand	10
4.3.1	Policy approach.....	10
4.3.2	M&E approach	10
4.3.3	Lessons for Scotland.....	11
5	Conclusions	12
6	Appendix A	13

2 Introduction

The Scottish Government’s approach to climate change is underpinned by a commitment to deliver a just transition. The Climate Change Act 2019 puts this commitment in legislation, and places a number of statutory obligations on Scottish Government when preparing Climate Change Plans, and when monitoring the progress of these plans.

How to assess the fairness of climate action is an issue in many nations and regions, not least those that have an economy heavily reliant on fossil fuel extraction and use.

The question of how to transition to a net zero economy in a fair and just way raises a number of complex moral and ethical questions. This is not least the case in relation to delivering a fair distribution of costs and benefits.

This report summarises international approaches to monitoring a Just Transition, including data gathered by RPA for a desk-based rapid evidence assessment of how other jurisdictions monitor how socially and economically just their climate action is, and to what extent other jurisdictions explicitly monitor a just transition.

Lessons are drawn for comparison to Scotland’s monitoring and evaluation approach across climate policy. This is particularly aimed at informing the draft Energy Strategy and Just Transition Plan², out for consultation as this report is collated. The report does not consider which individual indicators the Scottish Government should use to monitor the ‘fairness’ of the transition to net zero.

3 Monitoring just transition policies

3.1 Approaches to just transition policies

Climate justice is a multi-dimensional issue. How progress can and should be monitored depends on the policy focus and the policy approach³. The monitoring also needs to consider the many dimensions across justice as an aim⁴

While the term ‘Just Transition’ is mostly used in the context of fossil-fuel dependent regions and workers, it can also be understood in a much broader sense to include the issues of access to energy (“energy justice”) and other basic goods, and the socio-economic distribution of health-related environmental pollution and risks (“environmental (in-)justice”)⁵.

The Scottish Government has set out eight outcomes for a Just Transition:

1. Citizens, communities and place: support affected regions by empowering and invigorating communities and strengthening local economies;
2. Jobs, skills and education: equip people with the skills, education and retraining required to support retention and creation of access to green, fair and high-value work;

² <https://www.gov.scot/publications/draft-energy-strategy-transition-plan/>

³ Heyen et al (2020) (PDF) [Just transition in the context of EU environmental policy and the European Green Deal \(researchgate.net\)](#)

⁴ White and Leining (2021) [Developing a Policy Framework with Indicators for a ‘Just Transition’ in Aotearoa New Zealand | Policy Quarterly \(victoria.ac.nz\)](#)

⁵ (Heffron & McCauley 2018; Heyen et al. 2020; Newell & Mulvaney 2013, quoted in [JustTransition Indicator Paper final clean-2021.pdf \(europa.eu\)](#))

3. Fair distribution of costs and benefits: address existing economic and social inequality by sharing the benefits of climate action widely, while ensuring that the costs are distributed on the basis of ability to pay;
4. Business and Economy: support a strong, dynamic and productive economy which creates wealth and high-quality employment across Scotland, upholds the UN Guiding Principles on Business and Human Rights, and continues to make Scotland a great place to do business;
5. Adaptation and resilience: identify key risks from climate change and set out actions to build resilience to these risks, ensuring our economy is flexible, adaptable and responsive to the changing climate;
6. Environmental protection and restoration: commit to act within our planetary boundaries while protecting and restoring our natural environment;
7. Decarbonisation and efficiencies: contribute to resource efficient and sustainable economic approaches that actively encourage decarbonisation, support low-carbon investment and infrastructure, and avoid carbon 'lock-in';
8. Further equality and human rights implementation and preventing new inequalities from arising: address fuel poverty and child poverty in a manner consistent with Scotland's statutory targets on each, while furthering wider equality and human rights across all protected characteristics.

These outcomes will shape future Climate Change Plans and sector Just transition Plans⁶. Scotland's approach to Just Transition Monitoring and Evaluation (JT M&E) will need to consider how to measure progress against all the outcomes across the relevant policies and plans.

3.2 International approaches

An evidence review for ClimateXChange in 2022 found three well developed case study examples of JT M&E: Taranaki in New Zealand, British Columbia in Canada and the European Union. These jurisdictions have the most developed indicator frameworks across three broad policy approaches:

- Managing the social impacts of environmental policy and improving well-being (EU)
- Inclusive and life-enhancing economic growth (British Columbia)
- Visions for development and transition (Taranaki)

These policy approaches frame and define their approach to M&E as set out in section 4.

The frameworks summarised in this paper are at the over-national (EU) level and at the state/province level (Taranaki and British Columbia). However, there is no suggestion in the strategies reviewed that the monitoring and evaluation needs a different framework or building blocks at the local, regional or national level as long as the relevant data is available at the relevant level.

⁶ <https://www.gov.scot/publications/transition-fairer-greener-scotland/pages/5/>

4 International lessons on monitoring and evaluation

4.1 EU

4.1.1 Policy approach

The European Commission's 8th Environment Action Programme (EAP) aims to manage the social impacts of environmental policy and improve well-being as it sets out to:

*...accelerate the green transition, in a just and inclusive way, to a climate-neutral, sustainable, non-toxic, resource-efficient, renewable energy-based, resilient and competitive circular economy that gives back to the planet more than it takes.*⁷

Given the variety of effects, monitoring a Just Transition from an environmental-policy perspective needs a combination of indicators at the socio-environmental nexus. The issue paper Measuring a Just Transition in the EU in the context of the 8th Environment Action Programme⁸ discusses existing indicators and gaps. The paper discusses the diversity of social effects of environmental policy and identifies a broad range of existing European indicators that can be used for monitoring how socially just EU environmental policy is. This includes a combination of indicators from different issue areas.

Based on the policy approach and aim the monitoring has a focus on effective and socially acceptable transformation governance that can strengthen (and highlight) synergies between environmental and social justice objectives, and avoid conflicts, i.e. short-term economic hardships and social inequalities during and as a result of the transformation.

4.1.2 Monitoring approach

The monitoring framework agreed in July 2022 *'will inform European citizens about the impact of EU climate and environmental policy and facilitate an exchange between policy-makers on where further efforts are needed, in order to stay within the safe and just limits of our planet'*⁹.

The framework presents headline indicators as per a prioritisation of the indicators within a "pyramid structure"¹⁰:

1. Top of the pyramid contains a small number of indicators (a couple of indicators per policy area, or EAP goal) that best capture the outputs, results and possibly impacts of EU environmental policy in that area, and when combined show EU environmental policy as a whole, see table 1 below.
2. Middle of the pyramid includes indicators that are well known in each respective policy area and may well already be used in policy specific indicator sets (eg the Circular Economy Monitoring Framework) and strategies. These provide useful detail for policy makers in each area but go in to too much detail for the reporting of environmental policy as a whole.
3. Bottom of the pyramid includes all the other, most detailed, indicators that are useful for detailed analysis, but may be infrequent or even one-off analysis.

⁷ [EUR-Lex - 32022D0591 - EN - EUR-Lex \(europa.eu\)](#) entered into force on 2 May 2022

⁸ [JustTransition Indicator Paper final clean-2021.pdf \(europa.eu\)](#)

⁹ [Environment action programme to 2030 \(europa.eu\)](#)

¹⁰ [8th EAP Monitoring Oct 2020 final report-pdf.pdf \(europa.eu\)](#)

These are indicators used in detailed implementation / enforcement in each policy area by policy specialists and those engaged in scientific research.

The governance mechanism involves annual monitoring, assessment and reporting by the Commission on the progress towards the programme's six priority objectives, taking into consideration the enabling conditions and the overall goal of achieving systemic change. The reporting will cover 26 headline indicators with quantified targets:

INDICATOR	TARGET	Scottish equivalent indicator
Climate change mitigation		
1.Greenhouse gas emission (GHG, index 1990=100, tonnes of CO ₂ equivalent)	Climate neutrality: reduce net GHG emissions by at least 55% by 2030 from 1990 levels	Greenhouse gas emissions Environment statistics - gov.scot (www.gov.scot)
2.GHG emissions from land use, land use change and forestry (LULUCF, tonnes of CO ₂ equivalent)	Climate neutrality: increase net GHG removals by carbon sinks from the LULUCF sector to -310 million tonnes CO ₂ equivalent by 2030	Greenhouse gas emissions using categories presented in Scotland's climate change plan Scottish Greenhouse Gas statistics: 1990-2019 - gov.scot (www.gov.scot)
Climate change adaptation		
3.Climate-related economic losses (in EUR billion)	Economic impact of climate change: reduce overall monetary losses from weather and climate-related events	
4.Drought impact on ecosystems (area affected in km ²)	Ecosystem resilience: decrease the area impacted by drought and loss of vegetation productivity	
A regenerative circular economy		
5.Raw material consumption (tonnes per capita)	Material footprint: significantly decrease the EU's material footprint , by reducing the amount of raw material needed to produce the products consumed in the EU by reducing the amount of raw material needed to produce the products consumed in the Union	
6.Total waste generation (kg per capita)	Waste prevention: significantly reduce the total amount of waste generated by 2030	
Zero pollution and a toxic free environment		
7.Premature deaths due to exposure to fine particulate matter (PM2.5) (number of premature deaths)	Environmental impact on health: reduce premature deaths from air pollution by 55% (from 2005 levels) by 2030	
8.Nitrates in groundwater (mg of NO ₃ ⁻ /l and % monitoring stations with value above 50 mg NO ₃ ⁻ /l)	Clean water: reduce nutrient losses by at least 50% in safe groundwater resources	
Biodiversity and ecosystems		
9.Designated terrestrial and marine protected areas (% of total area)	Nature protection: legally protect at least 30% of the EU's land area and 30% of the EU's sea area by 2030	

10. Common bird index (index: 1990 = 100)	Biodiversity preservation: reverse the decline in populations of common birds	
11. Forest connectivity (0-100 %)	Healthy ecosystems: increase the degree of connectivity in forest ecosystems, with a view to creating and integrating ecological corridors and increase climate change resilience	
Environmental and climate pressures related to EU production and consumption		
12. Energy consumption (in million tonnes of oil equivalent)	Energy efficiency: reduce (primary and final) energy consumption by at least 13% by 2030 compared to 2020	
13. Share of renewable energy in gross final energy consumption (in %) <u>36</u>	Sustainable energy: at least [45%] of energy from renewable sources in gross final energy consumption by 2030	
14. Circular material use rate (in % to the overall material use)	Sustainable industry: double the ratio of circular material use by 2030 compared to 2020	
15. Share of buses and trains in inland passenger transport (% of total inland passenger transport, expressed in passenger-kilometres)	Sustainable mobility: Increase the share of collective transport modes (buses, coaches and trains)	
16. Area under organic farming (% of utilised agricultural area in km ²)	Sustainable agriculture: 25% of EU agricultural land organically farmed by 2030	
Enabling conditions		
17. Share of environmental taxes in total tax revenues (in %)	Making polluters pay: increase the share of environmental taxes in total revenues from taxes and social contributions	
18. Fossil fuel subsidies (EUR million)	Making polluters pay: reduce environmentally harmful subsidies, in particular fossil fuel subsidies, with a view to phasing them out without delay	
19. Environmental protection expenditure (EUR billion and % GDP)	Financing the transition: increase spending by households, corporations and governments on preventing, reducing and eliminating pollution and other environmental degradation	
20. Green bonds (% of total bonds issued)	Sustainable investments: increase the issuance of green bonds to boost public and private financing for green investments	
21. Eco-innovation index Member States' performance compared to EU average (EU = 100) and trend	Innovation for sustainability: increasing eco-innovation as a driver for the green transition	
Living well, within planetary boundaries		

22.Land take (km ² per year)	Planetary boundaries/sustainable use of land: no net land take by 2050	
23.Water exploitation index plus (in %)	Planetary boundaries/sustainable use of water: reduce water scarcity	
24.Consumption footprint (based on life cycle assessment)	Sustainable consumption: significantly decrease the EU's consumption footprint, i.e. the environmental impact of consumption	
25.Employment and gross added value of environmental goods and services sector (% of total economy)	Sustainable competitiveness: increase of the shares of the green economy and of green employment in the whole economy	
26.PLACEHOLDER Environmental inequalities	Environmental wellbeing: reduce environmental inequalities and ensure a fair transition	

The first annual progress report is due by the end of 2023.

4.1.3 Lessons for Scotland

The EU approach sets targets to improve environmental quality and decrease emissions while strengthening the 'green economy' and increase high quality 'green employment'. However, the headline indicators do not cover central themes in the National Just Transition Outcomes relating to empowerment, fair distribution of costs and benefits, adaptation and resilience, and future equality and human rights issues.

As an approach The Scottish Government would have a number of National Performance Framework indicators to include in assessments of how socially just net zero policy is. A challenge may be the need for local data in order to track the impacts of the net zero transition in individual communities across Scotland and not at a national level.

4.2 British Columbia, Canada

4.2.1 Policy approach

The StrongerBC Economic Plan lays out a long-term plan to grow British Columbia's economy by tackling challenges including climate change. It does not define a set plan period but outlines '*a long-term approach that looks 10 to 15 years ahead and results in a more sustainable and inclusive province for all British Columbians.*'¹¹

The Plan has two aims: *Inclusive Growth* and *Clean Growth*. It sets out missions to support these aims:

- Supporting people & families
- Building resilient communities
- Advancing true, lasting and meaningful reconciliation with Indigenous peoples
- Meeting BC's climate commitments
- Leading on environmental & social responsibility
- Fostering innovation across our economy

¹¹ [StrongerBC Economic Plan 2022.pdf \(gov.bc.ca\)](#)

To realise this inclusive and life-enhancing economic growth the ‘CleanBC: Roadmap to 2030’¹² which accompanies the plan prioritises actions that unlock co-benefits for the economy, environment and society. The Roadmap does not predefine the path but offers flexible choices and options.

4.2.2 Monitoring approach

The 2022 Climate Change Accountability Report¹³ reports on net GHG intensity of the B.C. economy and the emissions per capita. However, it also sets out a number of areas where wider planning, engagement and investment is underway, including climate preparedness and adaptation, and setting out engagement action to agree further reporting requirements.¹⁴

The indicators used to track progress in this first reporting cover:

- economic transition – net GHG across the economy, per person and for the province;
- transportation – sale and registrations of EVs, charging stations, renewable fuel content and supply, public transport trip numbers;
- buildings – residential heat pumps, ‘Better building’ fuel switching projects, clean electricity, energy intensity across different building categories;
- waste – municipal solid waste disposal, organic waste, landfill gas capture;
- industry – GHG emissions, investment to reduce emissions, methane gas from oil and gas; and
- public sector – GHG emissions, reduction in building emissions, reduction in fleet emissions.

The StrongerBC Economic Plan tracking report¹⁵ (2022) further tracks data on key indicators including

- Median after-tax income, household:
 - Gini coefficient (income distribution)
 - Core housing need
 - Poverty incidence
 - Post-secondary education
 - Community Resilience Indicator (infrastructure, connectivity)
 - New business openings
 - Regional economic diversity
- Net GHG emissions:
 - Gross GHG emissions
 - Emissions intensity (t/GDP)
 - Businesses reporting to ESG standard
 - ESG performance as it becomes available
 - Labour productivity
 - Value-added exports

¹² [cleanbc_roadmap_2030.pdf \(gov.bc.ca\)](#)

¹³ [CleanBC Climate Change Accountability Report \(gov.bc.ca\)](#)

¹⁴ [CleanBC Climate Change Accountability Report: Supporting Material \(gov.bc.ca\)](#)

¹⁵ [Economic Plan - Tracking our Progress 2022 \(gov.bc.ca\)](#)

Indicators on ‘Advancing true, lasting and meaningful reconciliation with Indigenous peoples’ will be developed collaboratively.

4.2.3 Lessons for Scotland

The idea of inclusive and clean growth resonates with the Scottish Government’s overall purpose and the Just Transition Outcomes. As for the EU approach above a number of National Performance Indicators can read across to measure to what extent the economy is growing in a way that achieves the aims in the Just Transition Outcomes.

The British Columbia framework’s emphasis on economic growth and distribution is measured at only at a whole-state level. Due to the impact of oil and gas sector in certain regions of Scotland, data may be needed at a more local level.

4.3 Taranaki, New Zealand

4.3.1 Policy approach

In August 2019, Taranaki launched a co-designed 2050 Roadmap for how the region will transition to a low-emissions economy by 2050:

The people of Taranaki have a vision for 2050 that includes:

- *A strong sustainable environment*
- *Education options that move and flex with a changing world*
- *Attractive jobs*
- *A similar lifestyle to the one we enjoy now, shared by all*
- *Leading the way in sustainable, low-emissions energy*
- *A region that looks out for and cares for itself and its people.*¹⁶

The approach is transformational with an emphasis on engagement and co-production.

The vision is translated into 12 Transition Pathway Action Plans (TPAPs), one dedicated to metrics. The TPAPs set out actions agreed during a number of stakeholder workshops for each sector. There are no further policy outcomes statement in the sector plans but eg the Energy TPAP lists a number of assessment, investigation and research tasks, including, from a long list, research into the feasibility and commercialisation of off-shore wind power, assessment of the use of bio-energy and trials to establish the most appropriate and economic use of hydrogen.

4.3.2 M&E approach

The Roadmap has a dedicated Metrics and Evaluation Transition Pathway Action Plan¹⁷ that sets out a framework including the following steps:

- a) Defining what ‘good’ looks like using outcomes statements and appropriate indicators
- b) Understanding how our actions will drive change (our theory of change/intervention logic), which we can test as part of evaluation, and
- c) Ensuring that our actions have delivered the intended outputs.

The Plan, published in August 2020, sets out a process for developing the evaluation approach and identifying indicators. Indicators will be developed through working with the pou (district) and the Taranaki community to build a set of Taranaki 2050 indicators considering local, national and bespoke sources of data. The aim is to create an indicator set for Taranaki 2050 that fully reflects the outcomes statements. To be cost-

¹⁶ [Taranaki-2050-Roadmap.pdf](#)

¹⁷ [Metrics-TPAP-FINAL.pdf \(taranaki.co.nz\)](#)

effective the plan suggests including to extend existing models, such as the regional well-being model developed by Infometrics¹⁸.

Potential indicators, in the white boxes in figure 1 below, are identified in the ‘intervention logic and theory of change’:

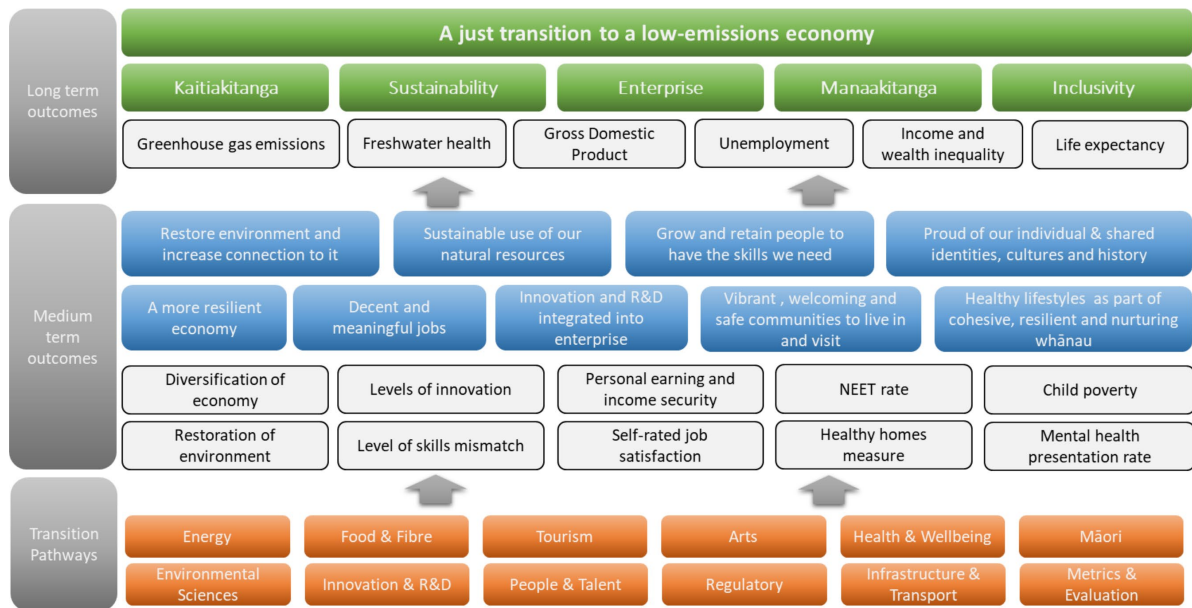


Figure 1 - How outcomes, goals and actions are linked, [Metrics-TPAP-FINAL.pdf \(taranaki.co.nz\)](#)

The Taranaki 2050 process evaluation, to be run every five years, will ask if the current process is fit for current and future purpose as defined by the Roadmap, and if effective partnership is underpinning this. The evaluation process should be undertaken independently, with the findings informing each new Taranaki 2050 five-year plan.

The progress update to date, [Tapuae-Roa-and-Taranaki-2050-Progress-Update-April-2021-Final.pdf](#), reports on the actions identified in the TPAPs, and does not include data on the indicators suggested in figure 1.

4.3.3 Lessons for Scotland

Taranaki’s approach is based around a considerable element of co-production with many of the specific outcomes still to be agreed. This is distinct from Scotland’s National Just transition Outcomes, yet has resonance with the outcome to ‘empower citizens, communities and place’.

The Taranaki approach stresses the importance of well-being and process indicators. As with the previous two approaches Scotland has a number of national level indicators in the NPF that map onto the high-level metrics in figure 1.

It is possible to identify indicators that can be used across a set of sector plans to provide a picture across Scotland’s transition to net zero, however, more detailed monitoring would be needed to address negative impact.

¹⁸ [Infometrics](#) Regional Wellbeing: A broader view of community outcomes around New Zealand, 2019

5 Conclusions

Monitoring and evaluation of a Just Transition is a new and emerging area for governments at all levels. While we have not found approaches to M&E with a track record of shaping policy and action or tracking the social and economic impact of net zero policies over time, a number of case studies point to approaches the Scottish Government can adopt. Across the case studies a common theme is tracking income, health and well-being indicators alongside environmental and greenhouse gas data.

There is no one approach to this addition of indicators but the approaches are based on reading across existing indicators and data sets. This approach is common across the three policy approaches in the case studies: managing the social impacts of environmental policy and improving well-being (EU); inclusive and life-enhancing economic growth (British Columbia) and visions for development and transition (Taranaki).

Scotland has a set of national Just Transition Outcomes with a number of relevant National Performance Framework Outcomes and underlying indicators. There is also some overlap with the Climate Change Plan and the Climate Change Adaptation Programme, see mapping in annex 1. This is a good basis for identifying a set of high level indicators that can measure to what extent net zero policy in Scotland is socially just across the Just Transition Sector Plans, the Climate Change Plan, The Climate Change Adaptation Programme and other relevant policies.

In the short term the Scottish Government could:

- 5) Link National Performance Framework Outcomes to Just Transition Outcomes as a first step to a set of success criteria for the JT Outcomes.
- 6) Measure the social impact of net zero policies by adding relevant indicators from the National Performance framework to environmental and greenhouse gas reporting, particularly around fair work, inclusion, health and social inclusion.
- 7) Assess the indicators' ability to capture regional impacts
- 8) Develop process indicators to capture empowerment and participation further to the current 'social capital' indicator.

6 Appendix A

Alignment of the eight National Just Transition Outcomes with the outcomes of existing M&E frameworks for initiatives implemented across Scotland.

National Just Transition Outcomes	SCAAP Outcomes	NPF Outcomes	CCP Outcomes	UN SDGs
Citizens, communities and place: support affected regions by empowering and invigorating communities and strengthening local economies	Outcome 1: Our communities are inclusive, empowered, resilient and safe in response to climate change	Communities: We live in communities that are inclusive, empowered, resilient and safe	<i>No direct equivalent outcome</i>	SDG 11: sustainable cities and communities
Jobs, skills and education: equip people with the skills, education and retraining required to support retention and creation of access to green, fair and high-value work	<i>No direct equivalent outcome</i>	Education: We have thriving and innovative businesses, with quality jobs and fair work for everyone Fair Work and Business: We have thriving and innovative businesses, with quality jobs and fair work for everyone	<i>No direct equivalent outcome</i>	SDG 4: quality education; SDG 8: decent work and economic growth
Fair distribution of costs and benefits: address existing economic and social inequality by sharing the benefits of climate action widely, while ensuring that the costs are distributed on the basis of ability to pay	<i>No direct equivalent outcome</i>	Poverty: We tackle poverty by sharing opportunities, wealth and power more equally	<i>No direct equivalent outcome</i>	SDG 10: reduced inequalities
Business and economy: support a strong, dynamic and productive economy which creates wealth and high quality employment across Scotland, upholds the UN Guiding Principles on Business and Human Rights, and continues to make Scotland a great place to do business	Outcome 3: Our inclusive and sustainable economy is flexible, adaptable and responsive to the changing climate	Fair work and business: We have thriving and innovative businesses, with quality jobs and fair work for everyone Economy: We have a globally competitive, entrepreneurial, inclusive and sustainable economy	<i>No direct equivalent outcome</i>	SDG 8: decent work and economic growth; SDG 9: industry, innovation and infrastructure

National Just Transition Outcomes	SCAAP Outcomes	NPF Outcomes	CCP Outcomes	UN SDGs
<p>Adaptation and resilience: identify key risks from climate change and set out actions to build resilience to these risks, ensuring our economy is flexible, adaptable and responsive to the changing climate</p>	<p>Outcome 4: Our society's supporting systems are resilient to climate change</p> <p>Outcome 5: Our natural environment is valued, enjoyed, protected and enhanced and has increased resilience to climate change</p> <p>Outcome 6: Our coastal and marine environment is valued, enjoyed, protected and enhanced and has increased resilience to climate change</p>	<p>Communities: Our communities are inclusive, empowered, resilient and safe</p> <p>Economy: We have a globally competitive, entrepreneurial, inclusive and sustainable economy</p>	<p><i>No direct equivalent outcome</i></p>	<p>SDG 1: no poverty; SDG 2: zero hunger; SDG 9: industry, innovation and infrastructure; SDG 11: sustainable cities and communities; SDG 13: climate action; SDG 14: life below water</p>
<p>Environmental protection and restoration: commit to act within our planetary boundaries while protecting and restoring our natural environment</p>	<p>Outcome 5: Our natural environment is valued, enjoyed, protected and enhanced and has increased resilience to climate change</p> <p>Outcome 6: Our coastal and marine environment is valued, enjoyed, protected and enhanced and has increased resilience to climate change</p>	<p>Environment: We value, enjoy, protect and enhance our environment</p>	<p><i>No direct equivalent outcome</i></p>	<p>SDG 13: climate action; SDG 14: life below water; SDG 15: life on land</p>
<p>Decarbonisation and efficiencies: contribute to resource efficient and sustainable economic approaches that actively encourage decarbonisation, support low-carbon investment and</p>	<p><i>No direct equivalent outcome</i></p>	<p>Economy: We have globally competitive, entrepreneurial, inclusive and sustainable economy</p>	<p>'Electricity' outcomes 1-3</p> <p>'Building' outcomes 1-4</p> <p>'Transport' outcomes 1-8</p> <p>'Industry' outcomes 1-2</p>	<p>SDG 7: affordable and clean energy; SDG 12: responsible consumption and production;</p>

National Just Transition Outcomes	SCAAP Outcomes	NPF Outcomes	CCP Outcomes	UN SDGs
infrastructure, and avoid carbon 'lock-in'			'Waste and the circular economy' outcomes 1-4 'Land use, land use change and forestry' outcomes 1-4 'Agriculture' outcomes 1-6 'Negative emissions technologies' outcomes 1-3	SDG 13: climate action
<p>Further equality and human rights implementation and preventing new inequalities from arising: address fuel poverty and child poverty in a manner consistent with Scotland's statutory targets on each, while furthering wider equality and human rights across all protected characteristics</p>	Outcome 2: The people in Scotland who are most vulnerable to climate change are able to adapt and climate justice is embedded in climate change adaptation policy	<p>Human Rights: We respect, protect and fulfil human rights and live free from discrimination</p> <p>Poverty: We tackle poverty by sharing opportunities, wealth and power more equally</p>	<i>No direct equivalent outcome</i>	SDG 1: no poverty; SDG 2: zero hunger; SDG 3: good health and well-being; SDG5 Gender Equality; SDG 6: clean water and sanitation; SDG 16: Peace, Justice and Strong Institutions
<p>Outcomes of other initiatives not covered by the National Just Transition Outcomes</p>	Outcome 7: Our international networks are adaptable to climate change	<p>Children and Young People: We grow up loved, safe and respected so that we realise our full potential</p> <p>Culture: We are creative and our vibrant and diverse cultures are expressed and enjoyed widely</p> <p>International: We are open, connected and make a positive contribution internationally</p>		SDG 17: Partnerships for the goals

Sources: Scottish Government 2019, Scottish Government 2020, Scottish Government 2022, United Nations 2022.

© Published by ClimateXChange. All rights reserved.

While every effort is made to ensure the information in this report is accurate, no legal responsibility is accepted for any errors, omissions or misleading statements. The views expressed represent those of the author(s), and do not necessarily represent those of the host institutions or funders.

climateXchange

Scotland's centre of expertise connecting
climate change research and policy

✉ info@climatexchange.org.uk
☎ +44(0)131 651 4783
🐦 @climatexchange_
📍 www.climatexchange.org.uk

ClimateXChange, Edinburgh Climate Change Institute, High School Yard, Edinburgh EH1 1LZ