

## Scoping Agreement:

# Circular Economy

## Project Title: Scotland's Materials and Resource Flows towards a Circular Economy

**Baseline:** SSAC has previously completed a study on the Environmental Impacts of Scotland's Manufacturing Industries and a Briefing Note on the Opportunities for Sustainable Chemicals <https://www.scottishscience.org.uk/Publications>. These both highlighted potential opportunities and interactions competition between sectors with respect to delivery of "net zero".

**Project overview:** A Circular Economy Bill is in development, with a consultation process due to start in 2022, with the SG Climate Change Action Plan due to be refreshed during 2024. There are only 6 years remaining after that for delivery of the 75% carbon reduction target. It is generally accepted that the target is challenging and progress is not currently on target.

The setting of targets draws on outputs from the Scottish TIMES model, which contains many thousands of variables. ClimateXChange recently commissioned a technical review of the Times Model ( DOI: <http://dx.doi.org/10.7488/era/793>) which included compliments on good practice in some areas and recommendations for improvement in other specific areas.

The model represents biomass in energy terms, including both domestic and imported sources but does not consider uses of biomass from outside the energy sector. Our earlier studies have identified significant opportunities (for the transition to net zero) associated with Scotland's natural resources, but with potential competition between sectors so this looks like an area which might be worthy of a quantitative study.

Presentations to the SSAC (Chris Stark and Melanie Welham) have highlighted Scottish strengths in the use of Scotland's natural resources to replace some of the current economic sectors supported by the fossil fuel industry (land resources by Chris and academic skills by Melanie) and sub-group discussions with Net Zero (Iain Gulland) have highlighted the need to raise the profile of the cross-sectoral opportunities presented by considering "waste" as a resource which is integral to the Circular Economy. The appointment of a new Minister with responsibility for the Circular Economy alongside Biodiversity suggests growing SG interest in this opportunity.

Research online has identified the following policy statements/documents as being relevant to the discussion:

2016: <https://www.gov.scot/publications/making-things-last-circular-economy-strategy-scotland/>

March 2020: [https://ec.europa.eu/environment/green-growth/index\\_en.htm](https://ec.europa.eu/environment/green-growth/index_en.htm)

July 2020: <https://www.gov.uk/government/publications/circular-economy-package-policy-statement/circular-economy-package-policy-statement>

Scottish highlights:

- [improving resource efficiency](#) through actions such as discouraging use of single-use materials
- introducing a [Deposit Return Scheme](#) for drinks containers
- supporting delivery partners to tackle [litter and fly-tipping](#)
- taking advice from the [Expert Panel on Environmental Charging and other measures](#)
- funding [Zero Waste Scotland](#) to deliver waste-reducing initiatives
- funding the [Scottish Environment Protection Agency \(SEPA\)](#) to regulate on the treatment and disposal of waste

June 2021: <https://www.zerowastescotland.org.uk/press-release/true-size-scotlands-raw-material-consumption-footprint>

## Scope

We have had discussions with a variety of colleagues across the SG. Catriona Graham (Circular Economy team) has a potential interest in the project and its outcomes and is happy to engage as it develops

David Mallon (Head of Climate Change Policy and Implementation Unit) is keen to get SSAC input into development of the 2024 Climate Change Plan and has signalled his interest in a cross-sectoral study.

## Aims and objectives:

The aim of the report is to work with Zero Waste Scotland, to build on their Materials Flow Account to identify which supply flows could be substituted with local resources (including the 25M tonnes per year of bio-waste) for both environmental and economic gain.

Additional sub-objectives required to deliver a useful input to the 2024 Climate Change Action plan would be:

- liaise with UKCCC on any work they are doing in this area;
- work with IBioIC to understand Scotland's skill base in industrial biotechnology with respect to the range of opportunities being identified;
- liaise with the Times modellers to assess whether/how the numbers generated could be incorporated into the TIMES model.

**Methodology:** SSAC member Mark Inall will lead the project with input from other SSAC members, industry representatives, stakeholders and other contacts.

An intern will be hired to work with the SSAC lead and Zero Waste Scotland to build on the numbers in their Materials Flow Account with respect to opportunities from alternative sources of materials.