

# Nature based jobs and skills for net zero – an initial assessment

## Introduction

This note summarises research to assess the trends in employment and skills in the nature sector. It shows that the nature-based sector can stimulate employment and skills development, and help contribute to Scotland's transition to a net zero and wellbeing economy.

The increase in skilled jobs needed to meet long term Scottish climate and biodiversity targets is a big opportunity for the Scottish wellbeing economy. This initial assessment suggests that strategic action by a broad alliance of partners, within and across nature-based sectors, is needed to support the growth of a diverse, gender balanced, highly skilled workforce.

## Key messages

1. Jobs in the nature-based sector make a significant contribution to the Scottish economy amounting to **195,000 jobs or 7.5% of Scotland's workforce** in 2019. (This is likely to be an underestimate, given the difficulty in separately identifying a number of key nature-based sectors).
2. **Nature-based jobs grew at more than five times the rate** of all jobs in Scotland in the period 2015-19 and accounted for one third of all job growth in Scotland in this period.
3. **Significant further growth in nature-based jobs is anticipated** on the back of expansion in activities required to meet our net zero targets. Growth in jobs in nature-based sectors such as blue carbon, woodland planting and restoration and peatland restoration between now and 2030 is expected to be significant.

## Additional findings

- Nature based jobs are of particular importance to the rural economy, however over 20% of nature based jobs are based in cities showing that their contribution to the urban economy is not insignificant.
- Nature-based jobs are just emerging in some activities such as urban green infrastructure and green finance but these are expected to develop quickly as demand for these roles grow.
- Further work is required to gain a better understanding of skills pathways for individual nature-based sectors.



### Context

The world faces an unprecedented challenge to address **climate change** and avoid potentially catastrophic environmental, social and economic consequences from a warming climate.

**Nature-based solutions** are an essential part of the solution to climate change, and can benefit both people and the natural environment. Nature-based solutions involve protecting, sustainably managing, and restoring the natural environment.

**Natural capital** has been identified as one of the four wealth generators in Scotland's green recovery, with research showing that investments in natural capital are one of the most effective ways to generate economic multipliers, create jobs and address climate change.

The Scottish Government is committed to creating **new, quality green employment** by investing in Green Jobs and Natural capital activities such as peatland restoration and forestry.

This work will complement the **Climate Emergency Skills Action Plan** to ensure that Scotland's workforce has the rights skills to reap the benefits of a transition to a net zero economy.

In line with **Just Transition** principles, this assessment identifies equalities issues to be addressed in supporting a more inclusive and diverse workforce across Scotland.

## Opportunities for nature-based skills development

1. **Operational jobs** - Employers reported that graduate and post-graduate jobs were relatively easy to fill but there are challenges in filling operational posts. A lack of applicants or a lack of experienced candidates for operational posts was reported, as well as stiff competition for the same skills from other sectors. Operational skills are often recruited locally or engaged through sub-contracting arrangements.

2. **Providing training and upskilling within small and micro businesses** - Many businesses in nature-based sectors are small and micro enterprises with seasonal labour demands where costs and availability of training can be challenging. Consideration should be given to workforce-sharing initiatives which allow smaller employers to share the costs of training and upskilling and help to create viable, year-round jobs, making the potential of losing skilled workers to other sectors less likely.

3. **Volunteering as route into employment** - Accrediting skills gained through volunteering would benefit both individuals and businesses seeking qualified staff with practical experience.

4. **Increasing the uptake of Modern Apprenticeships** – many nature-based jobs are well-suited to modern apprenticeships, but will require some innovation around supervisory support and administration to remove time, cost and capacity barriers for small businesses.

5. **Attracting young people** - The range of jobs available in nature-based sectors should be highlighted in order to attract young people. Some nature-based jobs are based in sparsely populated areas where there is a shrinking working age population. Aligning with wider efforts on talent attraction, improving the profile of nature-based sectors and making clearer the career progression routes within them will help attract and retain a more diverse workforce.

6. **Engaging Higher Education Institutes on digital and technology skills** will help ensure practical and effective tools are available for nature-based sectors. Current and future development of nature-based activities will require a blend of technology and multi-disciplinary skills, some of which are not typically associated with the nature sector. Climate literacy and an understanding of natural capital must become core skills across all disciplines.

### Defining the Nature Sector

For the purposes of this analysis, we defined the nature sector as:

- Nature-based solutions, including peatland restoration, flood risk management, blue carbon, coastal ecosystems, woodland restoration
- Low carbon and regenerative land use including agriculture, forestry and wildlife management
- Sustainable marine management and fisheries
- Green finance
- Urban green infrastructure, including planning, ecological engineering, active travel networks
- Sectors highly dependent on natural capital (especially tourism and food & drink)

### Methodology

Analysis of official data sources was combined with a series of stakeholder interviews to establish a baseline and estimate future demand. As there is no formal definition of the nature based sector, a best-fit analysis of the Standard Industrial Classification Codes was used to define the sector. The main data source was the Business Register and Employment Survey (BRES) regarded as the definitive source of official Government employee and employment statistics by industry.

Energy generation from renewable sources was excluded from this analysis.

### Contacts:

Claudia Rowse, Acting Deputy Director of Sustainable Growth, NatureScot  
[Claudia.Rowse@nature.scot](mailto:Claudia.Rowse@nature.scot)

Becky Shaw, Rural Development Adviser, NatureScot  
[Becky.Shaw@nature.scot](mailto:Becky.Shaw@nature.scot)

November 2020