

Lego Land Use at the ClimateXChange Climate Horizon 2040 Conference

Anna Sellars and Lee-Ann Sutherland from the LUNZ Hub Scotland team took the Lego land use game to ClimateXChange's Climate Horizon 2040 conference in Edinburgh on the 4th Feb, running an interactive workshop to discuss net zero land use scenarios. [The LUNZ \(Land Use for Net Zero, Nature and People\) Hub](#) is a UK-wide innovative research consortium aiming to drive the transformation of land use needed to achieve net zero by 2050.

The game was designed by Star Molteno and Helena Connors at Eonomia Consulting, to provide a structured but creative means of facilitating discussions to explore options for land use scenarios at a national scale, and has previously been used at workshops in England and Northern Ireland.

The session provoked discussions of trade-offs, limitations and priorities in developing land use scenarios to net zero targets in the 2030s and 40s, considering levels of certainty and evidence in economic, technical and social innovation, and where these could be furthered via research to accelerate decision making. Delving into what might constitute sustainable land uses spoke to broader conversations at the event, about how to design and implement effective policies which meet the needs of the many sectors that are implicated in how land is utilised within Scotland.



The workshop involved around 80 people spanning research, policy and public sectors, and with a wide range of technical backgrounds; teams were encouraged to form groups with people they didn't know, with the aim of mixing levels of knowledge and backgrounds within groups and encouraging a diverse, accessible discussion and co-learning. Teams were asked to build a tower from a maximum of 16 lego bricks, with each colour of brick representing a different land use action, coming to a mutually agreed decision as a group on the number of each brick within that scenario. The number of blocks were also noted down, as well as the rationale for choices.

The following table summarises scoring across actions, and variability across the groups:

Action	Group								Total
	1	2	3	4	5	6	7	8	
Peatland restoration	3	5	3	2	3	2	3	2	23
Tree planting, agroforestry and hedgerow expansion	2	3	2	3	2	3	3	3	21
Food waste reduction	3	1	2	2	3	3	2	3	19
Reduction in ruminant livestock herd	1	2	2	2	2	2	1	1	13
Low-carbon technology on-farm	2	1	2	2	2	2	2	2	15
Habitat protection, restoration & creation	3	2	3	3	3	3	3	3	23
Innovative actions to increase soil carbon	2	1	1	2	1	1	2	2	12
Planting of biomass energy crops	0	1	0	0	1	0	0	0	2

Key themes which emerged from the discussions were:

- A strong focus on nature-oriented options, and where there can be multiple synergies and system resilience built in, namely; peatland, habitat protection, peatlands and woodland creation;

- Peatland was acknowledged as having significant potential, and that net zero in Scotland would be impossible without their restoration;
 - Many tables emphasised the nuances within the topic of tree planting, with a focus on 'right tree in the right place', with native and biodiverse planting;
 - Though reducing food waste was represented less significantly across many (but not all) groups, it was described as a 'win-win' for societal benefits, as well as climate and to be maximised as much as possible;
 - Technical solutions were generally secondary to nature-based solutions, though still considered a sensible component to the mix across many scenarios. On-farm low-carbon tech was supported, providing there was no impact on productive efficiency of farm output, and that these continue to provide sustainable income for farmers;
 - Many tables had long discussions about what entailed innovative actions to increase soil carbon, both in the scope for emissions reduction and wider benefits; these weren't doubted, but it was a common area highlighted as lower evidence/knowledge. However, it was also highlighted that there could be many synergies with other options on the list and increasing soil carbon;
 - Reducing livestock numbers had mixed support, with some feeling that it was a quick win and represented a necessary change in diets, and others feeling that it would be better to focus on wider systemic change for longer-term reductions, other approaches to reducing emissions associated with livestock, and wanting to avoid 'offshoring' emissions making them less manageable;
 - Only one table was in support of biomass energy crops, with the general feeling that they are not a priority option for restricted land use and suitability in Scotland, and would detract from more beneficial use of land for other purposes.
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Across the discussions, various points were highlighted around the interaction of acceptability and uptake of options, and how these factors may accelerate climate action in Scotland;

- Understanding the importance of public support & behaviour change on land use options, particularly with regard to the interactions between dietary change, consumer behaviour and land use
- Increased evidence around specific actions, scale and scope of impacts of soil carbon within the broader land use picture
- A focus on ensuring viable business options within agriculture, and prioritising cost-effective on-farm technologies is important to ensure uptake
- Providing greater independent evidence of specific options for biomass within Scotland, their role within the wider land use system, and relative benefits versus other uses of arable land and renewable energy options

- More granular and applied understanding of trade-offs around a nature-focused approach, and how this might impact sustainability of economics of agriculture, and thereby, food production.

The session created a really lively discussion, and lots of positive feedback about how to gamify conversations about complex topics, picking up on comments from the keynote about using ‘climate imaginaries’ to think creatively about solutions for net zero. Themes from the discussion will be used to inform conversations with research and policy teams about where further evidence can be provided to support decision-making, facilitated through the LUNZ Hub’s Agile Policy Centre and Topic Advisory Groups.

The LUNZ Hub website describes more about the [ongoing workstreams within the consortium](#), [current research projects funded under the calldown](#), and [how to keep up to date with thematic areas of work within the Hub](#). Future activities planned involve representation of the Hub at various events across Scotland and the UK, to engage with land use stakeholders to better understand their priorities and needs around net zero.

If you have any thoughts, questions or would like to know more about LUNZ activities within Scotland, please get in touch with [Anna Sellars](#), the Scotland team lead within LUNZ, or visit the website at www.lunzhub.com.



