Report on the Natural Capital Accounting Expert & Stakeholder Workshop, 11th June 2025

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1. Foreword

Nature underpins everything yet it is continually being degraded and destroyed due to human actions, putting the future of our society, economy and wellbeing at risk. The **natural capital approach** aims to bring the multiple values of nature and contributions to people to a wider audience, using the language of business and economics to bring nature into everyday policy and decision-making, helping to make the case for nature protection and restoration.

The natural capital concept was relatively new to Ireland when in 2012, aware of her pioneering Natural Capital Project in the US, I invited Prof. Gretchen Daily to Ireland to discuss her work at Trinity College Dublin. Her insights encouraged myself and others to start the Irish Forum on Natural Capital, with thanks to funding from National Parks and Wildlife Services and the Environmental Protection Agency, and later the Department of Agriculture, Food and the Marine, among other sources. The forum, later rebranded as **Natural Capital Ireland** (NCI), hosted the first national conference on the topic in 2014. More sold-out and high-profile conferences followed, bringing together academics, ecologists, economists, data experts, citizen scientists, businesspeople, policymakers and environmentalists from here and abroad. NCI launched a website, social channels and newsletters. Its subscribership grew, and we attracted experts from a variety of disciplines to guide our work.

One of the key ambitions of NCI was to advance the natural capital approach and develop tools, including **Natural Capital Accounting (NCA)**. Many benefits are derived from nature, including marketable goods as measured by GDP, like food, fuel and timber. Healthy functioning ecological systems contribute to the production of those marketable goods and form the base of our bioeconomy. However, these ecosystems deliver much more, including climate regulation, soil formation and maintenance, nutrient cycling, natural pest control, pollination, habitats for wildlife, clean air and water, recreation and cultural services. The condition, or health, of our **stocks of nature** influences their ability to sustain **flows of goods and services**, and ultimately their benefits to people, into the future. Stocks and flows of non-marketable goods from nature have been largely excluded from our economic models and decision-making in the past. NCA allows these stocks and flows of nature to be quantified and tracked over time, allowing decision-making that takes into account the multiple values of nature.

While NCA is about putting nature on the balance sheet, it's not all about putting a price on nature. Natural capital accounting can be useful with or without a monetary value, but by systematising the data and with the right expertise in place, we can use this framework to make informed decisions on nature that will benefit our society, economy and wellbeing.

The System of Environmental-Economic Accounting-Ecosystem Accounting (SEEA-EA) was adopted by the UN in 2021 as a global NCA standard. As of 2024, 53 countries have started compiling accounts. The SEEA-EA is a spatial-based tool and allows the production of stock and flow accounts in both biophysical and financial formats. It aligns with the internationally agreed framework for measuring economic activity, the System of National Accounts. In 2019, a multi-disciplinary project to pilot the approach to creating biophysical accounts at the catchment level in Ireland had swung into action, the EPA Research-funded **Irish Natural Capital Accounting For Sustainable Environments** (INCASE), led by myself in Trinity College Dublin, in partnership with NCI, UCD, University of Limerick, University of Galway and IDEEA Group in Australia. The research was finalised in 2023, and a final report made recommendations for operationalising ecosystem accounting on a national scale. Whilst challenges exist in developing

accounts, particularly in the absence of a regularly updated national ecosystem map, with a lack of data to determine condition of stocks, and to quantify flows, the project and subsequent work has showed that the SEEA-EA approach is useful for identifying risks and informing decision-making at a range of scales.

While NCI brought the natural capital concept to national attention, the recommendations in this **Natural Capital Accounting Stakeholder Workshop** report will provide a further solid basis for the work of a Natural Capital Expert Group, with a firm focus on furthering the application of natural capital accounting in Ireland, already begun by the small, hardworking team at the Central Statistics Office. However, there needs to be collaboration across Departments and sectors to scale up and successfully deliver fully functional accounts.

Thanks to the Department of Climate, Energy and the Environment (DCEE) for hosting the workshop and issuing this report, to NCI for facilitating, and to all stakeholders for giving their time and energy. Thanks also to many of those in national institutions and within Government Departments who have championed the cause of nature and the natural capital approach over the years. Strong political will and adequate resourcing will be vital for the progression of our national natural capital accounting and the ongoing work needed to ensure its successful application.

Prof Jane Stout, Co-Founder of Natural Capital Ireland,
Vice President of Biodiversity & Climate Action, Trinity College Dublin

2. Introduction

Ireland is at a pivotal moment in recognising and embedding the value of nature across its economy, communities and public policy. Natural Capital Accounting (NCA) offers a framework to measure, manage and communicate the value of ecosystems and the services they provide. As global and national commitments to biodiversity restoration and sustainable development grow, integrating natural capital into decision-making has become increasingly urgent. Recent policy guidance — including a National Economic & Social Council *Guide for Action on NCA* — has called for significant progress in how Ireland accounts for nature in its planning and economic system. In response, Ireland's journey toward NCA has accelerated, with government departments and stakeholders exploring how to incorporate natural capital alongside traditional economic indicators in planning and policy.

The Department of Climate, Energy & Environment (DCEE), together with Natural Capital Ireland (NCI), convened a workshop on 11th June 2025 at Tom Johnson House, Dublin, to gather insights on advancing NCA in Ireland's policy and practice. This initial discovery workshop was in line with the action under the National Biodiversity Action Plan (NBAP) for relevant public bodies to establish a network of NCA experts. There were representatives from public agencies, private companies, farming and land management groups, business networks, NGOs, and natural capital practitioners from Ireland and abroad (Appendix 1).

The workshop aimed to build a shared understanding of where Ireland wants to go with NCA - "*Where are we trying to get to?*" - and what needs to happen – *"How do we get there?*". Through a mix of expert presentations and interactive sessions, the event sought to identify key challenges, opportunities and recommendations for embedding natural capital within decision-making. This report synthesises the workshop outcomes, the main themes that emerged and the key considerations of the participants. It reflects Ireland's ongoing journey toward a natural capital-informed future, building on recent initiatives and setting the stage for next steps in strategy, capacity building, finance, and stakeholder engagement.

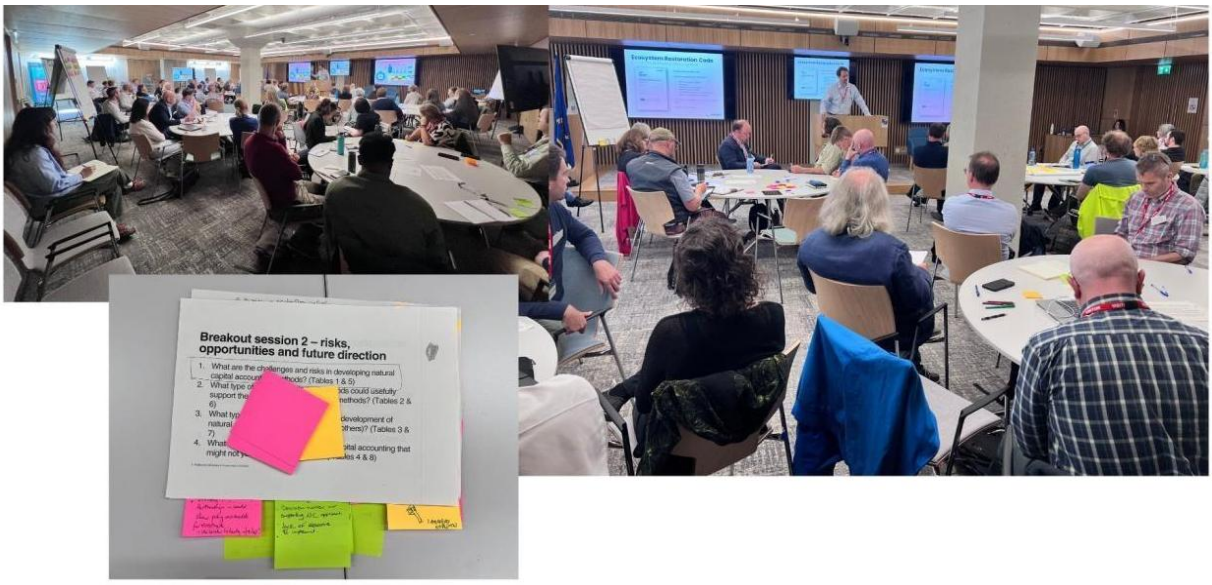

Figure 1. Photographs from the NCA workshop on 11th June 2025 in Dublin.

3. Background & Event Format

3.1. Event Goals

The Expert and Stakeholder Workshop was designed to take stock of Ireland's progress in NCA and to generate concrete ideas for next steps. We examined how NCA supports both the National Biodiversity Action Plan (NBAP), Climate Action Plan, Bioeconomy Action Plan and other national strategies by making the value of nature visible in decision-making — not through commodification, but by integrating ecological data into frameworks that inform policy, planning, and restoration efforts. This aligns with Ireland's 4th NBAP 2023–2030, which calls for NCA to make the true cost of nature degradation and the value of nature restoration visible in new policy roadmaps, and to establish long-term data collection and monitoring programmes. Indeed, the NBAP sets out clear delivery points: by 2027, the Central Statistics Office (CSO) will complete our first national ecosystem accounts; guidance on the use of NCA for key sectors will be finalised; and relevant organisations will conduct national assessments of stocks, flows and trends in ecosystem services.

3.2. Format

The event was structured into plenary and breakout sessions. It opened with a plenary introduction and a series of expert talks to set the scene on NCA concepts, ongoing projects, and international perspectives. These talks provided common grounding, highlighting current initiatives (e.g. pilot ecosystem accounts, biodiversity credit schemes) and lessons learned from within Ireland and abroad. Following the presentations, participants broke into facilitated breakout groups to discuss the guiding questions: *"Where are we trying to get to?"* (the desired end-state for NCA in Ireland) and *"How do we get there?"* (the pathways and actions needed). There were two breakout sessions corresponding to a series of open-ended questions for a wide range of feedback.

Each breakout group was composed of participants spanning government, private sector, academia, NGOs, and community representatives, to ensure cross-pollination of perspectives. Facilitators (led by NCI's team and DCEE) captured the discussions on flipcharts and worksheets. Vital topics discussed spanned climate, water, agriculture, health, economics, and more, reflecting the multifaceted impacts of NCA. After the group discussions, key points were shared back in a plenary wrap-up, and all written inputs were collected for analysis. The following questions were posed in the breakout sessions:

Breakout Session 1 Questions

The numbered 'Tables' below refer to the different physical breakout table groups.

- What are potential 'use cases' for NCA in Ireland? (Tables 1 & 5)
- What would be the most useful work for a natural capital expert network to undertake? (Tables 2 & 6)
- What capabilities are available and what is missing? (Tables 3 & 7)
- What and who will need to be part of an NCA expert network? (Tables 4 & 8)

Breakout Session 2 Questions

- What are the challenges and risks in developing NCA methods? (Tables 1 & 5)
- What type of products, tools and methods could usefully support the adoption of natural capital methods? (Tables 2 & 6)
- What type of actions would support the development of natural capital accounting (from the government or others)? (Tabl
- es 3 & 7)
- What are the opportunities for natural capital accounting that might not yet have been identified? (Tables 4 & 8)

3.3. Analysis Method

Comments and ideas from the workshop were captured in notes categorised by session number and questions. These were reviewed and used to inform a summary of the discussions on the day. These notes were then qualitatively coded under a set of cross-cutting themes that emerged repeatedly. Four main thematic areas were identified:

- Stakeholder Engagement
- Finance & Funding
- Capacity Building
- Roadmap & Strategy

These themes can underpin Ireland's approach to implementing NCA. In Section 4, we frame the key discussion points that our workshop participants put forward according to these themes. Bullet points are used to list a sample of italicised quotes coded under that theme, specifying which question they were linked to. These quotes are anonymised. Please note, these quote samples are not exhaustive and do not capture every single point made during the breakouts. The full data can be shared on request in an Excel sheet format from DCEE or NCI but are not detailed in this report.

3.4. Speaker Bios and Slide Links

The workshop featured presentations by several expert speakers who shared knowledge and real-world experience to inform the discussions. Below are the speakers, with brief biographies. Links to their presentation slides can be downloaded from the NCI site HERE.

- **Matthew Hornsby (DCEE) –** Matthew is DCEE policy lead on agri-environment, soils, carbon removals and biodiversity. He opened the event on behalf of the DCEE, welcoming attendees and setting out the national policy context for NCA. Slides

- **Prof Jane Stout (Trinity College Dublin (TCD))** - Jane Stout is Vice-President for Biodiversity & Climate Action at TCD and a co-founder of Natural Capital Ireland. A leading ecologist, her expertise includes pollinator conservation and the development of natural capital approaches in policy and business. Slides

- **Dr Catherine Farrell (Trinity College Dublin (TCD) / ReFarm Ireland)** - Catherine Farrell is an ecologist and Assistant Professor at Trinity Business School. A founding member of NCI, she led the Environmental Protection Agency-funded INCASE project piloting natural capital accounts for Ireland. She currently works on ReFarm, a project developing frameworks for private funding for farming with natural capital. Slides Catherine sits on the NCI Steering Committee.

- **Dr Deirdre Lynn (National Parks & Wildlife Service (NPWS))** - Deirdre Lynn is a Senior Scientist at the NPWS with extensive experience in biodiversity policy and data. She is primarily involved in monitoring and reporting obligations arising from the EU Habitats Directive, as well as oversight of the development and implementation of the National Biodiversity Action Plan. Deirdre sits on the NCI Steering Committee.

- **Dr Sam Belton (Central Statistics Office (CSO))** - Sam Belton is a statistician at the CSO working on environmental-economic accounts. He is involved in developing ecosystem accounts and integrating environmental data into national statistics, implementing the UN System of Environmental-Economic Accounting (SEEA). Slides

- **Dr Jimmy O'Keeffe (Dublin City University)** - Jimmy O'Keeffe is an Assistant Professor at DCU and Chair of NCI's Steering Committee. He leads the Farm-NC FARM-NC research project, which examines natural capital in agricultural systems, and has also studied urban natural capital for health (VNiC-Health project). Slides

- **Ed Pragnell (CreditNature, Scotland)** - Ed Pragnell is Nature Finance Lead at CreditNature, a UK-based initiative developing nature-based investment and credit schemes. Ed brought an international perspective by sharing how Scotland is applying the natural capital approach, for example, through biodiversity crediting and private investment in restoration and lessons which might inform Ireland's path. Slides

Figure 2. Photograph from the NCA workshop on 11th June 2025 in Dublin.

4. Key Findings & Discussion

The outputs of the stakeholder workshop are grouped here under the four main themes: Strategy & Roadmap; Stakeholder Engagement; Finance & Funding; and Capacity Building. Italicised quotes from specific questions accompany relevant points, but are not an exhaustive list of all workshop conversations.

4.1. Strategy & Roadmap

The 'Strategy & Roadmap' theme emerged from breakout group questions probing the desired end-state for NCA in Ireland. Participants stressed that government leadership is critical and there should be a long-term ambition to embed NCA into national decision-making, once the right tools and methods are available. Embedding NCA into decision-making frameworks ensures that environmental assets are treated as part of national wealth, enabling long-term planning and not just short-term projects. Participants discussed how NCA must be mainstreamed into appraisal and reporting systems, much like cost–benefit analysis or environmental impact assessment. NCA could have ongoing relevance if embedded in use cases such as budget cycles, spatial planning tools, and climate risk assessment frameworks.

When thinking about more specific sectoral use cases, suggestions included health departments using accounts to monitor the benefits of green infrastructure, or agricultural authorities integrating soil condition accounts into Common Agricultural Policy strategy reviews. Uses at the Local Authority level were highlighted too, for example, in planning and biodiversity action.

In terms of questions on existing and missing capabilities, participants called for continued investment in Ireland's environmental evidence base for reporting and filling data gaps. For example, updated land use maps, ecosystem condition maps, and national modelling platforms to track changes in natural capital over time. These were seen as foundational to account production and scenario modelling. Coordination with EU efforts (e.g. SEEA, CRCF, EU Restoration Law) was considered essential for international alignment.

Regarding actions that would support NCA development, participants strongly emphasised the need for a clear and focused national strategy for NCA to show how Ireland will move this agenda forward. While SEEA-EA provides a structured approach for valuing ecosystem services within national accounting, its valuation methods are still under development and are not considered a statistical standard. Ireland's progress on reaching the desired end-state will depend on meeting this challenge and resourcing its own methodologies alongside international best practices.

Sample Workshop Quotes on the Strategy & Roadmap Theme

Q. WHAT ARE POTENTIAL 'USE CASES' FOR NATURAL CAPITAL ACCOUNTING IN IRELAND?

- *"Delivery of Biodiversity Action Plan actions"*
- *"Ability to compare across EU member states"*
- *"Strategic infrastructure decisions"*
- *"Decision making…supporting decision makers to make better informed decision…indentify trade offs…justifying spending"*

- *"A tool to integrate decision making across sectors"*
- *"Influencing change in government policy"*
- *"Local Authority Biodiversity Programs"*
- *"Drafting of hypothetical cases for land use changes"*

Q. WHAT WOULD BE THE MOST USEFUL WORK FOR A NATURAL CAPITAL EXPERT NETWORK TO UNDERTAKE?

- *"Natural Capital Ireland brings conversation to policy, who is in the room, data, education, inform government, a single voice"*
- *"Develop a decision making process without monetary value"*
- *"Planning: Developers must incorporate biodiversity in plans"*
- *"Clear definitions for potential users. 1. EU Taxonomy. 2. If not available at all levels - develop our own"*
- *"Scoring must be comparable to international systems. Ensures capital is tradable."*

Q. WHAT CAPABILITIES ARE AVAILABLE AND WHAT IS MISSING?

- *"Government facilitation (databases, frameworks, and guidance for NCA)"*
- *"Agreed upon grant scheme"*

Q. WHAT TYPE OF PRODUCTS, TOOLS AND METHODS COULD USEFULLY SUPPORT THE ADOPTION OF NATURAL CAPITAL METHODS?

- *"Owner of natural capital accounting in government"*
- *"Cross department monitoring and assessment of natural capital"*
- *"Targets to work with the SDGs Sustainable Development Goals"*
- *"Legal Targets being chased with timeframe"*
- *"SAAP Strategic Data architecture, conservation, measurement and restoration, measurement with Eur23M with Agricultural Partners to improve"*
- *"Policy review with a natural capital lens"*

Q. WHAT ARE THE OPPORTUNITIES FOR NATURAL CAPITAL ACCOUNTING THAT MIGHT NOT YET HAVE BEEN IDENTIFIED?

- *"Linking natural capital of valuing it into a macro-modelling framework to understand the impact for example of a flooding disaster on GNI, GDP"*
- *"Disaster risk financing group. Insurance sector of placing a value on nature. Medium-term budgetary framework (Habitat map as well as land cover map)"*

4.2. Stakeholder Engagement

Another theme that emerged was stakeholder engagement. It was highlighted throughout the different breakout sessions and questions, reflecting its importance not just in the context of natural capital but also in terms of broader land use policy. The question, "*Where are we trying to get to?*", explored not only practical use cases, but also who will be informing, deciding, and operationalising them. One of the desired end-states for effective NCA highlighted by participants was greater interconnectedness between government bodies (from central departments to local authorities) and grassroots actors. Participants stressed the need to reach inclusive and integrated governance structures, avoiding siloed approaches, and instead fostering continuous collaboration between policy, science and community stakeholders. Farmers, landowners, and local communities were acknowledged as core stewards of natural capital, given that farmers manage the majority of Ireland's land. Workshop contributors highlighted that although it is a challenge, building a *"social license to grow"* is an essential

action pathway. Long-term success in restoring ecosystems and valuing nature depends on local acceptance, participation and shared benefits. Local authorities in particular were seen as pivotal “bridge” institutions for NCA, with a dual role in administering projects and engaging citizens through awareness, education and support for local environmental actions. They are likely to be among the most important end users of national ecosystem accounts. The workshop also raised the need to work on an all-island basis in collaboration with Northern Ireland bodies.

Diversifying the stakeholder base was also deemed a critical pathway to NCA development and adoption. Multi-sectoral involvement of NGOs, academia, industry and public-sector agencies would build an NCA system that is scientifically robust and socially acceptable, ensuring that ecological, economic and cultural dimensions are all represented. Participants noted that different stakeholders bring complementary strengths. For example, NGOs and community groups can mobilise public support, academics can provide the data and methods, while businesses can drive innovation and investment.

When thinking about, “*How do we get there?”*, attendees centred the importance of effective communication and a common language around natural capital. NCA is a technical concept which to gain wider traction should be communicated in ways that resonate with non-experts, including farmers, local businesses, and community leaders. The approach uses terminology and concepts which will be familiar to economists and many policymakers to demonstrate the benefits of nature and to “put it on the balance sheet”, but more work would be useful in this area to ensure that these concepts are accessible on a broader public basis.

Actions suggested by workshop participants included using clear, jargon-free messaging and shared, well-defined terminology to avoid misunderstandings that could derail collaboration. Communications specialists were identified as key allies for an NCA expert network in highlighting co-benefits or the win-wins of NCA, such as improved ecosystem services, climate resilience and local economic opportunities. This positive framing could help build public support. Participants suggested opportunities to communicate how the natural capital approach can complement, rather than replace, traditional economic metrics like GDP, reinforcing its relevance to everyday well-being.

Finally, a recurring action for NCA development and adoption was the need for visible leadership and champions for natural capital. This includes political leaders across parties who can keep NCA on the national agenda beyond election cycles, as well as institutional champions in state agencies or the private sector who standardise approaches and promote success stories.

Sample Workshop Quotes on the Stakeholder Engagement Theme

Q. WHAT ARE POTENTIAL 'USE CASES' FOR NATURAL CAPITAL ACCOUNTING IN IRELAND?

- *Connection to Europe? DG Env; DG Agri; DG Climate; meta registry at EU level”*

Q. WHAT WOULD BE THE MOST USEFUL WORK FOR A NATURAL CAPITAL EXPERT NETWORK TO UNDERTAKE?

- *“Community Development: Peer influence important for potential users”*

Q. WHAT CAPABILITIES ARE AVAILABLE AND WHAT IS MISSING?

- *"Understanding common language"*

Q. WHAT AND WHO WILL NEED TO BE PART OF A NATURAL CAPITAL ACCOUNTS EXPERT NETWORK?

- *"What will the group's role be? How often will there be meetings? Role & powers"*

Figure 3. Word cloud visualising some of the responses to the question, "Who will need to be a part of a natural capital accounts expert network?". Please note, this is not an extensive structured stakeholder mapping exercise and does not aim to compile members for an expert network.

Q. WHAT TYPE OF PRODUCTS, TOOLS AND METHODS COULD USEFULLY SUPPORT THE ADOPTION OF NATURAL CAPITAL METHODS?

- *"Public messaging is needed: what is natural capital accounting; how does it benefit the public; positive messaging"*

Q. WHAT TYPE OF ACTIONS WOULD SUPPORT THE DEVELOPMENT OF NATURAL CAPITAL ACCOUNTING (FROM GOVT OR OTHERS)?

- *"Local Authority involvement: Communications; Admin; funding; awareness; education; community groups"*
- *"Place-based level bottom up: energy communities; tidy towns; how to translate this to national level?"*
- *"Social license to grow"*

Q. WHAT ARE THE OPPORTUNITIES FOR NATURAL CAPITAL ACCOUNTING THAT MIGHT NOT YET HAVE BEEN IDENTIFIED?

- *"Sense of ownership in nature for communities - "our natural capital""*
- *"National nature communications campaign alongside natural capital accounting programmes"*

4.3. Finance & Funding

Finance and funding emerged as another key theme for reaching the desired end-state, but participants acknowledged the need to clearly distinguish funding for NCA itself from broader nature financing tools. A widely-agreed point was that developing and maintaining a robust NCA framework, particularly SEEA-EA-aligned accounts, will require dedicated, long-term funding. This includes resourcing the pathways and tools such as data infrastructure, training, and methodological refinement, necessary to produce physical and eventually monetary accounts.

Discussions also explored related but separate mechanisms - such as payments for ecosystem services (PES), biodiversity credits, or nature restoration bonds. These can complement NCA, particularly once monetary values for ecosystem services are available, but are not dependent on it. Participants were enthusiastic about these tools for incentivising positive action, but cautioned that they must be tied to credible ecological outcomes and governed by strong oversight to avoid greenwashing or speculative behaviour. Several contributors highlighted that while these market mechanisms are promising, they can exist independently of NCA. Their success will depend on reliable data, verification systems, and clear legal and policy frameworks - some of which could be informed by insights from natural capital accounts.

However, such mechanisms should not be confused with the core function of NCA: to provide a consistent, system-wide view of ecosystem assets and services through space and time, whether or not they are assigned economic values. Finally, participants emphasised the importance of really treating nature as an asset - not to commodify it, but to make its contributions to well-being and resilience visible in policy and planning. This reframing depends on clear, transparent methods, such as those under development in SEEA-EA. As Ireland moves forward, investment in the core accounting infrastructure - including training, data collection, and methodological refinement - is a necessary foundation to realise these ambitions.

Sample Workshop Quotes on the Strategy & Roadmap Theme

Q. WHAT CAPABILITIES ARE AVAILABLE AND WHAT IS MISSING?

- *"Incentives for stakeholders: farmers; landowners; community groups"*
- *"Translation of eco-system services to other public and social health costs"*

Q. WHAT TYPE OF PRODUCTS, TOOLS AND METHODS COULD USEFULLY SUPPORT THE ADOPTION OF NATURAL CAPITAL METHODS?

- *"Ensure payments for restoring nature also reward habitat maintenance/ stewardship"*

Q. WHAT TYPE OF ACTIONS WOULD SUPPORT THE DEVELOPMENT OF NATURAL CAPITAL ACCOUNTING (FROM GOVT OR OTHERS)?

- *"Costings, how much the work will cost"*

Q. WHAT ARE THE OPPORTUNITIES FOR NATURAL CAPITAL ACCOUNTING THAT MIGHT NOT YET HAVE BEEN IDENTIFIED?

- *"Opportunity to get funding for a national nature data hub (i.e., more funding for National Biodiversity Data Centre)"*
- *"Citizens green and climate nature bond: allow people to invest; green investment on projects; similar to SSIAs"*

4.4. Capacity Building

Thinking more on, "*How do we get there?*", capacity building emerged as a linchpin of the transition toward integrating natural capital into national systems. Across sectors, participants noted a serious shortage of skilled professionals required to rapidly develop, implement and maintain robust NCA. Specialist expertise is needed in the areas of ecology, environmental economics, hydrology, geology, spatial analysis and data science, among others. Participants felt that currently, the talent pool in these areas is limited in Ireland. This skills gap could become a bottleneck, potentially delaying NCA implementation or leading to flawed approaches if projects proceed without adequate expertise. For example, without enough trained ecologists, setting accurate ecological baselines and monitoring changes over time becomes difficult.

There is a risk that the lack of economists or statisticians familiar with natural capital could result in flawed valuations or misinterpretation of data. Participants worried that rushing into NCA without building capacity might result in unintended consequences or unreliable accounts that undermine confidence. However, some participants currently working in the field cautioned to not let perfection be the enemy of good or to allow it to delay progressing work in this area, as useful accounts can be created using incomplete or unaligned data as long as the human expertise is in place to provide an informed interpretation.

There was a strong call for interdisciplinary collaboration and knowledge-sharing to address these issues. NCA by its nature sits at the intersection of multiple fields and no single discipline can cover all aspects. Successful NCA requires bringing together a wide array of experts: ecologists to understand ecosystem functions, GIS analysts to map and model both ecosystem stocks – extent, condition, and integrity – and service flows, economists and statisticians to integrate accounts, policy experts to align with regulations, etc. Workshop participants suggested creating formal structures for collaboration, such as an NCA knowledge hub or an expert working group with representation from key agencies, academia, and industry (More in Section 4.2, Figure 3). Regular interdisciplinary workshops or "hackathons" could also be used to spur co-creation of tools and alignment of methods. The idea is to break down silos and ensure that Ireland's approach to NCA is co-designed by all necessary knowledge holders.

Building technical capacity also means developing the right tools and data infrastructure. The workshop highlighted the need for user-friendly models and decision-support tools that practitioners can use in the field. Examples mentioned included: scenario modelling tools to predict outcomes of land-use changes or intervention; dashboard interfaces to visualise ecosystem service flows; and sector-specific scorecards that can help, say, a local authority incorporate natural capital into spatial planning. Importantly, participants noted that data standardisation and sharing are critical.

Another concern raised was ensuring methodological consistency to avoid "reinventing the wheel" for each project. Many called for a core valuation and risk assessment model that could serve as a baseline for different contexts. This doesn't mean a one-size-fits-all approach - rather a modular toolkit that can be adapted but which provides a starting template so that, for instance, two different county councils don't develop completely incompatible accounting methods. A "base model" could include a standardised list of ecosystem services, default economic values (which can be locally adjusted), and risk factors to consider, ensuring comparability across projects. Testing this toolkit via pilot projects in various sectors (urban

development, agriculture, forestry, flood control) was suggested as a way to refine the model and build up case studies.

Participants repeatedly emphasised the importance of evidence and economic arguments to drive adoption of NCA. Often, the most persuasive case for investing in natural capital is showing the cost of not doing so - whether that cost is future flood damages, health impacts, or lost economic opportunity from ecosystem collapse. Communicating these potential costs (and comparing them to the relatively small upfront investment in nature-based solutions) can motivate action among policymakers and businesses. Additionally, highlighting potential legal or financial risks, for example, litigation over environmental damage or the risk to infrastructure if ecosystem services fail, taps into the existing risk management frameworks that organisations use. Embedding natural capital considerations into the public sector's project appraisal and "public value" accounting frameworks was noted as a way to institutionalise this thinking. In sectors like urban planning, tourism or agriculture, showing the ROI (return on investment) of nature - e.g. how green infrastructure can save costs in stormwater management - helps mainstream the approach.

Finally, capacity building also means on-the-ground experiential learning. Many advocated for state-supported pilot projects or demonstration sites as "living labs" for NCA. A hypothetical example was discussed where a government-funded wetland restoration could serve as a pilot where the full NCA process is applied: baseline natural capital is measured, an intervention is done, and changes are monitored and valued over time. This would not only restore an ecosystem but also provide a real example to train personnel, test methodologies and showcase benefits. Ensuring such projects have proper monitoring and verification (perhaps with academic partners) would help build a credible evidence base. As successes accumulate, they can be scaled up or transferred to other regions.

Sample Workshop Quotes on the Capacity Building Theme

Q. WHAT WOULD BE THE MOST USEFUL WORK FOR A NATURAL CAPITAL EXPERT NETWORK TO UNDERTAKE?

- *"National Natural Capital Registry creation"*
- *"Projects to deliver results, e.g for private finance, who has the package, costing"*
- *"Development of scoring system for each sector"*

Q. WHAT AND WHO WILL NEED TO BE PART OF NATURAL CAPITAL ACCOUNTS EXPERT NETWORK?

- *"Core group? = working groups for topics - look to land use review for structures"*
- *"Individual task groups on specific topics; focus on core areas; implementation; where are the findings?"*
- *"Interlinkages between the insurance, macro & financial system (feedback effects) Dept of Finance published a Disaster Risk Matrix"*
- *"Shared MRV (Monitoring, reporting and verification) in areas of Agriculture: Agri Environment Scheme; Bord Bia 'Origin Green/AgNav'; Carbon Farming; Water Framework Directive"*

Q. WHAT ARE THE CHALLENGES AND RISKS IN DEVELOPING NATURAL CAPITAL ACCOUNTING METHODS?

- *"Data is behind a paywall"*

- *"Complexity of data (much of which doesn't lend itself to quantify or binary status)"*
- *"Risks: verification (tool approaches); capacity (so we have the expertise); come up with solutions which lead to unintended consequences"*
- *"Lack of capacity / expertise in ecology sector to build reliable baselines"*
- *"Oversight / auditing"*
- *"AI for monitoring data"*
- *"Ecological: baseline monitoring and verification require ecologist; other technological solutions (e.g. remote monitoring, drones) suitable to provide more affordable data"*
- *"Conflicts and trade-offs in what are optimum land use/restoration scenarios"*

Q. WHAT TYPE OF PRODUCTS, TOOLS AND METHODS COULD USEFULLY SUPPORT THE ADOPTION OF NATURAL CAPITAL METHODS?

- "*Urban ecosystems, scenario models for urban development , to address urban green space loss on individual basis, Green block ratio to be integrated into developments"*
- *"Link of national carbon and carbon removal units. CRCF. DG Environment developing nature credits - harmonise with CRCF. Users could wait to see how measures are linked = want to act now"*
- *"Teagasc: About to launch data repository of what they can make publicly available"*
- *"Make data accessible to companies on issues re: ownership. Ownership: if data is used for something gaining value, how will data providers be supported?"*

Q. WHAT ARE THE OPPORTUNITIES FOR NATURAL CAPITAL ACCOUNTING THAT MIGHT NOT YET HAVE BEEN IDENTIFIED?

- *"Impacts to tourism recreation"*
- *"Economic, social, environmental risks"*
- *"Nature based solution: look for win-win scenarios; adaption piece"*
- *"Helping to mitigate against trade-offs (between infra + housing vs. nature)"*

5. Conclusion

This workshop marks an important milestone in Ireland's journey toward embracing NCA. The rich discussions and key findings captured here indicate the actions necessary to expand and deepen the use of natural capital approaches, including NCA, in Ireland.

In particular, the Expert & Stakeholder Workshop demonstrated a strong appetite and collective will to advance natural capital accounting in Ireland. Participants from all sectors rallied around the idea that valuing and investing in nature is not only an environmental imperative but also an economic and social opportunity. Overall, the discussions pointed toward a shift away from isolated, top-down policy actions to a collaborative, community-centred approach to environmental governance, built on trust, mutual understanding and co-created value. The findings in this report - spanning engagement, finance, capacity and strategy – will inform the next steps. By taking action, Ireland can build the structures, knowledge, and collaborations needed to truly make nature count.

A continued collaborative approach will ensure that the momentum from this workshop leads to tangible outcomes that will help secure Ireland's natural capital for future generations, while enhancing decision-making at every level.

Appendix 1: Workshop Participant List

Name	Affiliation
Prof Jane Stout	Trinity College Dublin (TCD) Vice President for Biodiversity & Climate Action
Dr Catherine Farrell	Trinity College Dublin (TCD), School of Natural Sciences; ReFarm Ireland, NCI Steering Committee member
Dr Deirdre Lynn	National Parks & Wildlife Service (NPWS) Scientific, Advice and Research Directorate, NCI Steering Committee member
Dr Sam Belton	Central Statistics Office (CSO), Ecosystem and Agriculture Accounts Division
Dr Jimmy O'Keeffe	Dublin City University (DCU) Assistant Professor, NCI Steering Committee Co Chair
Ed Pragnell	CreditNature (Scotland) Nature Finance Lead
Marcus Maginnis	National Parks & Wildlife Service (NPWS)
Cian McCarthy	Department of Climate, Energy and the Environment (DCEE) - Economics
Stephen Barry	Department of Climate, Energy and the Environment (DCEE) – Analysis unit
Niall Power	Department of Climate, Energy and the Environment (DCEE) – Funding
Matt Hornsby	Department of Climate, Energy and the Environment (DCEE)
Evan Carey	Department of Climate, Energy and the Environment (DCEE)
Barry Mulligan	Department of Climate, Energy and the Environment (DCEE)
Kelli Howard	Department of Climate, Energy and the Environment (DCEE)
Michelle Corrigan	Department of Agriculture, Food and the Marine (DAFM) – Land Use
John Mounsey	Department of Agriculture, Food and the Marine (DAFM) – Carbon Farming
Colin Fulcher	Department of Housing, Local Government and Heritage (DHLGH)
Jean Brennan	Department of Finance
Stuart Nolan	Oireachtas Researcher
Robert Keenan	Department of the Taoiseach
Alan Cahill	Central Statistics Office (CSO)
Paulina Pawlukojc	Coillte

Clare Glanville	Geological Survey Ireland (GSI)
Jeanne Moore	NESC National Economic and Social Council (NESC)
Niamh Garvey	National Economic and Social Council (NESC)
Dr John Gallagher	Trinity College Dublin (TCD) – Lecturer
Aravindhan Kumaran	Trinity College Dublin (TCD) – Student
Dr Catherine Dalton	University of Limerick
Dr Noreen Brennan	University of Galway, NCI Steering Committee Member
Dr Noeleen Smyth	University College Dublin, NCI Steering Committee Member
Dr Maria Fitzpatrick	Business for Biodiversity Ireland, NCI Steering Committee Member
Deirdre Lane	Natural Capital Ireland – NCI Coordinator /Secretariat
Shane Mc Guinness	Peatland Finance Ireland
Anita Vollmer	Economic and Social Research Institute (ESRI)
Thomas Ball	KPMG, NCI Steering Committee Member
Ally Couchman	EFTEC, NCI Steering Committee Member
Cormac McCarthy	Waterways Ireland
Joe Ryan	National Treasury Management Agency (NTMA)
JP Corkery	National Treasury Management Agency (NTMA)
Thomas Emmet	Historic Houses of Ireland
Colin O'Hehir	Department of Health
David Hughes	Irish Rail
Geoff Hamilton	ESB
Vito Romito	ESB
Joe O'Carroll	Gresham House
Micheal Officer	Cuan Beo
Jonathan Cooper	NCI Board
Felix Sinnott	NCI Facilitator
Maya Clinton	NCI Facilitator
Sinead Wisely	NCI Facilitator
Karl Byrne	NCI Facilitator
Geraldine O'Sullivan	Irish Farmers Association (IFA)
Vincent Roddy	Irish Natural & Hill Farmers Association (INHFA)

Marion Jammet	Irish Green Building Council (IGBC)
Sean Carolan	Mayo Biosphere
Eoin Cullinane	Irish Lights
Maria Hallinan	Solar Ireland
Kate van der Merwe	Hometree
Robert Fennelly	Eirgrid
Debbie Gillies	True Harvest Seeds
Brian Murphy	
Owen Small	TCD/ForES
Dr Emer Ni Dhuill	Business for Biodiversity
Sarah Zimmerman	Rediscovery Centre

Appendix 2: Ongoing Natural Capital Projects

Project	Description
Nature+Energy	Nature+Energy has developed both capacity and expertise within the Irish context through new practical accounting methods for valuing nature on onshore wind farms. Utilising state-of-the-art environmental monitoring systems to measure and monitor biodiversity on wind farms. Nature+Energy represents one of Ireland's initial sectoral test cases for natural capital implementation. A core aim being to develop sector-specific Natural Capital Accounts, Decision Support Tools and Biodiversity Action Plans to facilitate the enhancement of biodiversity and to mitigate the effects of wind farms on key species. Nature+Energy highlights the ability of a natural capital approach in Ireland to practically inform sectoral decision making.
For-ES	The For-ES project used a Natural Capital Accounting (NCA) approach to assess the condition and value of ecosystem services provided by Irish forests. Focusing on specific sites, the project quantified key services such as timber production, carbon sequestration, water retention, biodiversity, and recreation. By modelling different land management scenarios, For-ES provided forest managers with the evidence needed to balance multiple objectives — from commercial outputs to climate and biodiversity goals — at both the site and estate level. For-ES is the first initiative in Ireland to combine NCA with Bayesian Belief Network modelling, enabling a structured, scenario-based approach to decision-making under uncertainty. A major output was the creation of a "capacity index," linking ecosystem condition directly to the ability of forests to supply services. This work offers a practical model for integrating natural capital into forest planning and policy, supporting more sustainable and transparent land-use decisions.
VNiC-Health	VNiC-Health (Valuing Natural Capital in the Community for Health) was funded by Research Ireland and completed in March of 2025. This project centred around the role of urban blue and green spaces' role in our cities and quantifying their impacts on residents and tackling the climate crisis. An interdisciplinary team from DCU and RCSI applied a natural capital approach, integrating novel biosensor data, to advance our understanding of how urban blue and green spaces influence health and well-being. The project developed a user friendly decision support tool that visualises local environmental datasets alongside a unique, quantifiable well-being metric. This tool supports more informed management of Dublin's public blue and green spaces. VNiC-Health marked a significant step forward in deepening the interdisciplinary integration within natural capital accounting, offering a more holistic perspective on nature's role in urban environments.

FARM- NC	FARM-NC (Farm-level Natural Capital) is a research project working to create a transferable and adaptable framework for Whole-Farm Natural Capital Accounting in Ireland. FARM-NC aims to support sustainable land use, improve biodiversity, reduce flood risk, and enhance climate resilience — while recognising and supporting farmers' right to farm. By building farm-scale natural capital accounts, FARM-NC helps farmers integrate ecosystem services and naturebased solutions (NbS) into everyday decision-making. These accounts are to inform policy, enabling new economic and sustainability incentives for Irish farms. An ongoing project from DCU, the goal of the project is to give key stakeholders access to the data needed for creating long-term strategic plans and incentive schemes.
ReFarm	ReFarm is an on-going project which is aiming to drive the delivery of Nature-Positive actions on farms, building off the success of the Burren Programme utilising the Burrenbeo Trust's Farming for Nature network. ReFarm is engaging with the private sector to develop investment pathways for businesses to actively benefit from nature restoration through nature related reporting frameworks. This project is developing effective and robust governance and reporting mechanisms so that private sector stakeholders can feel confidence in nature restoration projects going forward.