

# Valuing ~~Natural Capital~~ for the Future Farmland



Jane Stout

[stoutj@tcd.ie](mailto:stoutj@tcd.ie)



Coláiste na Tríonóide, Baile Átha Cliath  
Trinity College Dublin

Ollscoil Átha Cliath | The University of Dublin



NATURAL  
CAPITAL  
IRELAND

# What is currently valued on farms?



## Getting the farm valued – what's involved

Most farmers will at some point contact an auctioneer or other professional to have a valuation of the farm carried out. Here's what happens.



**Paul Mooney**

PROPERTY > PROPERTY

5 January 2022



The land type will influence the value of the land. This land is from a 51ac parcel Quinn Property offered in September 2021 near Tinahely.

## Trees and shelter

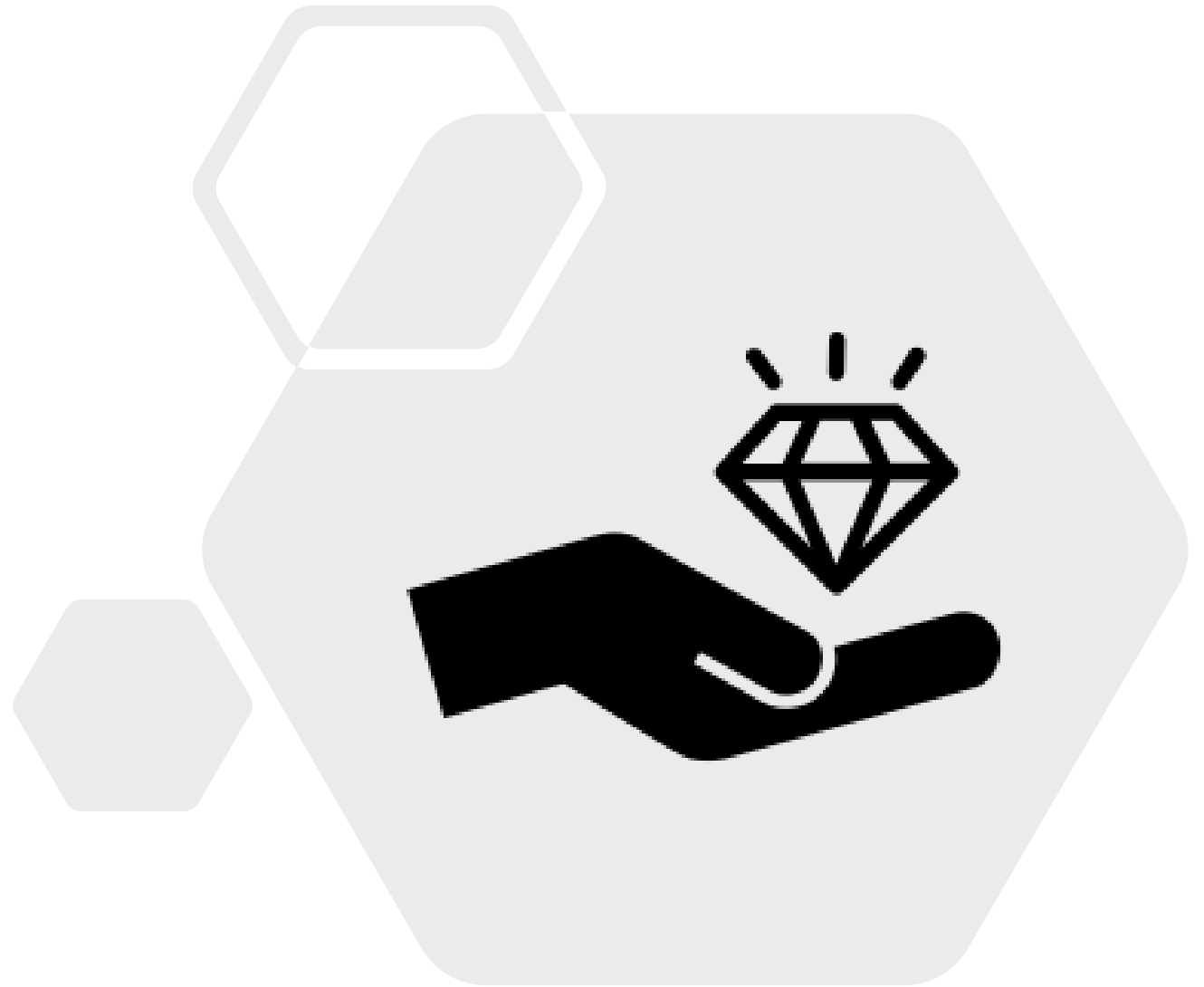
Having plenty of mature trees and large hedging on a farm **may or may not add to value.** They are not suited to tillage farming or intensive dairy farming. But they can suit cattle and sheep farming.

## Designation

Designations such as SAC and Hen Harrier tend to have a negative effect on land value. But such land is often of **marginal quality anyway.** Designation brings rules and restrictions on what farming activities can be carried out. In many areas, the value of designated land is in the region of €2,000/ac to €4,000/ac.

# What is value?

1. “the regard that something is held to deserve; the importance, worth, or usefulness of something.”
2. “principles or standards of behaviour; one's judgement of what is important in life.”





**Value** implies the worth of the good or service for an individual.

**Price** is the amount of money paid by the buyer to the seller in exchange for any product and service.



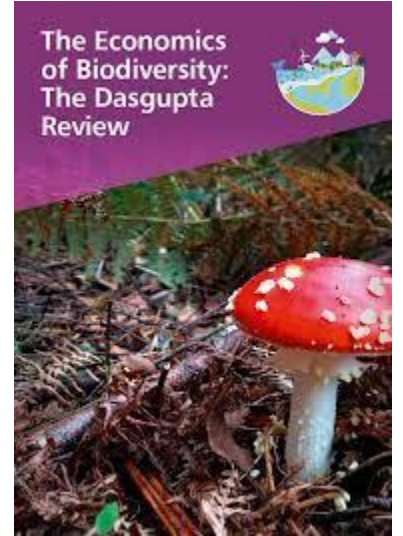
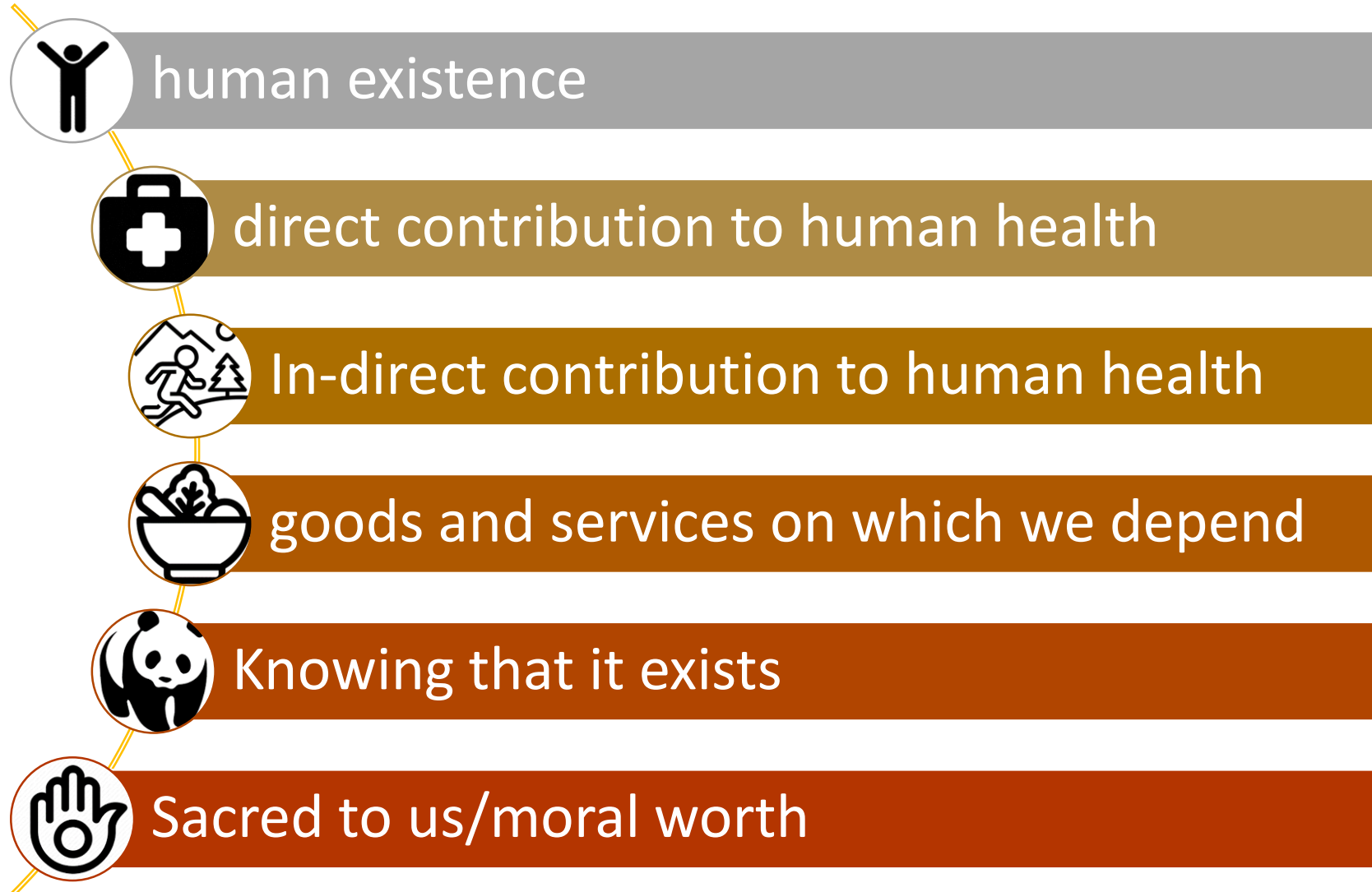
€2



€20



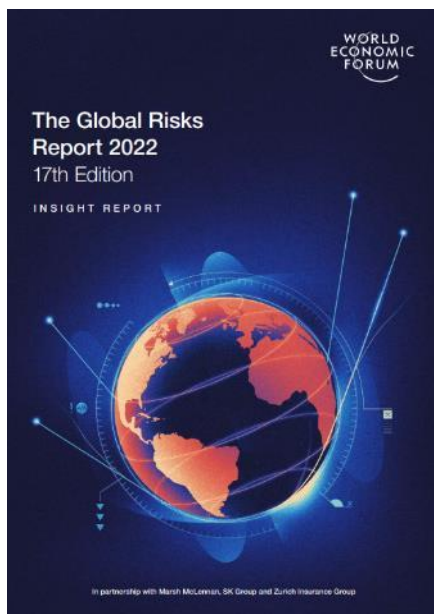
# Value of nature





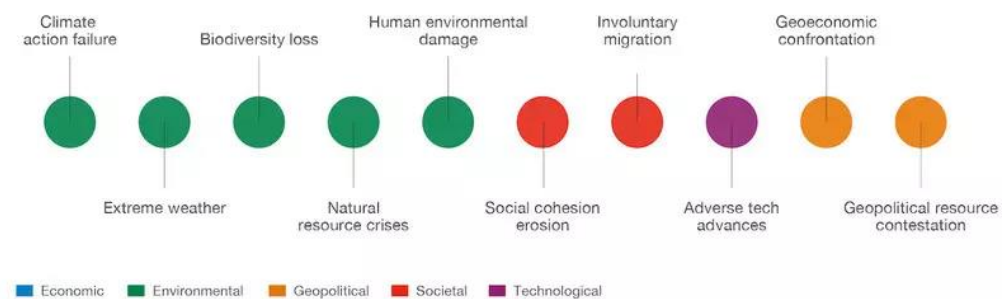






## Top Long-Term Global Risks

Over the next 5-10 years



Source: World Economic Forum Global Risks Report 2022

## Top 10 Global Risks by Severity

Over the next 10 years



Source: World Economic Forum Global Risks Report 2022







Farmers'  
goals and  
values



Income  
Pride  
Challenges  
Worthwhile  
Self respect  
Enjoyment  
Business  
Tradition  
Recognition  
Tasks  
Ownership  
Value  
Future

# Total value of nature

- ✓ Marketed goods: price can be used as a proxy
- ✓ Non-market goods: use, preference, replacement costs can be used as proxies
- ✓ Everything else: no price, but doesn't mean no value



- Price doesn't reflect all costs of production
- eg surveys, measures of activity

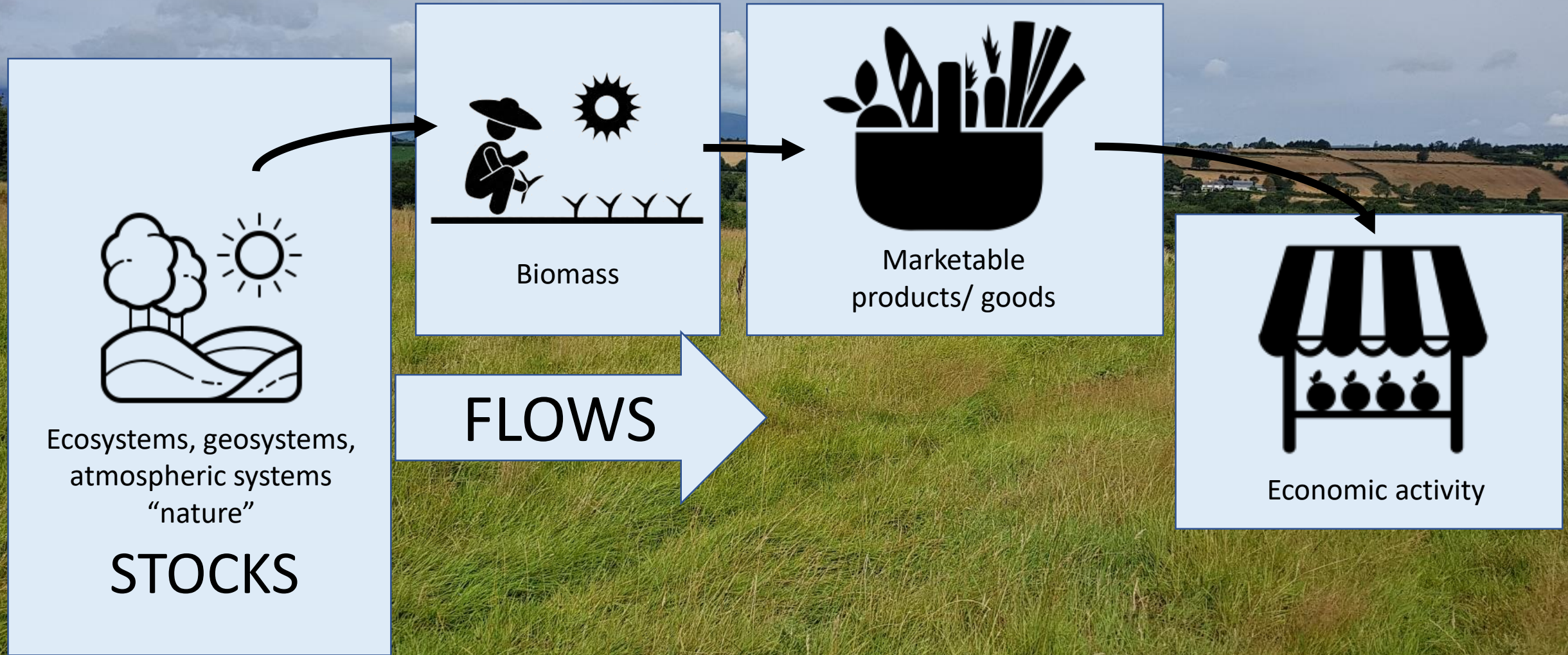




# NATURAL CAPITAL

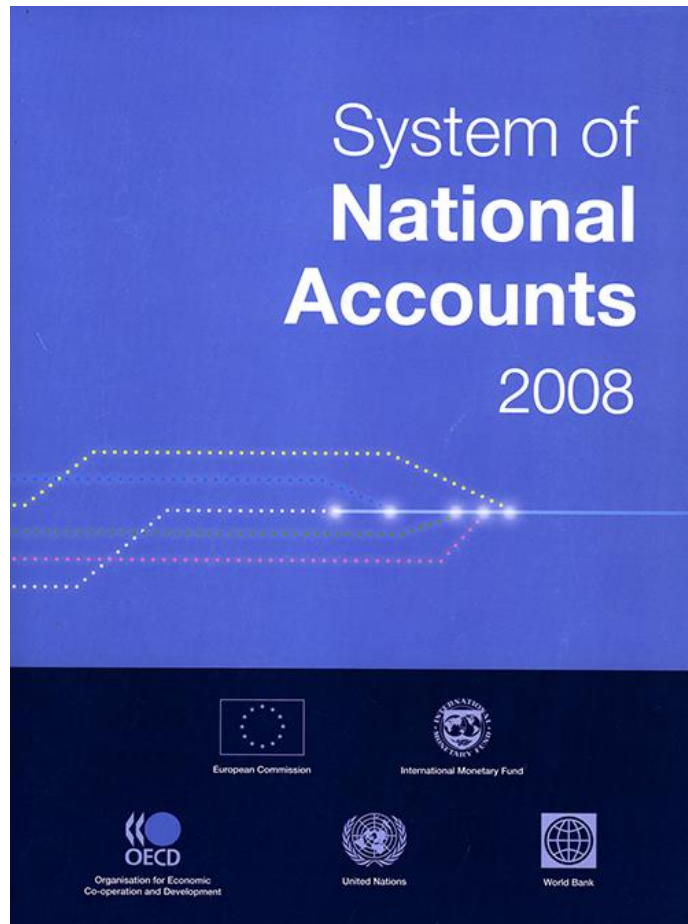
- ✗ Natural capital approach is not about putting a price on nature
- ✓ Natural capital approach is about valuing nature

# What is natural capital?

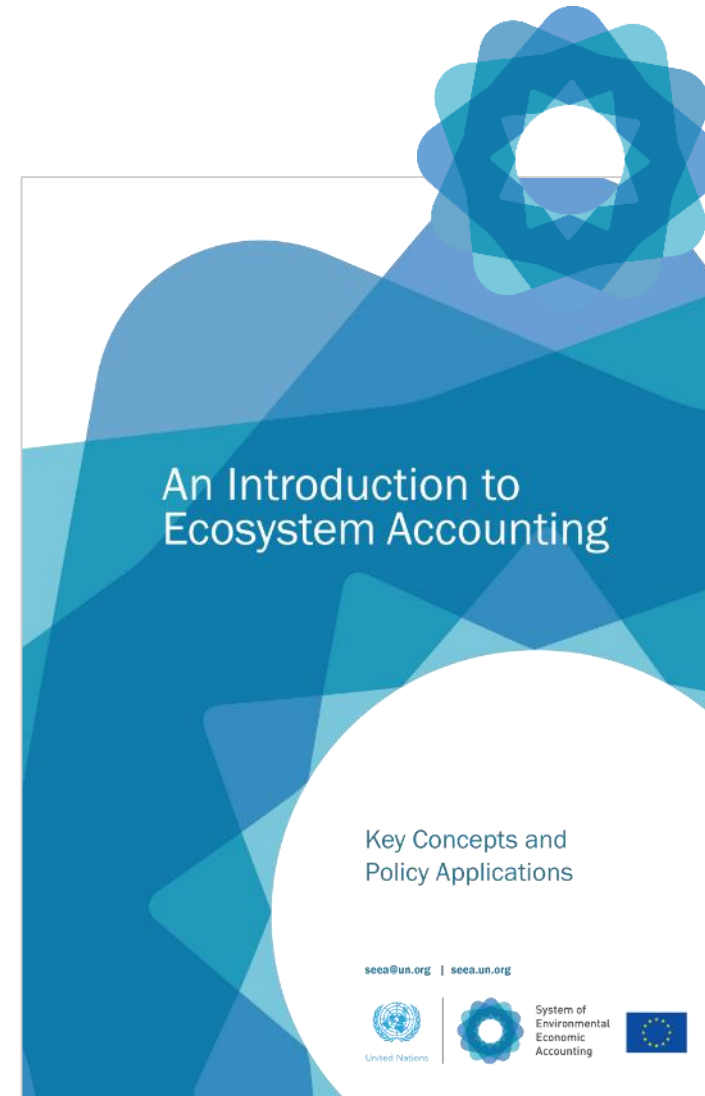




# Natural capital accounting: a systematic way to measure and report



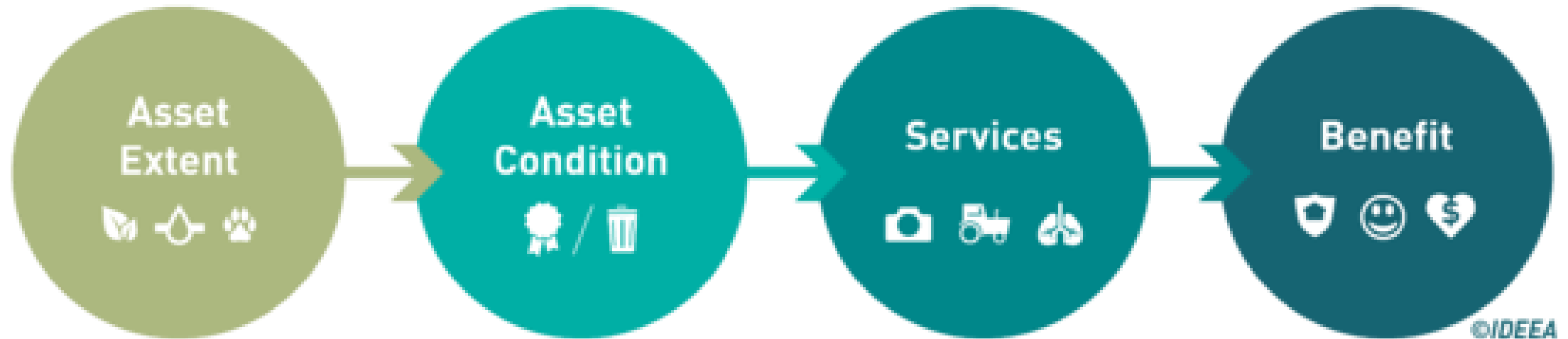
GDP  
National  
Expenditure  
Outputs



System of  
Environmental  
Economic  
Accounting

Underlying  
stocks and their  
condition

# SEEA-Ecosystem Accounting



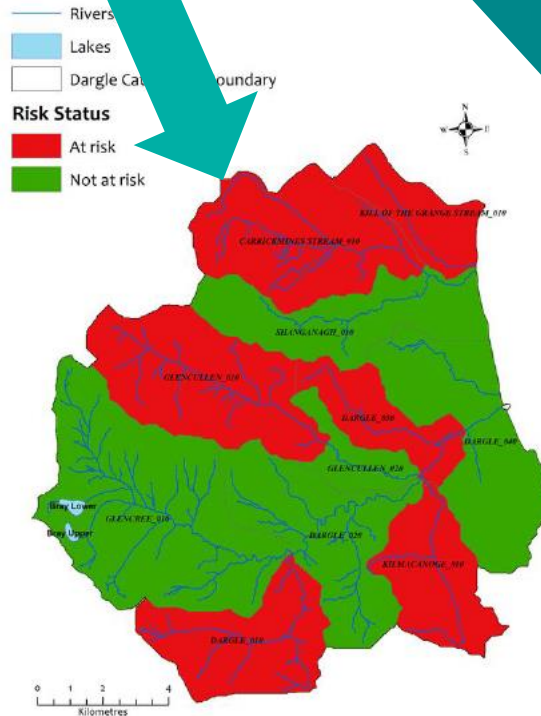
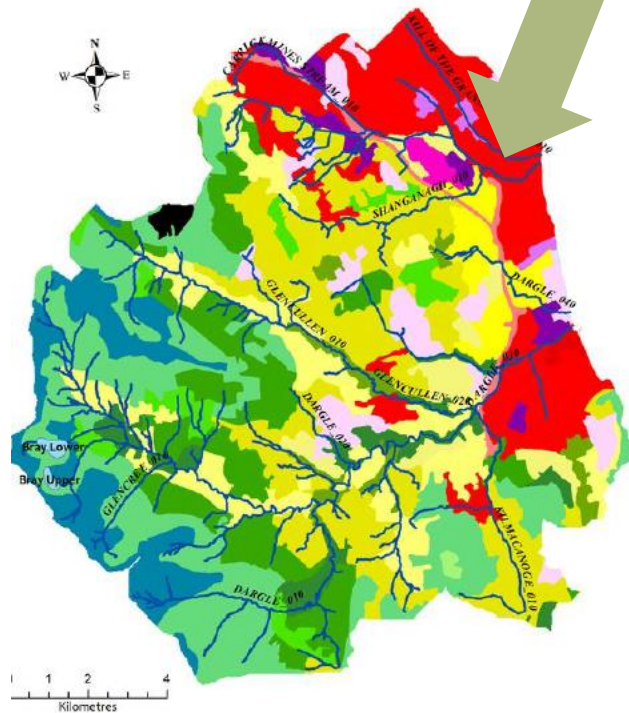
**INCASE**

Irish Natural Capital Accounting for Sustainable Environments

 **epa**Research

[www.incaseproject.com](http://www.incaseproject.com)





#### SUPPLY ACCOUNT: WHAT ECOSYSTEM SUPPLIES WHAT SERVICE?

What assets?  
What services?  
What matters?  
What can you do?

Farrell et al. 2021 <https://oneecosystem.pensoft.net/article/65582/>





Carbon storage



Habitat for natural enemies/pollinators



Fodder for livestock

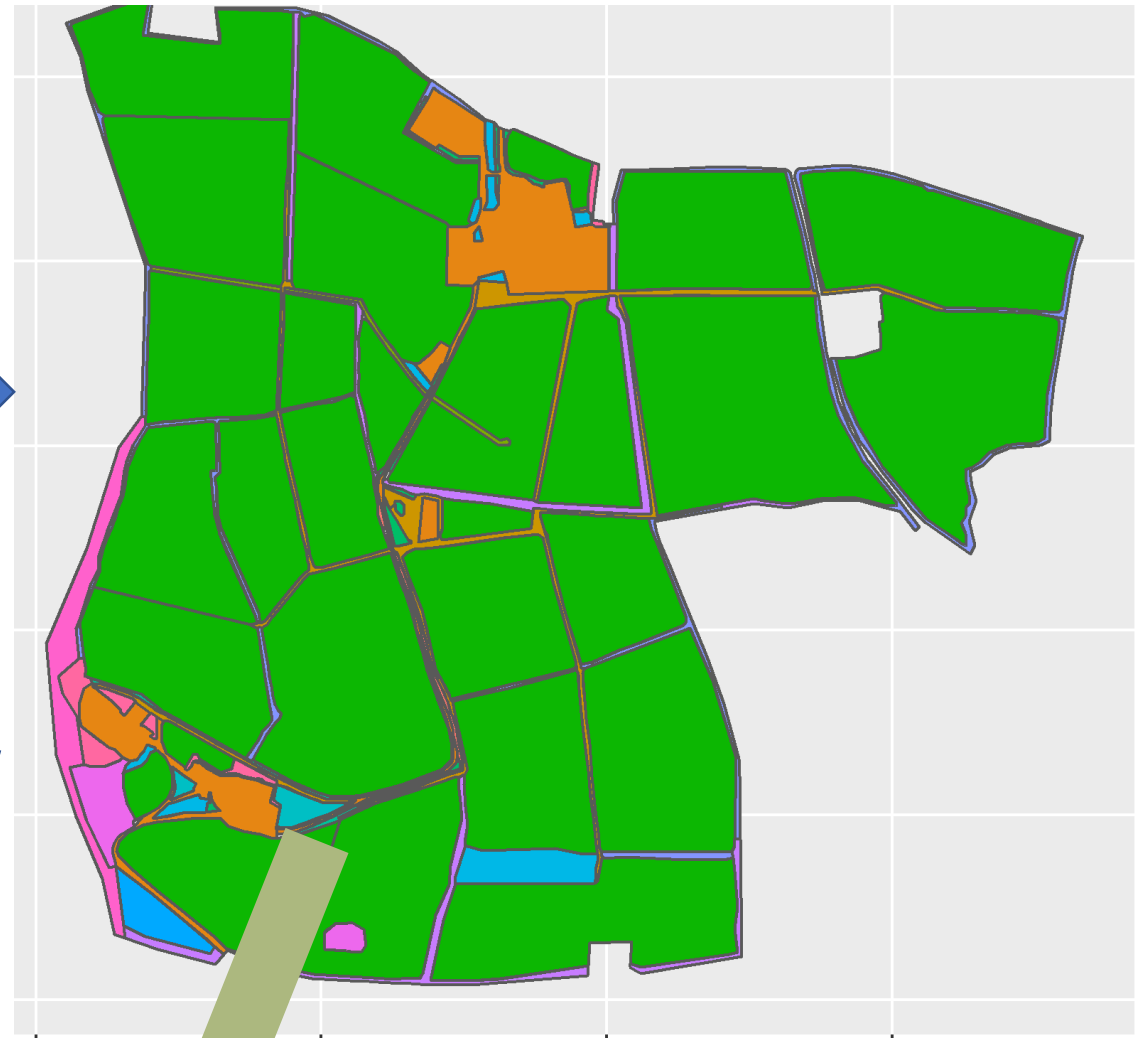


Biodiversity



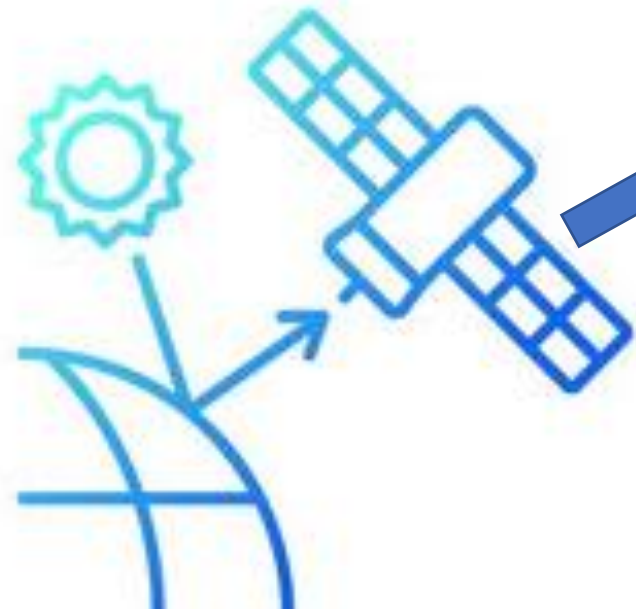


[www.biorbic.com/farm-zero-c](http://www.biorbic.com/farm-zero-c)



Name

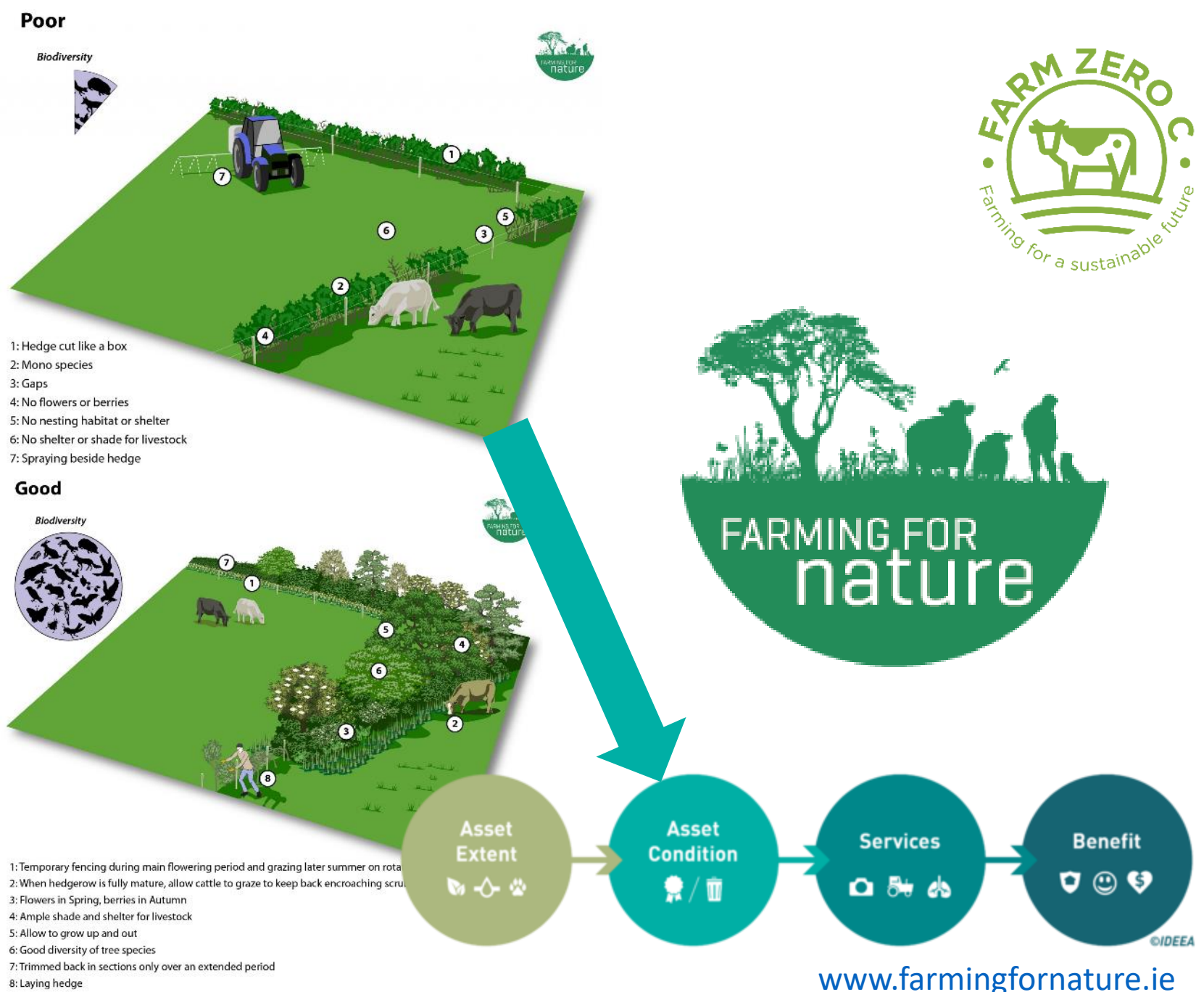
- BL2
- BL3
- ED2
- ER1
- FW4
- GA1
- GA2
- GS2
- WD1
- WD3
- WD5
- WL1
- WL2
- WN2
- WN5
- WS1







Photos by Cian White







BL2  
BL3



Ecosystem service	Unit	Basic spatial unit number								
		1	2	3	4	5	6	7	8	9
Hunting	kg/yr	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Drinking water extraction	m3/yr	58	58	58	58	58	58	58	58	58
Crop production	kg/yr	0	0	0	0	0	0	0	0	0
Fodder production	kg/yr	935	935	0	935	935	0	681	0	0
Air quality regulation	kg/yr	0.6	2.3	2.3	0.6	2.3	2.3	0.6	2.3	2.3
Carbon sequestration	kg/yr	11	11	91	11	11	91	0	0	0
Recreational cycling	trips/yr	0	4	4	0	4	4	4	1	1
Land cover	-	Grass land	Grass land	Forest	Grass land	Grass land	Forest	Crop land	Crop land	Crop land



# TOOLS for FORESTERS



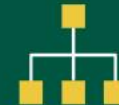
## WE MAP

Forests provide timber but also support biodiversity and other public benefits. We map specific forest sites using a Natural Capital Accounting approach to quantify forestry stocks and the various flows of benefits.



## WE MEASURE

By assessing the quantity, quality and location of forest stocks, we can determine the flows of commercial timber production and other benefits such as carbon sequestration, water retention, biodiversity and recreation.



## WE MODEL

Looking at different land management scenarios, we can co-develop tools for foresters to enable robust and transparent management decision-making to enhance sustainability.



An Roinn Talmhaíochta,  
Bia agus Mara  
Department of Agriculture,  
Food and the Marine



FOR**ES**

[www.for-es.ie](http://www.for-es.ie)

COILLTE  
*nature*



# Valuing Natural Capital for the Future

- Need to value farmland more broadly for **multiple benefits**
- Natural capital approach is about **stocks & flows** of benefits
- NCA => **quantifying & tracking** change in assets, condition, services & benefits
- Accounts can be generated at a range of scales to inform **management**

