



Value in EO Workshop

Round Table III: Measuring socio-regulatory impacts

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Overview

DPa

	ECONOMIC	ENVIRONMENTAL	REGULATORY	INNOVATION & ENTREPRENEURSHIP	SCIENCE & TECHNOLOGY
Farming in Denmark	☆☆☆	☆☆☆	☆☆☆	☆☆☆☆☆	☆
Flood management in Ireland	☆☆☆	☆☆	☆☆	☆☆	☆☆
Ice navigation off Greenland	☆☆☆☆	☆☆	☆☆	☆☆	☆☆☆
Farming in Poland	☆☆☆	☆☆☆	☆☆☆	☆☆☆☆☆	☆☆
Winter navigation in the Baltic	☆☆☆☆☆	☆☆	☆☆	☆☆	☆☆
Forestry management in Sweden	☆☆☆	☆☆	☆☆☆☆☆	☆☆	☆☆
Infrastructure management in the Netherlands	☆☆☆☆	☆☆	☆☆	☆☆☆	☆☆
Growing potatoes in Belgium	☆☆☆	☆☆☆	☆☆	☆☆☆	☆☆☆



Advancing the understanding and measurement of the societal benefits of Earth Observations, Rome, July 2019



The Nordic Forestry cycle

average
~ 5 ha/object
190 m³/ha
40 000 cutting
notifications yearly

Final felling
1 - 15 ha/object
300 - 1000 stems/ha
100 - 600 m³/ha

(0) 1 - 4 thinnings
each 30 - 70 m³/ha

average 50 m³/ha

The Nordic forestry cycle

Establishment
planting, sowing,
natural regeneration

**Shelter and
seed
trees**



Fertilization

60 - 140 years

Pre-commercial thinning
1.5 - 5 m height

1200 - 3000 stems/ha

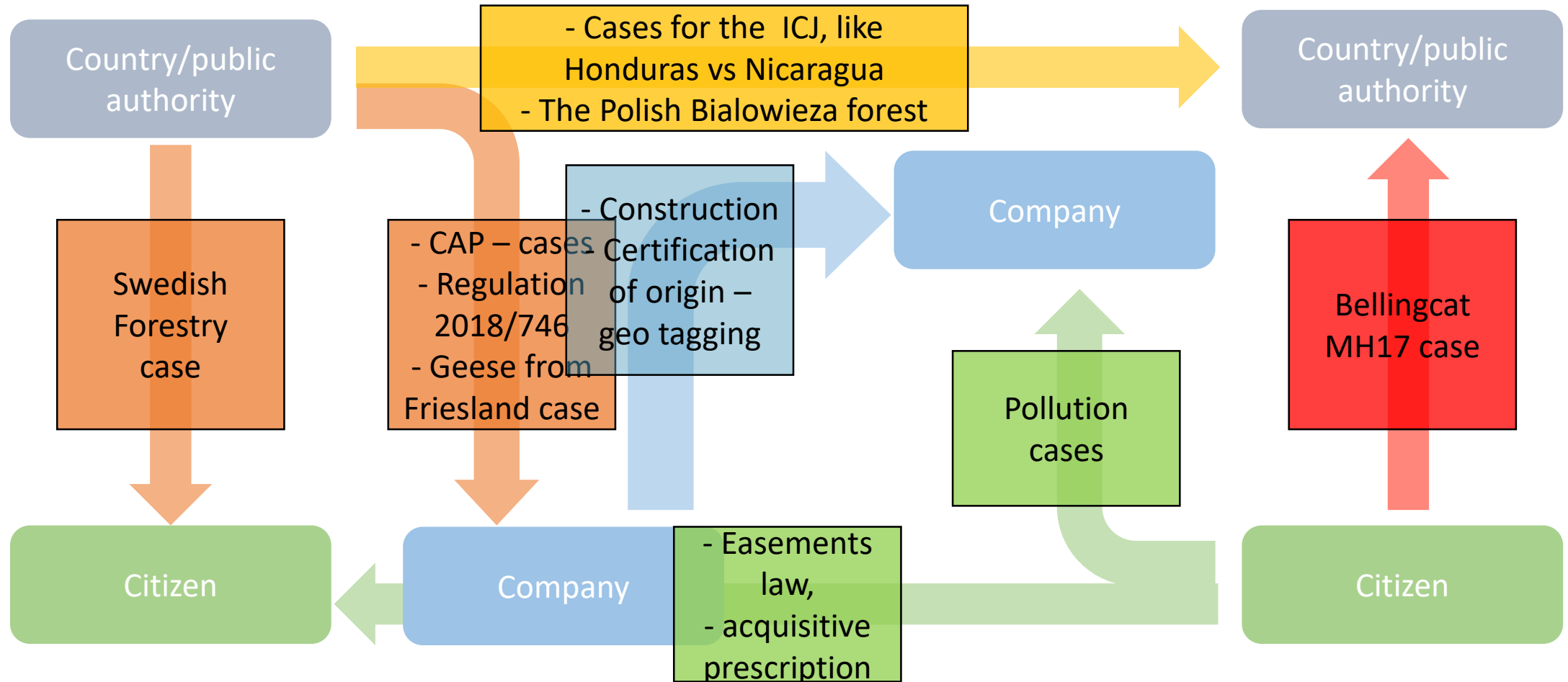
Value of EO in 'regulatory cases'

- Combination of the 'principal - agent theory' combined with transaction costs model
- the existence: fact that imagery represents the truth and the fact that everybody agrees that it is the truth
- the amount of value:
 - Transaction cost reduction:
 - the resources saved that needed to get to the same information position
 - Costs of fte's needed
 - Costs of aerial photographs
 - the opportunity costs of those efforts
 - The lower bondage costs of the forest owners
 - The reduction of the dead weight loss: non compliance and not caught is minimal
 - The benefits of the compliance (doing the right thing)
 - Long term higher yields timely planting and pre-commercial thinning
 - Side benefits like environmental gains, better quality of life

Expanding to 'compliance cases' - features

- Agreement on existence of the **basis of compliance**
 - A situation where there is an agreement between parties that one party has an obligation and the other party has a right of fulfillment of that obligation
 - This can be based on a statutory law, but also on an agreement, or even a principle like a human right
- System and process in place that allows for **enforcement**
 - There needs to be a system that allows for checking of the fulfillment of the obligation and an effective sanction in case of non-compliance

Compliance and EO data – food for thought





Thank you!

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