



Integrating
Transport Infrastructure
with Living Landscapes
IENE



IENE - 5th International Conference on Ecology and Transportation - 30th August to 2nd September 2016, Lyon, France

Developing natural habitats under high-voltage lines: a win-win strategy for biodiversity and society

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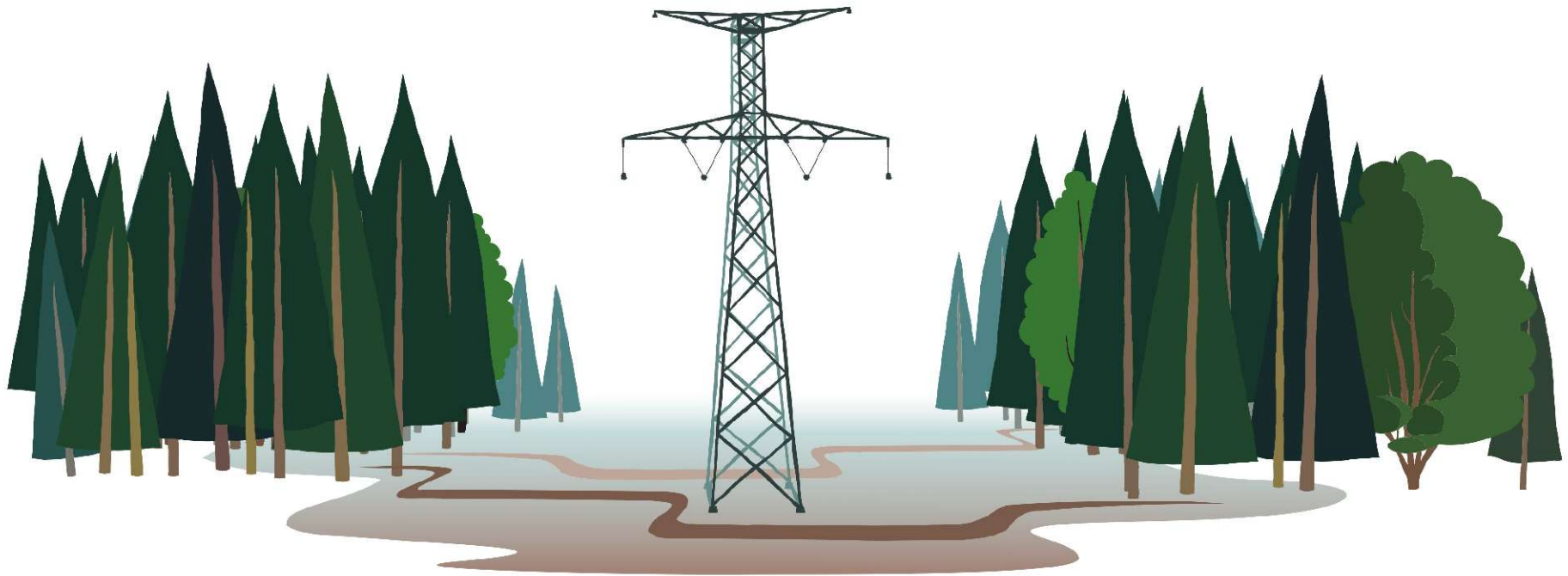
The context

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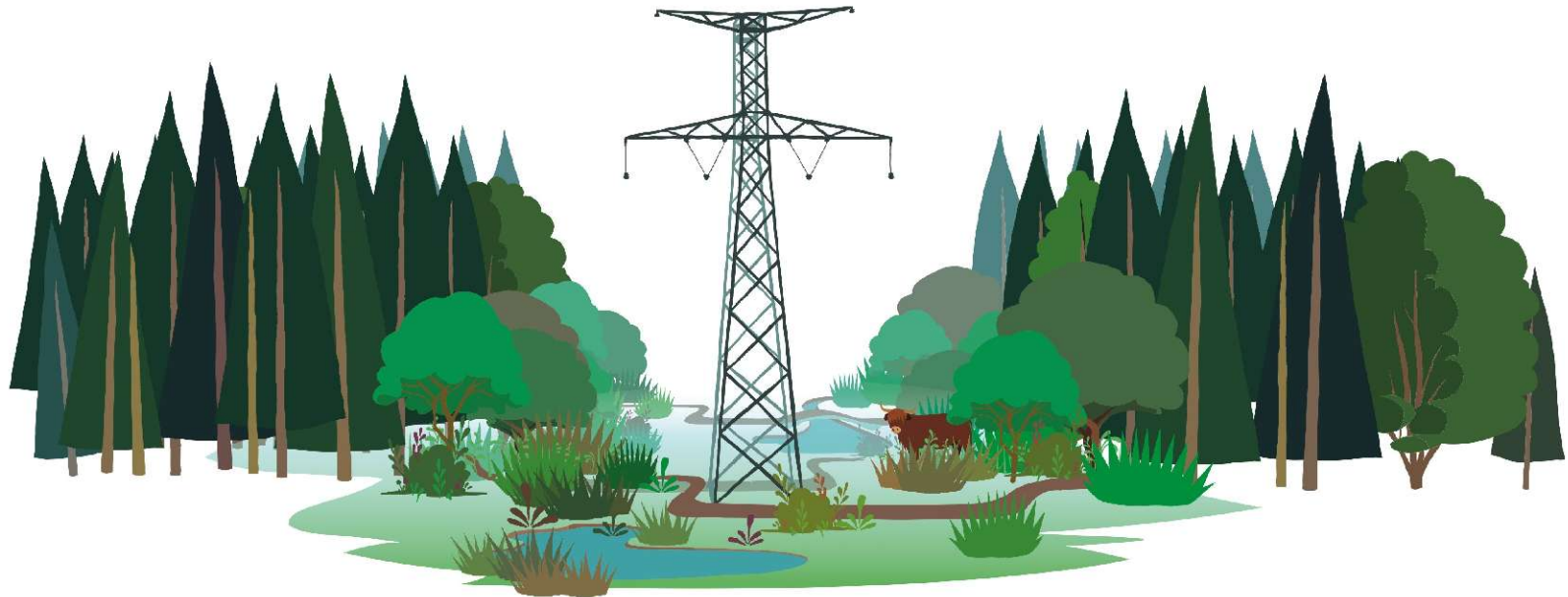


The context





The LIFE Elia-RTE project



7 different actions
existing/potential biodiversity
socio-economic opportunities



The LIFE Elia-RTE project

LIFE +:

EU program for biodiversity/nature
2011-2017



3.000.000 €

- * EU - 38 %
- * Walloon Region - 27 %
- * Elia - 22 %
- * RTE - 13 %

Avec
le soutien de la



Wallonie



28 sites in **Belgium** (155 km)



Belgium



France

7 sites in **France** (60 ha)



7 actions on site for biodiversity





7 actions on site for biodiversity





7 actions on site for biodiversity

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How can we find win-win solution for vegetation management under high- voltage lines ?

...for :

Biodiversity

Transmission System Operators (RTE, Elia...)

Landowners/stakeholders



Working methodology : 4 steps

Step 1 - Initial mapping

Step 2 - Social opportunities

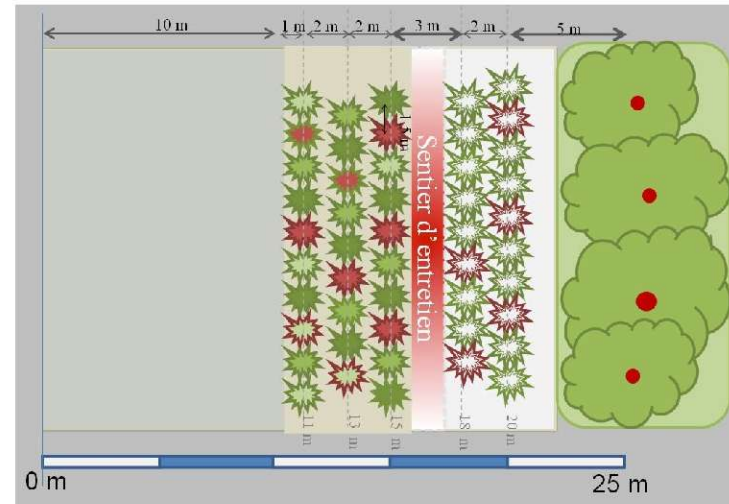
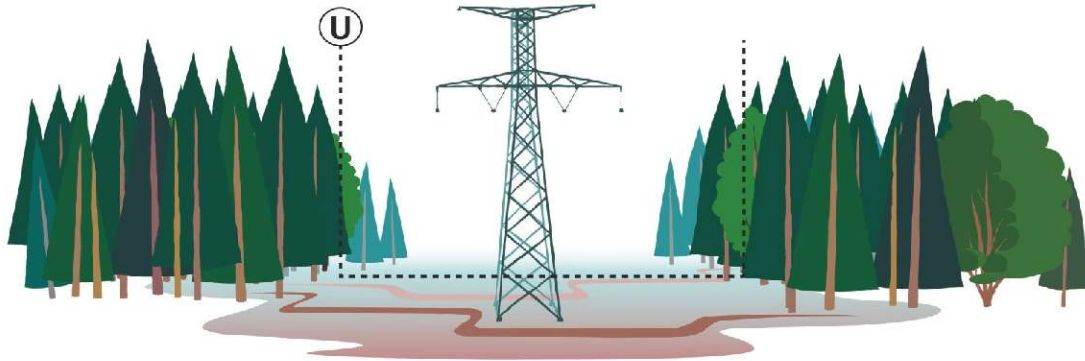
Step 3 - On site work

Step 4 - Long term management





The example of the edges





The example of the edges





The example of the edges

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From the point of view of the forest owner (public and private)

- + stability of the forest
- + wood value of bordering trees
- + forest certification program and Natura 2000 regulation
- + improvement of habitat for wild game
- + pride of doing something for biodiversity





The example of the edges

From the point of view of the Transmission System Operator (TSO)

- + electrical safety due to low-height species
- + less management efforts
- + improving landscape
- + social acceptance
- + - for line patrollers, the job is changing !
- + - for subcontractors, the job is changing !





The example of the edges

From the point of view of biodiversity

- + increasing the extend of habitat for ordinary biodiversity
- + creating “edges effect” between forest area and open land area
- + diversity of species chosen for their characteristics (flowers, fruits...)

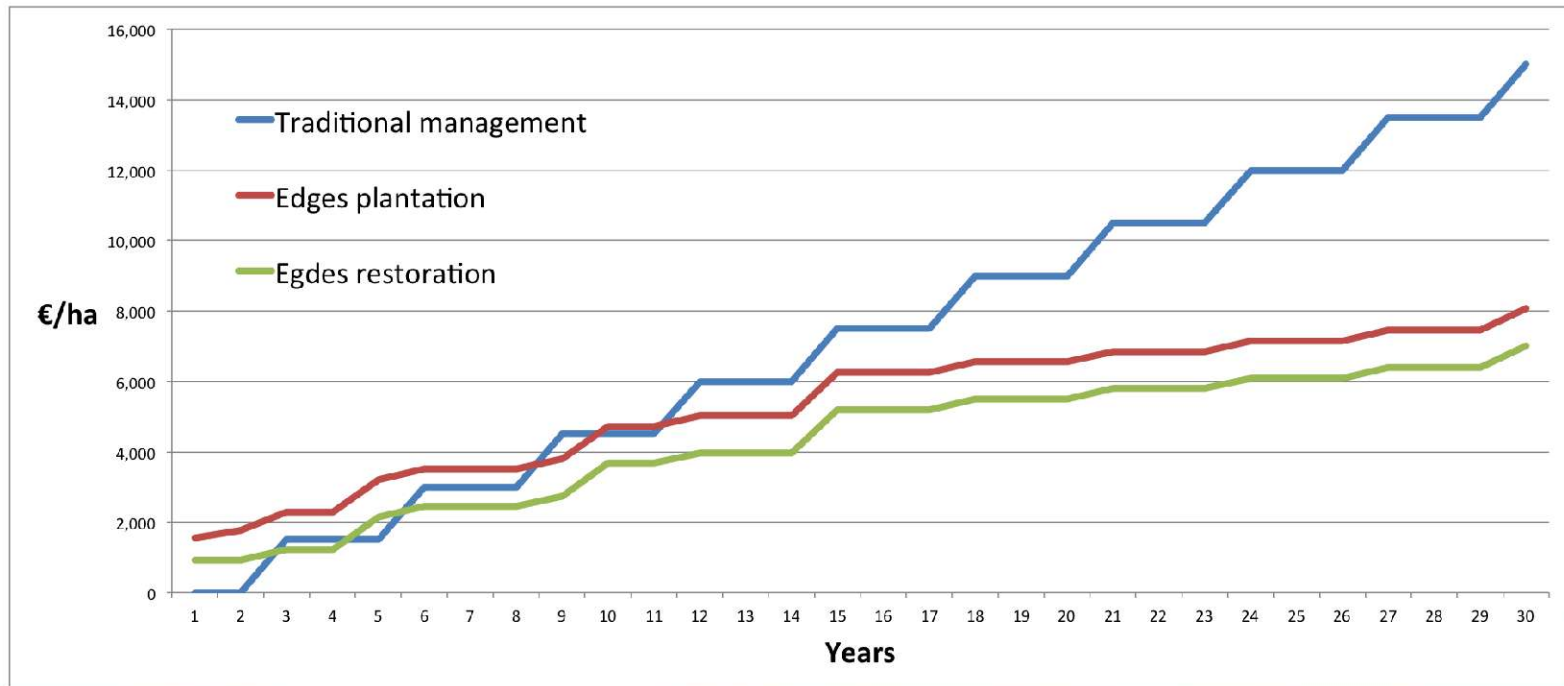




Comparison on 30 years scale

Return on investment : **5 years**

30 years timeframe: 4,7 times cheaper (3,9 times cheaper (WACC 5%))





Regular management by Elia :

Manual felling (14.286 €/ha) every 5 years

Actions

Installation of fences : 5.872 €/ha (guaranteed 15 years)

TOTAL of investment = 5.872 €/ha

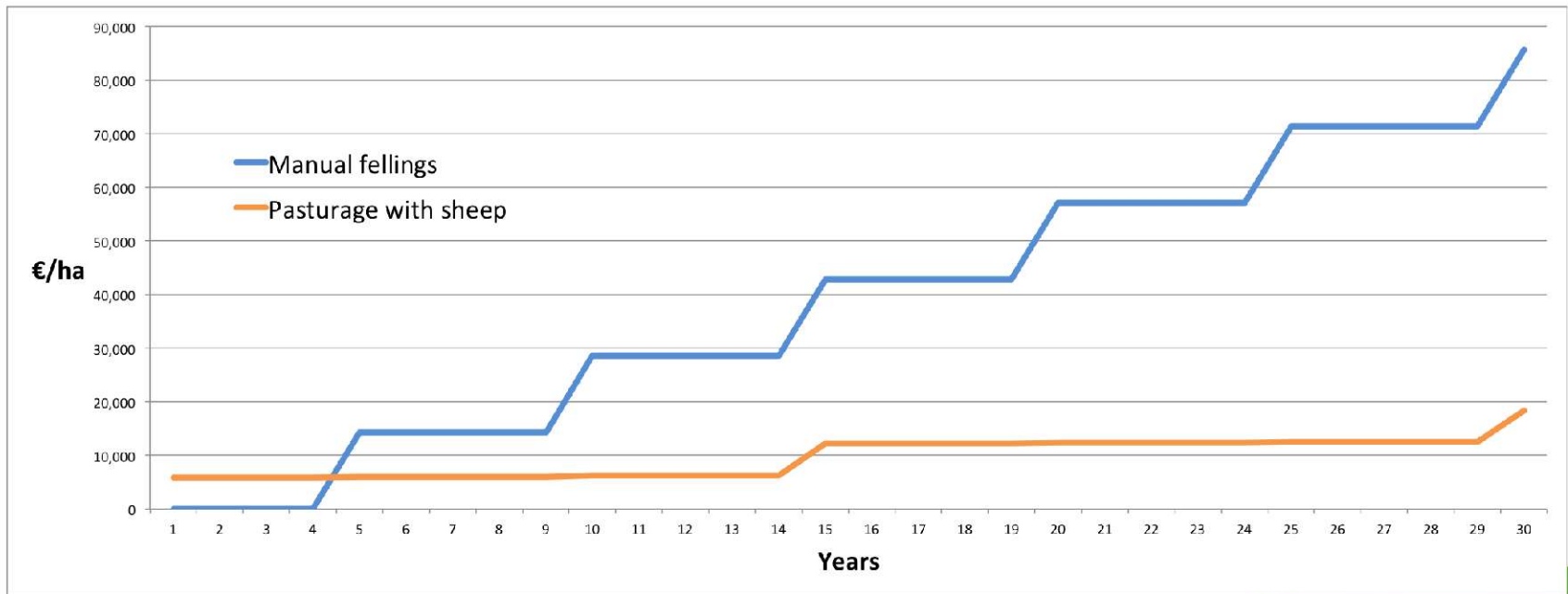
Estimation for fixing of fences : 160 €/ha every 5 years.



Comparison on 30 years scale

Return on investment : **5 years**

30 years timeframe: 4,7 times cheaper (3,9 times cheaper (WACC 5%))





For the TSO

- Less costs and easier patrolling
- Better landscape
- Better social acceptance

For the farmer/shepherd

- New pastures (land is expensive !)
- Natura 2000 subsidies
- Agro-Environmental measure subsidies (up to 450 €/ha/year)

For other stakeholders

- Local school visits for pedagogic

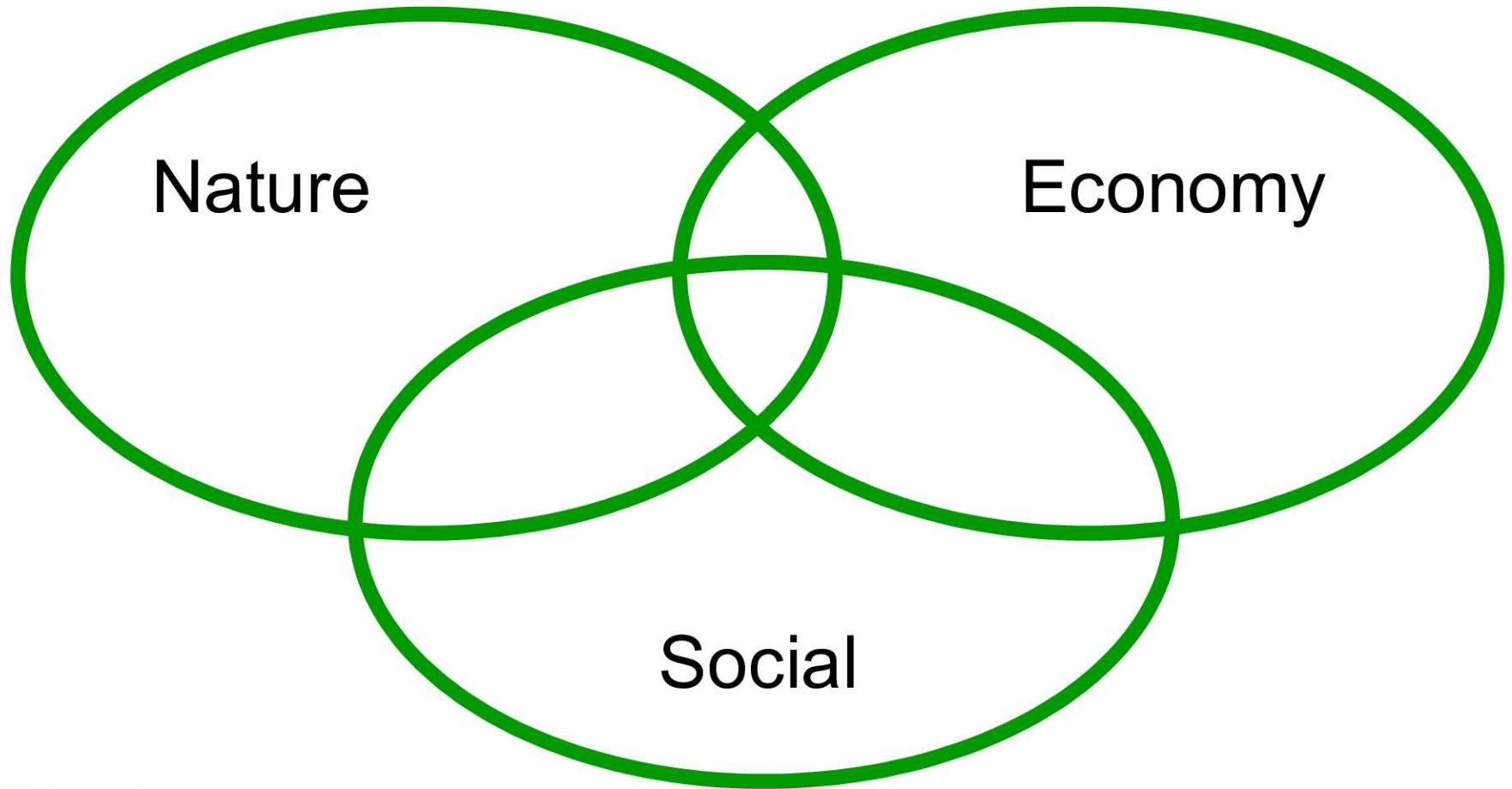


Conclusion

| Actions | Comparison traditional management/LIFE method | | with WACC = 5% |
|-------------------------------|--|-----------------------|-----------------------|
| | return on investment | after 30 years | after 30 years |
| Planted edges | 9 years | 1,9 times cheaper | 1,4 times cheaper |
| Restored edges | 3 years | 2,1 times cheaper | 1,8 times cheaper |
| Pasturage | 6 years | 2 times cheaper | 1,8 times cheaper |
| Pasturage in hard conditions | 5 years | 4,7 times cheaper | 3,9 times cheaper |
| Mowing | 6 years | 4,9 times cheaper | 2,5 times cheaper |
| Natural habitats (heathlands) | 3 years | 5,3 times cheaper | 3,9 times cheaper |
| Natural habitats (peatlands) | 9 years | 3 times cheaper | 1,8 times cheaper |



Finding the balance...



Biodiversity :
Ordinary & Extraordinary



For more !

Internet : www.life-elia.eu/en/

Twitter : @life_elia

Vimeo : LIFE Elia-RTE (videos)

Flickr : LIFE Elia-RTE (photos)

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