



Integrating
Transport Infrastructure
with Living Landscapes
IENE



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

Vegetation and high-voltage lines : an opportunity for biodiversity

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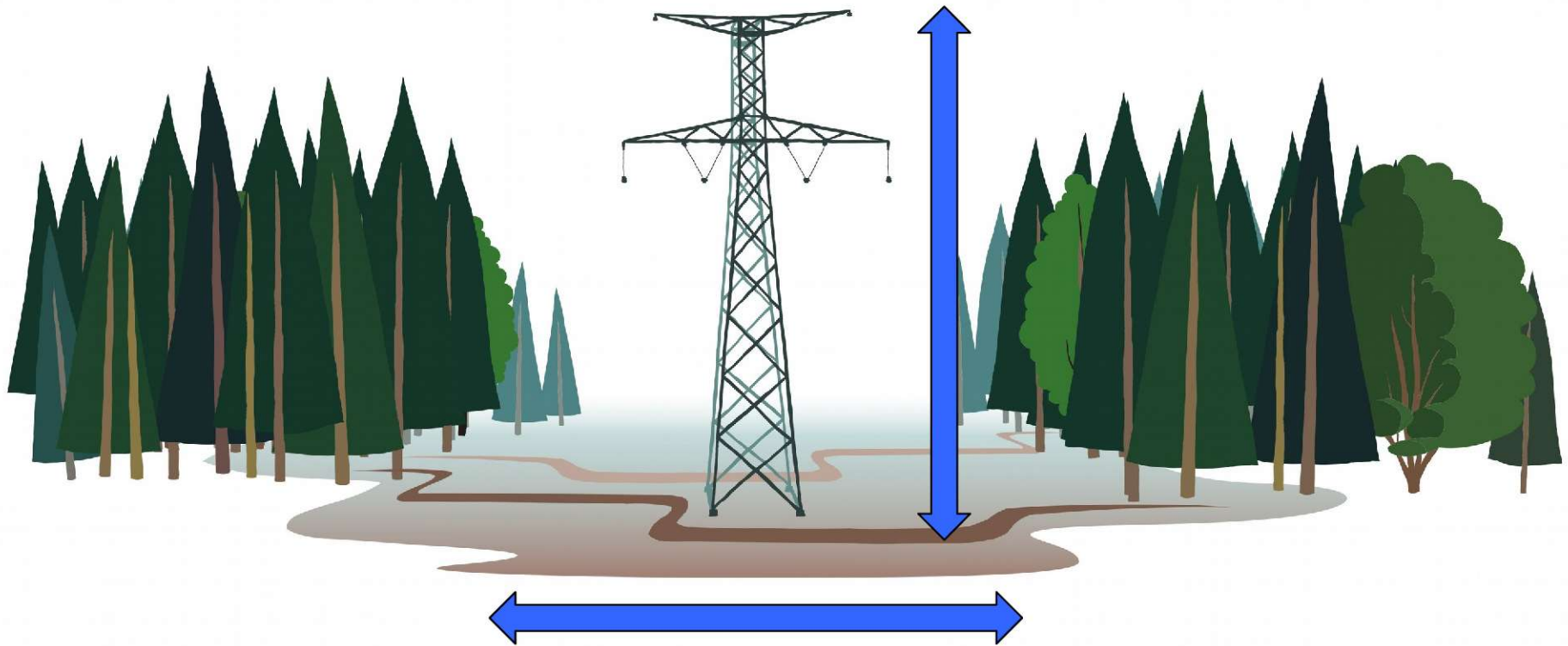


The context



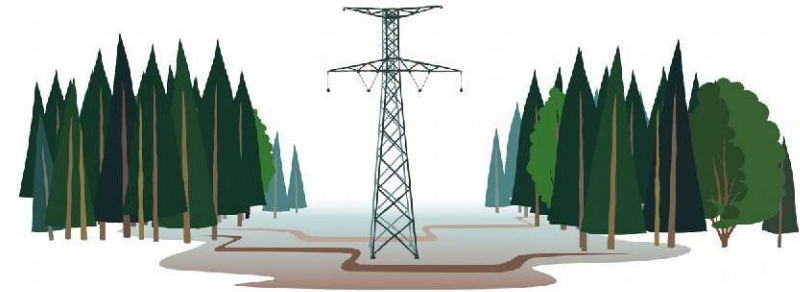


The context





The context



creating a vicious circle...

Negative impact on :

- costs (M€/year) for operators
- landscape
- public perception
- biodiversity



The LIFE Elia-RTE project



7 different actions
local environment
socio-economic opportunities



The LIFE Elia-RTE project

LIFE + : EU program for biodiversity/nature

- * funding innovative projects
- * European dimension
- * in and out Natura 2000



3.000.000 €

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



team : 7 (5,5 FTE)

duration : 6,5 years (->dec 2017)

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



7 actions on site for biodiversity

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1_Structured forest edges

corridor from U-shape to V-shape
plantation or restoration
selection of species
plants from local origin



2_Conservatory Orchards

apple, pear and medlar wild trees, and juniperus
local threatened species
with forest/scientific administration





7 actions on site for biodiversity

3_Natural habitats from Natura 2000 directives

peatlands (code 71XX) - stoppers and dykes

heathlands (code 40XX) - soil removing

poor meadows (62XX and 65XX) - harvesting/sowing



4_Mowing areas

annual mowing by local farmers/hunters



5_Pasturage

pasturage by sheep / cows / horses from local famers





7 actions on site for biodiversity

6 Controlling invasive plants

electrical corridor = possible spreading
different method tested



7 Digging ponds

springboards for diversity
semi-natural ponds





7 actions on site for biodiversity





7 actions on site for biodiversity

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7 actions on site for biodiversity

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Step 2 - Social opportunities

Contacting landowners/land managers -> meetings

Seeking for stakeholder's interests -> adaptation of maps

Agreement on work to carry out -> signature of agreements/conventions





Step 3 - On site work

Definition of the work -> call of specifications

Call for tenders -> selection of a subcontractors

Control of work on site -> actions depending on objectives (digging scrapping...)





Methodology : step 4 – Long term management

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Step 4 – Long term management

Follow up of the works -> guarantying actions' success
After-LIFE management plan -> management plan on 30 years
Company shift -> trainings for maintenance department





Biological monitoring

Groups : dragonflies, butterflies, amphibians, plants, reptiles, birds and bats

Results so far : monitoring will be good T0, but timeframe is too short to collect interesting observations.

Nevertheless, impact on dragonflies and amphibians (ponds), bats (*Rhinolophus ferrequinum*) and plants (calcareous grasslands)





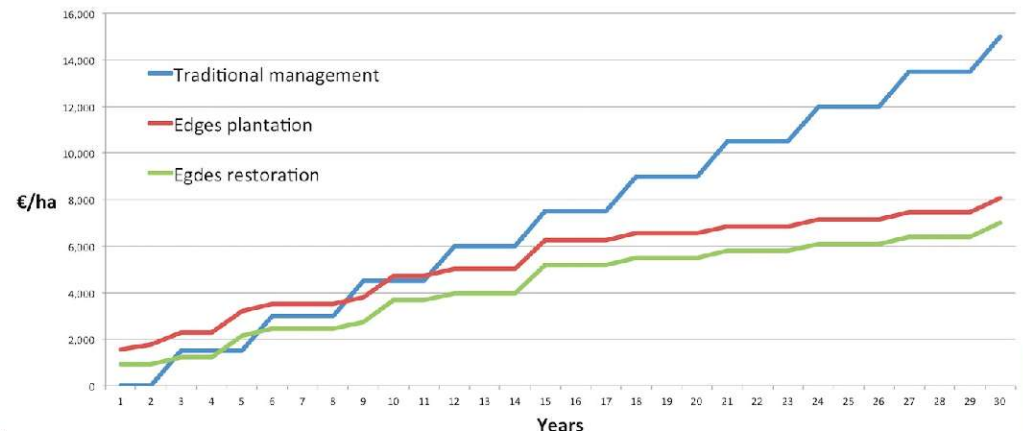
Economical monitoring : cost/benefit analysis

Methodology :

- working group with Elia and LIFE Elia-RTE
- time-frame = 30 years
- comparing costs of traditional methods with costs of LIFE Elia-RTE methods

Conclusion :

- return on investment occur after **3 to 9 years**
- costs are **2 to 5 times cheaper on 30 years** (1,5 to 3 times with WACC 5%)



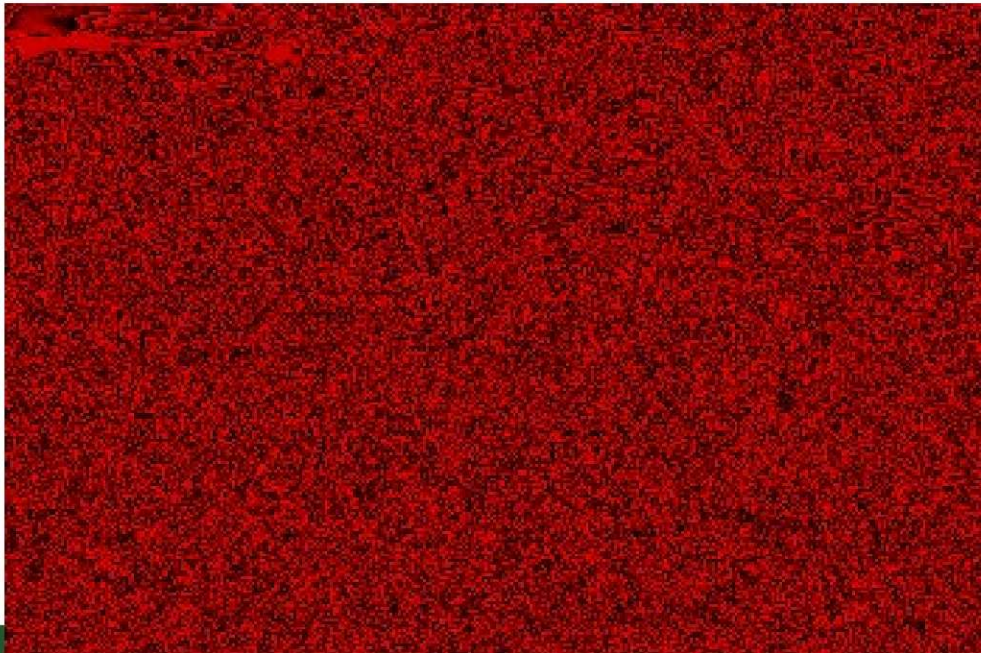


Shifting from....

Vegetation seen as a
CONSTRAINT



Vegetation seen as an **ALLY**, both for
electrical safety
and
biodiversity





1. It is possible to combine **biodiversity** with **electrical safety** for TSO
2. Environmental methods proved to be **cheaper**
3. Positive impacts on **public acceptance, socio-economical activities** and **landscape**
4. **Biological results** encouraging, but need to be fully assessed in the future



1. **Linear infrastructures** can play a major role in **nature conservation through connectivity**
2. Finding **win-win situation** with **local stakeholders** is facilitating the actions
3. Require a **shift** in the company mentality
4. Need for improvement of the **legal frame** (DG Energy and Environment)



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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