Implementing Biodiversity Offsets – Challenges and Opportunities

Lessons learned from the French experience

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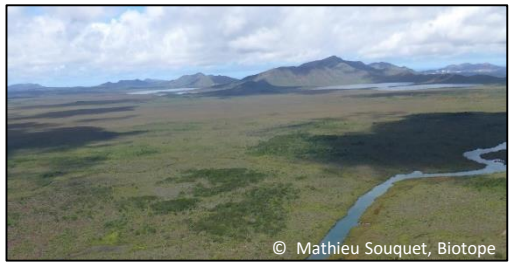
Mitigating impacts on biodiversity

Avoid

Reduce

Restore

Residual Impacts



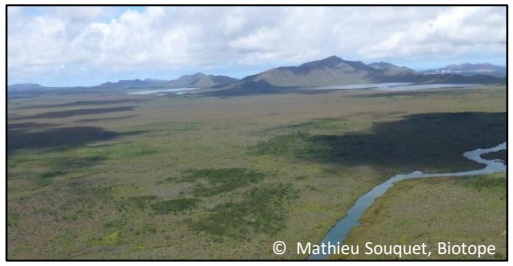
Mitigating impacts on biodiversity

Avoid

Reduce

Restore

Compensate



Mitigating impacts on biodiversity

Avoid

Reduce

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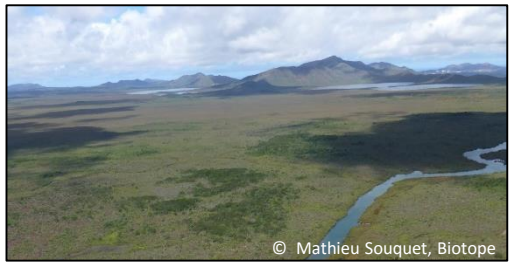
Prevent

Repair



Mitigating impacts on biodiversity

Avoid

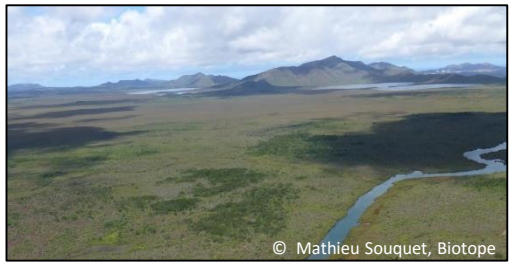
Reduce

Restore

Offset

Prevent

Repair

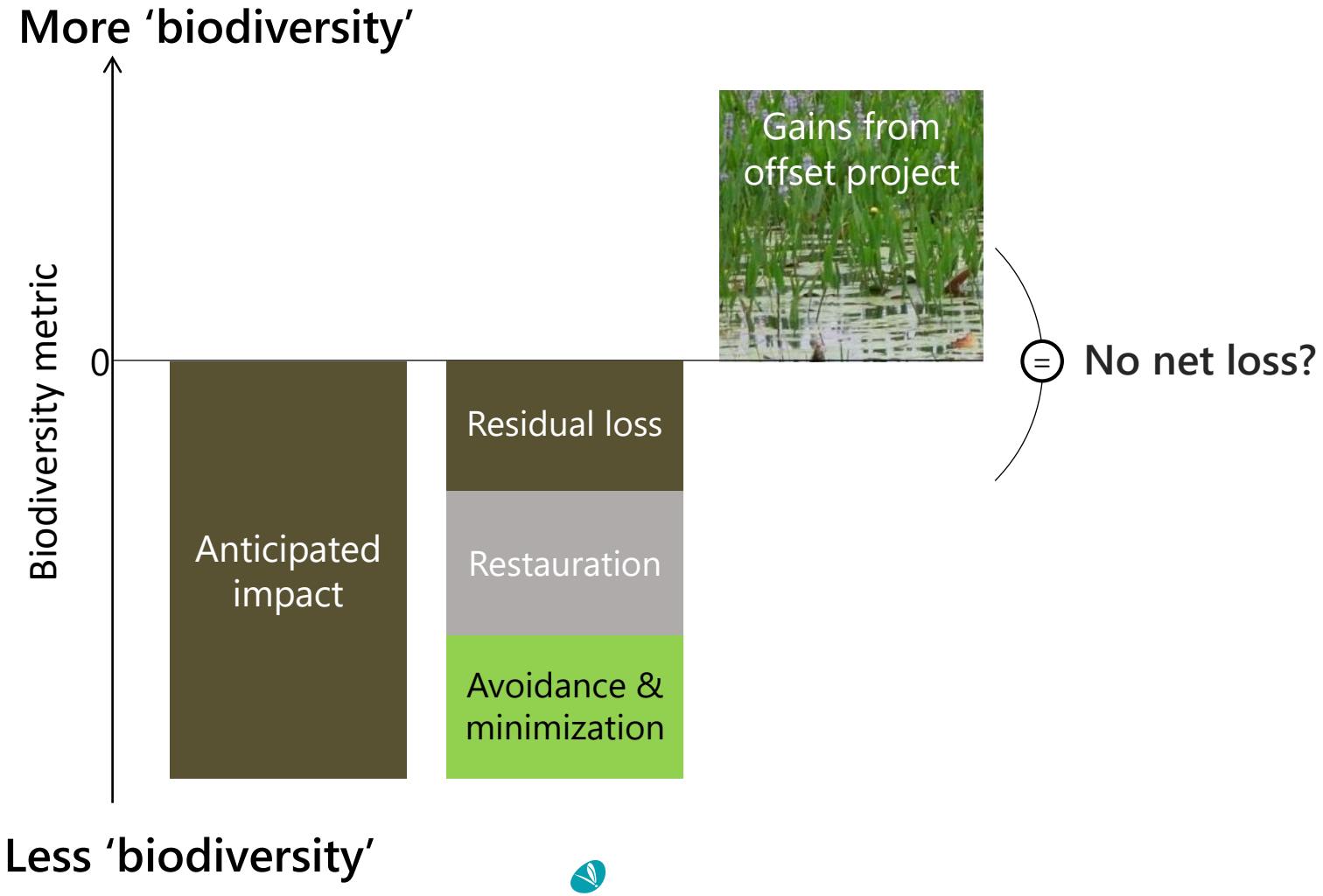


Achieving No Net Loss through offsets

Biodiversity offsets are ***measurable conservation outcomes*** *resulting from actions designed to compensate for* ***significant residual adverse biodiversity impacts*** *arising from project development* ***after appropriate prevention and mitigation measures have been taken****.*

Goal is to achieve ***no net loss*** *and preferably a* ***net gain*** *of biodiversity on the ground with respect to species composition, habitat structure, ecosystem function and people's use and cultural values associated with biodiversity.*

No Net Loss


More 'biodiversity'
Biodiversity metric
0
Anticipated impact
Residual loss
Restauration
Avoidance & minimization
Gains from offset project
No net loss?
Less 'biodiversity'

Drivers of No Net Loss goals

BBOP
Business and Biodiversity Offsets Programme

IFC

THE WORLD BANK
IBRD • IDA

European Investment Bank

European Bank for Reconstruction and Development

EQUATOR PRINCIPLES

UK Export Finance

coface
FOR SAFER TRADE

KFW

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No Net Loss in France: it takes time!

- **1976** : Nature protection law (introduces EIA and mitigation hierarchy)
- **1992** : Water law (reformed 2006)
- **2001** : Forest code
- **2004** : SEA and Water Directives
- **2006-2008**: Progressive transposition of Habitats directive of 1992
- **2008**: Transposition of Environmental Liability Directive
- **2010-2012**: EIA & SEA reforms
- **2012 & 2013**: Guidance on mitigation
- **2013**: "Green and blue veins" (ecological networks)
- **2014**: New forest code
- **2016**: New biodiversity law

2007 : protected species derogations "*the net result of a derogation should be neutral or positive for a Species*" (EC 2007 Guidance)

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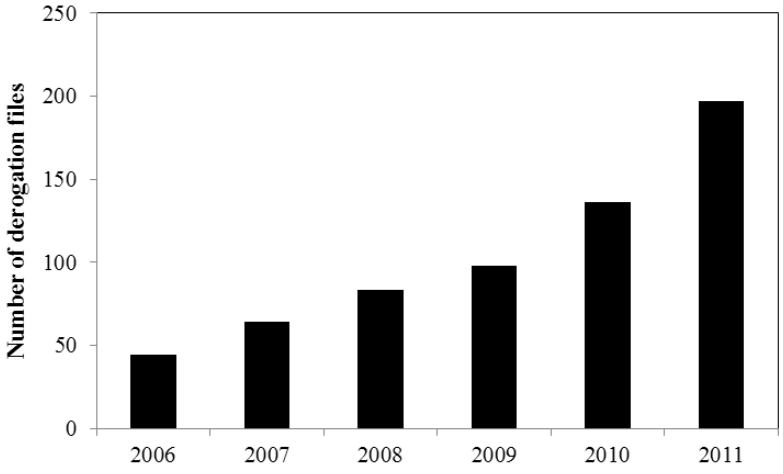


From Quétier, Regnery & Levrel (2014), *Environmental Science & Policy*

Gagea lacaitae

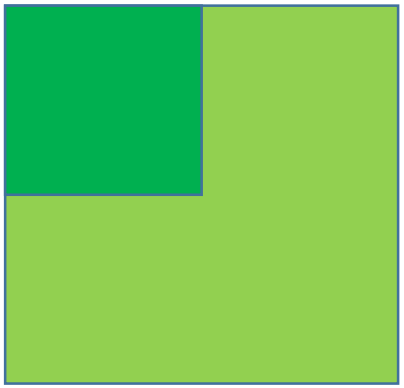
Timon lepidus

A typical offset in France…

Crau sèche © A. Wolff - CEEP

- Pipeline crosses 6ha of “coussoul” steppe (= 0.06% of a Natura 2000 site)
- Offset through the purchase of 70ha of existing “coussoul” (~1.2% of project cost)
- Land handed over to a local NGO (with regional nature reserve status)
- No funding for the management of the offset site

How much compensation?



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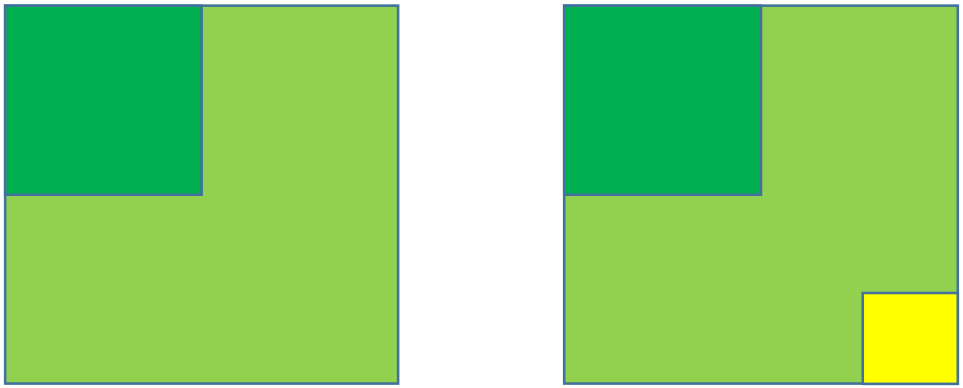
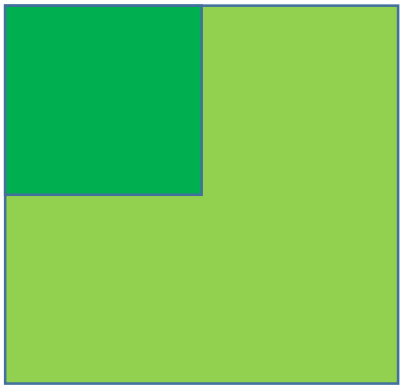
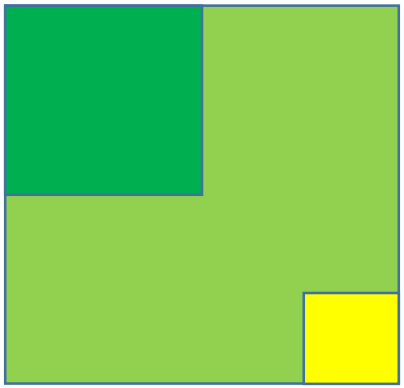
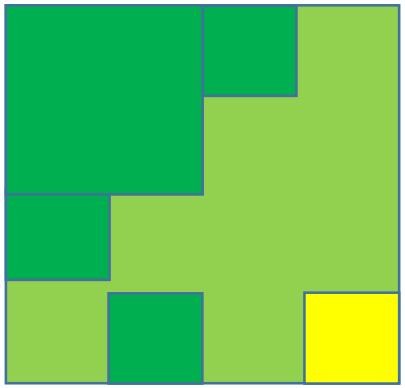


Ratio of 3 to 1

How much compensation?







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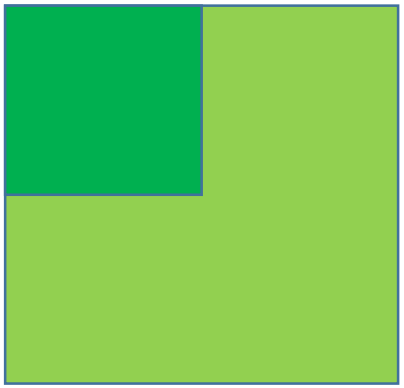
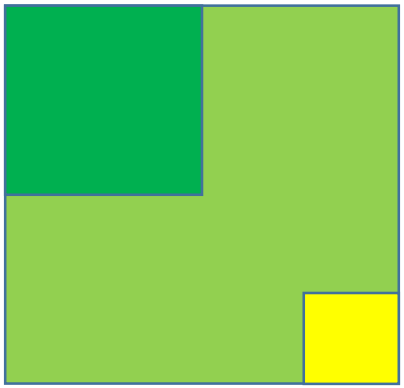
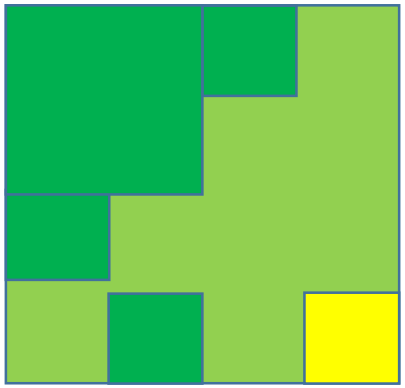
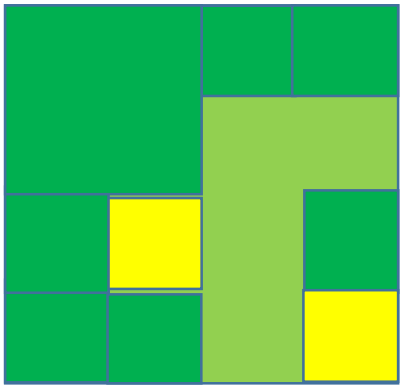
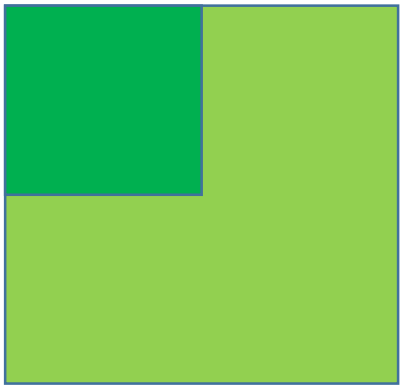


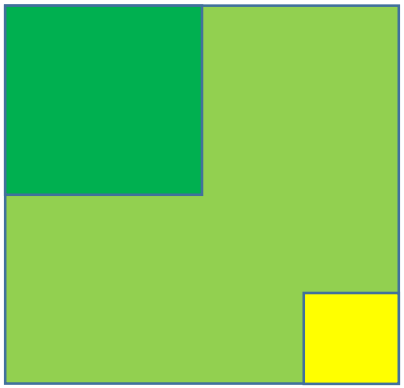


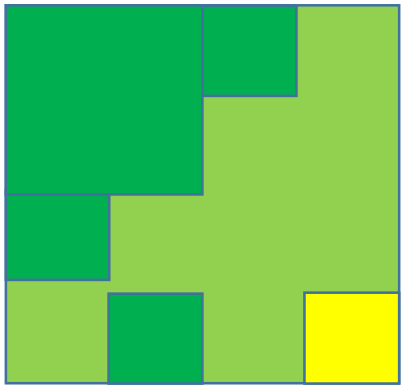


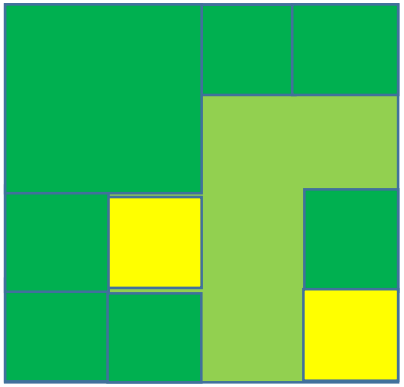


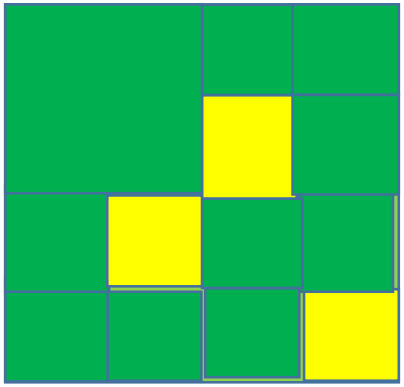
Net Loss!





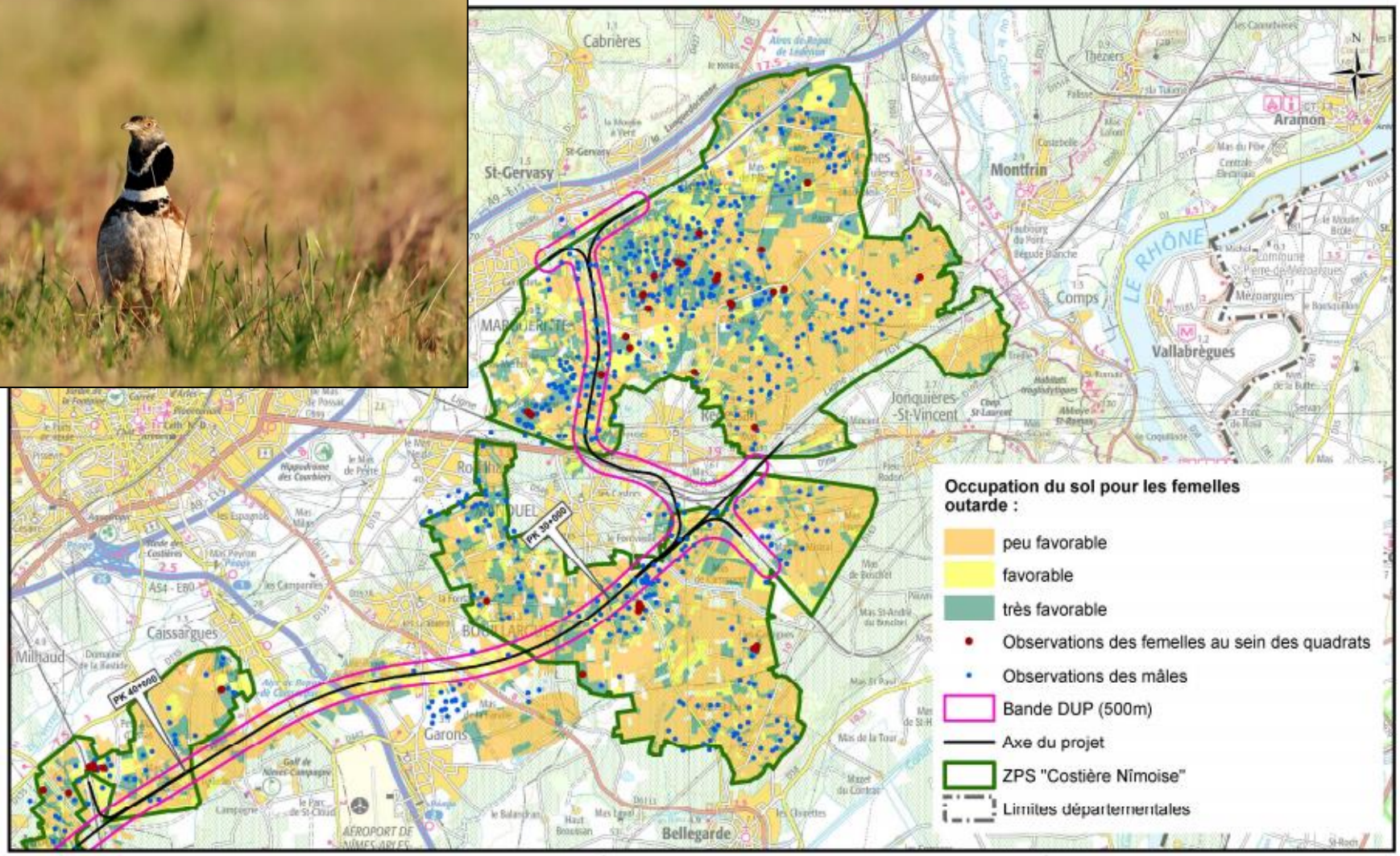






A ratio of 3 to 1 actually means we accept to loose 25% of the remaining unprotected biodiversity

The Nîmes – Montpellier line



Loss – gain calculations

-3 units/ha

-2 units/ha

See Quétier et al. (2015),
Sciences, Eaux et Territoires

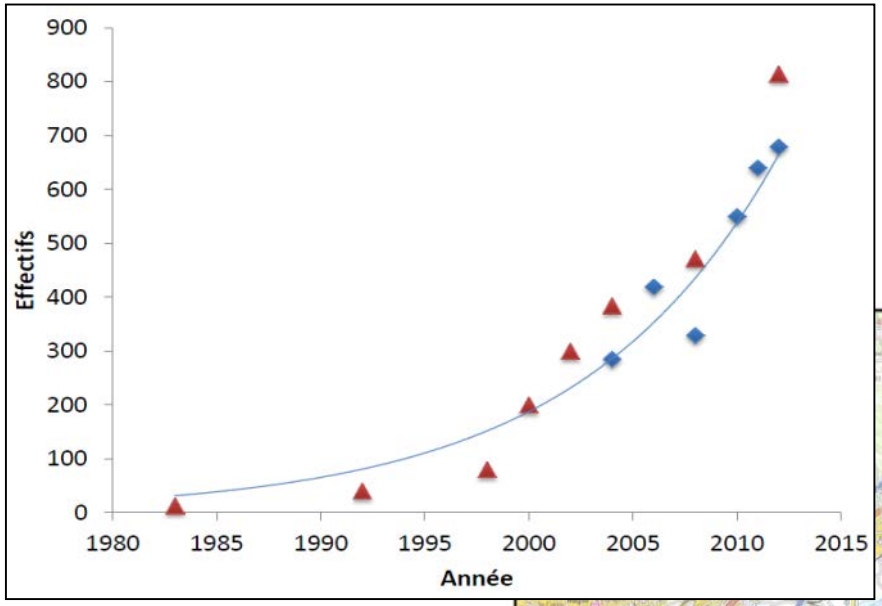
Loss – gain calculations

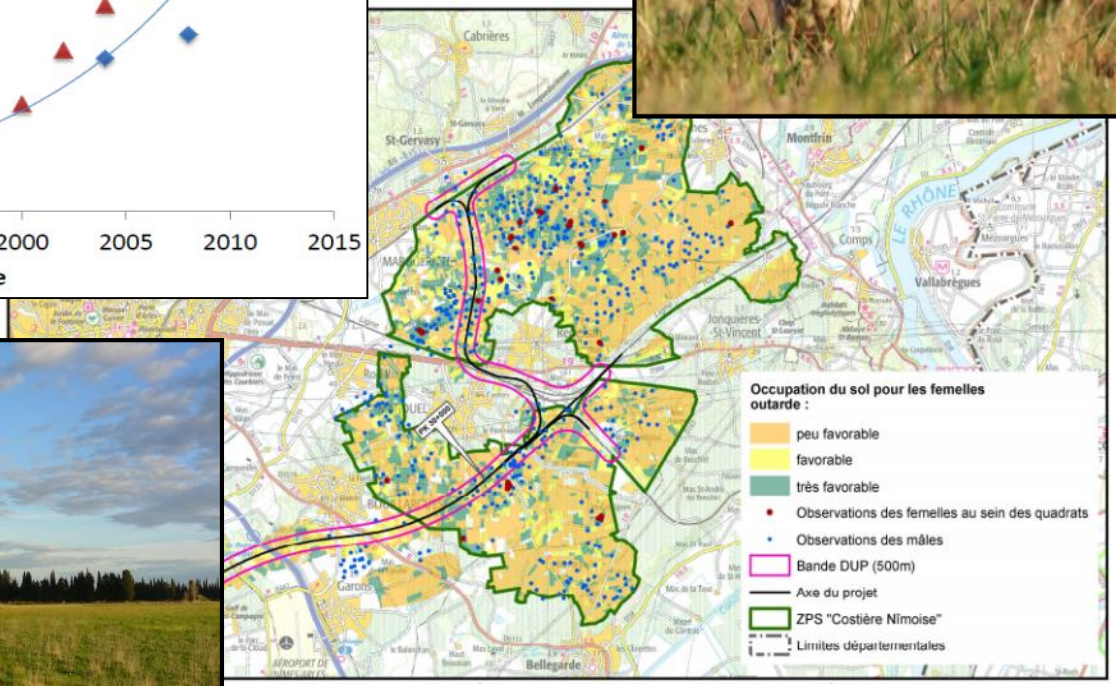
+2,5 units/ha

+1 unit/ha

See Quétier et al. (2015),
Sciences, Eaux et Territoires

Does it work?





Full analysis in PhD of Pierrick Devoucoux (2015) and Coralie Calvet (2016)

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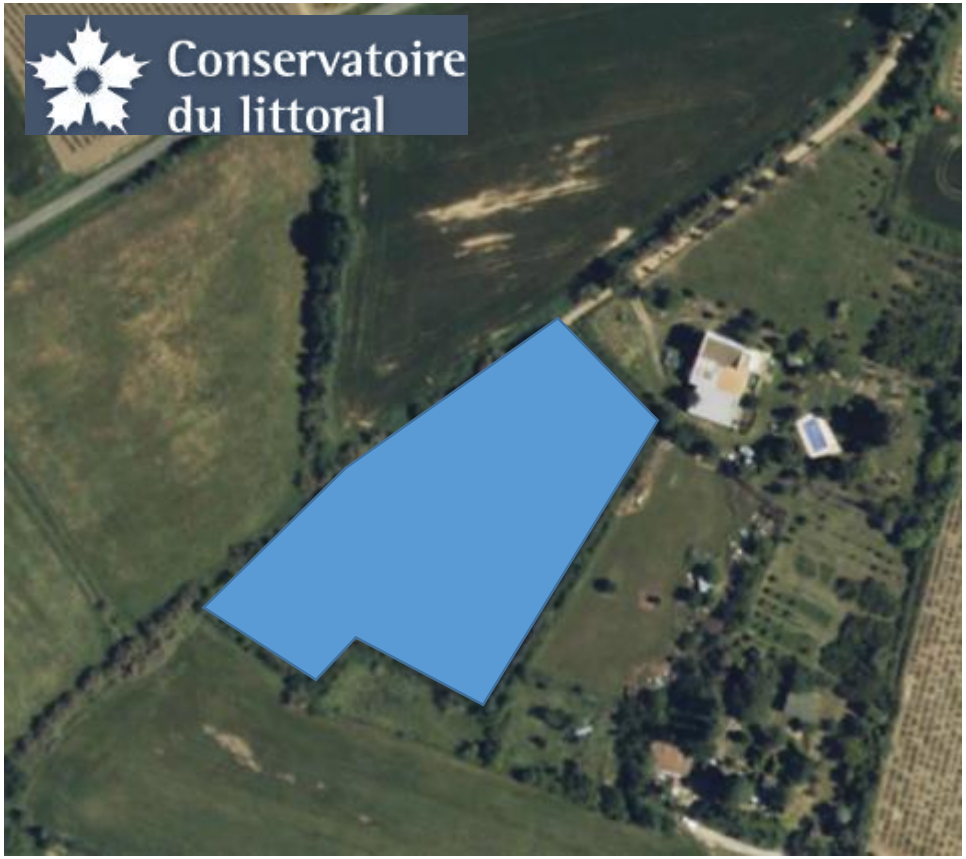
Governance challenges



Images taken from www.geoportail.fr

Governance challenges

Images taken from www.geoportail.fr

The Cossure habitat bank

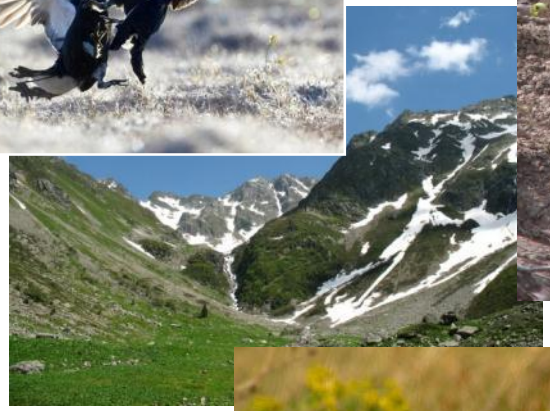
Purchase of 357ha at 12500 €/ha (~4.5 M€)
Restoration & management: 12 M€
Purchase + restoration: 35000 €/ha
Credits sold at > 40 000 €/ha

Sources: CDC Biodiversité & *Réserve Naturelle Nationale des Coussouls de Crau* : www.reserve-crau.org

Other pilot habitat banks

- **Cossure (Provence)**
  - Steppe birds
- **Farmland in Alsace**
  - European hamster
- **Subalpine valley (Alps)**
  - Black grouse
- **Hedgerow landscape (Britanny)**
- **Peri-urban green spaces (Paris)**
- **Open med. Habitats (Languedoc)**

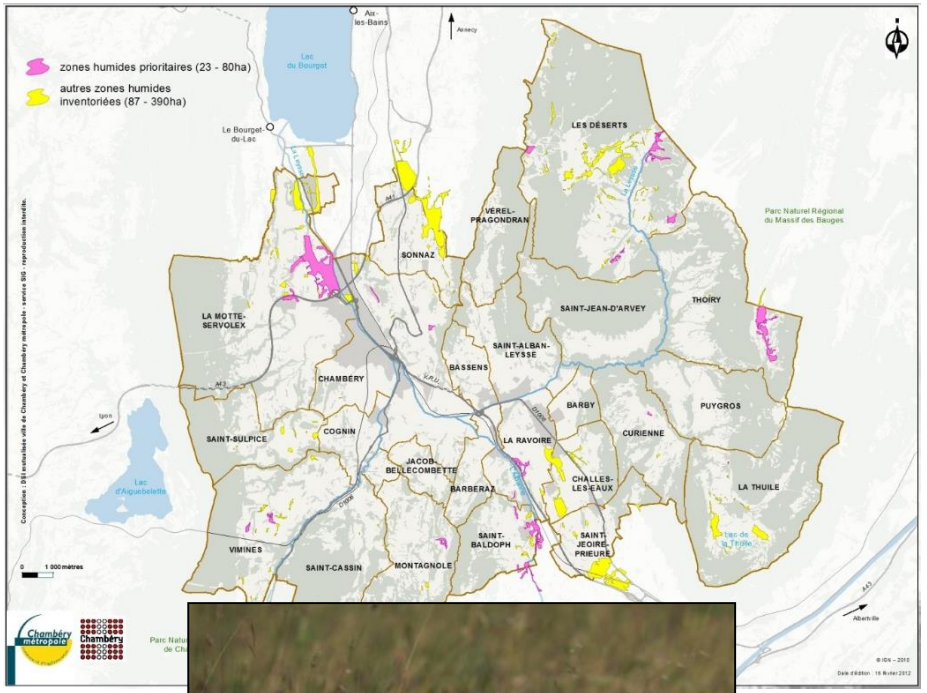





Other habitat bank-like approaches

- **Wetlands around Chambéry**

Wetland restoration jointly funded by developers and the water basin agencies



- **Stone curlew conservation around Lyon**

LPO (Birdlife partner in France) manages a conservation program (based on signing contracts with farmers), funded by developers

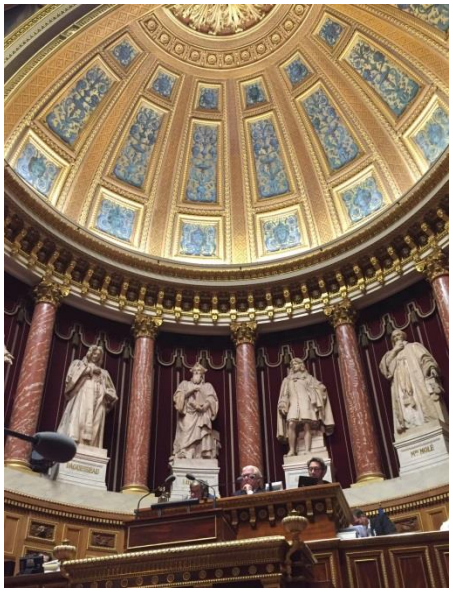
Technical and scientific challenges

- Lack of standardized ecological equivalency assessment methodologies – but this can spur innovation
- Variation in definitions of significance of impacts – and the treatment of “common” biodiversity
- Few shared databases
- Little practice or guidance in setting baselines
- Uncertainties about ecological restoration

Organizational & governance challenges

- Unstable institutional environment (laws, rules, etc.)
- Ineffective implementation (heterogeneous depending on location and sectors concerned, and local political support)
- Specific silo-based procedures (wetlands, endangered species)
- Limited cumulative impacts assessment, and offsets not integrated into broader conservation or restoration plans
- Limited staff capacity of regulators (numerous applications, permitting phase, control and monitoring)
- Costs of compensatory measures; which take time to be budgeted in project design
- Varying social acceptance of projects and biodiversity offsets

The promises of a new Biodiversity Law



A Law 2 years in the making (2014-2016)

Some interesting changes:

- NNL and net gain objectives spelt out
- Rights & duties of “offset operators”
- Option for habitat “banking”
- A type of conservation easement (not perpetual)
- National public georeferenced database on offsets
- Environmental liability regime in the Civil Code

Specific changes to EIA rules decided in parallel

Lessons learned

- Numerous voluntary initiatives…
  but you need regulation to:
  - get traction
  - level the playing field
  - ensure long-term commitments
  - build institutions
- Changing laws and regulations takes time and opportunism to build political will
- Pilots and experimental approaches are a useful first step (e.g. metrics, habitat banking) but can create precedents
- More research is needed on technical and organizational stumbling blocks
- Demand and supply of offsets must be addressed in parallel

Thank you !

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