

IS ECOLOGY SCIENCE USED AT ITS FULL POTENTIAL? THE PERSPECTIVE OF 44 YEARS OF PRACTICE IN LINEAR INFRASTRUCTURE PROJECTS.

Lighting talk presented by PhD Student Caroline Vincent, directed by Cécile Blatrix (Pr. in Political Sciences) & Nathalie Frascaria-Lacoste (Pr. in Ecology).

Subject of PhD : “Environmental assessment, a lever for mainstreaming ecology in public action ?”

CONNECTIVITY

“Roads and highways hinder animal crossings (unknown environment, noises, collisions) and disrupt the genetic exchanges between the two sides. [...] The reduction of genetic exchanges can lead to the disappearance of an isolated population.”

“The project would represent a physical boundary, an obstacle to wildlife movement. [It] would [...] considerably disrupt the ecological and hydraulic functioning of the environment. Habitat fragmentation is an essential component that must be taken into account for the survival of animal and plant populations.”

“This project impacts ecological corridors in several locations, and creates cumulative effects on the ecological functionality of local natural areas. [...] [It] will create a barrier [...] that will become a real obstacle for less mobile species [...] and a break between animal and plant populations.”

“[The project] does not affect the continuity of high trophic level species [...] because they will not be hindered by the obstacles linked to the construction. However, they will be affected indirectly through the species they predate on. [...] Ecological continuity should be only slightly altered because the effects considered will not prevent the completion of biological cycles.”

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1988

1997

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2011

2018

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SIGNIFICANCE ASSESSMENT JUSTIFICATION

“[The project] encroaches on the Lirou rypsilva. It is therefore necessary to reconstitute a riparian vegetation in continuity with the existing one along the watercourse. It is a question here of maintaining the essential functions of these riparian zones [...]. [Moreover, the site "Périé"] will be affected by the project, so it is advisable to reconstitute a vegetation cover as diversified as possible ...”

“Over most of the project, the vegetation that will be destroyed ... [is] unoriginal vegetation ... Nevertheless, in the absence of the road project, this vegetation would eventually become well established and give a kind of forest [...]. The project owner therefore considers that it is his duty to reconstitute this vegetation cover.”

“[This project] will result in the destruction of wetlands that are favorable to a range of interesting amphibians, [...] a break in ecological continuity and will constitute a new barrier to amphibian movement. The potential impacts are considered moderate to low for these species.”

“The work may induce changes in trajectory during the functional migrations of marine fish between the coast and the open sea without preventing them or affecting the survival of the species. Biological continuity is therefore maintained at the population level. A medium level of effect [...] is retained.”

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LIGHTING TALK

MITIGATION HIERARCHY

1988
9 PAGES

chapitre V
Mesures compensatoires des
impacts négatifs.

1997
41 PAGES

Mars 1997
Etude d'impact - Liaison interrégionale d'Evènement Nord de Montpellier - Section RD 109 - RD 906

- D -
Les impacts et mesures envisagées pour supprimer, réduire et si possible compenser les conséquences dommageables.

- I. La qualité des eaux souterraines
- II. Les écoulements superficiels
- III. La faune et la flore
- IV. Le paysage
- V. Le patrimoine culturel et architectural
- VI. Les espaces acquis au titre de la T.D.E.N.S.
- VII. L'agriculture
- VIII. Le réseau viaire
- IX. La Défense des Feux contre les Incendies (DFCI)
- X. L'urbanisation
- XI. La phase de chantiers
- XII. La pollution de l'air

2011
81 PAGES

PIECE E : ETUDE D'IMPACT
IMPACTS DU PROJET ET MESURES ASSOCIEES

PARTIE V
IMPACTS DU PROJET ET MESURES ASSOCIEES

2018
137 PAGES

5 Mesures prévues par le
pétitionnaire



Document 3 : Etude d'impact du parc sur l'environnement valant document d'incidences
au titre de la Police de l'eau et des réseaux aquatiques 841

LIGHTING TALK



Environmental Impact Assessment Reports

Indicateur ^a	Pertinent ^a	1 ^a	0,8 ^a	0,6 ^a	0,4 ^a	0,2 ^a	0 ^a	Commentaires ^a
		1 ^a	0,7 ^a	0,3 ^a	0 ^a			
Critère 0 - Visibilité et accessibilité de l'étude d'impact ^f								
Inc. Taille, lisibilité, répétition des critères, organisation logique, mise en évidence des impacts et de la justification du raisonnement								
Structure rédactionnelle de l'étude d'impact	□	Plan adapté aux spécificités du projet et suivant un cheminement logique	Plan adapté aux spécificités du projet mais sans prise en compte spécifique de l'environnement	Plan suivant les attendus réglementaires, nombreuses répétitions entre paragraphes	□			□
Accessibilité de l'étude d'impact	□	Rédaction optimisée avec le moins de répétitions possibles, l'explicitation de tous les concepts mobilisés pouvant nuire à la compréhension des éléments et des réflexions rythmant l'étude	Entre 2a	Existence d'un résumé non technique et/ou d'une présentation synthétisée des résultats	□			□
Accessibilité concernant les sources, les données et les justifications dans les études d'impact	□	Les données sont présentées dans le corps du texte ou dans des annexes précisées dans l'EI et située à la suite du document principal, de sorte à ne former qu'un document complet et cohérent	Certaines données sont sources, dans le corps du textes ou renvoient à des annexes, et certaines ne figurent pas dans l'EI, mais la justification reste à peu près valide	La dispersion des données entre le corps de l'EI et les annexes et le mauvais triage rend la lecture et la compréhension de la justification difficile	□			□
Résumé non technique	□	Résumé synthétique clairement rédigé et permettant d'aller droit au but de façon claire et compréhensible	Résumé partiel, moyennement synthétique mais permettant d'identifier la plupart des éléments importants	Présent	□			□
Illustration de l'étude d'impact	□	Très bonne adéquation illustrations / contenus	Présence d'illustrations mais partiellement ou pas toujours adéquates	Présence de supports visuels	□			□
Taille des études d'impact	□	L'étude d'impact est très synthétique et présente peu de pages	Entre 2a	L'étude d'impact cumule beaucoup de pages du fait de répétitions	□			□

- **Hypothesis:** "The quality of environmental impact assessment has improved over time."
- **Method to test the hypothesis:** my own ecological quality assessment tool used on different project's cases.

® #ecoducs, Twitter



- The biodiversity is still reduced to taxonomic diversity.
- The assessment of impact's significance would gain from increasing the importance of ecology teachings and methods in order to determine more accurate consequences on the environment.
- Great improvements have been made on mitigating and offsetting measures over time. Yet, these measures are based on the assessment of impact's significance.

**THANK YOU FOR YOUR
ATTENTION**

BIBLIOGRAPHY

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