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19 Octobre 2022

Restauration des paysages forestiers

Objectifs, enjeux et opérationnalité

La commande



- **À quels enjeux la RPF entend-elle répondre et de quelle manière ?**
- **Quelles sont les évolutions et les diverses approches possibles ?**
- **Quelle traduction politique aujourd'hui ?**
- **Existe-il des controverses, des points de vigilance, des défis pour son développement ?**



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Défis de la Décennie



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Enjeux et objectifs

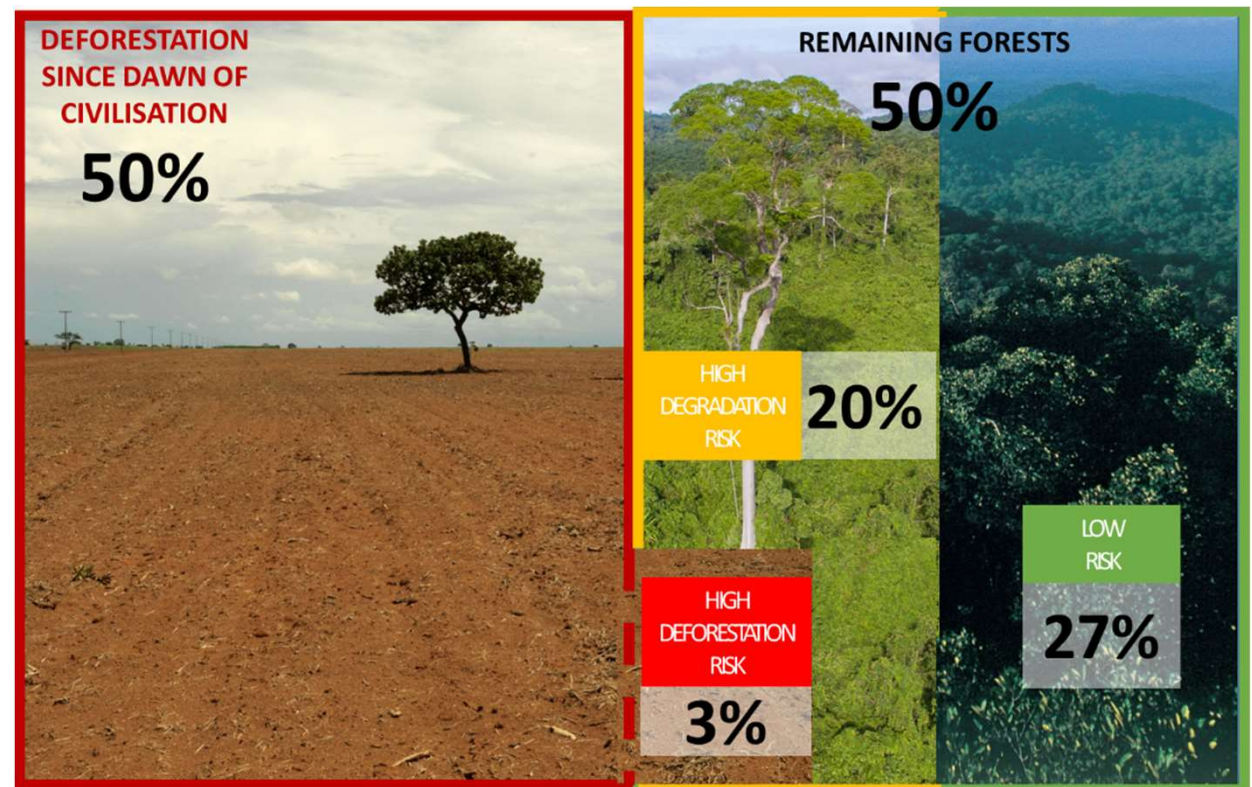


Déforestation

- Déjà disparus : 3 trillions d'arbres or 4 milliards d'ha ; 240 millions d'ha depuis 25 ans (Crowther *et al.* 2015, Keenan *et al.* 2015)
- En cours : 24 fronts, 10% déboisés entre 2004 et 2017 (WWF 2020) ; circa 150 Mha (WWF 2014) *déboisés entre 2014-2030*.
- Raisons : faim de terres agricoles et autres changements d'usages des sols

Dégradation (Dudley 2006, 2012; Ghazoul *et al.* 2015)

- Qualités écologiques, sociales, économiques des forêts
- Haut risque 1,729 Mha (WWF 2014)



Enjeux et objectifs



Pourquoi restaurer ?

✓ Pour la biodiversité

✓ Pour le climat

Stock de carbone (2^{ème}, >50% dans le sol)

Emissions évitées dans des produits bois durables

Adaptation des forêts elle-mêmes

✓ Pour la société

On a tous besoin de ressources forestières

Les terres dégradées sont un coût

Valeurs et services écologiques associés



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Le Brusquet, Haute Provence

1876



Digne, Haute Provence

An Analysis of Forest
Restoration 120 Years
after Reforestation on
Badlands in the
Southwestern Alps

Daniel R. Vallauri^{1,2,3}
James Aronson⁴
Marcel Barbero⁵

Restoration Ecology
10(1):16-26

1996

Vingt ans après



Etapes politiques



2000

Definition de la RPF (Segovia, WWF/IUCN)



2003

Global Partnership on FLR (GPFLR)



2009

Congress US adopte le FLR Act



2011

Bonn Challenge



2014

Déclaration de New York sur les forêts



2015

Mechanism F&LR de la FAO pour appuyer les pays membres à mettre en œuvre la RPF



United Nations
Convention to Combat
Desertification

2019

Engagement lors de la COP UNCCD de restaurer 100 million ha de terres dégradées



2021

Lancement de la Décennie de la restauration des écosystèmes ONU



2022

Legislation UE (en cours)

Initiatives régionales

2007

Launch of the Great Green Wall for the Sahara and the Sahel Initiative



2014

Initiative 20x20



2015

afr100



2017

Agadir Commitment

2019

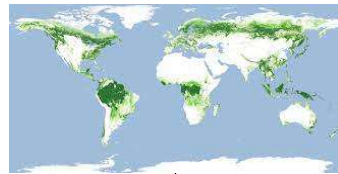
ECC30



Une littérature nourrie

IUCN and WWF - Rehabilitation and Restoration of Degraded Forests (Lamb & Gilmour 2003).

IUCN – A World of Opportunities (2011)



SER - International Standards for Ecological Restoration (McDonald et al. 2016).

Book on integrated approaches to FLR (Mansourian & Parrotta 2018).

IUCN – Biodiversity guidelines for FLR (Beatty et al. 2018).

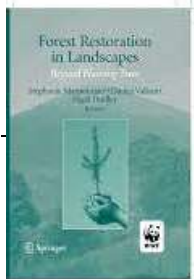
GPFLR – FLR principles (Besseau et al. 2018).

FAO - Restoration in Action Against Desertification. A manual to support rural communities' resilience in Africa's Great Green Wall (Sacande et al. 2020).



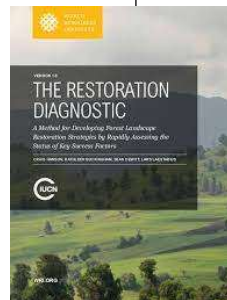
2005

WWF – FLR, Beyond Planting Trees (2005).



ITTO/IUCN – Publication on the art of restoring forest landscapes (ITTO & IUCN 2005).

2015



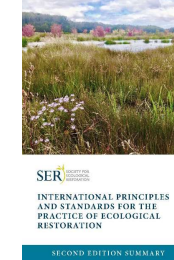
FAO- Building Africa's Great Green Wall (Berrahmouni et al. 2016).

IUCN Barometer of Progress on FLR (Dave et al. 2017).



IUFRO – Practitioner guide (2017).

IUCN – Guidance on the mitigation potential of FLR (König et al. 2019).



CIFOR – collaborative monitoring for FLR (Evans & Guariguata 2019).

FAO & WRI - The Road to Restoration, A Guide to Identifying Priorities and Indicators for Monitoring FLR (Buckingham et al. 2019).



2020



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Où en sommes nous aujourd'hui ?



Une approche intégrée

- “A **planned process** that aims to regain **ecological integrity** and enhance **human well-being** in deforested or **degraded landscapes**” (Segovia, 2000 by IUCN/WWF)
- « La restauration des **paysages** forestiers consiste à **inverser** le **processus** de **dégradation** des sols, des zones agricoles, des forêts et des bassins versants, afin que ceux ci retrouvent leur **fonctionnalité écologique**. Elle vise essentiellement à améliorer la **productivité des paysages** et leur capacité à répondre aux **besoins** divers et évolutifs **de la société** » (Besseau *et al.* 2018, GPFLR)

Reflecting on twenty years of forest landscape restoration

Stephanie Mansourian^{1,2,3,4}, Nora Berahmouni⁵, Jürgen Blaser⁶, Nigel Dudley⁷, Stewart Maginnis⁸, Musonda Mumba⁹, Daniel Vallauri¹⁰

Twenty years ago, in 2000, the term “forest landscape restoration” (FLR) was first defined by a group that included among others, all of the authors on this paper. Today, FLR is widely accepted and promoted among diverse groups, at all levels, from the political to the scientific. To mark FLR's 20th anniversary, we look back at major progress and challenges faced to implement this concept since its definition. We explore specifically five questions: (1) What are the top achievements and milestones related to FLR in the last 20 years? (2) What are key FLR products? (3) What are major FLR projects worth showcasing? (4) What have been significant obstacles to FLR in the last 20 years? (5) What are priorities taking FLR forward? Our intention with this article is to contribute contextual material for the launch of the UN Decade on Ecosystem Restoration as well as to the many other ongoing FLR initiatives around the globe.

Key words: forests, forest landscape restoration, restoration, UN Decade on Ecosystem Restoration

Conceptual Implications

- Understanding the historical development and framing of forest landscape restoration (FLR) provides context to its specific features.
- Close scrutiny of FLR implementation and evolution over time raises specific challenges that need addressing.
- Significant mobilization around FLR has contributed to the UN Decade on Ecosystem Restoration (which goes beyond FLR) and in turn, the Decade provides an opportunity to develop and improve FLR implementation.

Introduction

Twenty years ago, together with 23 other individuals representing different organizations and disciplines, we met in the Spanish city of Segovia to plan the new WWF and IUCN forest restoration program. The issue of forest restoration at large scale was new to both organizations, which previously worked on nature conservation mainly through protection and sustainable management. One agenda item was to frame how the organizations would approach forest restoration. The term “forest landscape restoration” (FLR) was coined and defined, along with its dimensions, added value, and key components.

Today, this group of authors continues to work on FLR. We take this anniversary, as well as the upcoming UN Decade on Ecosystem Restoration (2021–2030), as an opportunity to reflect on some of the major milestones, challenges, and future

directions for FLR. Our aim is to contribute contextual material for the launch of the UN Decade on Ecosystem Restoration as well as to the many other ongoing FLR initiatives around the globe. In doing so we also seek to clarify the reasons that led to the need for a new approach such as FLR and the distinctive value of FLR, as opposed to other restoration or reforestation approaches.

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Author contributions: SM conceived the paper; all authors responded to the five key questions that formed the basis for this article and contributed to drafting the article.

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Où en sommes nous aujourd'hui ?



Principes de la RPF

Focus on landscapes

Engage stakeholders and support participatory governance

Restore multiple functions for multiple benefits

Maintain and enhance natural ecosystems within landscapes

Tailor to the local context using a variety of approaches

Manage adaptively for long-term resilience

Au-delà de planter des arbres



WWF (2018)

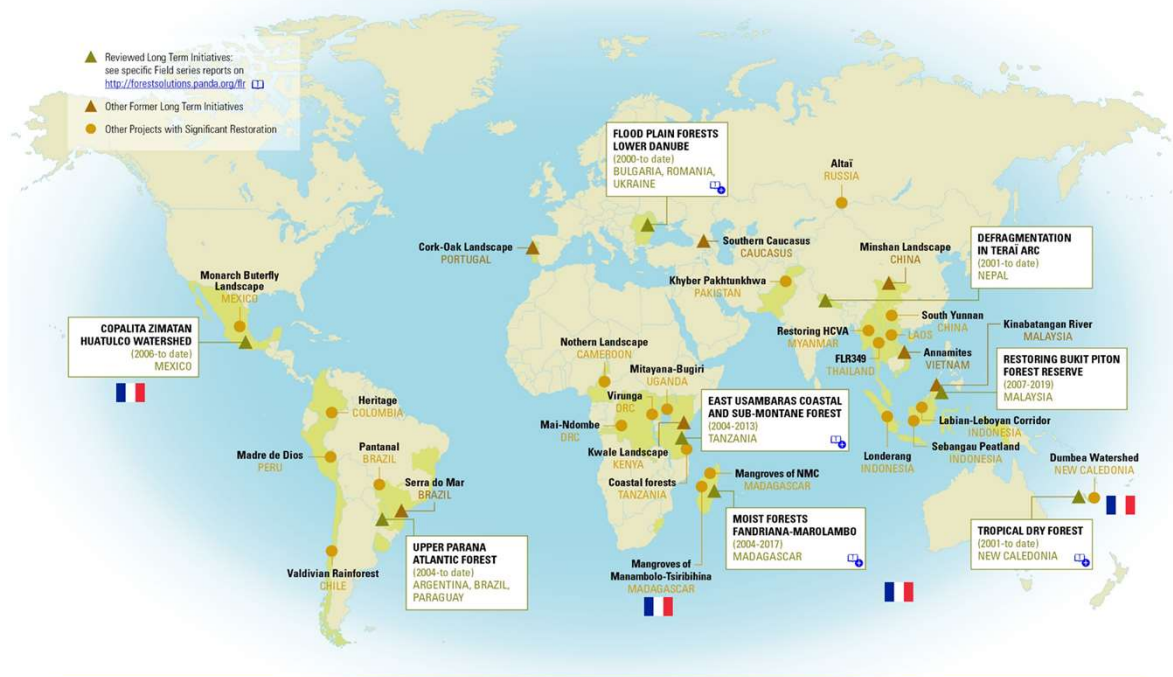
Besseau *et al.* (2018), GPFLR

Où en sommes nous aujourd'hui ?



Un si précieux retour d'expérience

A WORLD-WIDE FIELD OF EXPERIENCES FROM WWF AND PARTNERS



L'expérience en chiffres et faits

- **Approche territoriale** : sur le terrain de 17.500ha à 268.000 ha
- **Un appui dans la durée** : min 10 ans, jusqu'à >20 ans
- **Budget variable** : 1,6 à 6,7 M€ par projet
- **Arbres plantés** : 180.000 à >3 M
- **Diversité des actions** : dont alternatives agricoles, gouvernance, revenus alternatifs...
- **Un catalyseur** de l'engagement des partenaires et des communautés
- **Sources de financement variées** : Aide publique au développement, fondations, entreprises, donateurs privés



Meta-lessons		Data		Link to GPFLR principles (Besseau <i>et al.</i> , 2018)					
Theme	Wording	Frequency among landscapes	Total number of lessons*	Focus on landscape	Engage stakeholders and support participatory governance	Restore multiple functions for multiple benefits	Maintain and enhance natural ecosystems within landscapes	Tailor to the local context using a variety of approaches	Manage adaptively for long-term resilience
1. Spatial scale	FLR takes place at a landscape scale but multiple spatial scales must be considered, from sites to ecoregions as well as the ways in which they inter-relate	86%	10	X					
2. Multiple measures	Several actions in a landscape contribute to a strategic approach to FLR	86%	10	X		X		X	
3. Inclusiveness	Equitable implementation must be inclusive and build on social realities	71%	12		X	X		X	X
4. Pathways	Forest restoration can take several pathways	71%	9			X	X	X	
5. Governance	Inclusive, local level governance facilitates long-term FLR efforts	71%	6		X			X	
6. Degradation	Addressing the drivers of forest loss and degradation is a key first step in FLR	57%	4				X	X	
7. Planning	The organisation leading implementation must plan for a careful handover strategy to ensure local ownership and continuity	57%	4						X
8. Temporal scale	Commitment to FLR should be long term, but flexibility and adaptive management are necessary to incorporate changes over time	43%	5			X			X
9. Stakeholders	Mechanisms that bring stakeholders together are essential	43%	5		X				
10. Policies	Public policies and instruments are needed to support FLR	43%	4						
11. Funding	Long term financing tends to rely on public funding, but should be diversified	43%	4						X
12. Monitoring	Monitoring is always weak but crucial to support FLR implementation and adaptive management	43%	3						X
13. Science	Scientific knowledge provides an important basis for FLR interventions	43%	3						
14. Engagement	Engagement starts with awareness raising, capacity building and communications	29%	2		X			X	X

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Les défis de la Décennie



UN DECADÉ ON ECOSYSTEM RESTORATION
OPINION ARTICLE

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¹⁰Forest department, WWF France, Marseille, 13001, France

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Reverse degradation process

Maintain political momentum

Expand collaboration

Establish favorable national and local conditions

Upscale impacts

Raise quality of field implementation



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Changer de braquet

**Des projets à l'échelle :
Surface / Impact / Temps**



DECENNIE DES NATIONS UNIES POUR LA
**RESTAURATION
DES ÉCOSYSTÈMES**
2021-2030

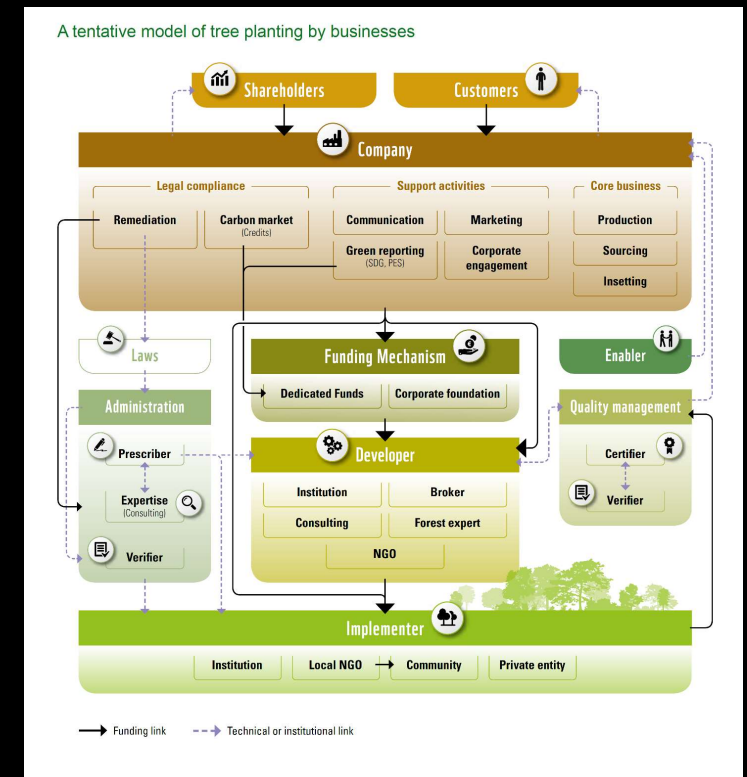
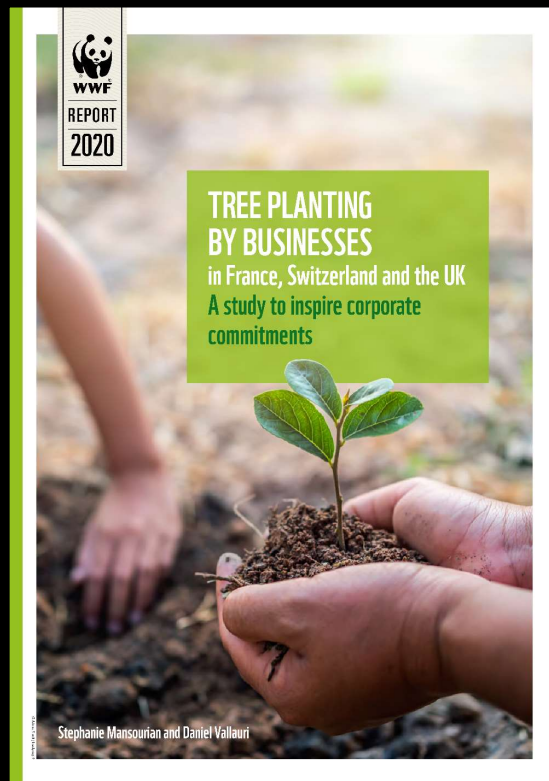
Financement public, plus et mieux ?



	US
	GERMANY
	FRANCE
	EU
	NORWAY
	GCF
	GEF

**PUBLIC DONORS
PLAY A MAJOR ROLE.
THEY SHOULD PRIORITISE
FUNDING COMPREHENSIVE
AND HIGH QUALITY
FOREST LANDSCAPE
RESTORATION.**

Entreprises, planter sans se planter ?

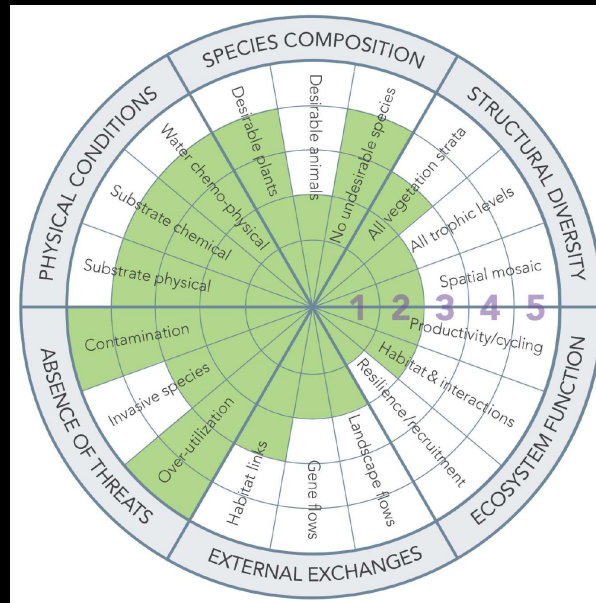


Viser des projets qualitatifs

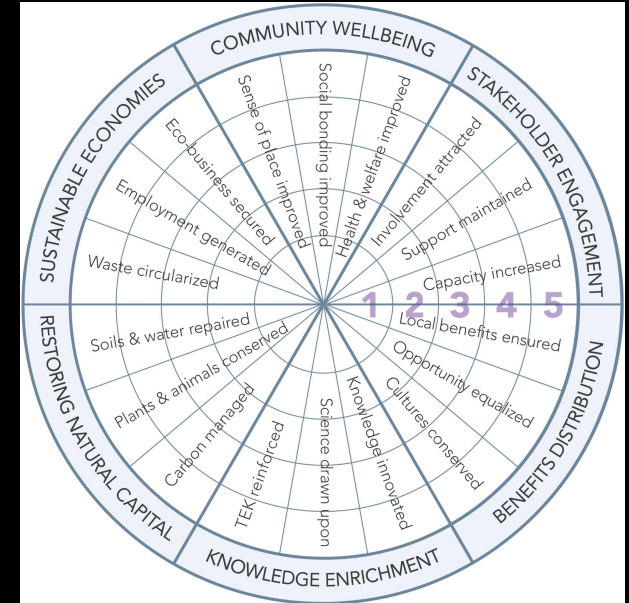
Améliorer l'interprétation
des principes de la RPF

Rassembler les
enseignements tirés des
projets sur le terrain

Outils de mesure de la
qualité des projets



Ecological wheel



Social wheel

Gann *et al.* (2018)

Renforcer le volet social

Gouvernance

Droit de propriété

Sécurité

Accès aux ressources naturelles

Développement des ressources
financières

Accès à la formation et l'éducation

Equité sociale (dont genre)

Liberté de choix

Respect des cultures



© WWF Mexico

Mieux mesurer les impacts

RESTORATION
ECOLOGY
The Journal of the Society for Ecological Restoration

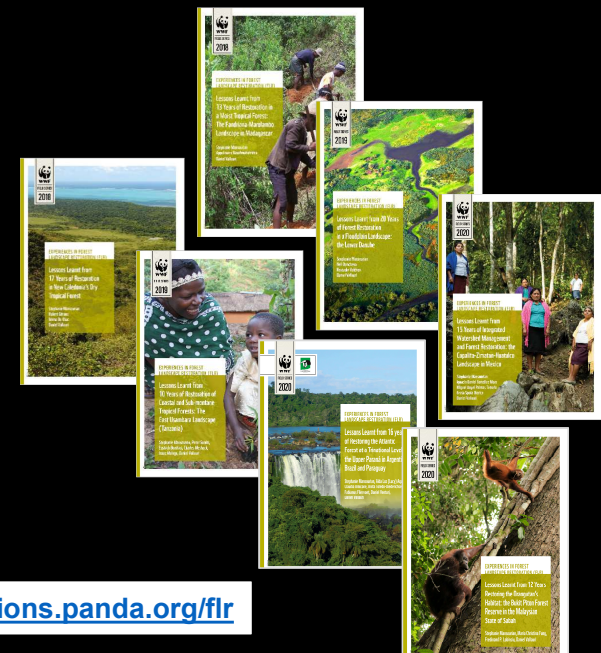
SER
SOCIETY FOR
ECOLOGICAL
RESTORATION

UN DECADE ON ECOSYSTEM RESTORATION

RESEARCH ARTICLE

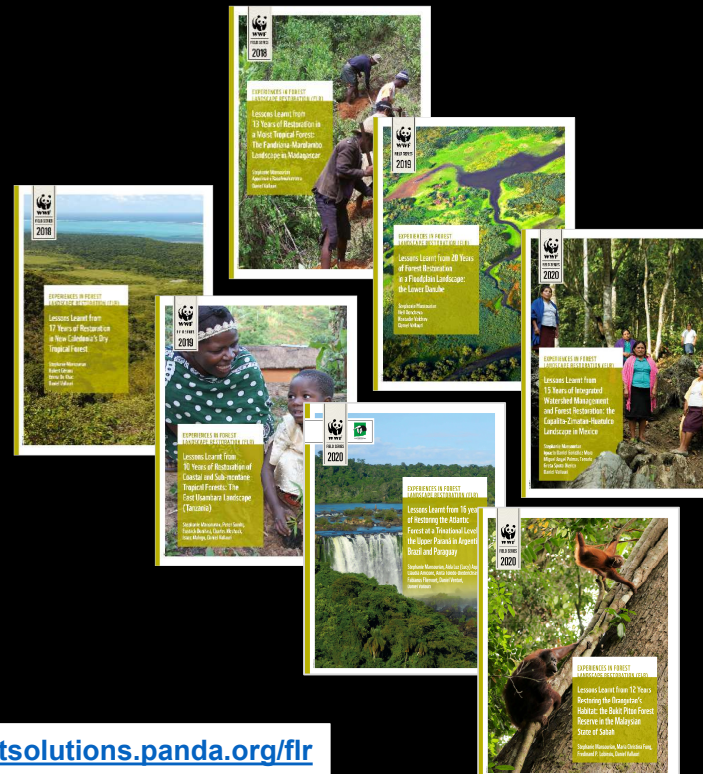
Challenges in measuring multiple impacts hinder performance recognition in forest landscape restoration: experience from seven field projects

Stephanie Mansourian^{1,2,3,4}, Daniel Vallauri⁵



<https://forestsolutions.panda.org/flr>

Partager l'expérience acquise



<https://forestsolutions.panda.org/flr>



Le dernier mot