

SERE and the international standards for the practice of ecological restoration

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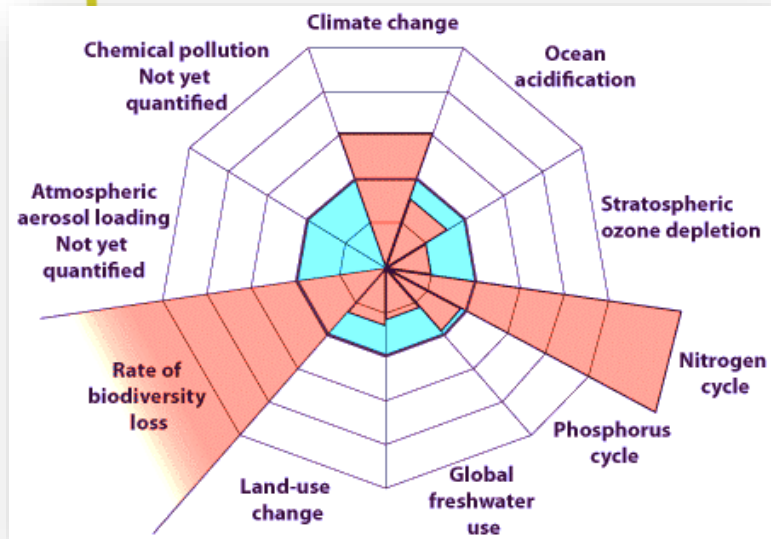
George Gann, Institute for Regional Conservation

Tein McDonald, SER-Australasia

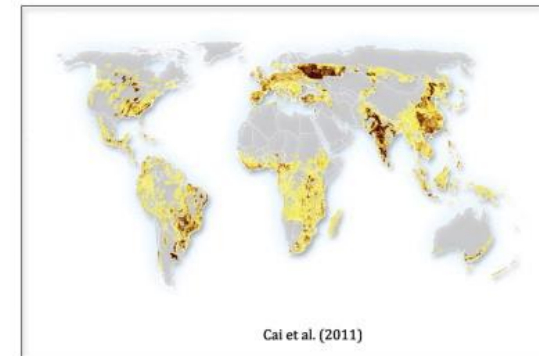
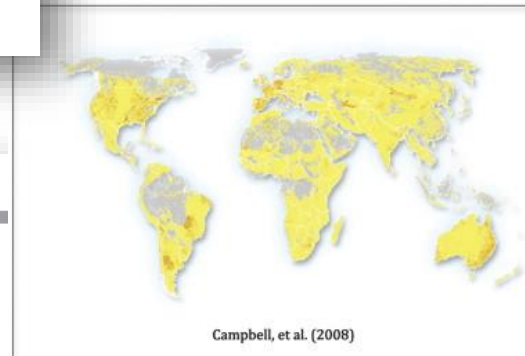
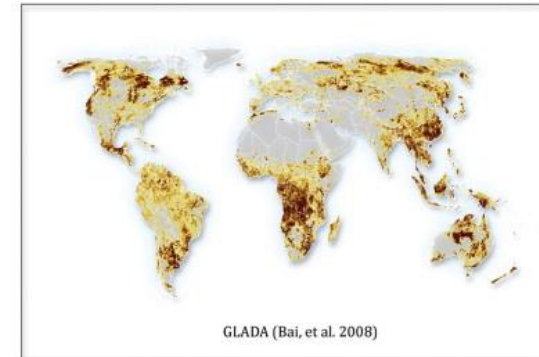
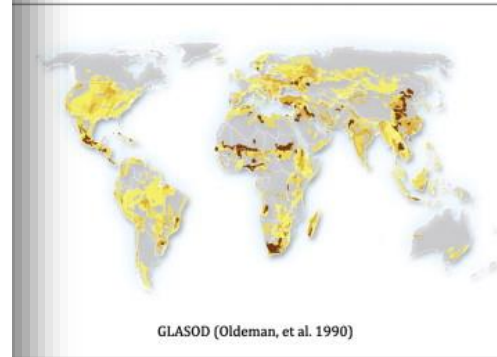




1-6 billion ha degraded land



Rockström et al., 2009



World Scientists' Warning to Humanity: A Second Notice

WILLIAM J. RIPPLE, CHRISTOPHER WOLF, THOMAS M. NEWSOME, MAURO GALETTI, MOHAMMED MAHMOUD I. MAHMOUD, WILLIAM F. LAURANCE, and 15,364 scientist signatories from 184 countries

Twenty-five years ago, the Union of Concerned Scientists and more than 1700 independent scientists, including the majority of living Nobel laureates in the sciences, penned the 1992 "World Scientists' Warning to Humanity" (see supplemental file S1). These concerned professionals called on humankind to curtail environmental

deforestation, and reverse the trend of collapsing biodiversity.

On the twenty-fifth anniversary of their call, we look back at their warning and evaluate the human response by exploring available time-series data. Since 1992, with the exception of stabilizing the stratospheric ozone layer, humanity has failed to make

the urgent steps needed to safeguard our imperilled biosphere.

As most political leaders respond to pressure, scientists, media influencers, and lay citizens must insist that their governments take immediate action as a moral imperative to current and future generations of human and other life. With a groundswell of organized

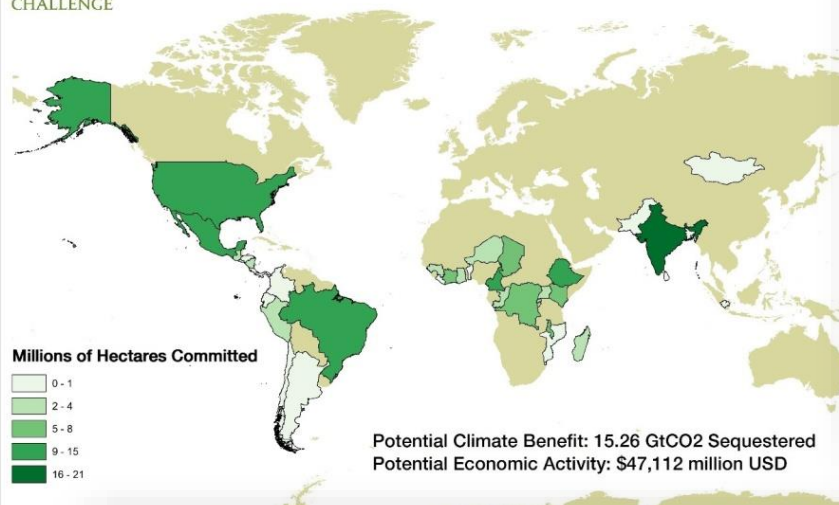


Gibbs & Salmon (2015).
Appl. Geog. 57: 12-21

THE CHALLENGE



November 2017
45 Commitments 156.02 million hectares



Potential Climate Benefit: 15.26 GtCO₂ Sequestered
Potential Economic Activity: \$47,112 million USD



WORLD
RESOURCES
INSTITUTE

Initiative 20x20

A country-led effort to initiate restoration of 20 Mha in Latin America by 2020

Global Land
The Investment
June 10, 2018

CRAIG HANSON (GLC)



Progress on the
New York Declaration on Forests
An Assessment Framework and Initial Report



MARN

Ministerio de Medio Ambiente
y Recursos Naturales

UN Decade of Ecosystem Restoration 2021 – 2030

Initiative proposed by El Salvador with the support of countries from the Central American Integration System (SICA)

Concept Note

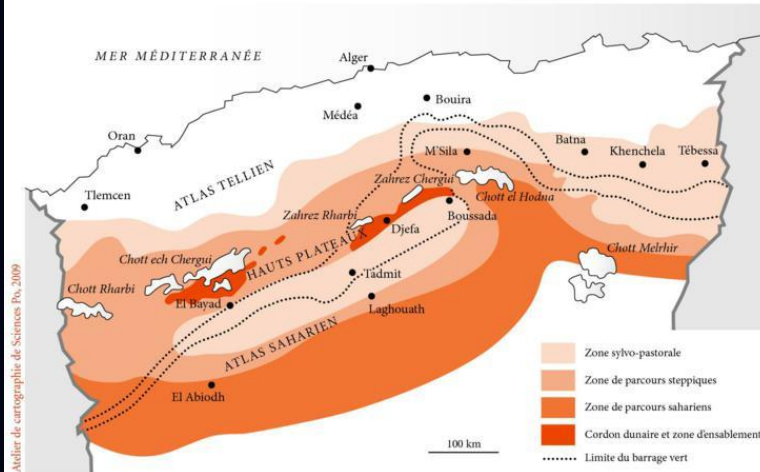
During the Bonn Challenge 3.0 high-level meeting in Brazil in March 2018, El Salvador indicated its intention to seek the proclamation of the “UN Decade of Ecosystem Restoration 2021 – 2030”. This concept note sets out the context, rationale and purpose of this initiative. The distribution of this concept note is intended to reach the international community including governmental and non-governmental actors, UN agencies, and civil society.



SECHERESSE

Synthèse

Sécheresse 1995 ; 6 : 247-55



Bilan critique du barrage vert en Algérie

Voici une analyse courageuse et objective de vingt ans de barrage vert en Algérie. À partir d'un bilan qui ne prétend pas à l'exhaustivité puisqu'il est ciblé sur une seule zone, l'auteur fait apparaître clairement les réalisations et difficultés rencontrées. Une part importante de l'article fait état des leçons à tirer de ces vingt années d'expérience algérienne.

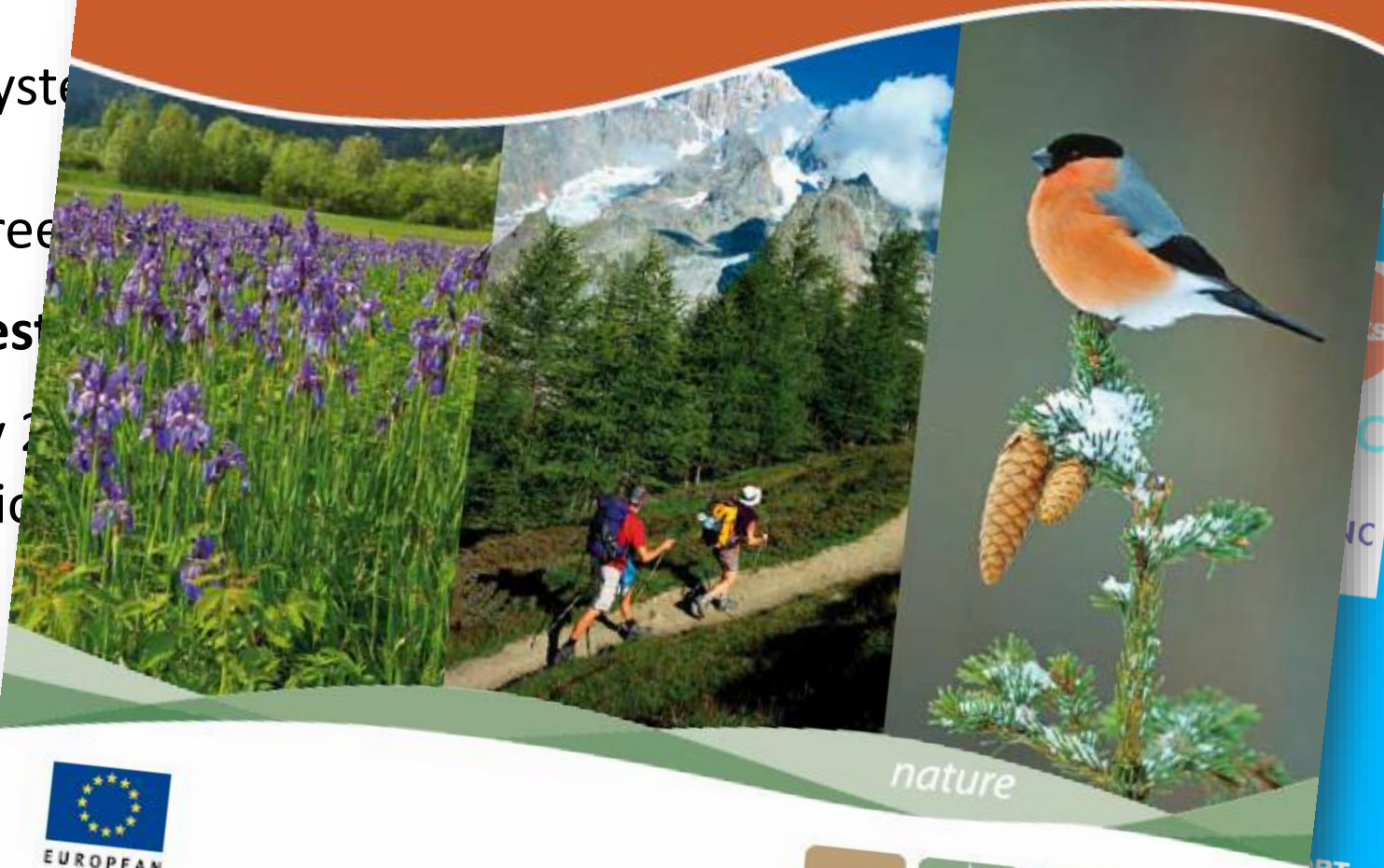
alternative processes can fight desertification more effectively, but in order to truly ensure its success, international and local policymakers alike must adapt their thinking

- FEW (SINGLE) SPECIES
- TOP-DOWN APPROACH (POOR ACCEPTANCE)
- ECOSYSTEM, NOT LANDSCAPE-SCALE
- CLEARING SHRUBLANDS, STEPPES

The EU Biodiversity Strategy to 2020

Ecosystems

- Green
- Rest
- By 2020
- 'bio



nature

THE CHALLENGE



countries should focus on strategic utilization of scientific research for economic and societal development. Restructuring of the governance of science and technology is

earmarked funds is essential to boost cost-effective restoration. Countries with a robust restoration plan and confirmed restoration efforts could be rewarded with access to further



Overview EU 2020 Targets and actions

Progress

Target 2 – Maintain and restore ecosystems and their services

By 2020, ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15 % of degraded ecosystems.

> [summary assessment](#)

Action 5) Member States, with the assistance of the Commission, will map and assess the state of ecosystems and their services in their national territory by 2014, assess the economic value of such services, and promote the integration of these values into accounting and reporting systems at EU and national level by 2020.

> [assessment for action 5](#)

Action 6a) By 2014, Member States, with the assistance of the Commission, will develop a strategic framework to set priorities for ecosystem restoration at sub-national, national and EU level.

> [assessment for action 6a](#)

biodiversity.europa.eu/mtr/biodiversity-strategy-plan/target-2-overview

guidelines and regulations should be issued and standards set up for evaluation and progress. Provision of additional

Tuqiao Zhang, Feifei Zheng, Tingchao Yu Zhejiang University, Hangzhou, China. feifeizheng@zju.edu.cn



Progress towards the target but at an insufficient rate (increased efforts are needed to meet the target by its deadline)



THE CHALLENGE



RESPONSES TO OVERCOME CONSTRAINTS FOR ER

Frequency	Response
Most often	➡ Knowledge/experience exchange, case studies
	Devoting more money/subsidies
	Simplify the public acquisition process
	➡ Awareness raising/training for stakeholders/engineers
	Legislative improvements
	More suitable planning
	➡ Active stakeholder involvement
	➡ Capacity building
	Develop a global, integrated approach (ecosystem approach)
	➡ Review or simplify the funding system
Least often	➡ Better communication
	Matching CAP or private sector money
	Improve Natura 2000 implementation
	➡ Cooperation across sectors
	Risk management for unsuccessful restorations
	➡ Learning from mistakes
	Reducing bureaucracy

EFTEC, ECNC, UAntwerp & CEEWEB (2017) Promotion of ecosystem restoration in the context of the EU biodiversity strategy to 2020. Report to European Commission, DG Environment.

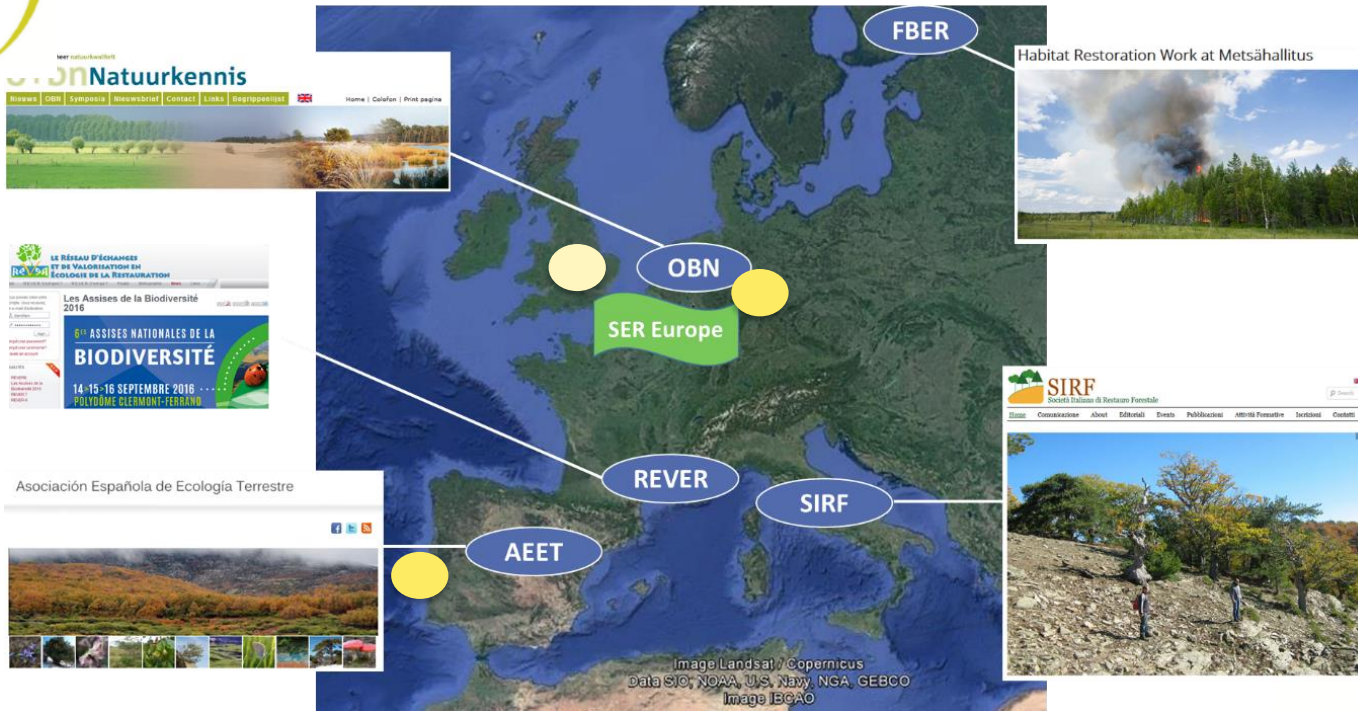


- **International network** of practitioners, researchers, indigenous people, non-governmental organization representatives, consultants, land managers and governmental agency staff who work in the field of ecological restoration.
- With nearly **3,000 members in 70 countries**, SER is well-respected as the primary global entity regarding restoration issues.
- SER members study and practice restoration in almost **all ecosystem types** – from prairies, savannas, and forests to tidal estuaries, freshwater wetlands, and coral reefs.

SER to promote high quality ER



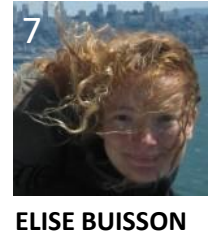
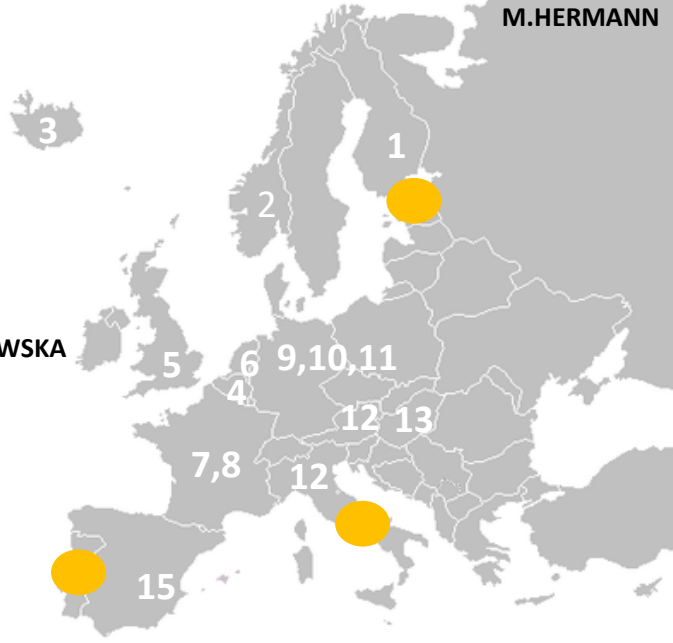
Network of networks



SER to promote high quality ER



SER Europe Board



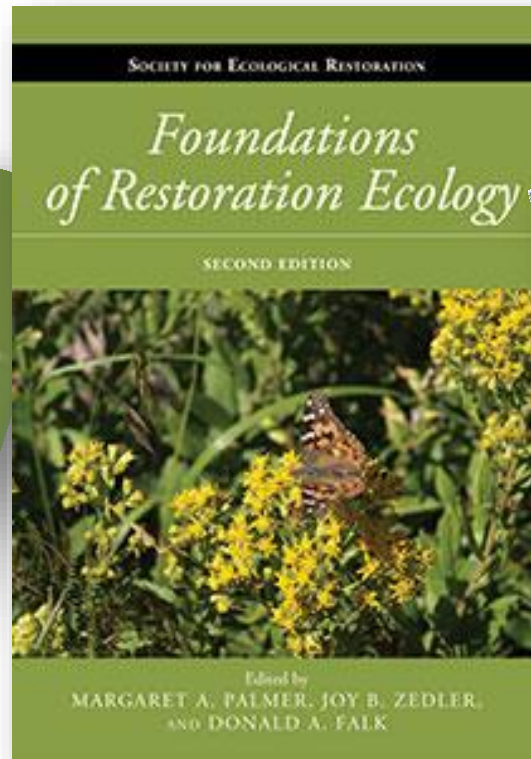
SER to promote high quality ER



Resources



Scientific journal- app



Island press
Restoration book series



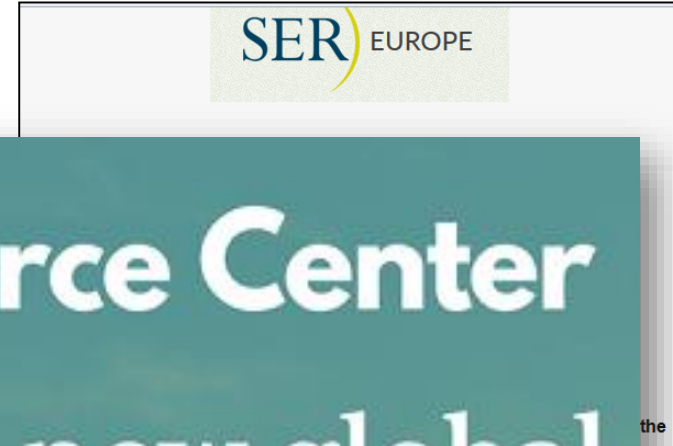
SER Reports and
Publications

SER to promote high quality ER



e-Resources

e-Newsletters



Restoration Resource Center

a primer on the new global
restoration database

www.ser-rrc.org

www.ser.org

@SER_Europe



SER to promote high quality ER



Education and training

Specialized courses

RESTORATION OF DEGRADED DRYLANDS & MONITORING OF DESERTIFICATION PROCESSES

IAMZ-CIHEAM, IUCN, ICARDA

Zaragoza, Spain, 5-10 Feb. 2018



SUMMER SCHOOL DRY GRASSLAND RESTORATION

MTA Centre for Ecological Research-EUROSITE

Hungary, August 20-24, 2018



SER to promote high quality ER

Biennial Conferences



9th European Conference
on Ecological Restoration | August 3-8, 2014
Oulu, Finland



SER Europe Conference 2016
22-26 August 2016 - Freising, Germany



SER to promote high quality ER

Professional Certification Program



November 10, 2017

[REDACTED]
[REDACTED]
United States

Dear [REDACTED]

We are pleased to inform you that you have been approved as a Certified Ecological Restoration Practitioner (CERP) under the Society for Ecological Restoration's CERP program! A review of your application indicated that you have met the high standard of knowledge and experience that we hold for practitioners throughout the world. Your certification will be valid until November 15, 2022.

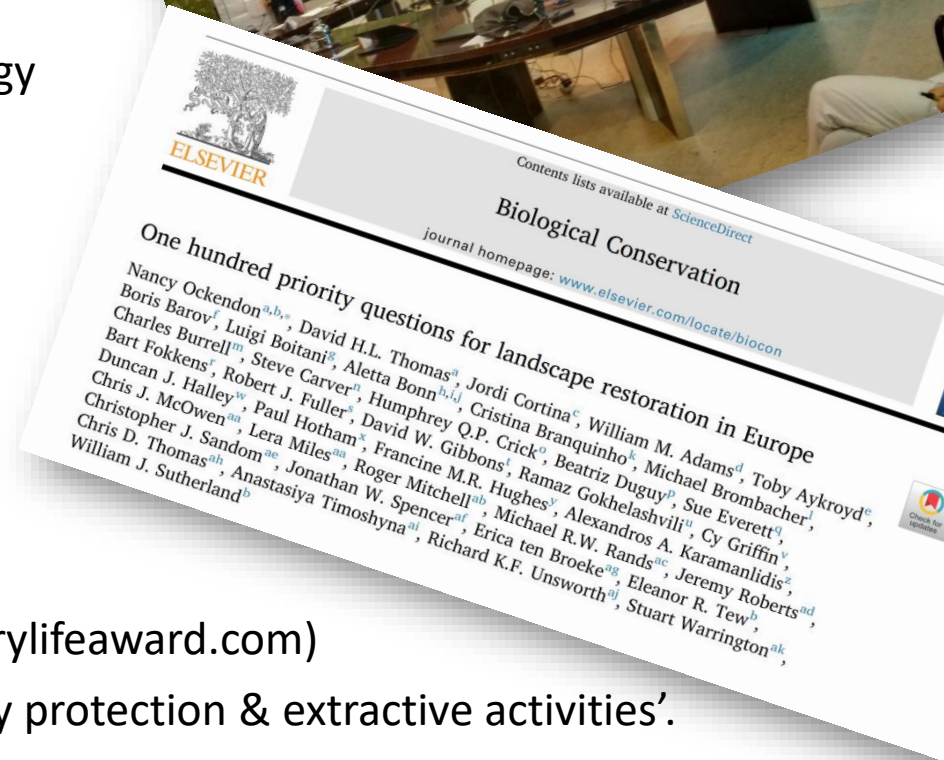


SER to promote high quality ER



Supporting the network

- Spanish Strategy GI, Connectivity, ER
- IUFRO
- EcoPlantMed Project
- NASSTEC-INSR, ES Seed Certification Strategy
- FAO-FLRM
- IUCN
- Cambridge Conservation Initiative (ELP)
- MERCES (www.merces-project.eu)
- ECOMED (ecomedb.io)
- LANDCARE (www.landcareforfuture.com)
- QuarriesAlive Conference
- Heidelberg Cement/QuarryLife (www.quarrylifeaward.com)
- DG GROW/DG ENV 'Reconciling biodiversity protection & extractive activities'
- EKLIPSE...



SER to promote high quality ER



What is hampering the effectiveness of existing approaches that aim to restore biodiversity and ecosystem function and services



EKLIPSE
Knowledge & Learning Mechanism
on Biodiversity & Ecosystem Services

Developing a mechanism
for supporting better
decisions on our
environment
based on the best
available knowledge.

CALL FOR EXPERTS No.5/2018 EKLIPSE – June 2018

What is hampering the effectiveness of existing approaches that aim to restore biodiversity and ecosystem function and services? (CfR.2/2017/2)

please visit

www.eclipse-mechanism.eu/open_calls

SER to promote high quality ER



Standards for the practice of ER



SER standards for practice



Outline

- The Challenge: Restoration is becoming mainstream, but implementation and effectiveness is inconsistent at best. Ecosystem services are a principle reason for restoration, but focus on single services can create perverse incentives.
- The Solution: SER's International Standards provide criteria for ensuring high quality restoration from project design to implementation. They can also help promote the bundling of ecosystem services.
- Next Steps: International stakeholder engagement, buy in, adoption, and implementation of ecological restoration standards. Integration between ecological restoration and ecosystem services.





Aggressive Targets = Aggressive Action

TARGETS ≠ STANDARDS

- International targets for reforestation and restoration, but no international standards for restoration.
- Without standards, actions may have unintended consequences.
- International standards can create a basis upon which to measure project and program effectiveness.

CLIMATE MITIGATION ALONE ≠ ECOLOGICAL RESTORATION

- Carbon and reforestation targets drive afforestation – native ecosystems and biodiversity can be degraded
- Minimal attention to socio-cultural/socio-economic needs and realities





External Adoption of Standards

- International bodies
 - **Convention on Biological Diversity (CBD)**
 - International Union for the Conservation of Nature (IUCN)
 - United Nations Framework Convention on Climate Change (UNFCCC)
 - United Nations Convention to Combat Desertification (UNCCD)
- International funding entities
 - World Bank
 - Global Environmental Facility
 - **Inter-American Development Bank**
 - Asian Development Bank
 - African Development Bank
- International NGOs
- Multinational Corporations



THE WORLD BANK



IDB

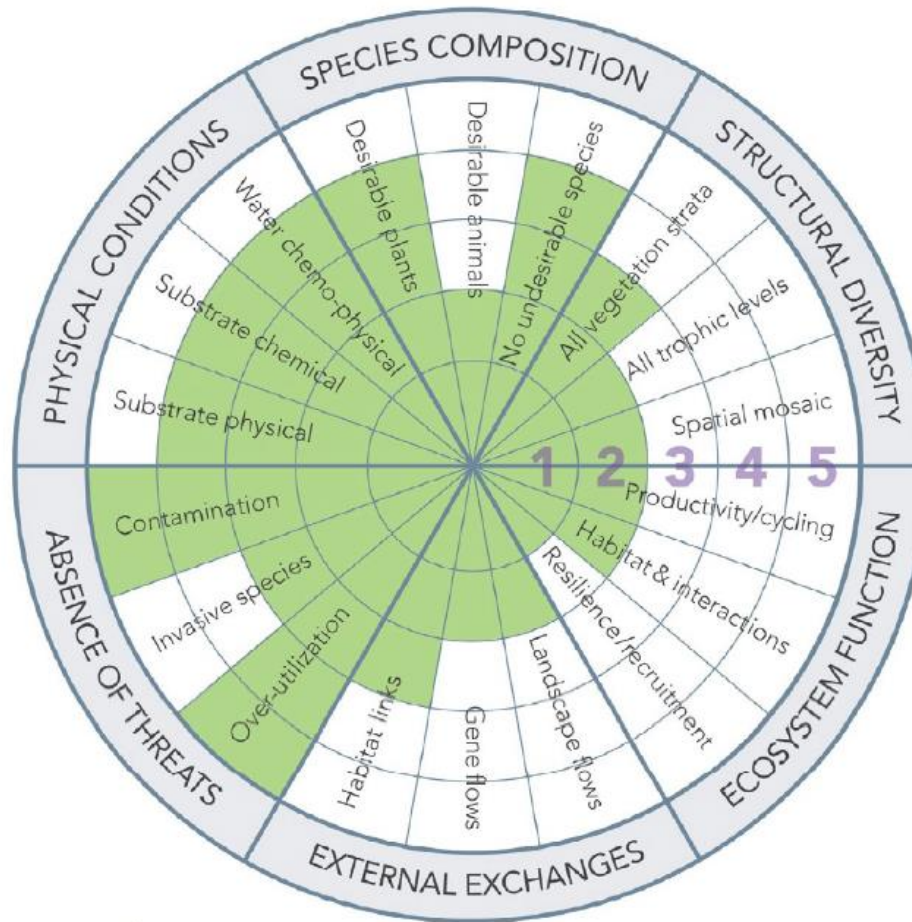
Improving lives



AFRICAN DEVELOPMENT BANK GROUP
GROUPE DE LA BANQUE AFRICAINE
DE DEVELOPPEMENT

Section II: Six Key Concepts

- **Concept 1:** local native account
- **Concept 2:** prior to development
- **Concept 3:** natural recovery potential
- **Concept 4:** toward full recovery
- **Concept 5:** long-term success
- **Concept 6:** underpins long-term restoration success



an **appropriate**
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1 all stakeholders



Section III: Standard Practices for Planning & Implementation

- I. Planning and Design
- II. Implementation
- III. Monitoring, documentation, evaluation, and reporting
- IV. Post-implementation maintenance





International Review and Revisions (Standards 1.1)

- SER and IUCN Committee on Ecosystem Management cohosted a Forum on Biodiversity and Global Forest Landscape Restoration in Brazil in August 2017.
- More than 50 participants from more than 30 countries attended the forum, which included a specific track to discuss the standards.
- Outcomes included recommendations to:
 - Expand the decision space for FLR to make biodiversity outcomes a greater focus in restoration planning and to include a wider array of ecosystem services in the evaluation of restoration needs





WWF Spain Standards for Forest Restoration

PRINCIPLES

1. Legislation and principles of FR
2. Diagnose
3. Reference ecosystem
4. Design
5. Project structure and contents
6. Implementation
7. Maintenance
8. Evaluation and monitoring



Estándares de para la Certificación de Proyectos de Restauración de Sistemas Forestales

Guía de Principios, criterios e indicadores.
Diciembre 2012



1. Urgent need to improve the quality of ER programs
2. Crucial role of professional organizations
 - i. Develop, sustain, link resource platforms
 - ii. Collaborative initiatives (policy guidance, courses, training materials...)
 - iii. Promotion, adoption and adaptation of standards of good practices



RESTORING LAND, WATER &
COMMUNITY RESILIENCE

SER2019 | CAPE TOWN
SOUTH AFRICA

SER2019

Cape Town, South Africa



<https://ser2019.org>

ALICANTE, Spain



SER Europe Conference
September 2020

THANK YOU!!



JORDI CORTINA
Jordi@ua.es
@RestEcol-UA

TERECOVA – *Tools for integrating ecological restoration into land planning in the Region of Valencia (CGL2014-52714-C2-1-R)*

