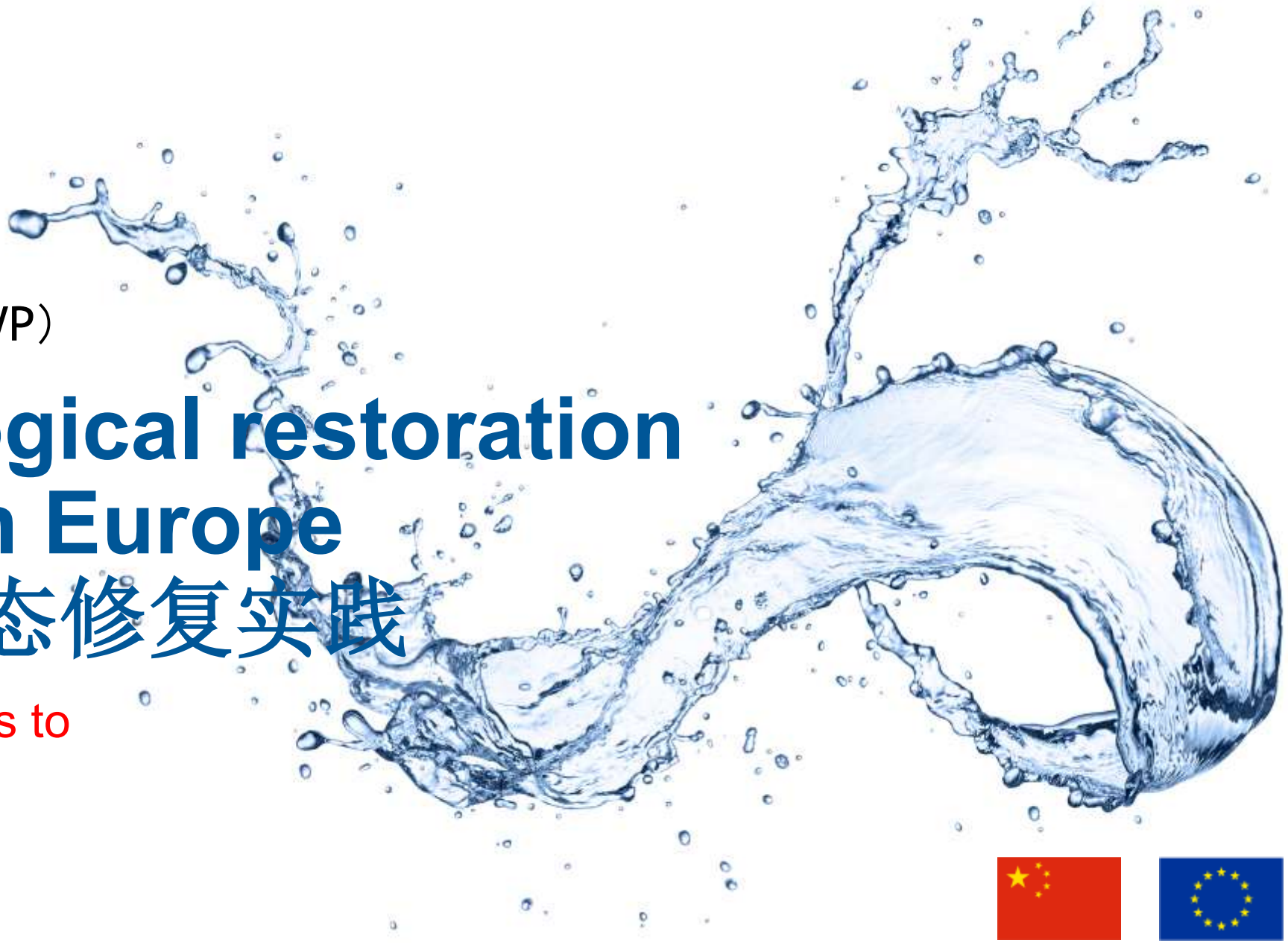
CHINA EUROPE Water Platform

中欧水资源平台（CEWP）

River ecological restoration practices in Europe
欧洲河流生态修复实践

From legal frameworks to implementation

从法律框架到实施



Global context:
Political ambition vs legal ambiguity
全球背景：政治雄心与法律模糊性

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UNITED NATIONS

- **The compromise**
- **折衷方案**
- United Nations Decade of Restoration (2021-2030)
  联合国生态系统恢复十年（2021-2030）
- SDGs 6 and 15
  可持续发展目标6和15
- Kunming-Montreal Biodiversity Framework
  《昆明-蒙特利尔生物多样性框架》

- **The reallity**
  现实情况
- Legal instruments rarely define restoration
  法律文书很少对“恢复”进行定义
- International treaties do not distinguish restoration form remediation
  国际条约不区分“恢复”与“修复”
- There is a lack of implementation of aichi target 15 due to the lack of qualitative standards
  由于缺乏定性标准，爱知目标15的执行不力

Restoration
Biodiversity
Ecosystem Services

International Treaties
国际条约

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Pollution Treaties
污染相关条约

Continuum Gap
连续统缺口

Nature Treaties
自然相关条约

Focus: Remediation
焦点：修复

Focus: Nature Restoration
焦点：自然恢复

There is no legal bridge to pass from clean ecossystem to recovered ecossytem
缺乏从清洁生态系统过渡到恢复后的生态系统的法律桥梁

Restoration
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European law for River and Freshwater
欧洲河流与淡水相关法律

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EU instrument 欧盟法律工具	Main focus 主要焦点	Contribution to river and aquatic ecosystem restoration 对河流及水生生态系统恢复的贡献
Water Framework Directive 《水框架指令》	Integrated water management 综合水资源管理	Good ecological status and restoration measures 良好生态状况及恢复措施
Nature Restoration Law 《自然恢复法》	Ecosystem restoration 生态系统恢复	Binding targets for restoring rivers and freshwater ecosystems 恢复河流和淡水生态系统的具约束力目标
Habitats & Birds Directives 《栖息地及鸟类指令》	Biodiversity conservation 生物多样性保护	Protection and restoration of aquatic habitats and species 保护与恢复水生栖息地及物种
Floods Directive 《洪水指令》	Flood risk management 洪水风险管理	Nature-based solutions and floodplain restoration 基于自然的解决方案及洪泛区恢复
Water quality directives 水质相关指令	Pollution reduction 污染减排	Enabling conditions for ecosystem recovery 为生态系统恢复创造赋能条件

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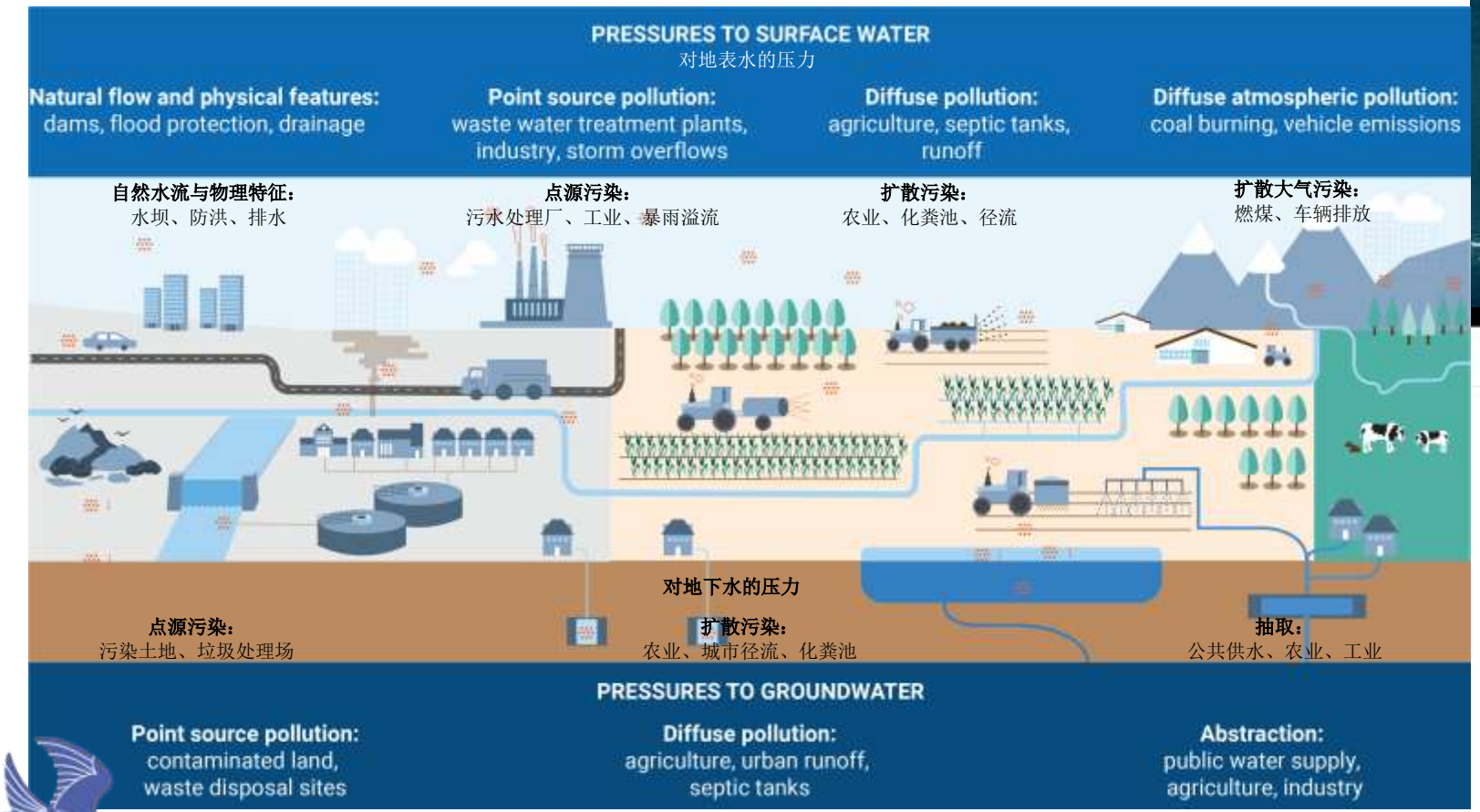
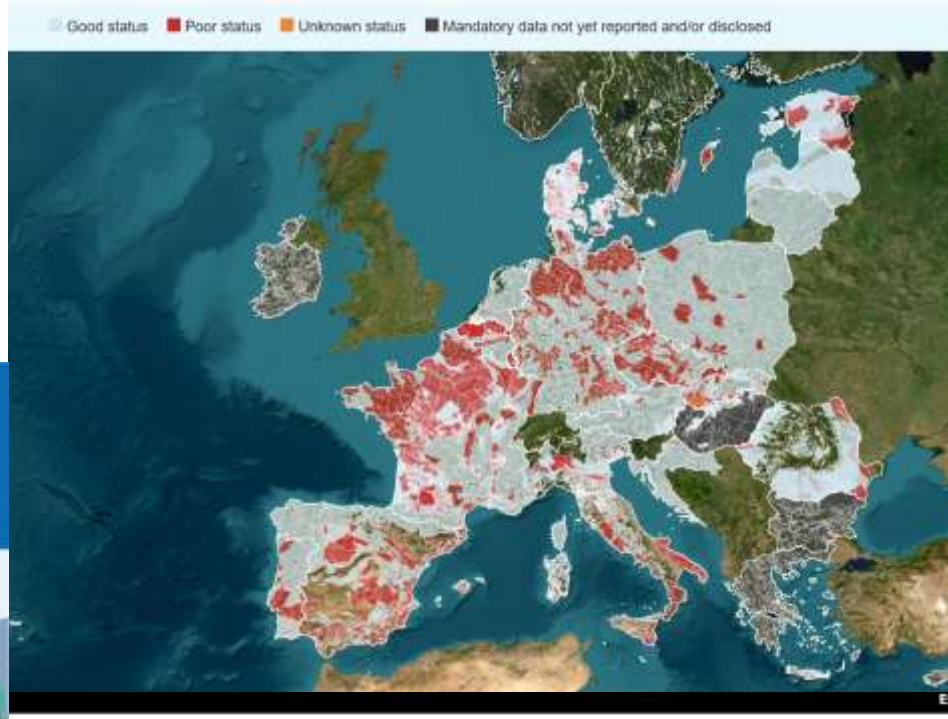
Ecosystem Services

Despite all efforts…
尽管付出诸多努力...





Reuters

World · Business · Markets · Sustainability · Legal · Commentary · Technology · Investigations

Europe's water resources under pressure, most surface bodies polluted, EU says

By Kate Abnett

February 4, 2025 10:13 AM GMT · Updated February 4, 2025

欧盟称欧洲水资源承压，多数地表水体受污染
作者：Kate Abnett 2025年2月4日 GMT上午10:13 • 更新于2025年2月4日

- Source: https://www.eea.europa.eu/en/analysis/publications/eea-signals-2024/infographics/pressures-on-the-water-environment-as-in-the-water-framework-directive?utm_source=chatgpt.com
- https://europeanwaters.eu/map-database/?utm_source=chatgpt.com
- https://www.reuters.com/world/europe/europes-water-resources-under-pressure-most-surface-bodies-polluted-eu-says-2025-02-04/?utm_source=chatgpt.com

Restoration Biodiversity Ecosystem Services

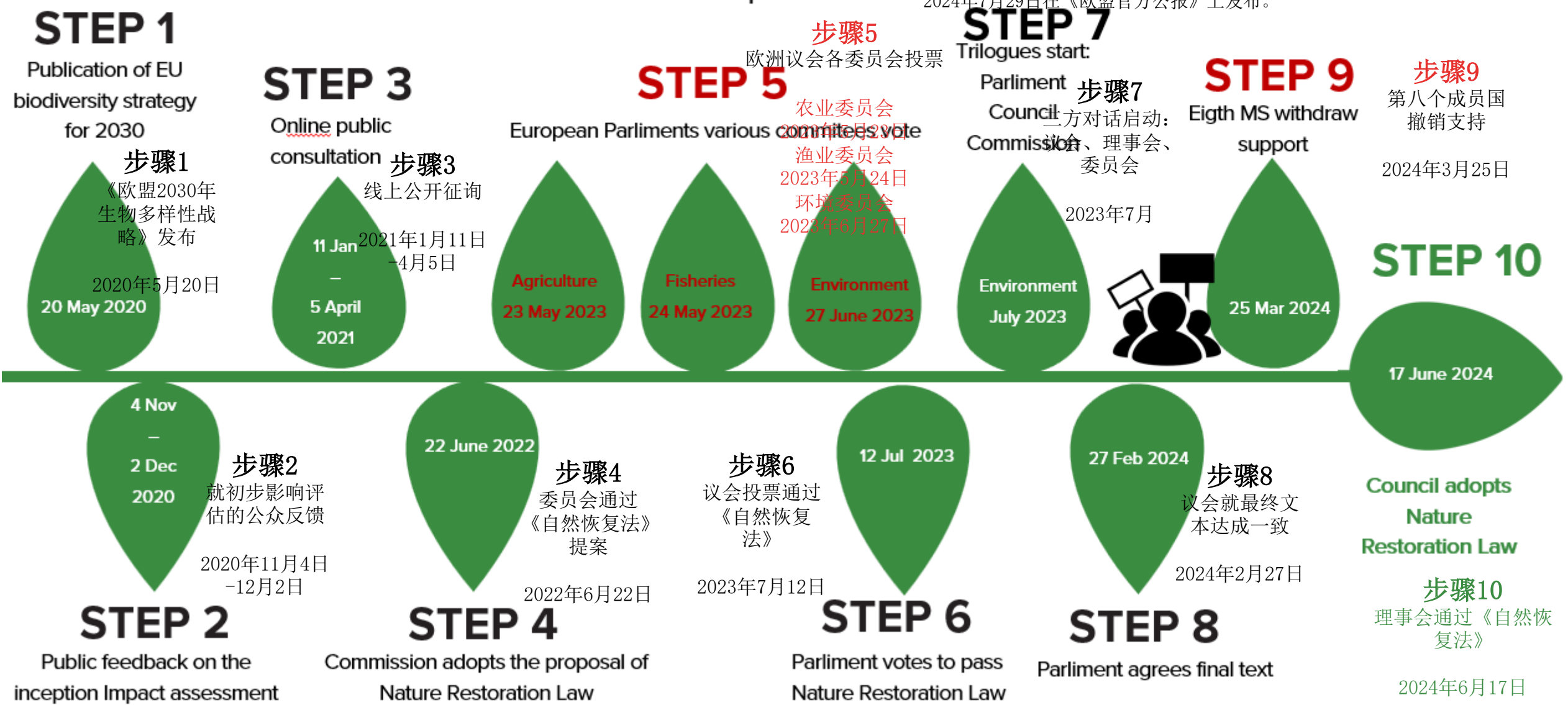
NRL

Process of approval

《自然恢复法》批准流程

Nature Restoration Law process took more than three years to be approved, but it was finally approved on the 17th of June 2024 and publish on 29th of July 2024 on the Journal of the European Union.

《自然恢复法》批准流程耗时超过三年，最终于2024年6月17日获得通过，并于2024年7月29日在《欧盟官方公报》上发布。



The New Nature Restoration Law
新《自然恢复法》

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- **For the first time a legal definition of restoration**
  首次对“恢复”进行了法律定义
- **However…**
  然而…

Included **包含内容**	**Excluded** **排除内容**
Species composition 物种组成	Threats removal 威胁消除
Community Structure 群落结构	Phisical conditions 物理条件
Ecossistem Functions 生态系统功能	Chemical conditions 化学条件

- Legal weakening of the initial proposal
  初始提案在法律层面遭到削弱
- **Consequence:** by ignoring physico-chemical conditions the regulation ignores the success of restoration in areas with pollution history
  后果：由于忽略了物理化学条件，该法规未能充分考虑有污染历史地区的成功修复潜力

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European Union: Terminological Inconsistency
欧洲联盟：术语不一致

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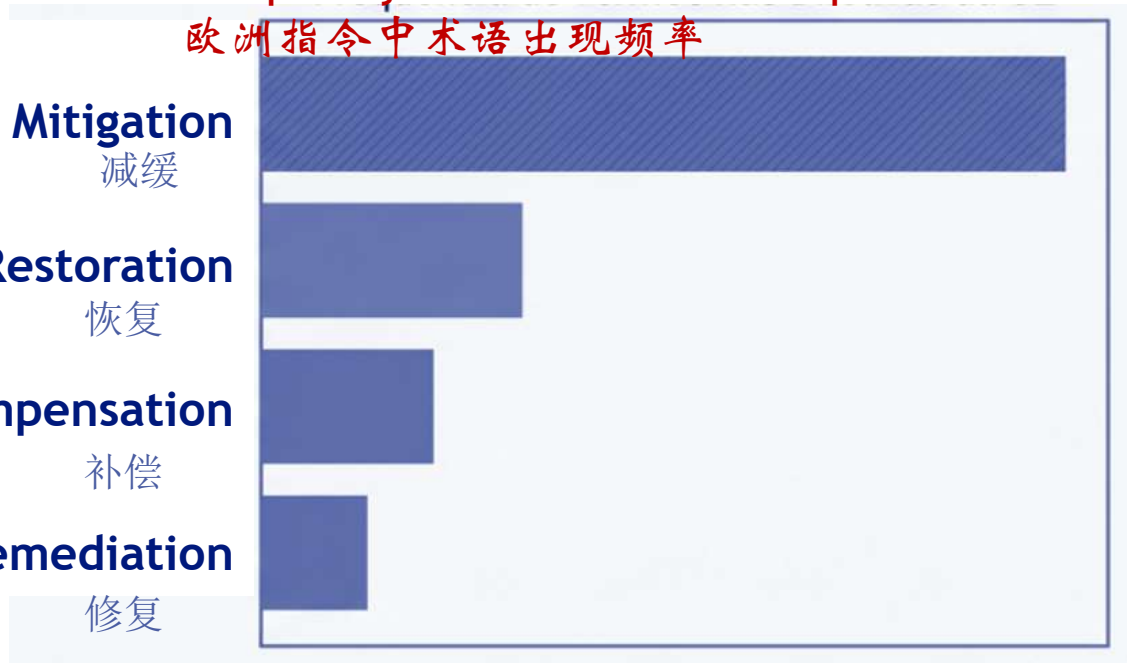
Frequency of the term in European Directives
欧洲指令中术语出现频率



- **Conflict of Meanings (examples)**
  含义冲突（示例）
- **Environmental Liability Directive**:
  "Restoration" is a means for **primary remediation**.
  《环境责任指令》：
  "恢复"是作为**首要补救**的一种手段。
- **Habitats Directive**:
  "Restoration" is a **conservation measure** aimed at achieving **Favourable Conservation Status**.
  《栖息地指令》：
  "恢复"是一项以**实现有利保护状况**为目标的**保护措施**。
- **Water Framework Directive**:
  Uses a **different concept**, focused on **physico-chemical parameters**.
  《水框架指令》：
  采用**不同概念**，重点关注**物理化学参数**。

The term Mitigation dominates, while "Restoration" changes of meaning according to the directive
"减缓"一词占主导地位，而"恢复"的含义随指令不同而不尽相同

Restoration
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Chinese legislation
中国立法

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- **Focus:** Ecological Civilization
  焦点：生态文明
- **Context:** Strong support of action for Ecological civilization
  背景：大力支持生态文明建设行动
- **Division:** Pollution laws focus in remediation; Conservation laws focus in protection
  分野：污染法律侧重于修复；保护法律则侧重于保护
- **Gap:** Lack of legal definition and reference ecosystem
  差距：缺乏明确的法律定义与参考生态系统标准

Term use in Chinese legislation
中国立法中的术语使用

Xiu Fu (修复) e Hui Fu (恢复)

Meaning “restoration” and “repair”
含义为“恢复”和“修理”

Comparative diagnosis
比较性诊断

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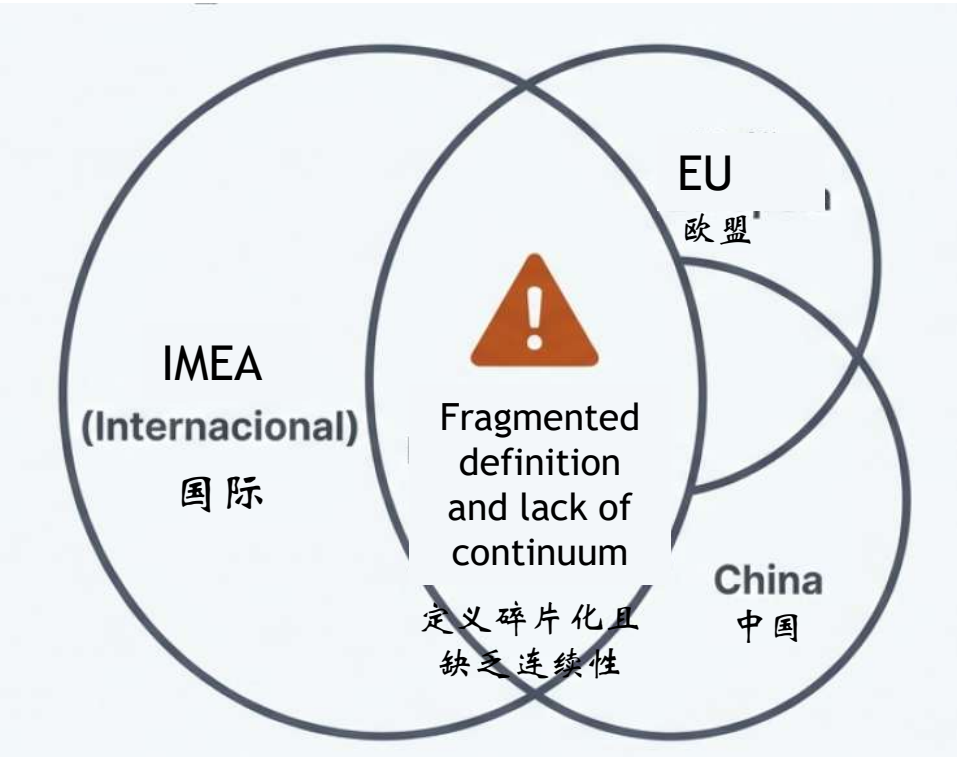
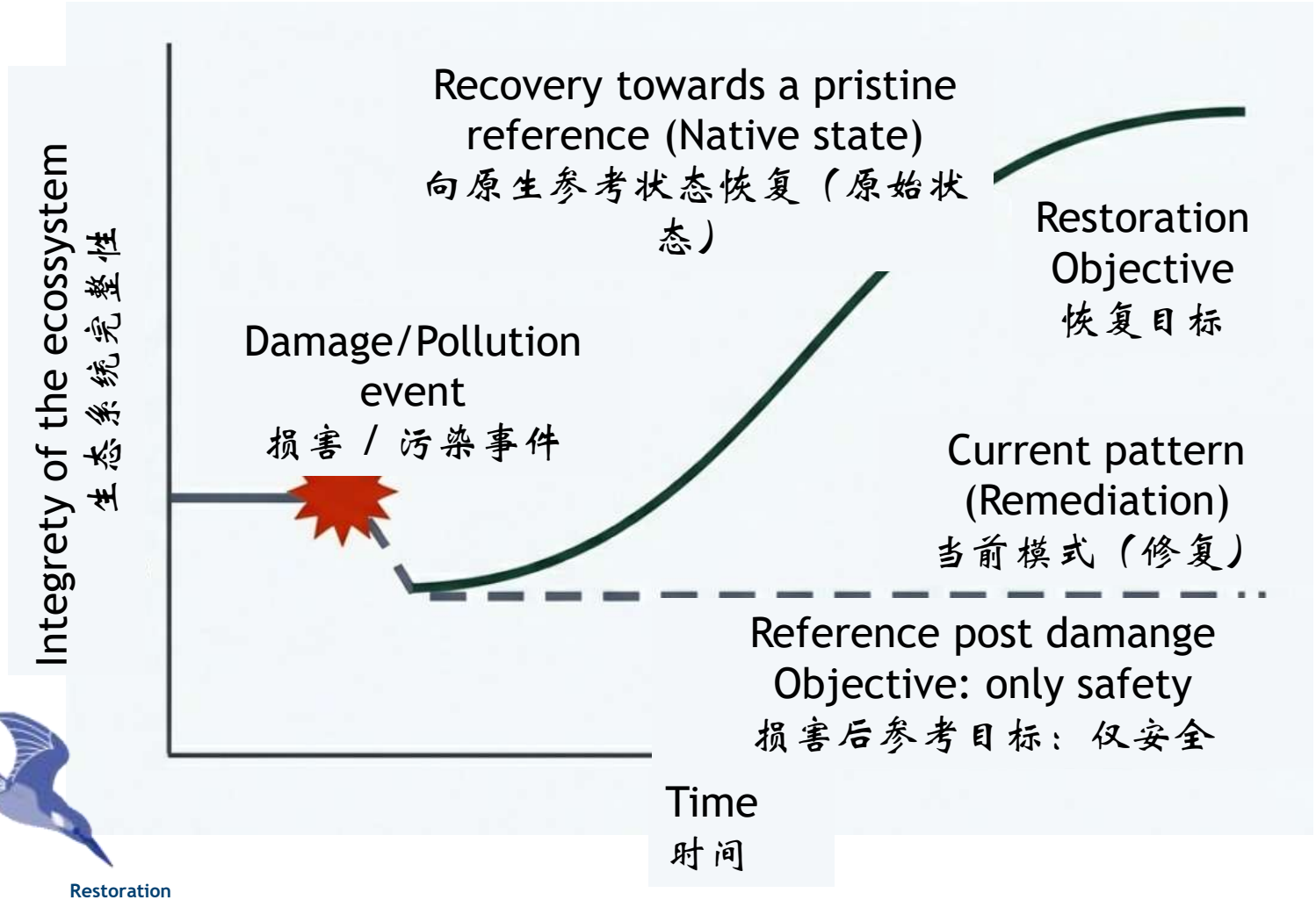
- Consequences:
  后果：
- Regulators enforce poor performance restoration projects
  监管机构强制执行效果不达标的修复项目
- Waste of resources in poor performance projects
  资源浪费于成效低下的项目中
- Lack of transition: Remediated sites rarely are forced to be restored
  缺乏过渡：修复完成的场地很少被要求进一步开展生态恢复



The technical problem



- For Restoration to work, we need to have legally:
  为使恢复有效，我们需要在法律上明确：
- Baseline: how it was prior to damage
  基线：受损前的状态
- Reference: what is our ideal?
  参考：我们的理想目标是什么？

- Current failure: legislation uses the post pollution event as reference limiting the ambition
  当前失败之处：立法使用污染事件后的状态作为参考，限制了雄心

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An opportunity!
一个机遇！

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- "The process of assisting the recovery of na ecossistema that has been degraded, damaged or restores with the goal of reaching the substancial recovery in relation to an appropriate reference…"
  "协助已退化、受损或遭破坏的生态系统逐步恢复的过程，旨在实现基于恰当参考基准的实质性生态复原…"

	Remediation/Rehabilitation 修复/重建	Restoration 恢复
Continuum 连续统	Initial stages (Clean/repair) 初始阶段（清理/修理）	Final stages (full recovery) 最终阶段（完全恢复）
Baseline 基线	The state of the ecossystem prior to the pollution event 污染事件前的生态系统状态	Native and Pristine ecossystem 原生及原始生态系统
Objective 目标	Security and basic functions 安全及基本功能	At least favourable conservation status 至少达到有利保护状况

- **Advantage:** Garanties contextual flexibility without sacrificing the ecological ambition
  优势：在确保生态目标不妥协的前提下，兼顾情境适应性与灵活性

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Global Proposal Challenge
全球提案挑战

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- **Funtion: H**armonize the language in International Treaties devoted to Conservation and Pollution
  功能：协调致力于生态保护与污染治理的国际条约术语体系
- **Leadership:** Europe and China as both regions have currently the most advanced legal frameworks
  领导力：欧洲与中国共同引领，因两地当前拥有最完善的法律框架
- **Cleaning pollution is only the first step for nature restoration. We need a level up!**
  清除污染仅是自然恢复的第一步，我们需向更高层次迈进！

Meanwhile… New tools!
与此同时...新工具！

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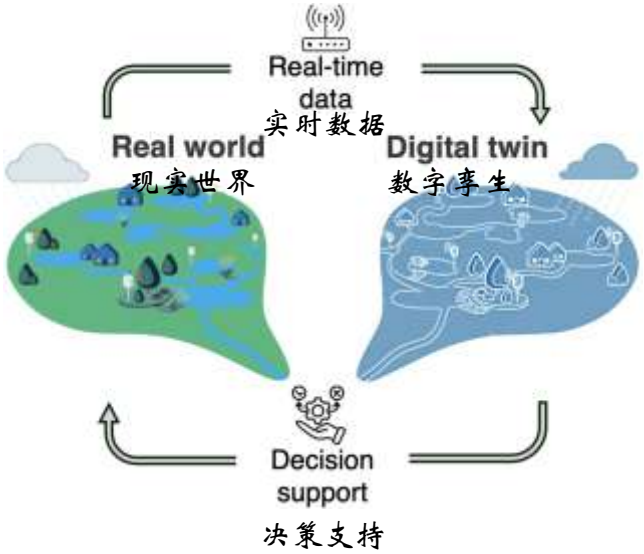

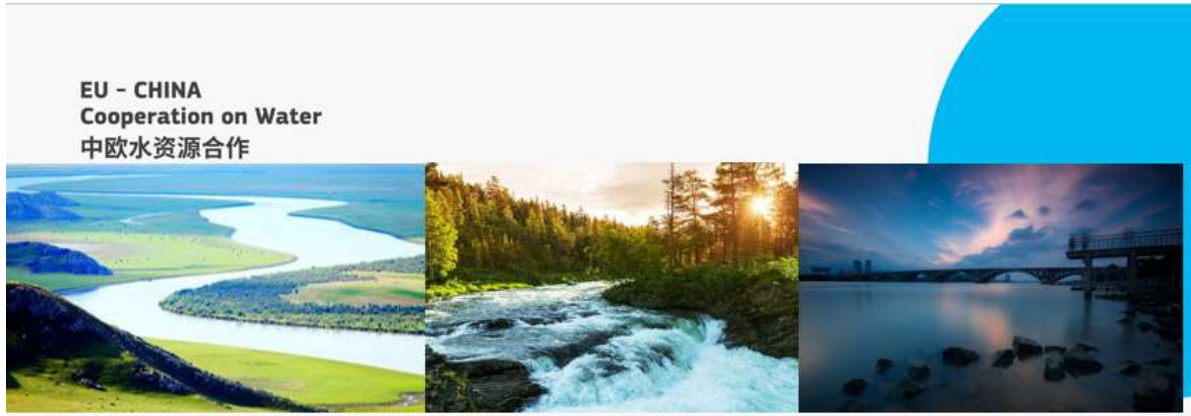

EU - CHINA
Cooperation on Water
中欧水资源合作

Learning from Payments for Ecosystem Services Implementation in China to improve freshwater ecosystem status in Europe

借鉴中国生态系统服务付费的实施经验以改善欧洲淡水生态系统状况

INTECOL, TARTU

Funded by the European Union

July,2025

国际生态学大会，塔尔图，2025年7月

IWHR

Restoration
Biodiversity
Ecosystem Services

Where to test it:
测试地点：

CHINA
EUROPE

Alqueva Dam is a multipurpose dam in Portugal operated by EDIA:
阿尔克瓦大坝是一座位于葡萄牙的多功能大坝，由EDIA负责运营：

- It is the biggest artificial lake in Europe with 250 km²
  这是欧洲最大的人工湖，面积达250平方公里
- Length of the reservoir: 83 km.
  水库长度：83公里。
- Albufeira banks: 1160 km.
  阿尔布费拉湖岸线：1160公里。
- Total capacity: 4,150 hm³ (at an elevation of 152 m).
  总库容：4,150立方百米（对应海拔152米）。
- Useful capacity: 3,150 hm³ (at an elevation of 130 m).
  有效库容：3,150立方百米（对应海拔130米）。

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Where to test it:
测试地点：

CHINA EUROPE

It has severe environmental problems with:

存在严重的环境问题：

- Nutrient loads and temperature due to

  营养物负荷和温度问题（因以下原因）
- Exotics species

  外来物种
- Deficient Riparian areas

  河岸带不足
- Water management and availability problems

  水资源管理与可用性问题
- Costs are not always

  成本并非总能[**得到**补偿或产生预期效益]

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Next steps!
下一步！

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- ✓ Visit to Chinese PES River Basin

  考察中国生态系统服务付费流域
- ✓ Feasibility study!

  可行性研究！
- ✓ Test it!

  测试它！

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CHINA
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Water Platform
Hoping for
a better
future!
期盼更美好
的未来!

CHINA EUROPE Water Platform

Thank you!
谢谢您！

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