环境影响评价制度改革国际比较研究

吴婧，王清扬，张新怡

南开大学战略环境评价研究中心

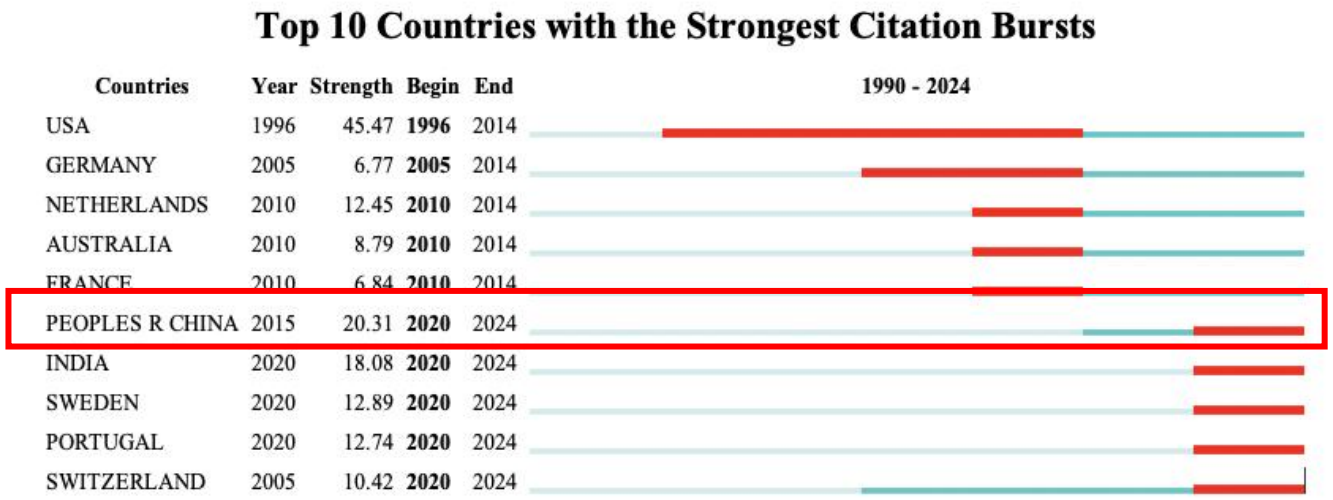
Contents

1. Environmental Impact Assessment in a changing world

1.1 以环评制度应对可持续发展新挑战

Top 10 countries and regions of EIA publications

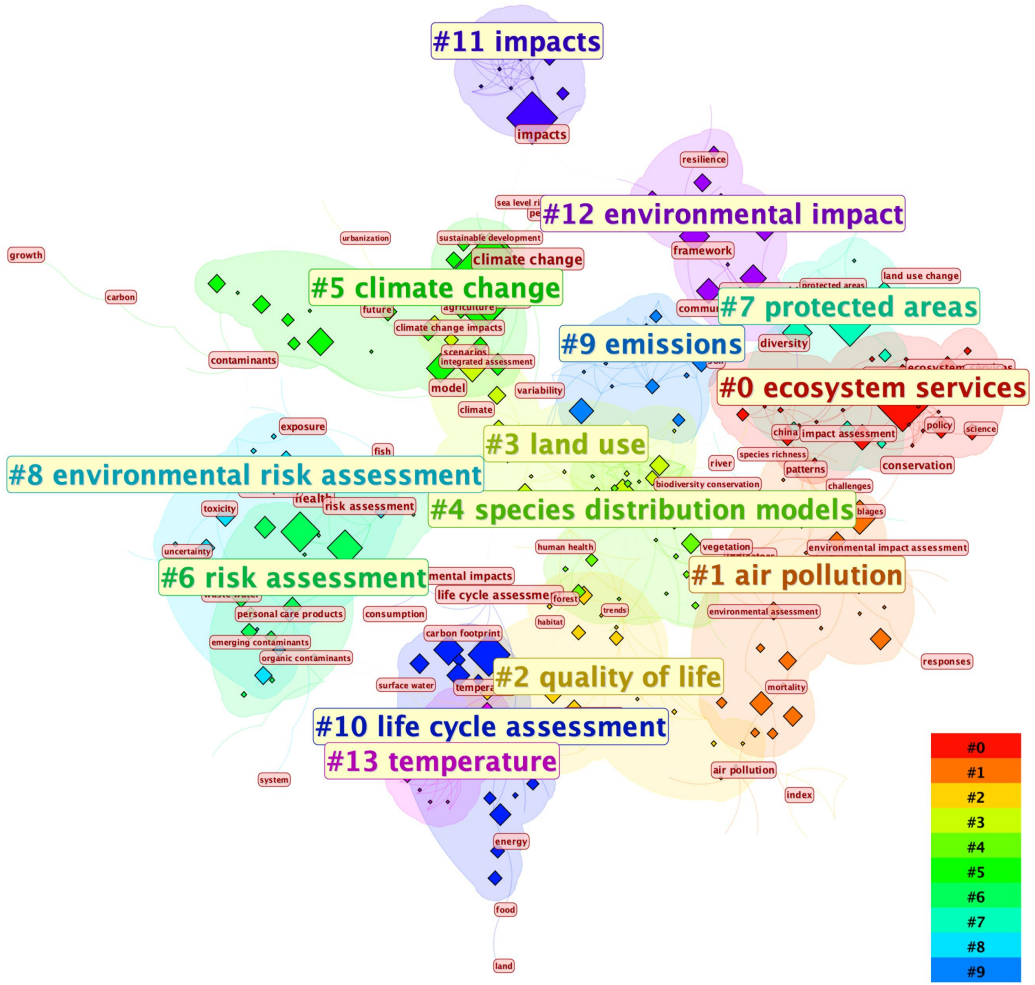
Country	Publications	Centrality	Central sorting
USA	1230	0.51	6
CHINA	828	0.02	9
ENGLAND	671	0.97	2
GERMANY	498	0.79	3
ITALY	447	0.12	8
AUSTRALIA	443	0.66	5
CANADA	402	0.01	10
SPAIN	380	1.14	1
FRANCE	350	0.26	7
NETHERLANDS	296	0.7	4



1.1 以环评制度应对可持续发展新挑战

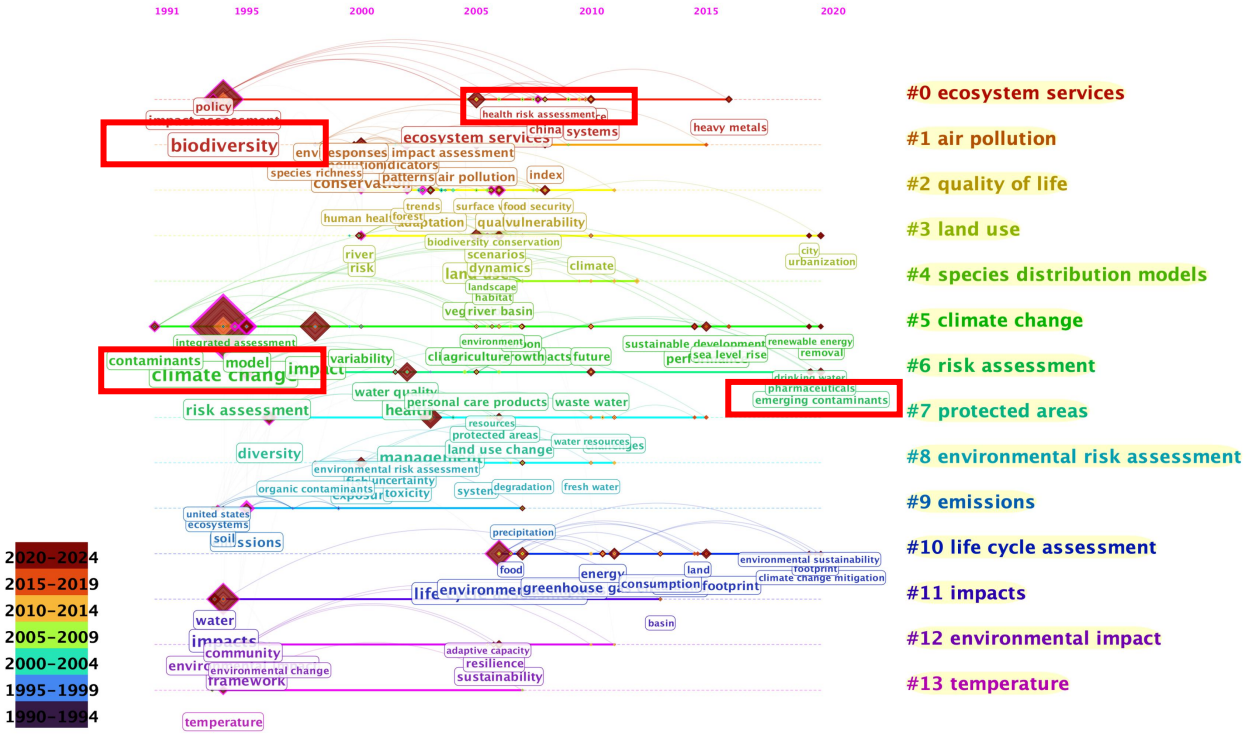
Coding	Contour value	Cluster label	Keywords
#0	0.961	Ecosystem services	biodiversity；Ecosystem services；Impact assessment；Systems；Policy
#1	0.784	Air pollution	Conservation；Patterns；Air pollution；Indicators；Pollution
#2	0.904	Quality of life	Quality；Vulnerability；Adaptation；human health；Forest；
#3	0.886	Land use	Land use；Risk；Dynamics；River；Climate
#4	0.887	Species distribution models	Vegetation；River basin；Habitat；Landscape；Distributions；
#5	1	Climate change	Climate change；Impact；Model；Contaminants；Performance；
#6	0.929	Risk assessment	Health；Risk assessmen；Water quality；Personal care products；Waste water
#7	0.969	Protected areas	Management；Diversity；Land use；Change；Protected areas；Challenges
#8	0.926	Environmental risk assessment	Exposure；Toxicity；Fish；System；Uncertainty
#9	0.886	Emissions	Emissions；Soil；Ecosystems；Precipitation；United states
#10	1	Life cycle assessment	Life cycle assessment；Environmental impacts；Greenhouse gas emissions；Carbon footprint；Energy
#11	0.989	Impacts	Impacts；Water；Basin；California；Aquatic birds
#12	0.962	Environmental impact	Framework；Environmental impact；Community；Sustainability；Resilience
#13	0.994	temperature	Temperature；Scale；Europe；Budget；Carbon dioxide

Key words clusters of EIA studies



采取LLR聚类方法选取文献中排名靠前的关键词作为聚类标签形成13个关键词聚类，较高的轮廓值显示聚类效果较好四类关键词在众多聚类中出现，涉及到气候变化、生物多样性及环境治理的关键词热度持续上升

1.1 以环评制度应对可持续发展新挑战



#0 ecosystem services

#1 air pollution

#2 quality of life

#3 land use

#4 species distribution models

#5 climate change

#6 risk assessment

#7 protected areas

#8 environmental risk assessment

#9 emissions

#10 life cycle assessment

#11 impacts

#12 environmental impact

#13 temperature

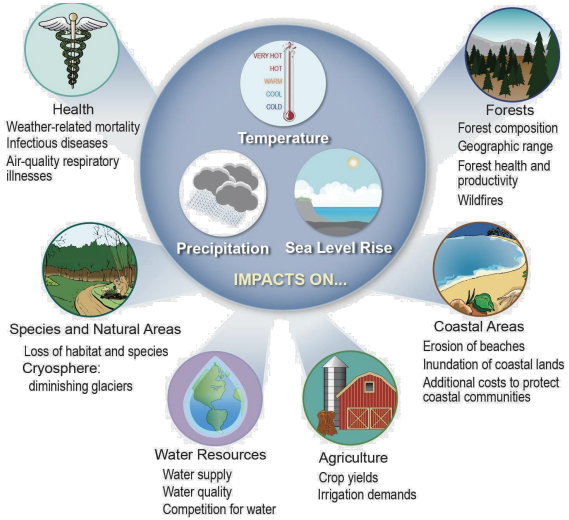
Top 100 Keywords with the Strongest Citation Bursts

Keywords	Year	Strength	Begin	End	1990 - 2024
biodiversity conservation	2006	15.7	**2010**	2019	
species richness	1998	14.36	**1998**	2019	
emerging contaminants	2020	12.86	**2020**	2024	
integrated assessment	1995	12.71	**1995**	2019	
lca	2015	12.61	**2015**	2019	
food security	2008	12.13	**2008**	2019	
abundance	2015	11.38	**2015**	2019	
environmental change	1996	10.77	**1996**	2019	
consequences	2006	10.73	**2010**	2019	
united states	1994	10.68	**1994**	2019	
water resources	2010	10.5	**2010**	2019	
resources	2006	10.42	**2010**	2019	
drinking water	2020	10.28	**2020**	2024	
ecology	2005	10.15	**2005**	2014	
fresh water	2010	10.04	**2010**	2019	
global change	1994	9.82	**1994**	2014	
health impacts	2015	9.66	**2015**	2019	
decision making	2015	9.45	**2015**	2019	
landscape	2006	9.22	**2006**	2019	
species diversity	2006	9.12	**2006**	2014	
area	2015	9.05	**2015**	2019	
removal	2020	8.84	**2020**	2024	
biological invasions	2006	8.58	**2006**	2014	
urbanization	2020	8.56	**2020**	2024	
health risk assessment	2008	8.4	**2020**	2024	

根据关键词突跃及中心性分析，“生物多样性”有关关键词研究中心值最高，且研究热度从2000年至今依旧不减。与EIA相关的新污染物、环境变化及健康影响研究在突现之后热度不断提升，引起了研究者的广泛关注。

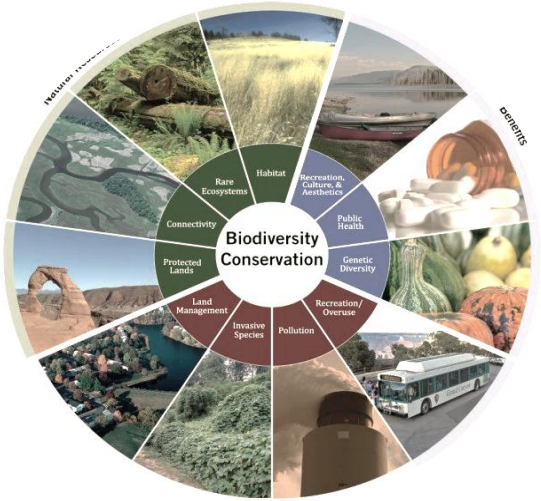
1.1 以环评制度应对可持续发展新挑战

➢ Climate change

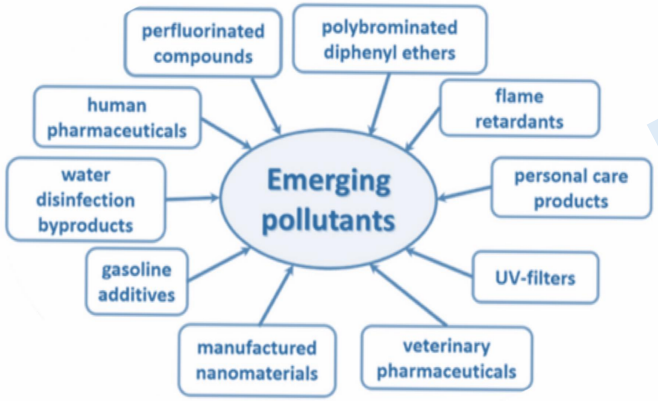


EIA 可以迅速对这些挑战给予反应，并通过Project EIA, Plan EIA, Policy EIA将对这些问题的考量纳入决策过程

➢ Biodiversity conservation



➢ Emerging pollutants



➢ Health impact assessment

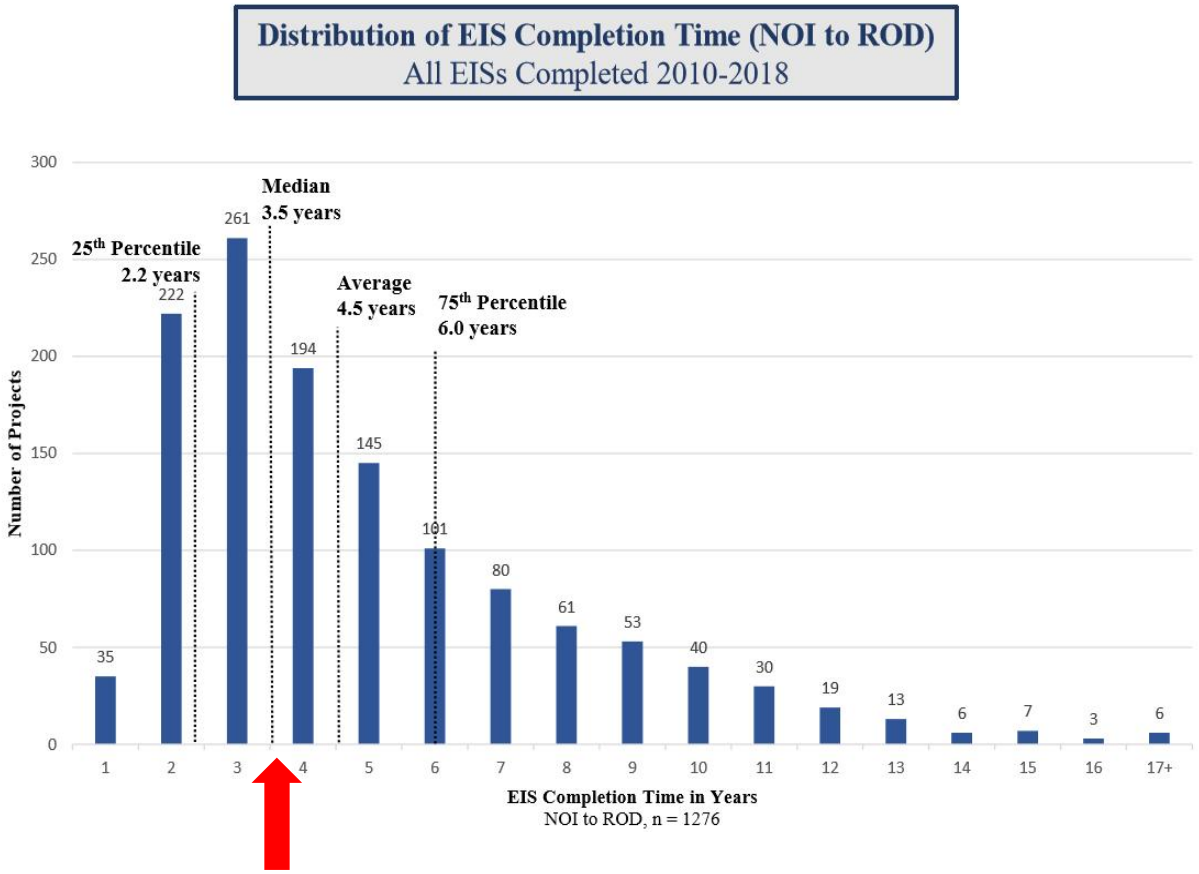
亟需开展基于复杂系统、学科融合的环评系统理论研究、拓展环评实践领域，通过环评制度将以上问题纳入综合决策。

(Global change, 2016, EPA, 2025, Centers for Disease Control and Prevention, 2025, Vasilachi et al., 2021)

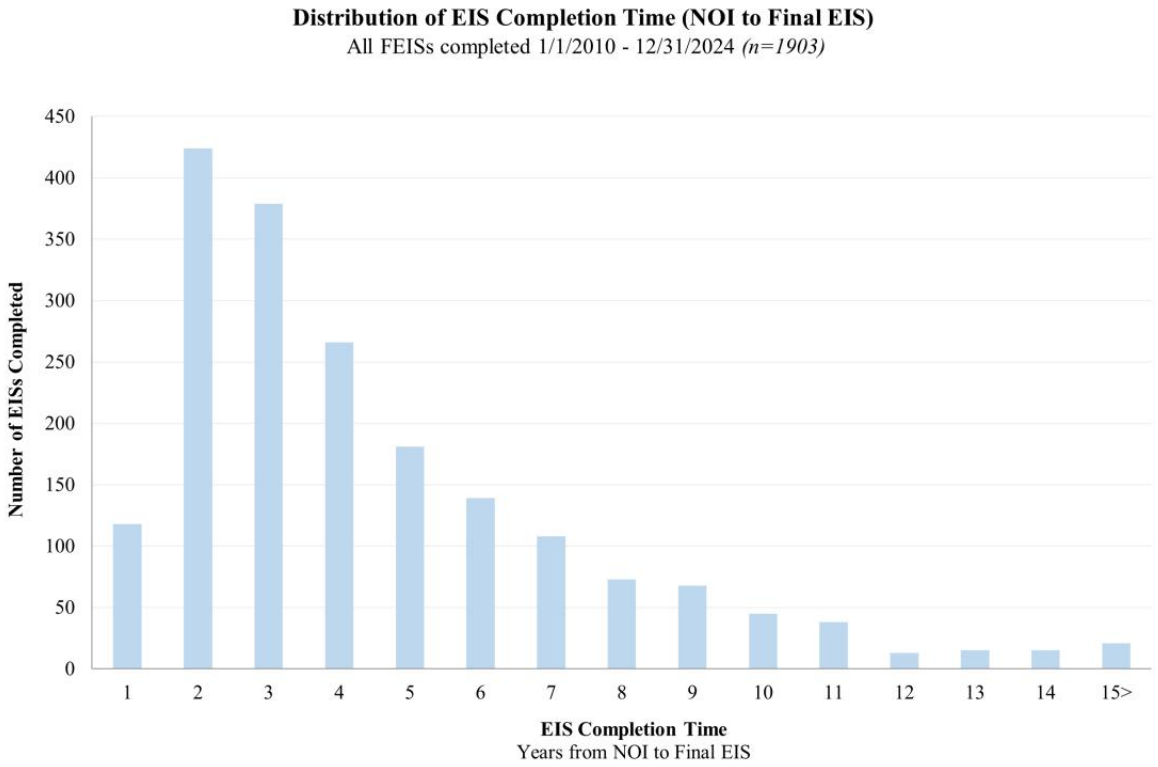
1.2 对环评制度的评估-USA

美国：环境质量委员会收集数据，于2018、2020、2025年发表了三份关于联邦机构根据《国家环境政策法》编制环境影响报告书所需时间的报告

- **Time-consuming：3.5 years**



- **Time-consuming：2.2 years**



CEQ, EIS Timelines (2010– 2018), (June 12, 2020), https://ceq.doe.gov/nepa-practice/eis-timelines.html

1.2 对环评制度的评估-USA

美国：环境质量委员会收集数据，于2018、2020、2025年发表了三份关于联邦机构根据《国家环境政策法》编制环境影响报告书所需时间的报告

表1 展示了2019年至2024年间完成的最终环境影响报告书（EIS）的中位数完成时间和在两年或更短时间内完成的比例。在这段时间内，中位数完成时间显著缩短，同时在两年或更短时间内完成的EIS比例也有所增加。

Table 1. Median Completion Time and Percent of EISs Completed in Two Years or Less by Year from 2019 to 2024.

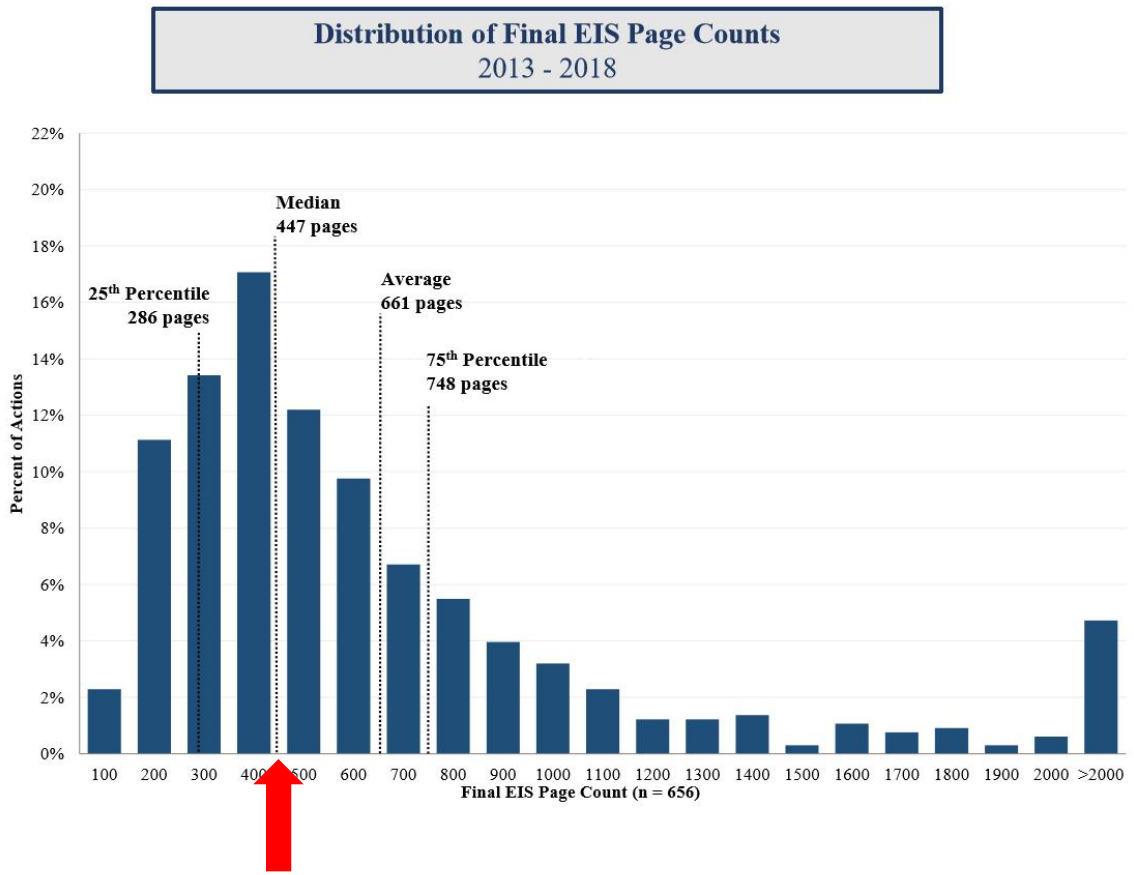
Year	Median NOI to final EIS	Percent of EISs Completed in Two Years or Less
2019	3.6	24%
2020	3.0	30%
2021	2.5	39%
2022	2.8	41%
2023	2.5	33%
2024	2.2	41%

CEQ, EIS Timelines (2010– 2018), (June 12, 2020), https://ceq.doe.gov/nepa-practice/eis-timelines.html

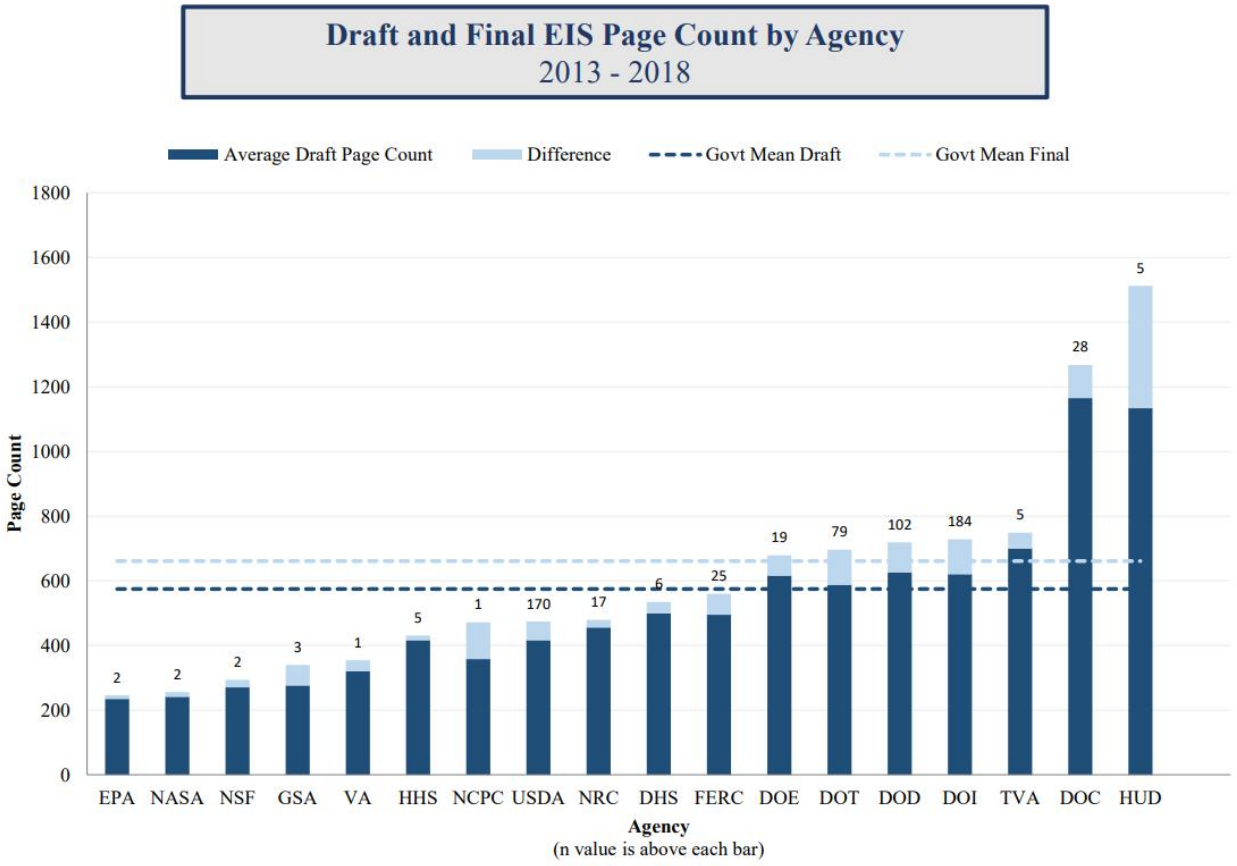
1.2 对环评制度的评估-USA

为了向各机构和公众提供与《国家环境政策法》（NEPA）程序有关的信息，环境质量委员会按页数汇编了联邦机构编制的环境影响报告书（EIS）的长度数据。CEQ评估了2013-2018年间完成的656个案例。

- **EIS page counts：447 pages**



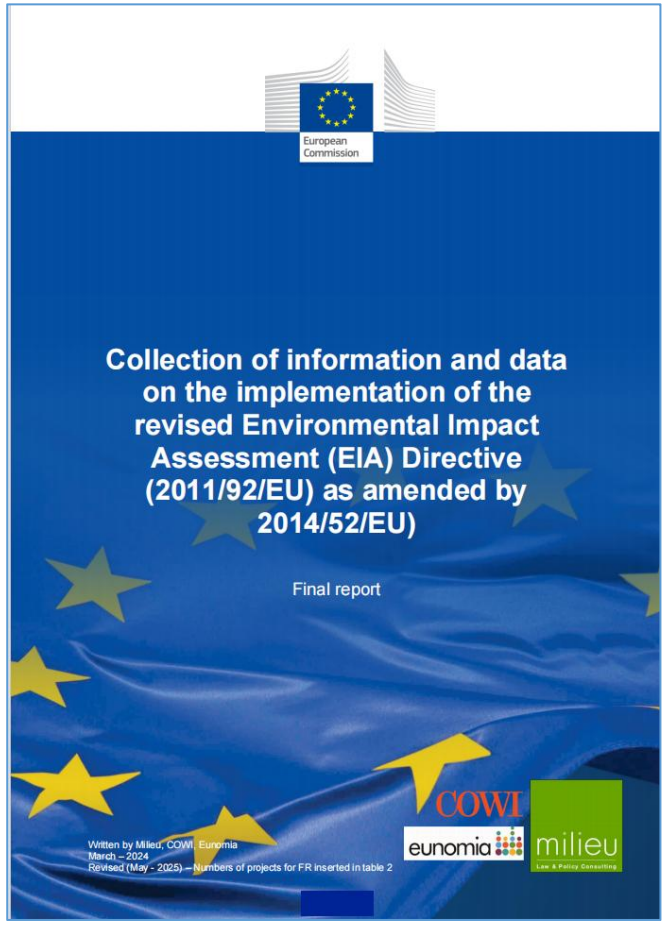
Report: EIS Page Length (2013-2018), 12 June 2020, https://ceq.doe.gov/nepa-practice/eis-length.html



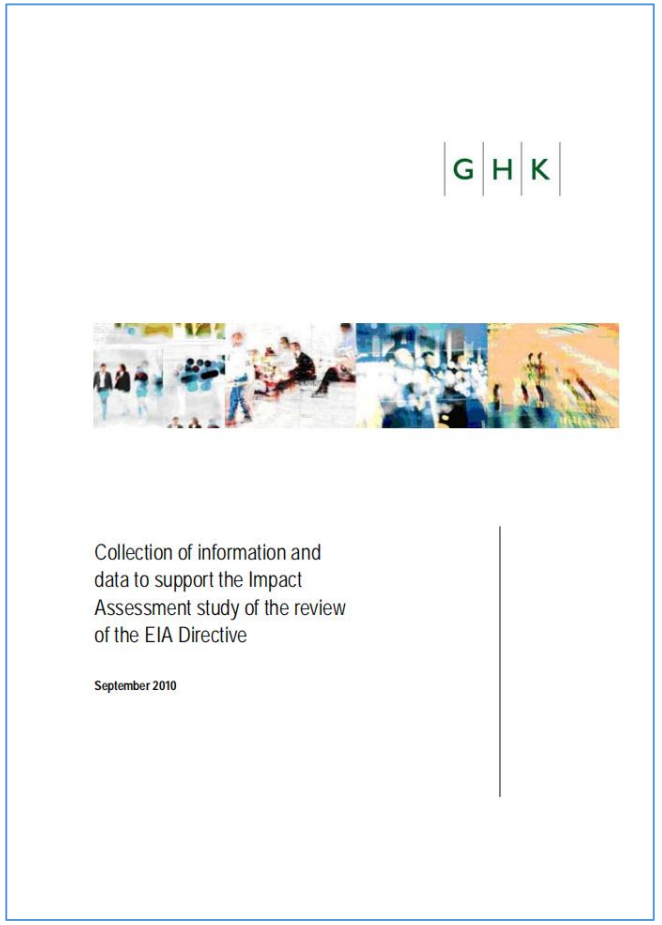
航空航天局,国家科学基金会,总务管理局,退伍军人事务部,卫生与公众服务部,首都规划委员会,农业部,核管理委员会,国土安全部,联邦能源监管委员会,能源部,交通部,国防部,内政部,田纳西河流域管理局,商务部,住房和城市发展部

1.2 对环评制度的评估-EU

根据《环境影响评估指令》，欧盟成员国必须每六年向欧盟委员会提供有关该指令在其国家实施情况的统计数据。这包括根据该指令的两个附件评估的项目数量、环评过程所需的平均时间以及所涉及的成本。



2024报告 https://op.europa.eu/en/publication-detail/-/publication/8349a857-2936-11ef-9290-01aa75ed71a1/language-en



GHK (2010), Collection of information and data to support the IA study of the review of the EIA Directive

1.2 对环评程序的评估-EU

- **High socio-economic cost：** **Average 53,000€ (2010)**

Country	No. of days to process an EIA	Cost to developers(€)	% of total project cost	No. of staff	No. of EIAs per staff
Belgium	22	35,000		30	6
Cyprus		25,000	1.0%		
Czech Republic	5			80	1
Denmark	100	22,820		45	3
Estonia	25	35,000	1.0%	19	4
Finland		90,000	0.5%	15	3
France	8	50,000	2.5%		
Germany	10				
Greece	30		1.0%	160	3
Ireland	7~35	70,000~250,000	0.5%		
Latvia	30			22	6
Malta	80	55,000	1.5%	3	3
Netherlands		200,000	1.0%		
Poland				290	
Slovakia		3,320		90	7
Spain		18,000			
United Kingdom		100,000	0.1%		

GHK (2010), Collection of information and data to support the IA study of the review of the EIA Directive

1.2 对环评程序的评估-EU

2024年评估情况，根据报告相关数据的成员国平均水平估算，环境影响评估流程中每个步骤所需的最短、最长及平均持续时间（以月为单位）

	Screening	Scoping	EIA report	Public consultation	Reasoned conclusion	Development consent	Total
Weighted average duration[11]	3.7	3.8	5.3	2.1	3.5	2.2	20.6
Minimum duration[12]	0.9	1.4	2.5	1.1	1.5	4	
Maximum duration[13]	18.3	7.4	20.4	2.1	12.2	15.3	
Difference between minimum and maximum duration[14]	18.8	6.4	19.3	1.1	10.7	9.6	

Collection of information and data on the implementation of the revised EIA Directive (2011/92/EU) amended by 2014/52/EU (2024)

1.2 对环评程序的评估-EU

各成员国为EIA程序分配的预算（政府行政成本）

- 在国家一级，预算从马耳他的27.5万欧元到波兰的约240万欧元不等。
- 在区域层面，差别更大，斯洛伐克的预算从89000欧元开始，而波兰的区域预算最高，每年超过1100万欧元。
- 地方层面数据较少

各成员国的EIA程序的人员配置

- 在国家层面，斯洛文尼亚报告的员工人数最低，为4人，而丹麦报告的员工数量最高，为50-65人。
- 从地区来看，斯洛伐克的员工人数最少，而波兰的员工人数为350人。
- 地方一级数据较少

环评主管部门环境影响评估/筛查程序的成本估算

	National level		Regional level		Local level	
MS	Number of staff employed to manage EIAs / screenings	Annual budget allocated for the management of EIAs / screenings	Number of staff employed to manage EIAs/screenings	Annual budget allocated for the management of EIAs / screenings	Number of staff employed to manage EIAs/screenings	Annual budget allocated for the management of EIAs / screenings
BG	9		65-67			
CY		€450 415				
DK	50-65					
EL	35	€1 050 000	80	€2 400 000		
FI			5-13			
FR	35		220			
HR	Maximum 9		Maximum 5			
IT	38 staff; 40 technical experts		13 staff employed	€200 000 medium/year	13 staff employed, 65 technical experts	€203 000 for year
LT	40-50					
LU	4 in the EIA unit of the				1 to 2	

Collection of information and data on the implementation of the revised EIA Directive (2011/92/EU) amended by 2014/52/EU (2024)

1.2 对环评程序的评估-EU

只有13个成员国提供了开发商EIA/筛查程序的成本估算。

- 开发商的环境影响评价总成本从10000欧元（SI）到92000欧元（PT）不等。
- 丹麦报告的成本明显高于其他成员国，在13万至40万欧元之间。与环境影响评估相比，筛查程序的成本通常要低得多，从4000欧元（人力资源）到7000欧元（丹麦、斯洛伐克）不等。
- 一些国家表示，环境影响评估占项目总成本的不到1%（丹麦、爱沙尼亚、IT），但爱沙尼亚报告称占15%。
- 由于样本量非常小且观察到显著变化，因此基于这些数据计算平均值可能会产生误导。然而，总体而言，平均成本占项目总成本的比例通常低于10%。

开发商环境影响评价/筛选程序的成本估算

MS	The average cost to the developer (in €) of an EIA or screening	The average EIA/screening cost to the developer as a share of the total project cost (%)
DK	Screening: € 7 000 EIA permit: Between € 130 000 – € 400 000	Between 0.1% - 1%[15]
EE	€25 000 – €55 000	1–15%
EL	EIA: €20 000 Screening: €5 000	
ES		Less than 1 %
FR	€10 000	
HR	EIA: € 35 000. Screening: € 4.000	10% of the project documentation
HU	There are administration service fees for the environmental licensing procedures (regulated by Ministerial Decree No. 14/2015.): - for preliminary assessment – €625 - for EIA procedure – €7 500	
IT		EIA: 0.5 per thousand calculated on the value of the works to be carried out with a minimum of €5 000. Screening: 0.25 per thousand calculated on the value of the works to be carried out with a minimum of €2 000
PT	Between €50 300 (low estimate) and €91 250 (high estimate)[16]	Less than 5%
RO	25200	
SI	**EIA:** Between €1000 – €50 000 Screening: Much less	
SK	The average cost to the developer of documentation is up to €20 000 in the impact assessment process and up to €7 000 in the inquiry procedure.	Between 10% and 50%.

Collection of information and data on the implementation of the revised EIA Directive (2011/92/EU) (2024)

1.3 部分国家EIA制度改革进程

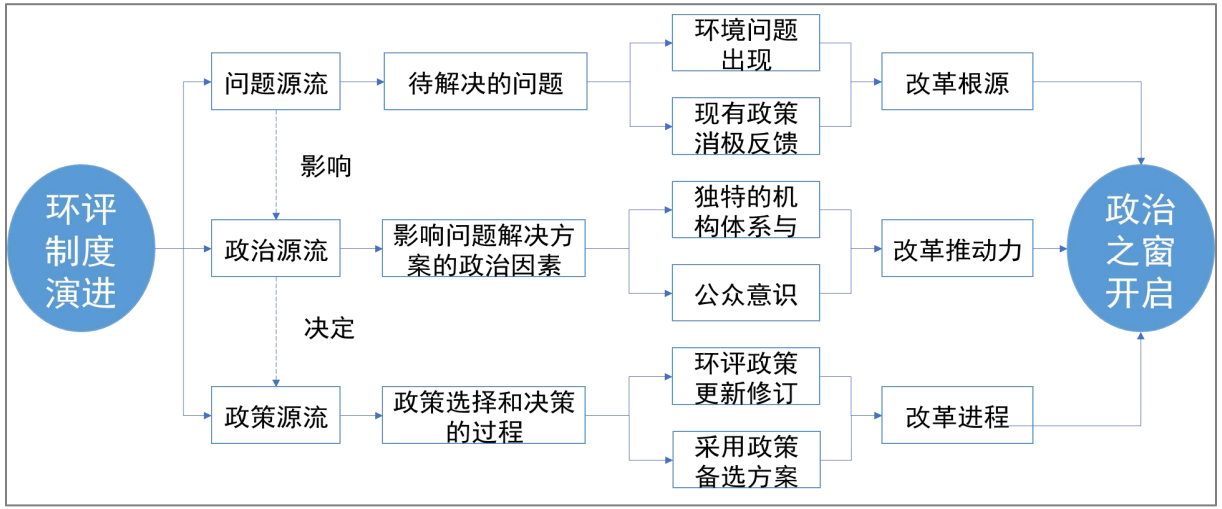
- **EIA system reforms are underway in developed countries.** (Wu et al., 2019, Cui and Wu, 2021, Wang et al., 2024, Pediaditi et al., 2018).
- **Cross-national comparative studies are scarce.**

Country	Regulations and measures	Reference
The United States	NEPA Implementing Regulations Revisions	(CEQ, 2024)
The United Kingdom	Environmental outcomes report	(Wang et al., 2024)
Canada	Impact Assessment Act,2019	(Government of Canada, 2019)
Australia	Nature Positive Bill 2024	(Government of Australia, 2024)
Netherlands	Environment and Planning Act of the Netherlands	(Cui, 2021) (Arts &De Vries, 2023)
Austria and Germany	Simplified coordination of SEA and EIA	(Geißler & Jiricka-Pürrer, 2023)
Sweden	Simplify the elements and timing of EIA	(Faith-Ell, 2023)
Denmark	Regulatory, administrative and practice simplification	(Kørnøv & Lyhne, 2023)

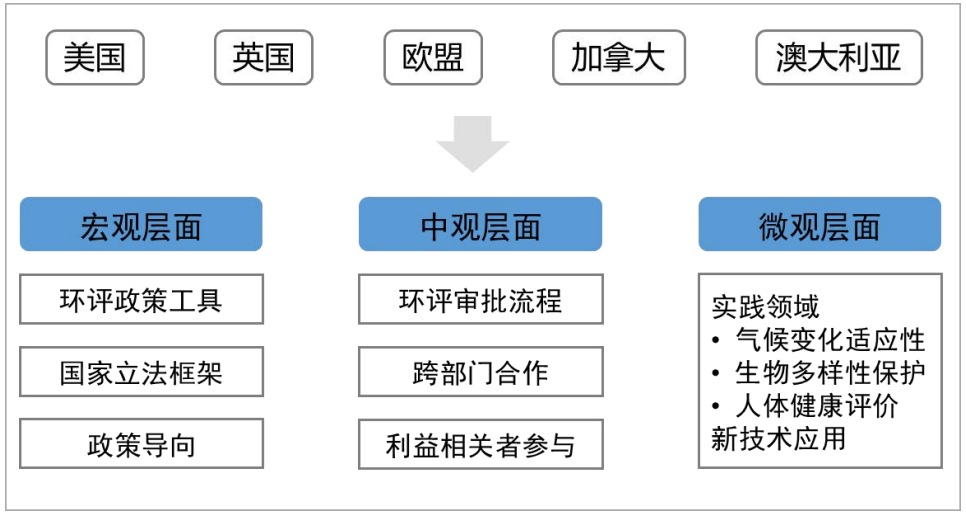
2. Methods

2.1 Research methodology

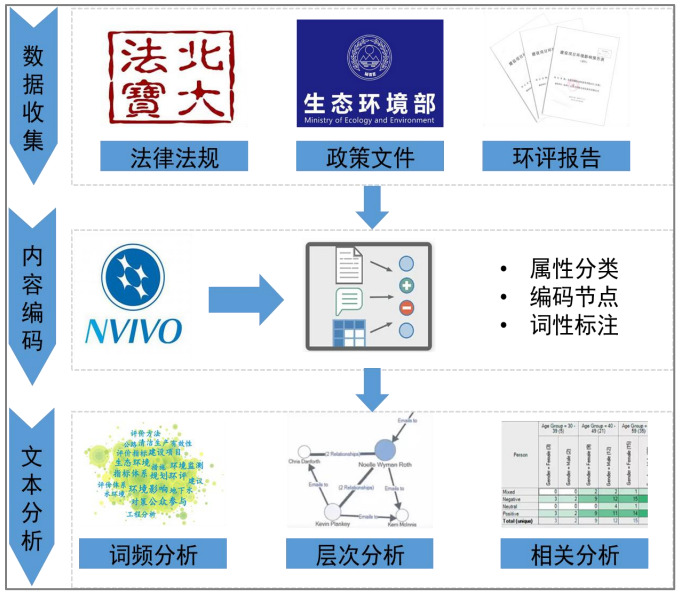
多源流理论



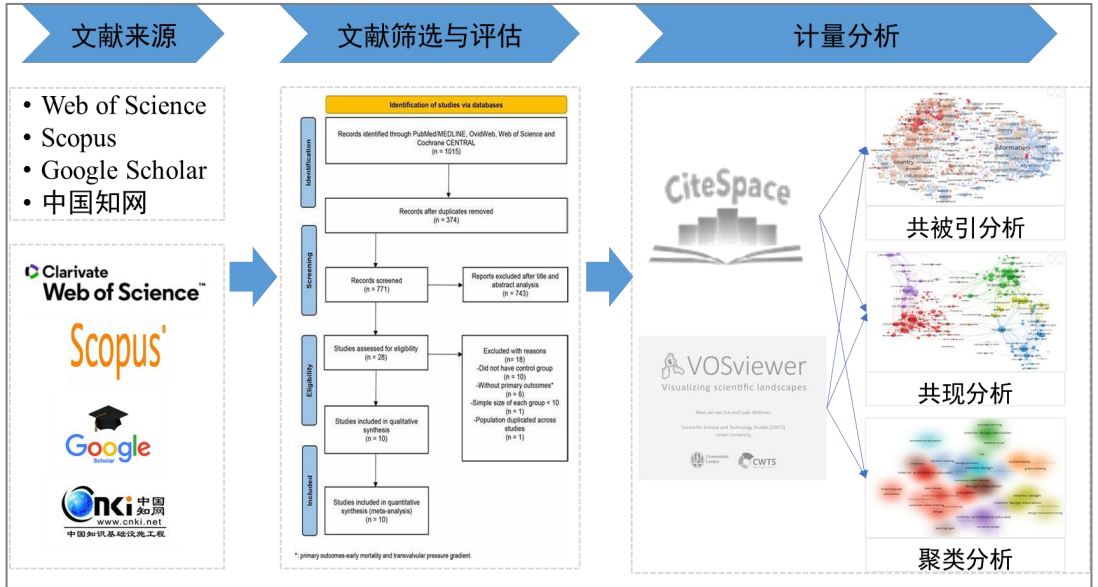
多层次案例分析



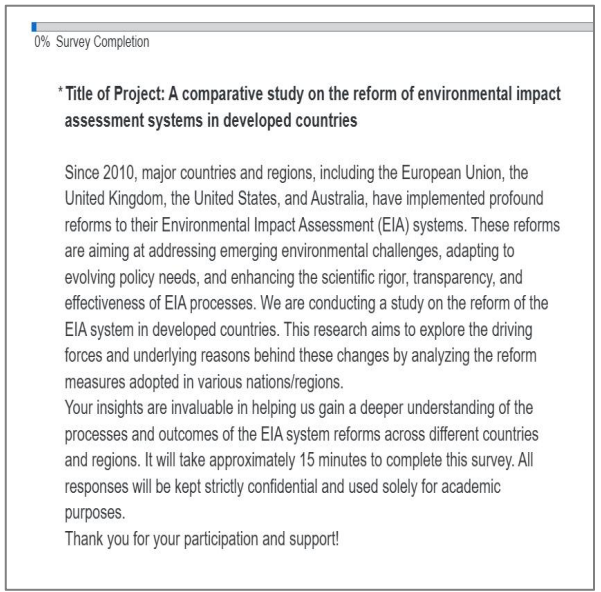
政策文本分析法



文献综述

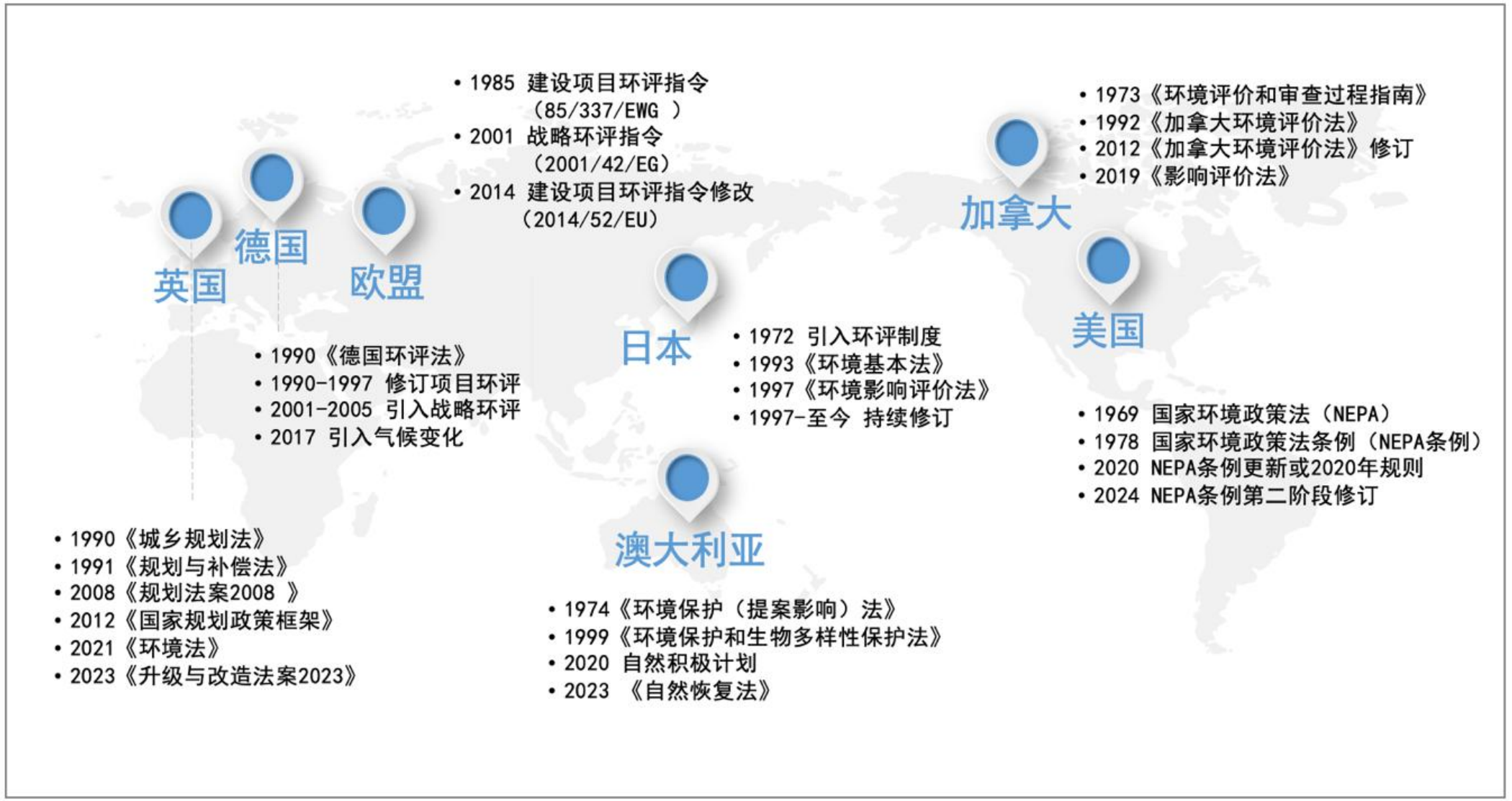


问卷调查法



2.2 研究对象

Principle of diversity, representativeness, reform frontiers, research feasibility, and data accessibility



3. EIA Reforms

3.1 EIA改革进程——美国

1969 NEPA法规发展期

- 1969 颁布《国家环境政策法》（National Environmental Policy Act, NEPA）
- 1978 年，CEQ颁布了《 NEPA 条例》
- 40多年来法规基本没有大范围修订

2017 特朗普政府（2017-2021）

对《 NEPA 条例》进行实质性修订

- （1）现代化、简化和加速国家环境政策法进程
- （2）阐明国家环境政策法的术语、应用和范围
- （3）加强政府间的协调
- *Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act*

2021 拜登政府（2021-2025）

- 第一阶段：着重恢复 1978 年《 NEPA 条例》核心要素
- 第二阶段：修订、更新和现代化 NEPA 实施条例，应对国家的环境、气候变化和环境正义挑战
- *NEPA Implementing Regulations Revisions Phase*
- *NEPA Implementing Regulations Revisions Phase 2*
- *Fiscal Responsibility Act of 2023*

3.1 EIA改革进程——美国

问题源流

- 2020年NEPA修订存在的问题
- NEPA审批流程与基础设施投资的冲突
- 各方利益相关者的批评与诉求

政治源流

- 拜登政府的绿色议程：气候行动与环境正义
- 清洁能源与基础设施发展的推动力

政策源流

- 拜登政府2023年NEPA修订的核心要素
- 政策工具的演变
- 精简审批与环境保护的平衡

- *Bipartisan Infrastructure Law & Inflation Reduction Act*

- *NEPA Implementing Regulations Revisions Phase & Phase 2*

3.2 EIA改革进程——英国

1985

2014 脱欧带来改革契机

2021 Environmental Outcomes Report制度取代EIA和SEA

- 欧盟指令85/337/EC1985将EIA引入英国；
- 1991，《规划与补偿法》强制推行EIA；
- 2001，欧盟指令2001/42/EC将SEA引入英国
- 2012，《国家规划政策框架》强调SEA与SA的法定地位

- 2020，英国议会发布了《升级白皮书》（Levelling Up White Paper），明确了新一轮环评改革的意向，旨在引入更加高效和精简的评价框架。
- 2021，《环境法》（Environment Act 2021）框架下正式提出EOR制度，
- 2023，英国议会发布了《升级和再生法案2023》，提出EOR制度取代EIA和SEA，明确了英国环评改革的三方面核心动向：一是优先考量环境因素；二是提升环评效率和有效性；三是强化责任部门自主权。
- *The Environment, Food and Rural Affairs (Environmental Impact Assessment) (Amendment) (EU Exit) Regulations 2019*
- *Environment Act 2021*
- *Levelling-up and Regeneration Act 2023*
- *Environmental Outcomes Report: a new approach to environmental assessment*

3.2 EIA改革进程——英国

问题源流

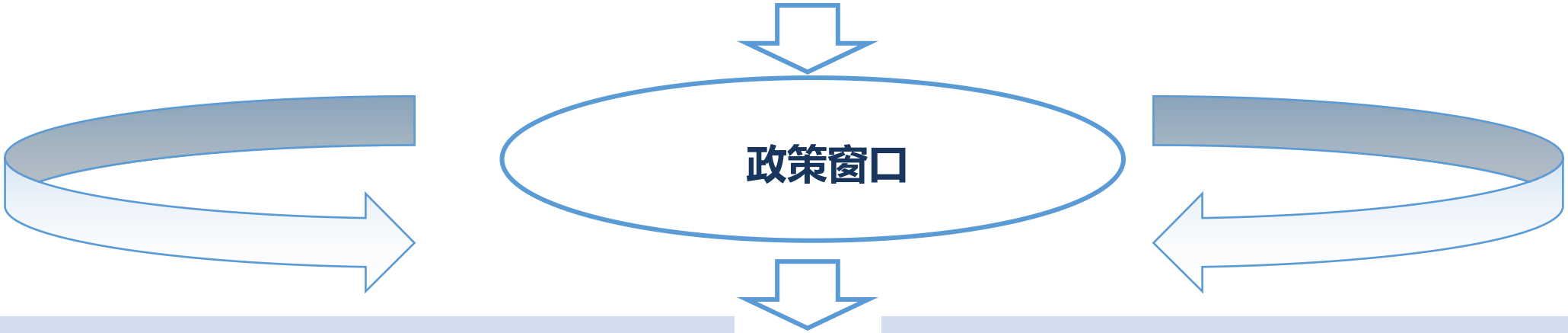
- 脱欧前环评体系的低效性问题
- 经济增长与环境保护的冲突
- 行业及地方政府的不满

政策源流

- 从过程导向向成果导向模式转型
- 中央政府统一界定环境目标成果
- 环评流程的精简优化

政治源流

- 脱欧成为制度改革的合法性依据
- 行业对流程简化的支持
- 环保NGO对保护力度弱化的担忧



- Legal-political opening post-Brexit
- Demand for economic growth

- *Environment Act 2021*
- *Levelling-up and Regeneration Act 2023*

3.3 EIA改革进程——澳大利亚

1974

1999 EPBC Act

2019 Independent review of EPBC Act

2022 Nature Positive Plan

- 1974年《环境影响评估法》形成多层次的EIA体系
- 1999年《环境保护和生物多样性保护法》简称(EPBC法案)在国家层面确立环评制度

- 2020年，EPBC法案独立评估（萨缪尔审查）发现，EIA 制度存在低效、执法弱和生物多样性下降的问题。
- 2022年，政府公布了“自然积极计划”的改革蓝图。
- *Environment Protection and Biodiversity Conservation Amendment (Streamlining Environmental Approvals) Bill 2020*
- *Nature Positive (Environment Protection Australia) Bill 2024*
- *Nature Positive (Environment Information Australia) Bill 2024*
- *Nature Positive (Environmental Law Amendments and Transitional Provisions) Bill 2024*

3.3 EIA reforms in Australia

Problem Stream

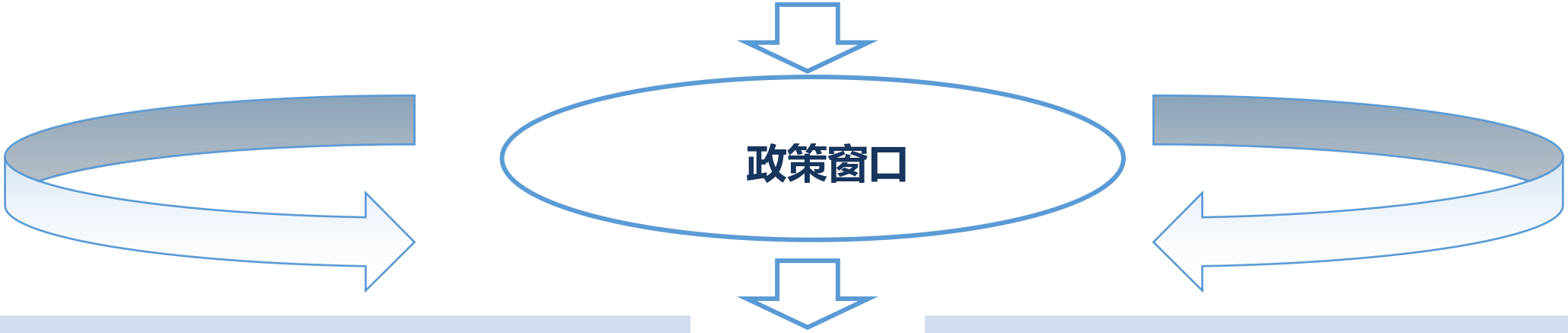
- 环评审批低效
- 生物多样性丧失与物种灭绝趋势
- 对EPBC法案失效性的批评（萨缪尔审查报告）

Policy Stream

- 萨缪尔审查报告（38项改革建议）
- Nature Positive Plan （2022）
- 设立EPA、制定国家标准、数据整合

Political Stream

- 莫里森政府时期（2019–2022）
- 工党政府时期（2022至今）：经济与生态平衡的政策转向
- 利益相关方施压



- Samuel Review(2020) report triggers debate on EIA inefficiencies.

- *Nature Positive Plan (2022)*
- Legislative reform pending final phase

3.4 EIA reforms in Canada

1973 1992 2012 2019 Judicial and Political Challenges 2024 Legislative Amendments

- 1973，环境评价和审查程序(EARP)首次规范环评程序
- 1992，加拿大环境评价法案确立环评法律地位(CEAA)
- 2012，CEAA修订，修订细节，精简流程

- 2019年，通过了《环境影响评估法》(IAA)替代CEAA。新法的主要修订内容
  - 扩大环评要素
  - 引入综合评估框架
  - 增强公众参与
- *Impact Assessment Act*

- 2023年，加拿大最高法院裁定IAA部分条款违宪
- 2024年，加拿大政府对IAA进行了修订
  - 重新界定联邦与省级政府的审批权限
  - 削弱部分对省级项目的约束力
  - 简化部分审批程序，提高审批效率
- *Budget Implementation Act, 2024*
- *An Act to amend the Interpretation Act and to make related amendments to other Acts (S.C. 2024, c. 30)*

3.4 EIA reforms in Canada

Problem Stream

- 原住民权利与气候议题保护失效
- 《2019年影响评估法》(IAA)争议
- 最高法院裁决（2023）

Policy Stream

- IAA 2019核心：早期规划、原住民参与机制、气候焦点
- 2024年修正案：限缩评估触发条件、推行合作联邦制模式

Political Stream

- 自由党政府：重建信任、气候行动与原住民和解议程
- 省级政府抵制
- 行业因审批周期冗长施压

- 2023 Supreme Court Ruling：IAA 2019 were unconstitutional

- *Impact Assessment Act 2019*
- *Budget Implementation Act 2024*

4. Conclusions and Discussion

4.1 Major trends

- ✓ **简化审批流程，减少不必要的延误。**
- ✓ **拓宽评估范围，将气候变化、生物多样性、公众健康等新议题纳入环评考量，以提升环境决策的全面性。**
- ✓ **普遍加强了信息公开和监督，通过数字化手段提升透明度，提高公众参与的实质效果**

Efficiency Optimization ⏱️	Integration of Emerging Issues	Digital Transformation 💻
US: 1–2-year deadlines	**US**: Climate impact analysis	**UK**: Online consultation platforms
UK: EOR replaces EU-EIA	**UK**: "Climate Test" (GHG assessment)	**AU**: National Environmental Data Hub
AU: Single-touch approvals	**AU**: Biodiversity safeguards	**CA**: Digitized Indigenous engagement
CA: Narrowed federal triggers	**CA**: Indigenous consent mandates	

4.2 Driving forces behind the EIA system reforms

Country	Problem stream	Policy stream	Politics stream
US	Inefficiency vs. climate goals	NEPA phased revisions	Bipartisan infrastructure push
UK	Post-Brexit regulatory gaps	EOR replacing traditional EIA	Conservative deregulation agenda
Australia	Biodiversity decline	Samuel Review (38 recommendations)	Labor’ s ecological pivot
Canada	Indigenous rights disputes	IAA 2019 and early planning	Federal-provincial power struggles

- ✓ **Problem stream set the stage for reform, though specific problems.**
- ✓ **Administrative inefficiency was a major driver.**

4.2 Driving forces behind the EIA system reforms

Country	Problem stream	Policy stream	Politics stream
US	Inefficiency vs. climate goals	NEPA phased revisions	Bipartisan infrastructure push
UK	Post-Brexit regulatory gaps	EOR replacing traditional EIA	Conservative deregulation agenda
Australia	Biodiversity decline	Samuel Review (38 recommendations)	Labor’ s ecological pivot
Canada	Indigenous rights disputes	IAA 2019 and early planning	Federal-provincial power struggles

✓ **Each country had available policy options or models to draw from, often informed by expert input or prior practice.**

4.2 Driving forces behind the EIA system reforms

Country	Problem stream	Policy stream	Politics stream
US	Inefficiency vs. climate goals	NEPA phased revisions	Bipartisan infrastructure push
UK	Post-Brexit regulatory gaps	EOR replacing traditional EIA	Conservative deregulation agenda
Australia	Biodiversity decline	Samuel Review (38 recommendations)	Labor’ s ecological pivot
Canada	Indigenous rights disputes	IAA 2019 and early planning	Federal-provincial power struggles

- ✓ **政治因素在环评改革中往往起决定性作用**
- ✓ **Political stream enabled (or hindered) the coupling of problems and solutions**
- ✓ **illustrated the influence of governance systems and leadership change.**

4.2 Driving forces behind the EIA system reforms

Divergent Reform Paths

- Divergent reform paths reflect **institutional contexts**: federal systems (U.S., Canada) prioritize balancing authority, whereas unitary systems (UK, Australia) rely more on centralized policy entrepreneurship."

Problem-Policy-Politics Coupling

- **Reforms succeeded only when all three streams aligned** (e.g., US leveraged Biden’ s climate agenda + NEPA inefficiency + bipartisan infrastructure bills).

Failure Example

- Australia’ s 2019–2021 reform stalled **due to weak political** will under Morrison government.

4.3 Discussion

Conclusions

- **Three universal trends**: Process simplification, issue integration, and digital.
- **Reforms succeed** when problem recognition, policy solutions, and political will align.

Limitations

- **Geographic Scope:** Focused on developed countries; reforms in emerging economies (e.g., China, India) need exploration.
- **Temporal Constraints:** Long-term impacts of reforms (e.g., NEPA Phase 2, IAA amendments) remain unverified.

Future Research Directions

- **Expanding cases:** Include EU member states (e.g., German) and developing nations.
- **Longitudinal analysis**: Track reform outcomes (e.g., approval timelines, biodiversity recovery rates).

Thank you