Impact Assessment in Higher Education and Research in Mexico



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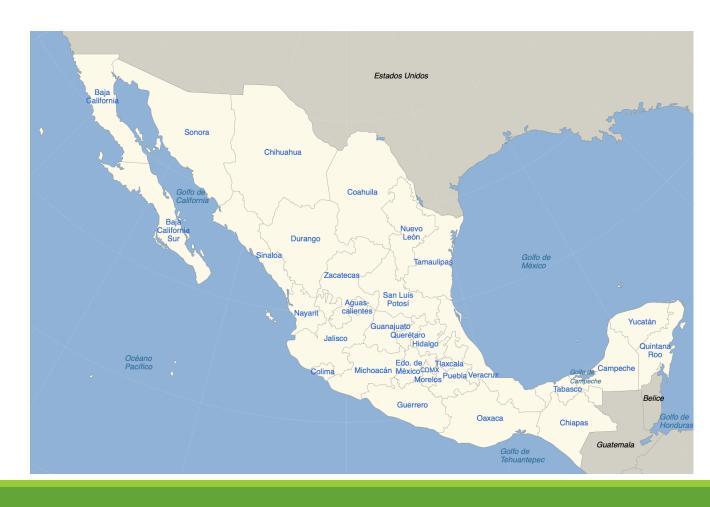






HIGHER EDUCATION RADIOGRAPHY

- 9 FEDERAL PUBLIC UNIVERSITIES (2024)
- 126 FEDERAL TECHNOLOGICAL INSTITUTES (2024)
- **130** DECENTRALIZED TECHNOLOGICAL INSTITUTES (2024)
- 6 TECHOLOGICAL RESEARCH CENTRES (2024)
- 16 INTERCULTURAL UNIVERSITIES (2024)
- **34** STATE PUBLIC UNIVERSITIES (2024)
- **1,587** SCHOOLS FROM **880** PRIVATE INSTITUTIONS (2002)







IMPACT ASSESSMENT IN HIGHER EDUCATION

- IA as subject in some undergraduate program.
- Not a single undergraduate program with strong relationship to impact assessment.
- Only two organizations related to impact assessment (AMIA, 2013 & COMIMPACT, 2018).
- IA teaching is focused on EIA for projects (LGEEPA, 1988)







IMPACT ASSESSMENT IN HIGHER EDUCATION

- Not aligned to EA international best practices or foundations restricted to Mexican guidelines for EIA (all of them outdated: 1988, 1996, 2014)
- Facilitators without any EA certification or experience
- Anyone can make an EIA





RESEARCH ON IMPACT ASSESSMENT

- Some undergraduate thesis in law, biology, architecture, civil engineering, chemical sciences, environmental engineering programs.
- Some Master thesis in law, biology, chemical sciences, civil engineering, environmental sciences, water management, environmental engineering programs.
- Some PhD thesis in law, environmental sciences, geography programs.





RESEARCH ON IMPACT ASSESSMENT – SOME EXAMPLES

- Economic, Social and Environmental Impact of the implementation of rainwater harvesting systems in two case studies. 2015. UNAM. Bachelor.
- Comprehensive diagnosis of the impacts produced by the tourism industry in Baja California Sur. 2006. Master.
- Analysis of carbon taxation in Mexico and its environmental impact. 2023. Bachelor.
- Citizen participation in the environmental impact assessment of the Mayan Train Phase 1. 2022. Master.





RESEARCH ON IMPACT ASSESSMENT – SOME EXAMPLES

- Strategic Environmental Assessment of the final disposition of residues and proposal of implementation of a sanitary fill in Xicotepec, Puebla. 2018. Bachelor.
- Strategic environmental assessment in the environmental management for the wind energy in the state of Baja California. 2012. Master.
- Integration of indexes of environmental impacts as part of a strategic environmental assessment for decision-making in the manufacturing industry. 2004. Bachelor.





• Methodological approach for using strategic environmental assessment within the Mexican decision-making and planning system based on two case studies. 2017. PhD Thesis.

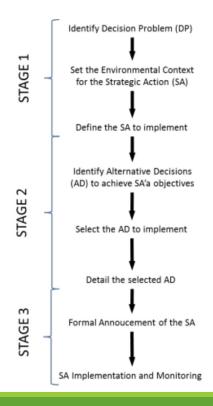
SEA CORE PRINCIPLES

- SEA has to meet integration between environmental considerations with a high-level of country's, state's, region's or municipality's development decision-making and planning.
- SEA has to be performed under an effective and accessible public participation in high tiers of decision-making and planning, or at least it has to improve it.
- SEA has to lead to decision-making, planning, legal frameworks and mindset rearrangements in order to achieve previous principles.

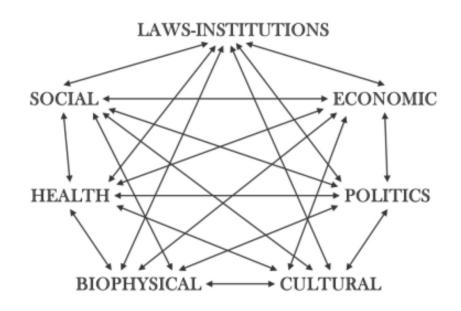




• Methodological approach for using strategic environmental assessment within the Mexican decision-making and planning system based on two case studies. 2017. PhD Thesis.



	STEP	SPECIFIC TASK	METHOD USED	
		Identify Problem's interested or affected stakeholders (1st screening)	Stakeholders meetings;	
	Identify Problem (P)	Define the Problem's fundamental(s) feature(s)	legal framework review	
		Set the reference framework (RF) for Problem's fundamental(s) feature(s) (Initial proposal)	Problem's Reference	
	Set the Environmental	Define the environmental elements linked to the Problem from the RF	Framework template	
STAGE 1	Context for Solving problem	Describe the baseline for the environmental elements identified (data gathering from institutions and field work) (2nd stakeholder screening)	Literature review, official documents collection, field work	
		Tiers with other strategic actions	Legal framework review	
	Define the Strategic Action (SA) to	Define the SA to use (legislation, policy, plan, programme or project)		
	implement	Set SA's vision	Stakeholders meetings	
		Set DP's strategic objectives		
		Data analysis	DF-P-S-I-R model	
	Identify Alternative	Report Stage 1 results to interested or affected stakeholders	Stakeholders meetings	
	Decisions (AD) to	Identify with the help of interested or affected stakeholders the ADs to achieve SA's objectives	Stakeholders meetings	
STAGE	achieve SA's objectives	Environmentally assess the ADs identified	Network analysis	
2		Define short, medium and long term scenarios for the use of identified ADs	Forecasting	
	Select the AD to implement	Hierarchy analysis for the selection of ADs to implement by the strategic action	Hierarchy analysis	
	Detail the selected AD	Once ADs were selected, detailed those ADs (Strategic Action's first draft)		
	Detail the selected AD	First draft review by affected or interested stakeholders	Consultation	
STAGE	Formal Announcement of the SA	Strategic Action's draft approval and formal announcement of the SA		
3	SA Implementation and Monitoring	ADs from the SA and environmental context follow-up	Application of evaluation criteria	







 Quantitative Analysis of Federal EIA's in 2003-2006. 2018. Bachelor.

Tabla 19. Totales de Proyectos Ingresados (DGIRA + Del. Federales) por rubro, periodo 2003-2006.

AÑO	PROYECTOS INGRESADOS											TOTALES			
	V.C.	O.H.	S	C.U.S.	Т	D.U.	E	Н	AC	AG	R.P.	I	P.E.	P.R.	TOTALES
2003	232	117	58	319	221	133	140	186	141	24	11	100	16	0	1698
2004	263	126	143	429	194	325	131	140	236	66	16	90	9	0	2168
2005	352	294	153	442	318	293	109	111	170	45	18	109	20	1	2435
2006	485	223	138	413	247	465	116	108	148	35	21	71	12	0	2482
	1332	760	492	1603	980	1216	496	545	695	170	66	370	57	1	8783

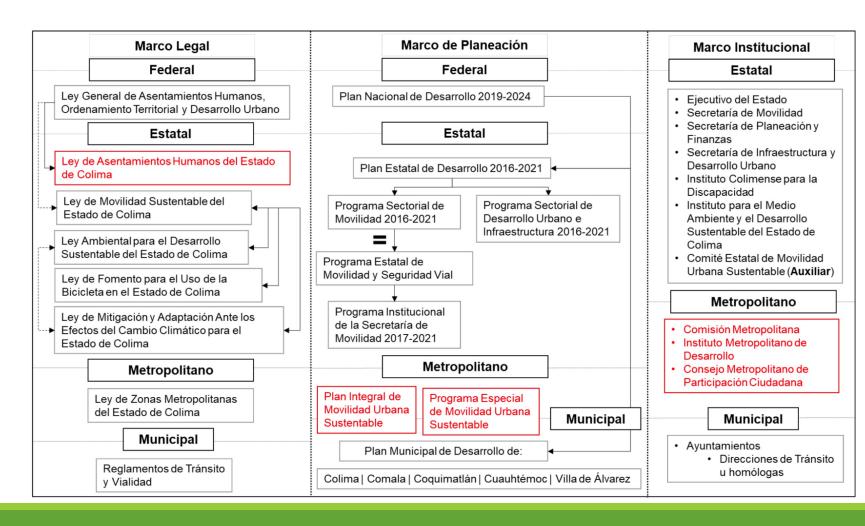
Tabla 20. Totales de Proyectos Emitidos (DGIRA + Del. Federales) por rubro, periodo 2003-2006

AÑO	PROYECTOS INGRESADOS											TOTALES			
ANU	V.C.	O.H.	S	C.U.S.	Т	D.U.	Е	Н	AC	AG	R.P.	1	P.E.	P.R.	TOTALES
2003	128	74	29	232	154	78	119	146	98	18	9	58	12	0	1155
2004	196	83	90	376	191	223	112	145	171	44	17	83	5	0	1736
2005	200	207	118	299	257	208	63	92	138	24	12	83	13	1	1715
2006	225	168	108	329	205	386	83	106	123	24	16	58	8	0	1839
	749	532	345	1236	807	895	377	489	530	110	54	282	38	1	6445





 Strategic environmental assessment of the urban mobility policy of the Colima-Villa de Alvarez metropolitan area, 2020, Bachelor.







- Identification, management proposal and sustainability appraisal for the water supply to urban and rural communities in the state of San Luis Potosí under the 2030 Agenda. (2018-2021). Research project.
- Development of a software for the Design of State Development Plans under the SD 2030 Agenda based on Strategic Environmental Assessment (2018-2019). Research project.
- Food Security in Impact Assessment. 2021 IAIA's Innovation Grant with Prof. Jill Blakley. (Fastips 2023, Webinar 2023, Premier 2024)





• Quality Analysis and Methodologies for IA used in Federal EIA's in Mexico 2003-2021. 2022. Bachelor (NF)

Lee & Colley Environmental Statement Review Package Assessment Adapted to Mexican Context

54 different IA methodologies used in 385 studies

CALIFICACIÓN	CONTEO	CATEGORÍA	TOTAL	PORCENTAJE	
Α	0	Bueno	0	0.0%	
В	0	buello	U	0.076	
С	24	Pogular	223	57.9%	
D	199	Regular	223		
Е	158	Mediocre	162	42 10/	
F	4	ivieurocre	102	42.1%	

CALIFICACION	CONTEO	Categoría	TOTAL	PORCENTAJE	
Α	0	Bueno	0	0.0%	
В	0	buello	U		
С	1	Pogular	99	25.7%	
D	98	Regular	99	25.770	
Е	259	Mediocre	286	74.3%	
F	27	Mediocre	200	74.3%	





RESEARCH ON IMPACT ASSESSMENT – CURRENT AND FUTURE

- Quantitative Analysis of Federal EIA's in 2007-2012. 2024. Bachelor. (Ongoing)
- Present status of the implementation of Strategic Environmental Assessment in Mexico after 10 years of the first assessment. (2024)
- Impact Assessment in AFF activities (IAIA's AFF Section activities). (2024)
- Development of an Environmental Assessment Research Centre at University of Colima. (Future)
- Analysis of the EA research production in Mexico (thesis, papers). (Future)
- Analysis of the national EA system in Mexico. (Future)
- More SEA application in real contexts through research projects or real cases. (Future)
- Complete the Quantitative Analysis of Federal EIA's for 2013-current. (Future)
- Development of a Software for using SEA process proposed in PhD Thesis. (Future)
- Analysis of the sub-national EA systems in Mexico. (Future)
- Development of a proposal to upgrade Mexico's EA system. (Future)

Let's continue the conversation!

Post questions and comments in the IAIA24 app.

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