Universalization of sanitation versus environmental licensing and IA

Mariana R.R. Santos and Gabriel D. Lima

Prof. Dr/ State University of Campinas - UNICAMP

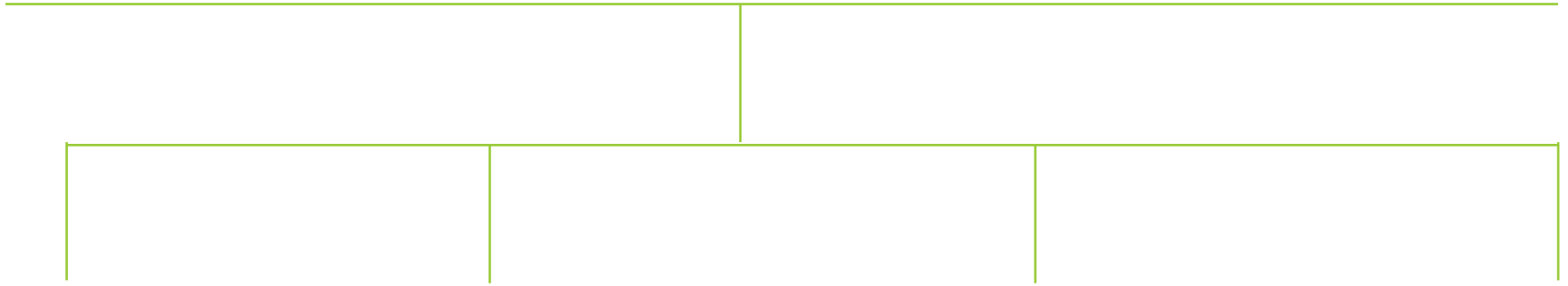
Brazil

mariana@fec.unicamp.br

https://www.fecfau.unicamp.br

Introduction

Part of a project: ENVIRONMENTAL LICESING, IMPACT ASSESSMENT AND BASIC SANITATION: CHALLENGES AND OPPORTUNITIES



Contextualization

In 1981 - the Brazilian National Environmental Policy mentions Environmental Impact Assessment (EIA) and Environmental Licensing (EL)

In 1986 – a Resolution stablished guidelines to Environmental Impact Assessment of projects (**sanitation projects are included**)

In 1997 – another Resolution stablished guidelines to Environmental Licensing (**water and sewage treatment plants included**)

after critics on bureaucracy and clamour for development…

In 2021 – a New General Law for Environmental Licensing is put to vote in the chamber (discussion started in 2004)

Contextualization

This new Law defines that Basic Sanitation projects related to water treatment and distribution and to sewage collection and treatment – **DO NOT NEED TO GO TRHOUGH ENVIRONMENTAL LICENCING**

which also means…

NO ENVIRONMENTAL IMPACT ASSESSMENT needed!!

It also doesn’t talk about SEA

On the other hand...

Sanitation in Brazil in numbers (2024), from **211 million** people:

about **32 million people without access to potable water**

about **90 million people not linked to sewage systems**

about **50% of the generated sewage is not treated**

On the other hand...

UNIVERSAL ACCESS TO SANITATION

Sustainable Development Goal N° 6 for 2030

and

Brazilian Sanitation Policy Target for 2033

IT IS AN URGENCY!!!!

On the other hand...

OK...

Water distribution systems with Water Treatment plants and Sewage collection systems and Treatment plants **are not the only solution...**

In Brazil, about 7,8% of houses are = irregular housing

Rural areas are very extensive = no water or sewage nets

And then??

What can be done in urban areas which need water distribution nets and treatment systems?

EIA presents opportunity for learning, public participation and improvement of proposals

How can we ensure PEOPLE'S, URBAN and ENVIRONMENTAL HEALTH in this context?

Is it possible to put UNIVERSALIZATION **against or ahead** ENVIRONMENTAL CONCERNS?

The study

- Focus on water treatment plants
- Search for Environmental Impact Assessment reports
- **Only 2 found!!!**
- Leading to other questions: what has been done? What has happened to sanitation projects in practice? (next steps of the research)

Impact Assessment Reports

Water Treatment Plant Tanque - Itabira MG

Among other things, this study…

- Presents locational alternatives considering data on river intake flow rates, length of the pipeline …
- Considers the presence of indigenous peoples, traditional communities, cultural heritage sites and others
- Foresees that the sludge will be thickened and dewatered in geotextile bags and subsequently properly disposed

Impact Assessment Reports

Water Treatment Plant Itapoá - SC

This study:

- Demonstrates concern regarding the Ombrófila forest in the region, which limit the local implementation possibilities of the project
- Chooses location from a water distribution perspective
- Regarding fauna and flora, concerning birds, identifies some species which are threatened of extinction and promotes mitigating activities for this

Impacts

NEGATIVES			
IMPACT	**MAGNITUDE**	**PHASE**	**MIDDLE**
Disturbance/driving away/death of animals	Median	Construction & Operation	Biotic
Suppression of vegetation cover	High		
Change in air quality	Median	Construction & Operation	Physical
Increase noise and vibration levels	Median		
Change in soil quality	Low		
Change in the landscape	Median		
Soil erosion	Low	Construction	
Soil instability	Low		
Change in the quality of water resources	Low		
Risk of work accidents	High	Construction & Operation	Socioeconomic
Generating expectations in the community	Median	Construction	

Impacts

IMPACT	MITIGATING, COMPENSATORY AND/OR CONTROL MEASURES
Disturbance/driving away/death of animals	Assist employees with how to proceed in the presence of native species
	Adoption of measures that seek to reduce noise levels, control and organize the traffic of trucks, people and Machinery
	Implement an Environmental Education Program, aiming to raise awareness environment of workers and the surrounding population
Suppression of vegetation cover	**An area of the same size as that removed, in the same region, will be compensated with forest replacement**

Impacts	**Change in air quality**	Measures to minimize involve: controlling emissions in land preparation and cleaning activities, in the movement of materials, equipment and cargo vehicles, through moistening work areas, washing truck tires when exiting the project onto public roads, and regulating vehicles in accordance with standards, which must be detailed in the Environmental Management Program
	Increased noise and vibration levels	Monitor the sound propagation of the flow of vehicles around the WTP to neighboring residential areas. It is also important that periodic maintenance is carried out on transport equipment
		The operation of the equipment responsible for capture and flocculation takes place in a closed environment and during daytime

Impacts	**Change in soil quality**	Controlling the **generation and adequate final disposal of solid waste and effluents**. For this purpose, it is suggested to use areas containing designed waterproofing and drainage systems, to prevent waste generated by civil construction, handling of products for supply and maintenance of vehicles and equipment from reaching the ground. In addition, periodic maintenance must be carried out on machines and equipment to prevent oil and grease spills
	Change in the landscape	There are no mitigating measures in relation to the impacts on the landscape resulting from the implementation of the Project

Insights

- Potable water is necessary to keep people healthy and productive, influencing the countries development
- Universalization is an urgent demand
- Environmental Licesing and EIA Reports are fundamental to provide better decisions, including the opportunity for new approaches (i.e. use of sludge) – including the opportunity of public participation in the process
- EIA reports can help making better projects and design mitigation/compensation measures

Which alternatives can we follow/suggest now?!

Let’s continue the conversation!

Post questions and comments in the IAIA24 app.

#iaia24

Mariana Santos

UNICAMP

Brazil

mariana@fec.unicamp.br