Analysis of the EIA of Landfills for Sustainability in Perú

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Perú

Population: 34,050,000

79% belongs to the urban population

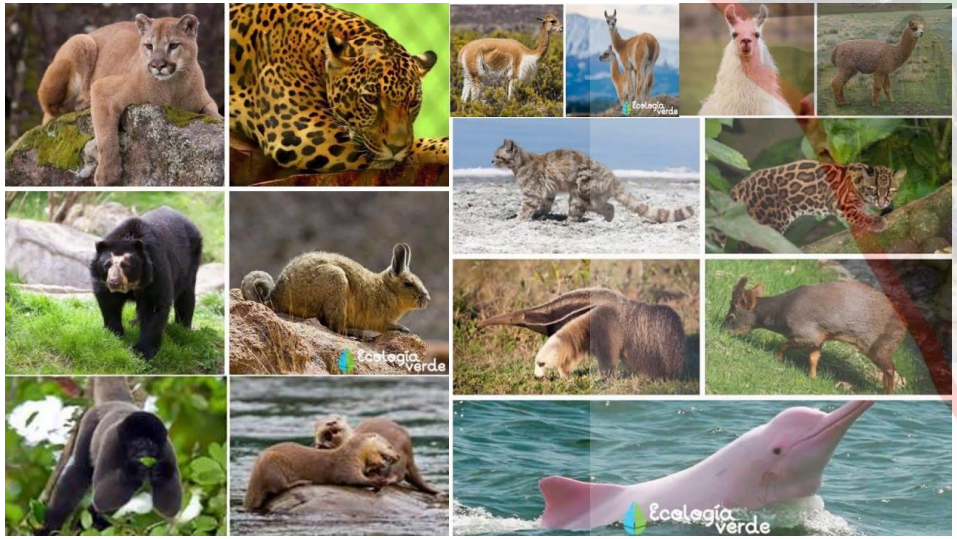
Almost every third resident lives in Lima.

1US$= 3. 5 Soles

Language: Spanish, Quechua, Aymara

16. 9% protected areas (SINANPE)

Perú



Perú is considered a mega-diverse country.

territory contains approximately 2.000 species of fish; 1.736 species of birds (second ranking in the world in biodiversity);

Its 32 species of amphibians (it ranked the third place in the world); 460 species of mammals (ranking third in the classification); and 365 species of reptiles (ranking fifth in the classification).

Solid Waste in Perú

Sinia, 2019

In Perú, 21 million tons of solid waste are generated every day. (Servindi, 2024), of which only 1% is recovered.

According to Duran (2020), 55% of the solid waste generated in Perú is taken to a landfill, the rest is taken to illegal waste dumps.

Perú has 47 landfills and 6 security landfills. (SINIA; 2019).

In Latin America

According to Gonzales & Stamm, (2022) in Chile, landfills have not been the complete solution to the solid waste problem in Santiago de Chile, in fact, they have been the creators of other environmental problems, as well as social conflicts

The author Lara (2022), carries out an analysis of the sanitary landfills "La Perseverancia" and "Loma de Mejía" located in Mexico, which present conflicts due to their location and protests of the population.

The author Mahecha Bustos (2019) describes the case of the Doña Juana landfill located in Colombia, which ended up becoming an environmental problem for the country of Colombia, one of the causes being its location. The article indicates that landfills can cause major problems of inequality in the population, due to the conflicts they can generate in the surrounding population.

According to Guevara, et al (2020) in the area of Bariloche, Argentina there are conflicts related to solid waste due to informal businesses around them.

Methodology

Step 1: The Environmental Impact Studies related to the landfill published on the SENACE website, which is the Peruvian authority in charge of approving such studies, have been used. The EIAs that are in accordance with SENACE and already approved have been used.

Step 2: The content of these EIAs has been compared with the SDGs and their targets in order to determine whether they are properly aligned.

Step 3: In addition, the report published by the Peruvian Defensoría del Pueblo for December 2023 has been used to learn about socio-environmental conflicts related to solid waste management.

EIA and SDG

EIA 1	EIA2	EIA3	SDG
Environmental Impact Study 1 corresponds to a safety landfill for the treatment and final disposal of hazardous solid waste located in Trujillo, Perú. The project aims to reverse the impacts of poor waste management as waste is currently taken to an illegal waste dump.	The project is a safety landfill in the south of the country, located in Moquegua, where the infrastructure to handle hazardous waste is scarce. This is a project that will also contribute to the recovery of waste before final disposal.	The third IEA is also a security landfill located in the south of the country, in the Arequipa region.	These factors taken into account are related to SDG 3 as it is linked to the goal of reducing air, water and soil pollution by 2030. It is related to SDG 6 as it is linked to the target of minimizing water pollution with chemicals by 2030. It is linked to SDG 11 as there is a specific target on waste management in cities. There is a relationship with SDG 12 as it talks about rational management of products throughout the life cycle. And finally, there is a relationship with SDG 14, as landfills in Peru prevent waste from reaching marine ecosystems.

Conflicts related to solid waste

The issue of waste and sanitation accounted for 4.5% of conflicts in Perú. (Defensoría del Pueblo , 2023).

Landfill: Huánuco. No dialogue

Landfill location: Puno: there is dialogue

Farmers protest prevented the final disposal of waste in different areas of Pasco.

Problems with waste treatment and final disposal. Junín

Closure of landfill due to poor final disposal of waste and contamination. Cusco

Conclusions

- Landfills have different advantages in countries such as Perú, where other techniques for treating solid waste have not yet been developed.
- Landfills help improve waste collection, as well as decrease the amount of greenhouse gases produced.
- Solid waste is a complex issue to solve, especially when there are different social problems that afflict the population.
- Landfills are still a valid and necessary strategy in countries such as Perú for the proper treatment of solid waste.
- EIAs can be aligned with the SDGs to be instruments that help achieve targets at the national level.
- Solid waste is an issue of socio-environmental conflicts that there are many aspects related to the issue that must be addressed.

Discussion

Which are the methods you applied in order to capture complexity in IA?

- The methods applied to be able to make a better analysis in an EIA in this proposal are related to linking the studies to the SDGs in order to make the environmental management instruments tools to reach the goals for the year 2030.

What do you see as opportunities to positively influence the future development of IA by using your methods?

- The opportunities lie in the use of multidisciplinary methodologies and in citizen consultation in order to obtain feedback that leads us to strategies that are truly sustainable for communities, taking into account the 3 axes of sustainable development: environmental, economic and social.

Let’s continue the conversation!

Post questions and comments in the IAIA24 app.

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