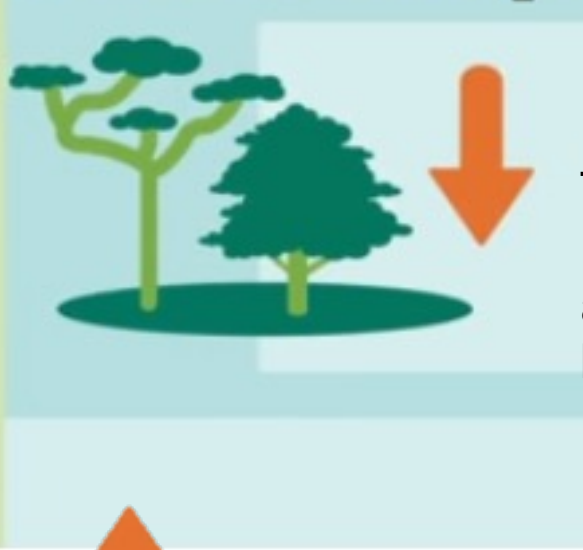


Environmental responsibility in Mexico: a view from the degradation of forests

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Tropical countries

annual net loss of forest: 7 million hectares.



Increase in agricultural land

Forest conversion



Deforestation and forest degradation account for 12% of greenhouse gas emissions.

Currently, several countries are increasing the area of their forests.



México total land area, 70% is forest vegetation (41% arid zone vegetation, 24% temperate forest, 21.7% jungle, and 13.3% other vegetation).

But it is estimated that about 300,000 hectares per year are degraded (FAO, 2010).



Production and consumption processes have driven environmental imbalances (such as forest degradation). In 1971 Germany regulated environmental responsibility, followed by Italy, Spain, Japan, Canada, the United States, Brazil, Argentina, among others. In Mexico until 2013 began to regulate the repair and / or compensation for environmental damage through the Federal Law of Environmental Responsibility.





The figure of environmental responsibility (ER) is not defined in the Mexican legal framework, it is only determined on the basis of a sanctioned fact based on the non-compliance of environmental management (formal infraction) or when the permits granted are exceeded (material infraction). This indicates that the scope of ER so far comes from ignorance or disregard of the law.



It recognizes the independence between the damage caused to the environment and the damage suffered by the owners of the natural elements.

The existence of environmental damage is **not considered to exist as long as the damage is not adverse** due to the existence of a forest land use change authorization or any other type of similar authorization.

Does not define **environmental compensation**.

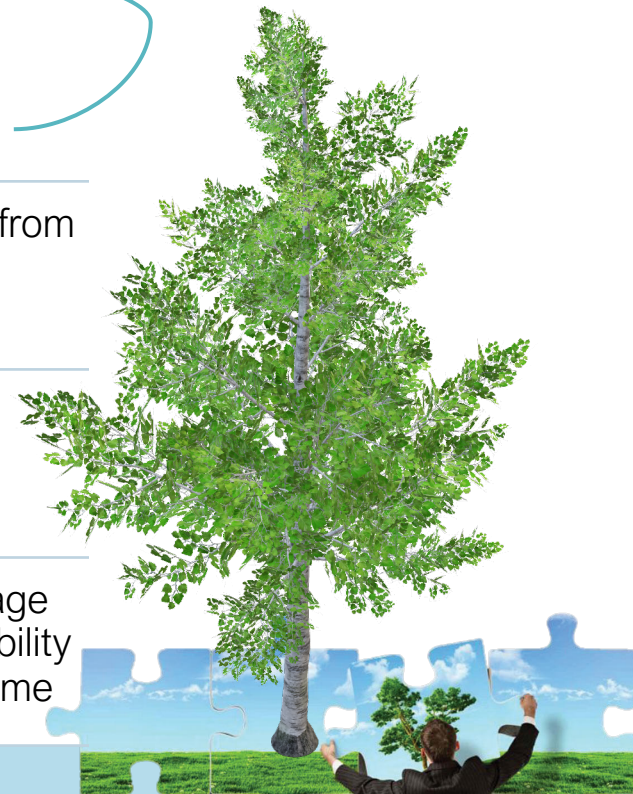
This refers to the repair of the damage or, when this is not possible, **environmental compensation** will be applied.

The responsibility for damage caused to the environment will be subjective, and will arise from unlawful acts or omissions.

It defines damage repair as the restitution of the habitat to its Base State...through **restoration**, reestablishment, treatment, **recovery** or remediation.

Not defined

The Mexican legal framework presents an unclear position regarding environmental damage from forest degradation, which questions the way to link biomass decrease with the possibility of repairing degraded forests, taking into account that 45% of Mexican forests present some degradation process.



In the case of the decrease in biomass levels from forest degradation processes, it would be assumed that the adversity of the act is fulfilled and that there is a possibility that the forest can be repaired. These characteristics lead to reflect on the scope of the figures of environmental damage, repair, and compensation to improve degraded forests.



This lack of clarity in the mexican environmental legal framework could presuppose a legal and political weakness regarding the actions being taken in México to address forest degradation.



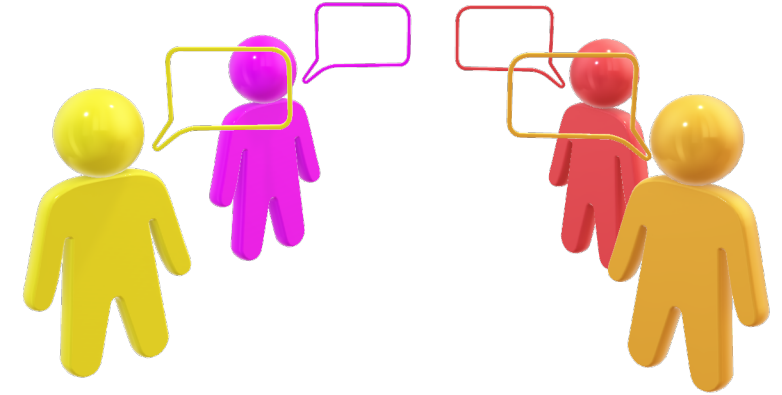
Particularly in forest protection and forest management through the use of forest waste.

It has been suggested that the residual biomass in Mexico are estimated to be approximately 278E6 tons of solid waste. The estimated energy potential for this amount of waste is approximately 2,980 PJ. Fifty-eight percent of the potential comes from forests and 27% of agricultural and forestry residues.



The residual forest biomass in México comes from sawmills.

It has been estimated that about 728,846 Ton/y of biomass are generated, and the energy potential of this residual biomass is 13,897 TJ/y. Generating sources have been classified according to the wood used: tropical, coniferous and leafy, with conifers representing a higher energy potential TJ/y.



Forest management can begin with the incorporation of international mechanisms such as clean development mechanisms and the REDD+ mechanism to achieve energy efficiency in the use of forests and the management of forest and other residues such as agricultural and livestock waste.

In this way, a contribution can be made to energy demand in rural communities.



Conclusions:



1. The responsibility in México is limited to the fact that a damage is adverse, without considering those that under an authorization cause imbalances to the environment.



2. The responsibility in México promotes the repair and/or compensation of the damage, but not the prevention.



3. The mexican forest is in constant degradation and deforestation with no litigation to date to claim environmental responsibility.



4. One way to reverse the environmental imbalances of the forest is through the efficient use of forest residues, which, among other things, will promote social participation and meet local energy demand.

