AQUAPONICS TO IMPROVE QUALITY OF LIFE OF PEOPLE AFFECTED BY THE DISRUPTION OF THE MINING DAM OF "FUNDÃO"

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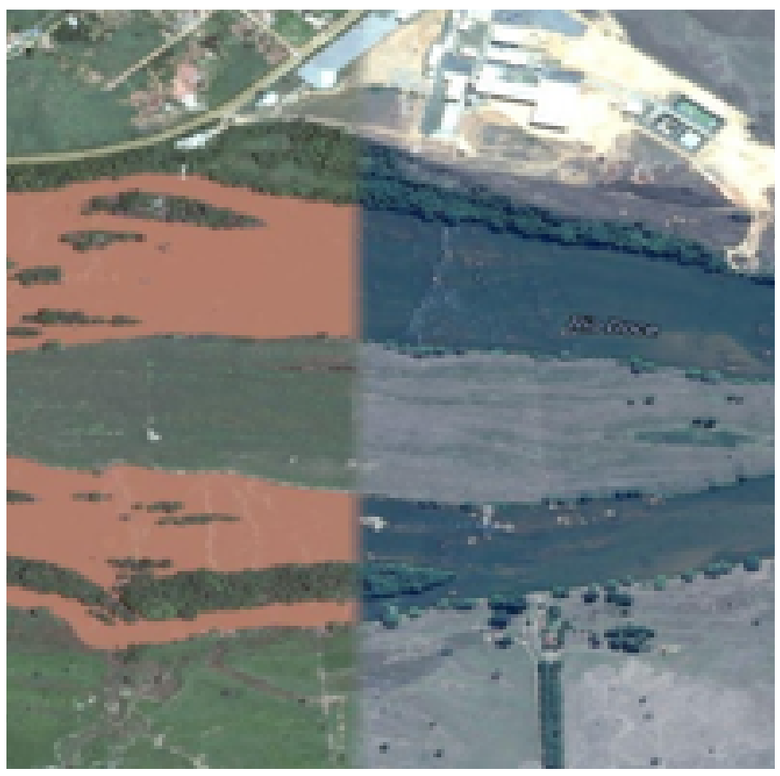
AIM

This project aimed to improve the quality of life of riverside communities affected by the rupture of the mining tailings dam of "Fundão", Minas Gerais, Brazil, by implementing aquaponic systems. Such episode, which occurred in 2018, severely damaged populations that lived in the area. Aquaponics, a low-cost, simple-to-implement sustainable system, presented itself as an alternative for food production and increased income for the affected communities.

METHODS

A pilot system was implemented in Resplendor (MG, Brazil), an indigenous community of the Krenak ethnic group. Before the implementation, dialogic and educational methods explained the management necessary for the maintenance and success of the system. The fish species chosen were the Nilotic tilapia (Oreochromis niloticus) and the Lambari (Astyanax bimaculatus), grown together in the same tank. Juveniles of the animals were allocated in a 310L water tank, with an intensive and recirculating water system. The aquaponic system used was the expanded and floating clay as cradles for plant cultivation. The consortium with plants used in traditional rituals was used for plant production. The animals were fed daily, with commercial feed containing 28% of raw protein. Besides the two face-to-face visits to the community, the team maintained a weekly telephone contact for technical support.



Unupdated stretches of the Rio Doce show what the river was like before and after the tragedy. It is currently noted the ore sludge present in the water.

Source: Google Maps.

CONCLUSION

Aquaponics was a real alternative to improve the quality of life of communities. The system proved to be an efficient and inexpensive way to produce safe food, fast to build, easy to maintain, sustainable, and organic.

RESULTS

The Krenak tribe was receptive to the project proposal. The system favored obtaining fish and vegetables for the families. It was used for eight consecutive months when the community determined that the fish reached sufficient size for consumption. This experience promoted dialogue between the University, the external public and the consolidation of associative forms in the community.

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