BAFWAC

Itza Popo - Replenishing groundwater through reforestation in Mexico

a Volkswagen Group case study

Company details

The Volkswagen Group, headquartered in Wolfsburg, Germany, is one of the world's leading automobile manufacturers. In 2014, the Volkswagen Group's 592,586 employees delivered 10.137 million vehicles in 153 countries, which represented a 12.9 percent of the global market share. The Volkswagen Group is comprised of twelve brands operating 118 production plants in 20 countries across Europe and 11 countries in the Americas, Asia, and Africa.

Summary of action

Volkswagen de México operates a production plant in the Puebla Tlaxcala Valley, a region of Mexico where water supply is not sufficient for both the growing city of Puebla and the industrial area nearby. In this context, securing a reliable water supply was critical to ensure the stability of production for the company, and the availability of water for local communities.

Program rationale

The Puebla Tlaxcala valley where the company operates is a region where water supply is particularly critical. Analysis found that groundwater replenishment in the valley was highly contingent upon the functionality of the ecosystems on the volcanic slopes. Years of deforestation had led to increased water runoff, and loss of capture and storage in the groundwater table. To restore the functionality of the ecosystems, it was important to re-plant the deforested slopes between the two volcanoes.

The additional water supply would support the company's long-term operations in the region and help prevent water rationing, rising water prices, and unrest in the local population.

The company partnered with the Comisión Nacional de Áreas Naturales Protegidas to develop this project. Stakeholders included local communities who had a strong interest in ensuring water availability for domestic use.

Program approach

The project aimed to restore the functionality of the ecosystems on the volcanic slopes of Popocatépetl and Iztaccíhuatl and the team proposed a system of natural infrastructure alternatives—trees, pits, and earthen banks—to enhance rainwater capture. To facilitate this, approximately 300,000 Hartweg's Pines, a tree native to Mexico (Photo 1) were planted in 2008. Additionally, pits (Photo 2) and earthen dams (Photo 3) were constructed to ensure a source of water was retained while the trees were establishing.

Lessons learned

When involving local people in the planting and maintenance work, it is important to rely on their experience, and allow them to take ownership of their part in the project.

Results & Benefits

1,300,000 cubic meters of additional water per year to be fed into the ground reserves in the source region over six years. This is significantly more groundwater than Volkswagen de México itself consumes every year.

Photo 1

Photo 2

Photo 3

The participation and stakeholder buy-in from other organizations, including the agency responsible for the Puebla State drinking water, was key to the project's success.

It was important to include team members with a working knowledge of sustainable practices in water use and development for natural resources.

This project was an opportunity to create awareness within local communities on the importance of environmental stewardship.

What next?

The success of the Itza Popo project prompted Volkswagen de México to initiate a similar new project involving 100 hectares of trees to be planted in Filao, Mexico in 2015.

Source:

http://www.naturalinfrastructureforbusiness.org/wp-content/uploads/2015/11/Volkswagen_NI4BizCaseStudy_Itza-Popo.pdf

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BAFWAC was jointly launched by CDP, CEO Water Mandate, SUEZ, and World Business Council for Sustainable Development (WBCSD) in December 2015. The initiative commits companies to analyze and report water-and-climate-related risks and impacts, and to implement collaborative response strategies along the value chain.

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