

# Combining the best in ‘Wisdom Traditions’:

Public schools as locus for species conservation, upscaling traditional knowledge and gaining entrepreneurial acumen

United Nations Biodiversity Conference  
COP 13

Cancún, Quintana Roo  
MÉXICO

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# UN Regional Centre of Expertise on Education for Sustainable Development

## Borderlands México-USA

## Innovation for the Future Today!





## ESD in the México-US Borderlands Region





# Ecosystem Services



Native flora provides *ground cover* allowing for the prevention of erosion.



It constitutes a *habitat* for the myriad species of insects, reptiles and mammals native to the region.



Natural forest growth in the region helps ensure constant and healthy *water cycles* in the highlands.



Healthy water cycles in the mountains allow for *abundant rains to reach the plains areas*, where small and medium scale *agriculture* have traditionally been carried out.



# Risks to Biodiversity

In Borderlands México-USA...

*Genetically modified seeds, chemical fertilizers and monoculture*

Since the entry into force of the North American Free Trade Agreement on 1 January 1994, transnational agribusiness has acquired vast amounts of arable land, in the borderland region, which they dedicate to only a few varieties of genetically-modified crops, destined primarily for exportation. In addition to loss of biodiversity and soil degradation, the heavy use of manufactured pesticides and fertilizers poses considerable risk to the wellbeing of humans, animals and the land itself.





# Risks to biodiversity

In the Sierra Madre Mountains of Chihuahua MÉXICO

Deforestation and interrupted rain cycles- Although the rate of reforestation has improved considerably over the last several years, vast swaths of wooded areas in the Sierra Madre region continue to be cut much faster than the forests are able to reconstitute themselves. In addition to habitat loss, and the ensuing species loss, the rapid felling of trees is a factor in causing drought conditions in the region, since trees and accompanying flora are so crucial to the hydrological cycle.





# Human Costs of Biodiversity Loss and Ecosystem Degradation in the Borderlands Region



...as they become less and less able to compete with agribusiness; water grows ever-more scarce; soils degrade; and family lands are sold off to the transnational logging and agribusiness.

Human costs can be found in the ongoing outmigration of individuals and families from the countryside to the cities, or to the United States, in search of work...





# The Wisdom Traditions Program



## Overview: Two venues

### The schoolgrounds and the *Fincas* (smallholding farms)

#### *School to community-Community to school-*

- \* Elders share their knowledge of native medicinal plants, crops and livestock husbandry. Production includes *pinole*, dairy and poultry products, apples, pecans, corn, chile, beans, squash and traditional medicinal products.
- \* The school becomes a Living Lab where students cultivate these crops . They carry out species identification of the medicinal crops, and they are taught about the uses of the plants from community elders, traditional healers and farmers.
- \* Elders, families and children learn about proper handling, packaging and selling of products.
- \* The school has a cooperative store for selling prepared foods, fresh produce, *pinole* and packaged medicinal products. Students, families and community members learn the business aspects at the Wisdom Traditions Coop located on the schoolgrounds, where they take turns running the store- as they learn to handle the accounting, logistics, etc.



# Multi-stakeholder approach



**School personnel**



**Students**



**Women**



**Political Leaders**



**Traditional Healers**



**Private Sector**



**RCE Borderlands  
personnel & collaborators**



**Smallholder  
Farmers**



**Local  
Governments**



# On the school grounds...



## Biodiversity- Species Identification -Traditional Knowledge

- 1) The Wisdom Traditions Program aims to conserve biodiversity by engaging traditional healers and farmers to identify native seed, which students then plant and care for on the school grounds.
- 2) Elders teach the students how the plants are used as food sources and for traditional medicine.
- 3) Apple and pecan trees are planted on the school grounds. Cows and chickens are kept at a local *finca*.
- 4) The Wisdom Traditions Coop Store is used to sell these locally-produced goods, and to prepare both students and community members as small business entrepreneurs.
- 5) The school ground thus serves as a Living Lab where traditional knowledge meets with modern day business skills as we seek to help people to achieve dignified and sustainable livelihoods.





# In the *fincas* (smallholding farms)...

## Food crops



## Livestock





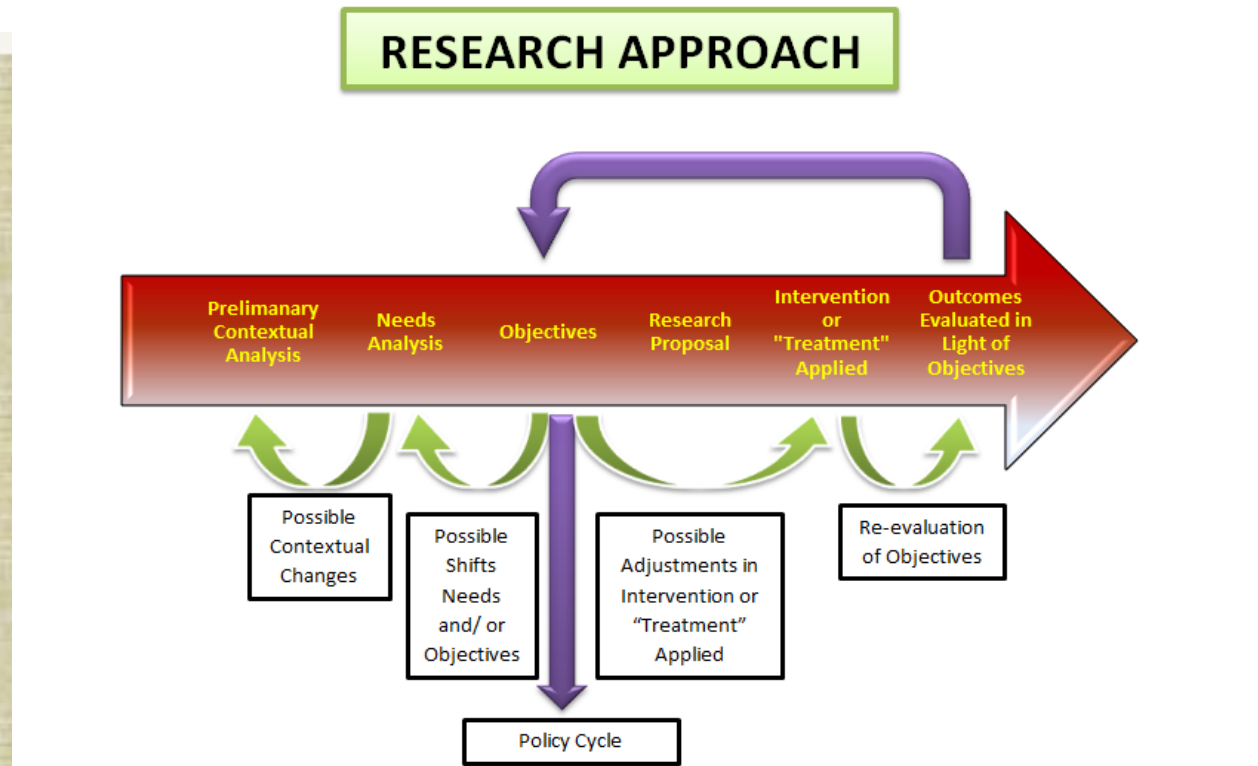
# Transforming local economy through the Wisdom Traditions Coop:

Providing small business  
training to students and  
the community





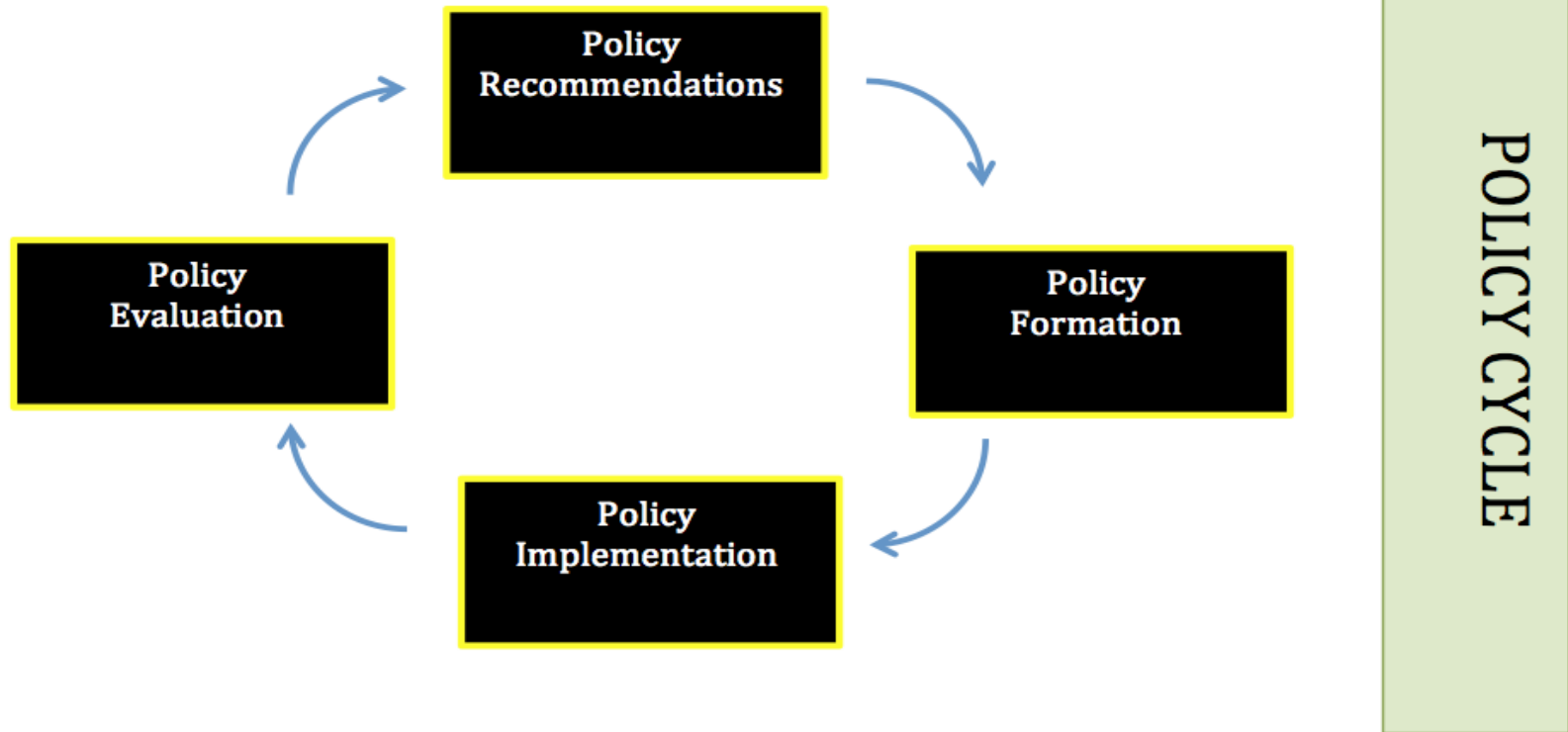
# RESEARCH APPROACH



**Research Approach--** When a problem or a concern has been identified for intervention, researchers begin by conducting a Preliminary Analysis which provides a broad understanding of the history and the particulars surrounding the topic of study. The second step is to carry out a needs analysis in order to understand people's concerns, desires, goals and fears pertaining to the issue. Objectives are then developed in conjunction with community members and authorities. A Research Proposal is presented, which includes a section specifying what perceived benefits the project will provide for the locality. The Intervention is applied, and data analyzed in light of the stated objectives. In order to improve implementation, adaptations may be made as indicated by the green feedback arrows depicted in the graph above. Based on the findings, policy recommendations are presented to appropriate legislative bodies; and resulting manuscripts are submitted for publication in refereed journals, books, or other sources of knowledge dissemination.



# THE POLICY COMPONENT: ENCOURAGING LASTING STRUCTURAL CHANGES



*Joining in to the Policy Cycle*— Research carried out at the Living Lab/Centro de Diálogo y Transformación is conducted in collaboration with relevant actors, including ordinary people, local authorities and the private sector. The Centers' researchers join in to the Policy Cycle by providing recommendations based on research findings. They then approach administrative bodies and offer to conduct ongoing evaluation of the implementation process with the aim of providing feedback designed to help reach the policy objectives as enshrined in the law, or legislation. Outcomes are systematically assessed for their effectiveness, further recommendations are given, and on goes the policy process.





Solar	Wind	Geo	Hydro	Bio	Tide

Contact us today for service and collaboration toward a sustainable future!



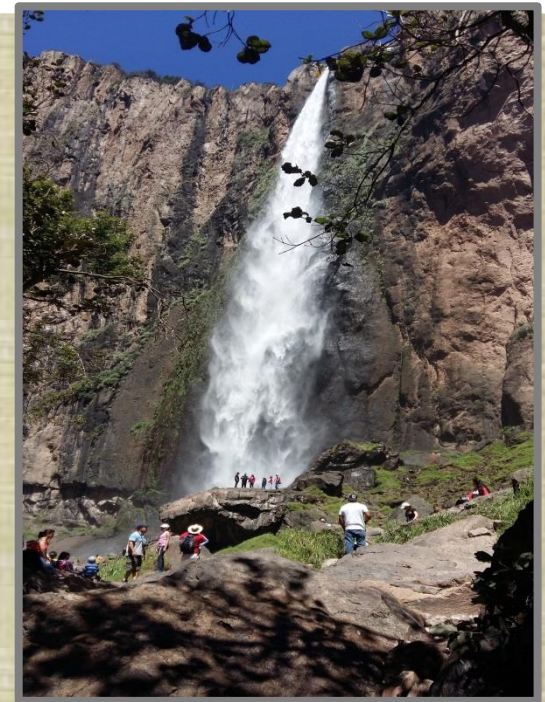
KINDLY LEAVE A MESSAGE ON THE FACEBOOK MESSENGER AT:

“Living Lab/Centro de Diálogo y Transformación: Borderlands México-USA”





**Living Lab: For sustainable development**  
&  
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**Humanity- Environment- Economy**



**Thank you for your kind attention!**