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# Embracing Indigenous Wisdom to Build More Resilient and Adapted Communities

NAHRO's INTERNATIONAL RESEARCH AND  
GLOBAL EXCHANGE COMMITTEE

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# About the International Research and Global Exchange Committee

The Committee's mission is to promote and share global exchanges of information and to develop relationships that assist NAHRO membership and all those engaged in the development and operation of housing and community development programs.

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# Today's Presentation

- **About this whitepaper**  
The origins and background
- **The Question**  
Are there different ways to think about healthy communities?
  - ◆ What would that look like?
- **The Areas of Study**
  - ◆ Australia, Africa, the Americas
- **Lessons Learned and Areas for Research**

This is an interactive session,  
SO.....

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# Questions to think about:



1. What is your biggest takeaway?
2. What did you find most relatable?
3. What 1 change could you take immediately for the better?

# Why pick resilience to study?

# Why choose indigenous populations?



A man rides a bicycle in front of a property destroyed by Hurricane Ida in Houma, Louisiana, in August 2021. (GO NAKAMURA/THE WASHINGTON POST/GETTY IMAGES)

From: The 19th “Climate change is destroying public housing and displacing women of color” [https://19thnews.org/2023/09/climate-change-public-housing-hurricane-women/?utm\\_source=The+19th&utm\\_campaign=4e0aaf3325-19th-newsletters-daily-0927&utm\\_medium=email&utm\\_term=0\\_a35c3279be-4e0aaf3325-383036510](https://19thnews.org/2023/09/climate-change-public-housing-hurricane-women/?utm_source=The+19th&utm_campaign=4e0aaf3325-19th-newsletters-daily-0927&utm_medium=email&utm_term=0_a35c3279be-4e0aaf3325-383036510)

In the first report of its kind, [Biodiversity in Focus: United States Edition](#) reveals an alarming conclusion: 34% of plants and 40% of animals are at risk of extinction, and 41% of ecosystems are at risk of range-wide collapse.

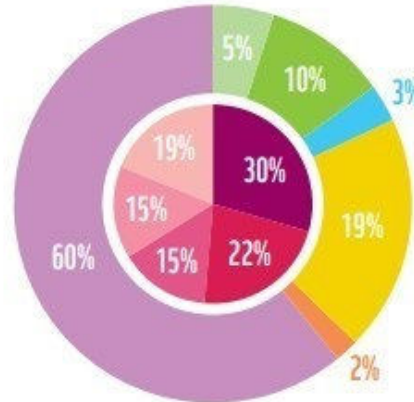
**Humanity's Ecological Footprint by land use**

Key



**Humanity's Ecological Footprint by activities**

Key

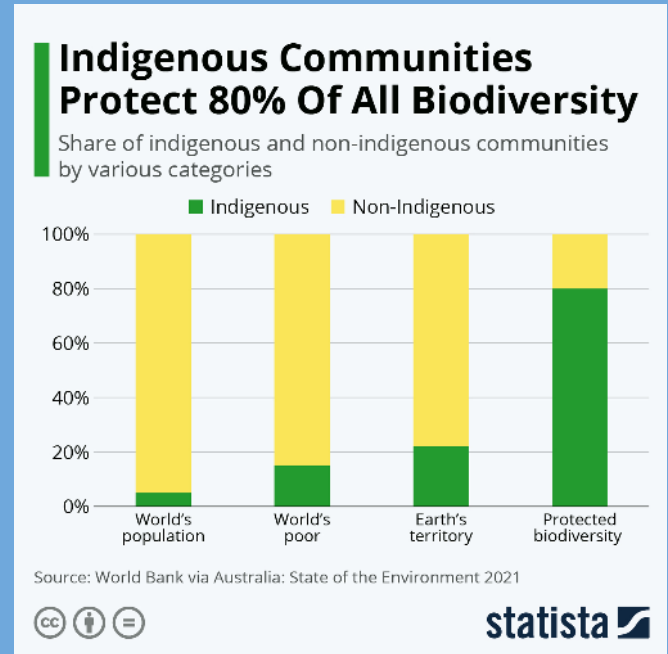


**Figure 13: Humanity's Ecological Footprint by land use and by activities**

The Ecological Footprint measures how much demand human consumption places on the biosphere and compares it to what ecosystems can renew. In 2020, the world average Footprint amounts to 2.5 global hectares per person, compared to 1.6 global hectares of biocapacity. The Footprint can be broken down by area categories (outer circle) or, using Multi-Regional Input-Output Assessments, by activity fields (inner circle) <sup>185, 186, 187, 188, 189</sup>.

Indigenous peoples occupy 20% of the Earth's land. And 80% of the entire Earth's remaining biodiversity is located there.

This is despite the fact that indigenous peoples are only 5% of the world's population and make up 15% of the world's extreme poor.





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***“We have lived our lives by the assumption that what was good for us would be good for the world. We have been wrong. We must change our lives so that it will be possible to live by the contrary assumptions, that what is good for the world will be good for us. And that requires that we make the effort to know the world and learn what is good for it.” Wendell Berry (American novelist and poet)***

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**The Question:**

What if there were different ways to think about healthy communities?

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As housing and community development professionals, we are on the front lines for providing affordable housing and economic opportunity for our residents and communities.

Increasingly, we are also on the front lines for response to extreme weather, global/local pandemics, fires, drought, and increased income inequality.

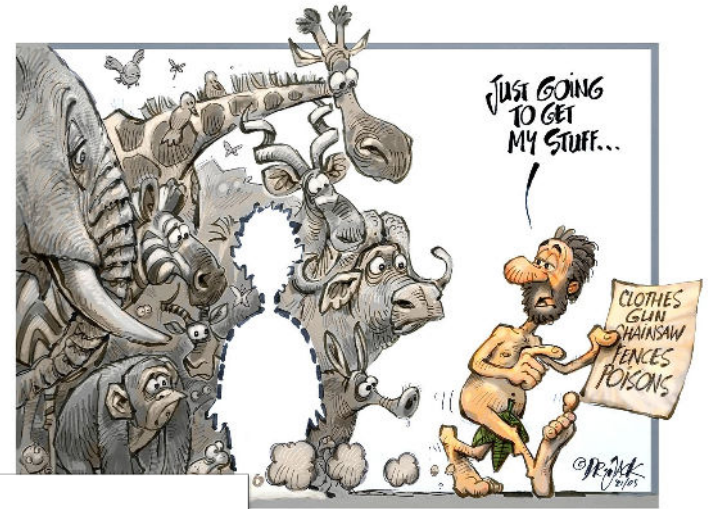
Many of these impacts come from how we have historically developed, which includes our approach to land use, how we view natural resources, and how we view our relationships with each other.

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In our current system, we place ourselves at the center and as the principal driver of all things around us.

**But that isn't the only way to center our world**

*Chief Seattle:* Humankind has not woven the web of life. We are but one thread within it. Whatever we do to the web, we do to ourselves...



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**The Story of  
Uab:**

<https://ca.pbslearningmedia.org/resource/prcc12.sci.life.eco.modernuab/an-ancient-legend-teaches-climate-change-adaptation/>



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There are over:

- 500 different aboriginal tribes in Australia;
- 3,000 tribes on the African continent;
- 574 federally recognized tribes in the US and another 200 additional tribes that don't receive federal recognition.

Some tribes, such as in Australia and parts of the US no longer have good access to their traditional lands, though often their learning persists due to long standing knowledge transfer systems.

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# Australia



- Aboriginal tribes manage about 20% of the land mass.
  - Most aboriginal peoples now live on the outskirts of towns in poor conditions as a lingering issue of colonialism. Many live in maladapted government housing that is not suited to the climate.
  - Aboriginal peoples identify more as a collective or as a kinship group than as individuals. Their belief system is based on a deep connection to the land and biosphere.
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Songline: The route of the seven sisters



Image Credit: National Museum of Australia

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# History, Context

- The aboriginal peoples of Australia have an amazing oral history that helps pass information on to the next generation.
  - As the oldest living original inhabitants of their lands, they have a huge amount of data that correlates land points to stars, covers useful plants/locations, water sources, animal locations, and an understanding of local materials and weather - including weather changes and ways to adapt over time.
  - Despite this, they often struggle to be heard in dominant culture climate and adaptation plans.
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# Lessons: Resilience and Adaptation

- Despite struggles, aboriginal peoples are not waiting to be heard. Instead, they are moving forward with adaptation plans. Some lessons:
    - It starts with intent: **Centering community values**. They believe that the values underpinning responses are the driver and will help or hinder the adaptation.
    - Adaptation is framed in cultural/historical terms as their history of survival instead of actions they need to take to address a recent issue - **“Old ways for new days.”**
    - **Combine traditional with the modern**. Communities have identified:
      - Reestablishing **fire burning** on the traditional system to minimize wildfire.
      - Create nurseries for **native plant restoration** and promote the **return of native wildlife**.
      - Focus on **native trees for street/sidewalk shading**. Provide **public water stations** for clean drinking water in harsh areas.
      - Use **traditional passive cooling including using wind** -especially in door/window placement.
      - Improve **water storage** and protecting/managing existing springs.
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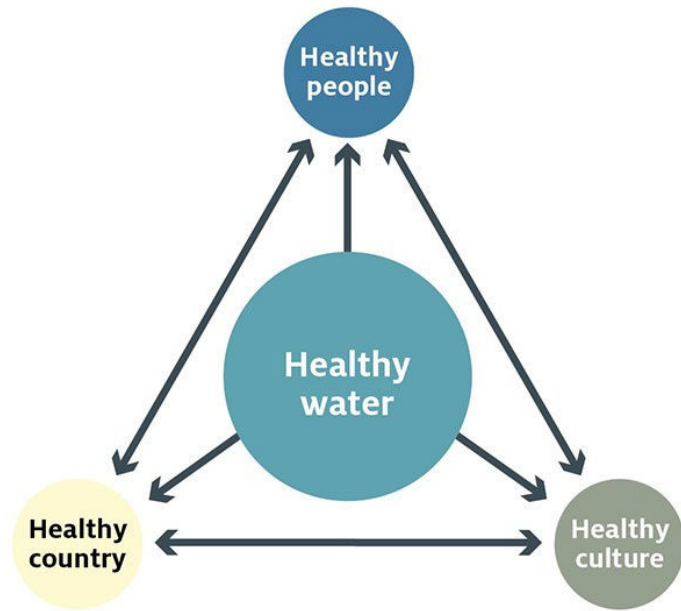


Image Credit: Water Quality Australia



Image Credit: By Tourism NT <https://commons.wikimedia.org/w/index.php?curid=1843314>



Image Credit: Auscape/Universal Images Group via Getty Images

Aboriginal Australian principles of water management, architecture, fire mgmt.

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# Africa

Map of Lingual Groups, 1971



Image Credit: Wikipedia Commons

- Africa is a huge continent, with extremely diverse tribal groups. Many indigenous groups still live on ancestral lands, while there are also great urban centers. Some of the oldest still inhabited cities are in Africa, some dating back to 2,181 bce (Faiyum).
  - As the “Mother Continent,” the longevity of its cities reflects its use of adaptive strategies, cultural flexibility, and embrace of innovation.
  - Some tribes, such as the San, Hazda, Ogiek, Maasai still practice traditional lifeways.
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# History, Context

- Africa has a long history of large empires, agriculture and mining, dense cities and rural villages - in places as diverse as Ethiopia, Egypt, Sudan, among others.
  - The colonial era brought European farming practices - forest clearance, mechanical plowing, and monoculture crops that are maladapted to Africa. These practices are expensive and can reduce soil nutrients and water-holding capacity.
  - As in Australia, there are cultures holding deep knowledge, especially in Zimbabwe, in the area of weather forecasting that is currently the subject of academic research.
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Pyramids at Karima, Sudan, 3rd century bce



Image Credit: David Stanley, Flickr

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# Lessons: Resilience and Adaptation

- Africa is a long settled place that has seen many empire systems of its own as well as many years of immigration and colonization. This has had impacts on knowledge transfer. Nevertheless, many indigenous peoples still practice traditional lifeways. This gives indigenous people the opportunity to innovate hybrid systems for adaptation.
  - It is all about adapting to the land and to change.
    - Take **cultural norms into consideration for adaptation and building types**.
    - **Build resilient housing** that can “resist, recover, and adapt to adverse effects of climate or disasters.”
    - **Use local materials** to be climate adapted, but also to shorten supply lines, create local jobs and that lead to economic improvement.
    - Use **locally adapted traditional sustainable design**, construction, practices and materials in modern ways and incorporating renewables.
    - **Hybrid systems** extend to food forests, intercropping, but also to protection of waterways through a variety of natural and manmade systems that work together.

## TRADITIONAL OASES

### Territorial Distribution and Classification by Typology

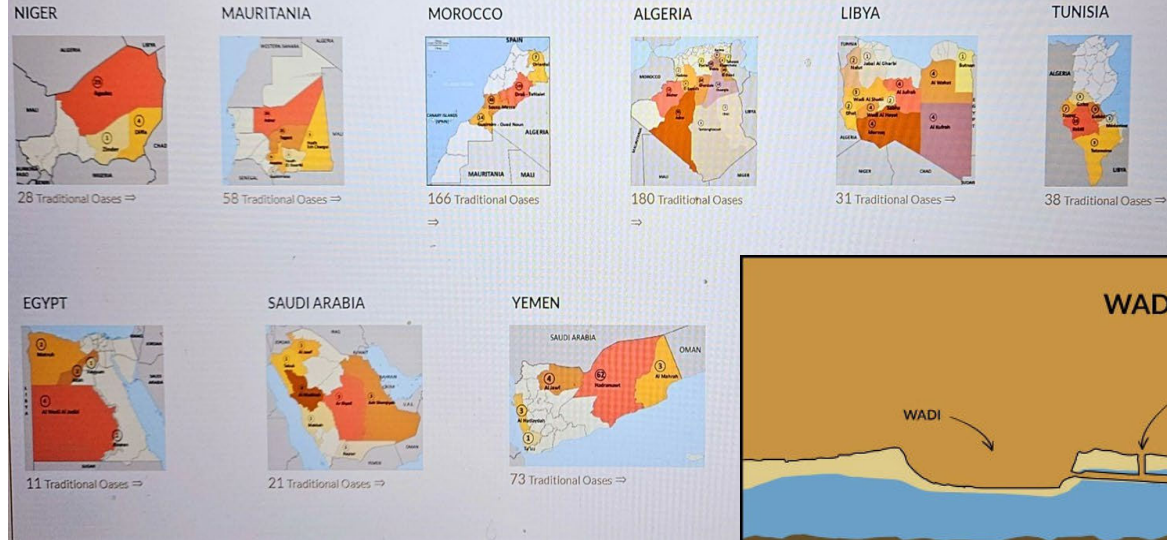
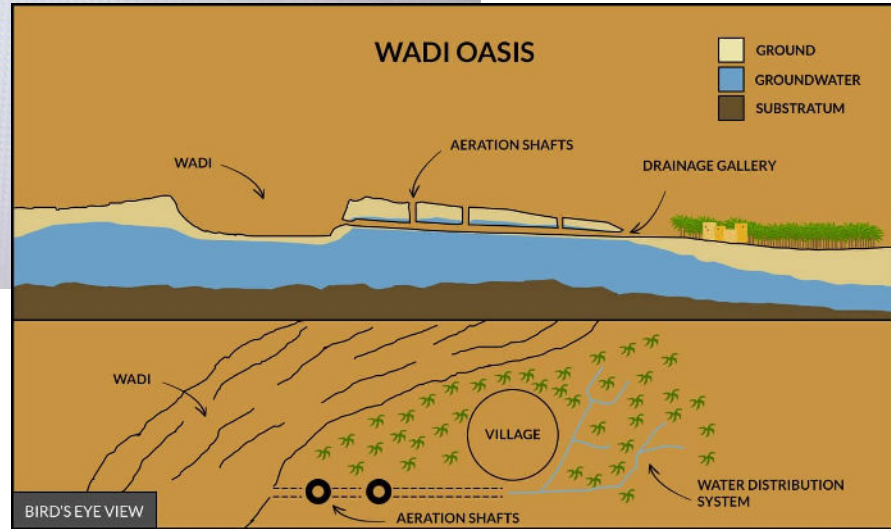


Image Credit: LabOasis Foundation, "Atlas of Saharan and Arabian Oases,"



## Traditional African Oases Creation

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# The Americas



- As with Australia and Africa, the Americas are very diverse and home to a large number of separate indigenous peoples. As we have seen before, some are still connected to their lands and some are not.
  - Forced relocation, residential boarding schools, and other practices have had an impact on knowledge transfer.
  - Many tribal peoples have community based value systems that are different from the dominant culture which is based on the individual.
  - As in Australia, there is a deep connection to the land, the plants, the animals in many tribal cultures.
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# History, Context

- The Americas are a long settled area, with a history of very diverse living patterns, including large empires such as the Incas, Mayas, Haudenosaunee Confederacy, Algonquin Confederacy, Chachapoya, the Triple Alliance (Aztec), Mound Builders and others.
  - Colonization brought different development ways, many of which were maladapted to the area. But it also brought new diseases and greatly reduced the area's population. And, later, there was a conscious effort to bring tribes into the dominant culture through acculturation practices.
  - Despite this, tribes have survived, some lifeways are preserved, and the US is now actively partnering with tribes on conservation practices and national park management, recognizing the deep understanding possessed by tribes.
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# Lessons: Resilience and Adaptation

The Americas are a long settled place with a history of diverse land use and settlements and, like Africa, of great empires and infrastructure development. As with the other areas, values tend to be shaped in a communal way and there is deep connection and appreciation for the interconnectedness of the people with the land and the biosphere. This gives them a unique view of resilience and adaptation:

- **Change starts with intention**, not with things.
  - Prioritize adaptation and change based on **valued natural resources**.
  - **Change the relationship** of resources from infrastructure and commodities to a shared relationship between the resource and its users.
  - **Revive and adapt traditional practices** to meet current challenges - clam gardens to manage coastline and food supplies, or wildfire management through traditional burning practices.
  - **Look to traditional housing types that are adapted to climate/conditions** and find ways to create modern hybrids to bring the best of both worlds.
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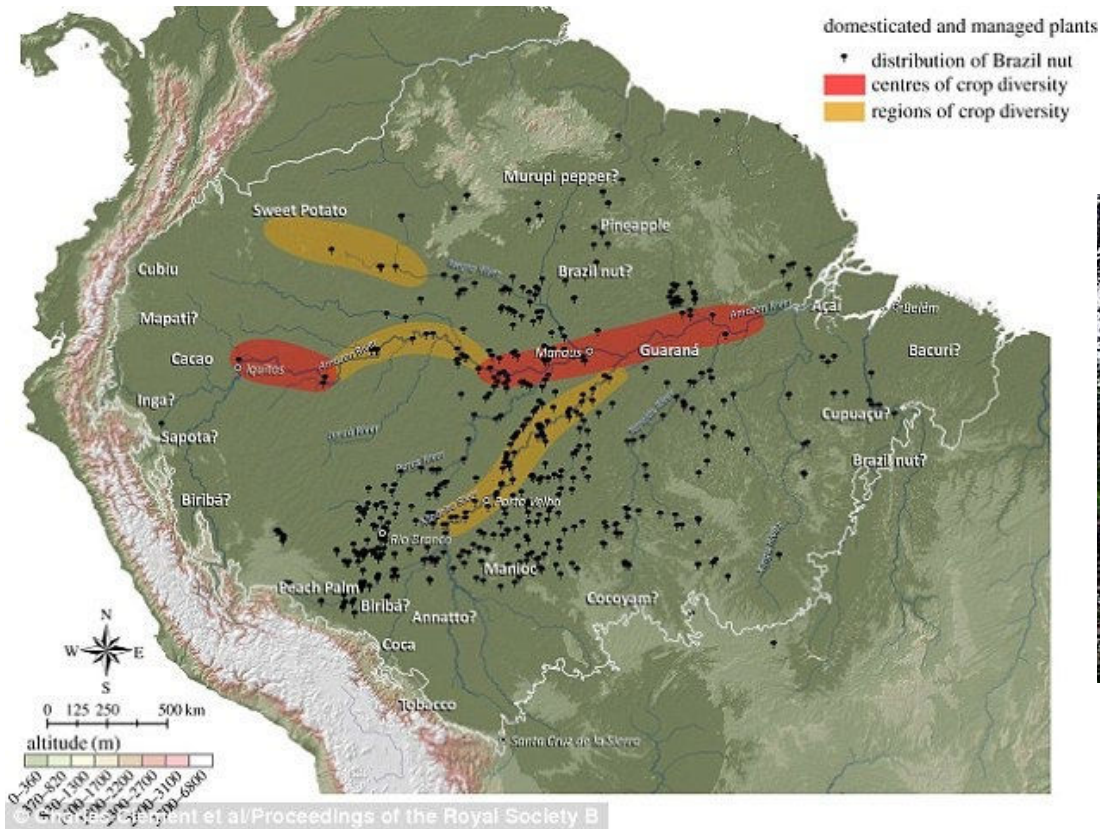


Image Credits: Proceedings of the Royal Society and Getty Images



Pre-Inca city of Kuelap, Chachapoyas culture

Creation of the Amazonian Rainforest as large scale Agroforestry

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He ali'i ka 'aina, he kauwa  
ke kanaka

*“The land is a chief, and man is its servant”*

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# Three Big Policy Takeaways

Change our thinking to change our outcomes

Focus on stewardship, rather than on control. Create plans that prioritize local resources

It's about systems: whatever we do to the web of life, we do to ourselves

# Materials and Housing

Adapt traditional housing forms to local communities using modern methods

Focus on passive systems to reduce costs and impacts of air conditioning, and heating.

Use locally available high quality reusable materials to reduce costs, increase local economy.

# Community

**Prioritize the natural environment in streetscapes and walking places**

**Promote the return and protection of native plants and animals to improve biodiversity**

**Pay attention to water - both above and below ground. Protect local sources. Focus on natural storage**

# Building Sustainable Economic Prosperity

- **Multidimensional land use** - land, water, agriculture, built environment.
- **Shorten supply chains**, focus on locally available materials for sustainability and as economic driver.
- **Build synergy** between old systems and new for something better.
- **Respect the land and biodiversity** to increase abundance.
- **Adapt housing** types/products to local conditions and changing climate.
- Create enough adapted/affordable housing to **decrease homelessness** for economic stability, maintain habitat.

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It's about more than land acknowledgements -  
Give value and an equal seat at the table to  
indigenous peoples, realizing the value - social,  
adaptive, economic - of their unique body of  
knowledge.







**Closing**

**Thank You!**

**Q/A -**

**Discussion**