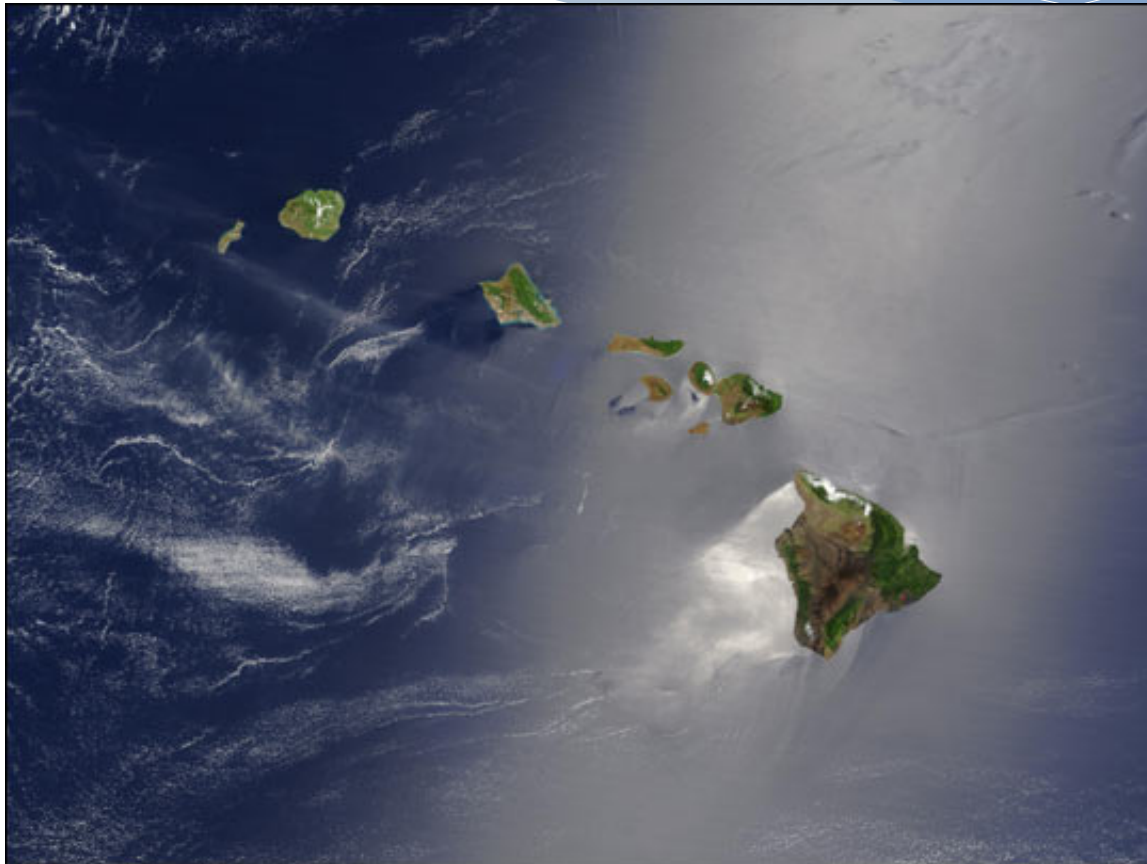


Global Judicial Institute for the Environment: Judicial Response to a Planet Under Siege

Justice Michael D. Wilson
Supreme Court of the State of Hawai'i



Hawaiian Islands From Space



Astronaut Chuck Brady













LAURENS VAN DER POST

A Story like
the Wind

A Novel

Climate Change

"Magic . . .

evokes the

legendary Africa

the author knew

as a child."

—The New York
Times Book Review

A Harvest Book

Climate Change

The Role of Environmental Courts and
the Global Judicial Institute for the
Environment

“**Mitigating** climate change and **adapting** to its effects are necessary to eradicate extreme poverty, reduce inequality and secure equitable, sustainable economic development.

That is why I say climate change is the defining issue of our time.

Responding to it effectively is essential for sustainable development.


Climate change is intrinsically linked to public health, food and water security, migration, peace and security.

It is a moral issue. It is an issue of social justice, human rights and fundamental ethics.

We have a profound responsibility to protect the fragile web of life on this Earth, and to this generation and those that will follow.”



U.N. Secretary-General Ban Ki-moon



Climate Change will lead to fights over water and food

“The water issue is critically related to climate change. People say that carbon is the currency of climate change. Water is the teeth. **Fights over water and food are going to be the most significant direct impacts of climate change in the next five to 10 years.** There’s just no question about it.”

-Jim Yong Kim
World Bank President

“there’s one issue that will define the contours of this century more dramatically than any other, and that is **the urgent and growing threat of a changing climate**”

– *President Barack Obama*



2030 Agenda for Sustainable Development

- * Adopted by the 193-Member United Nations General Assembly in September 2015
- * Enforcement began January 1, 2016



2015 Paris Climate Conference 190 Countries





Paris Agreement

- * Conference of the Parties (COP21): November-December 2015
- * Agreement by representatives of 196 nations
- * Goal of Paris Agreement:

“Holding the increase in global average temperature to well below 2 degrees C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 degrees C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.”

- * $2^{\circ}\text{C} = 3.6^{\circ}\text{F}$

China Seeks Eco-Civilization

- * China is the country with the largest carbon footprint; world's largest carbon emitter. Most of the population does not have access to clean water and much of the productive soil is toxic.

China Seeks Eco-Civilization



- * *We value both natural landscape and resource as well as material wealth. The former overrides and promises the latter.” - Chinese President Xi Jinping*
- * The 18th National Congress of the Communist Party wrote the construction of an “Ecological Civilization” into the Constitution in 2012, requiring a shift away from the industrial civilization modern China had become.

China Seeks Eco-Civilization



Eco Forum Global Annual Conference
Guiyang, China
July 2016

China Seeks Eco-Civilization



Launch of China's gross ecosystem product (GEP), a tool to measure the wealth of nature for human society.

“There is no substitute for the ecological environment. It will be too late to take actions when we have lost it unconsciously. . . . Embracing ecological civilization is an inevitability of history as well as a common wish of people from various countries. “

*-Zhang Xinsheng
IUCN President*

Impending 2 Degrees: Solution Horizon

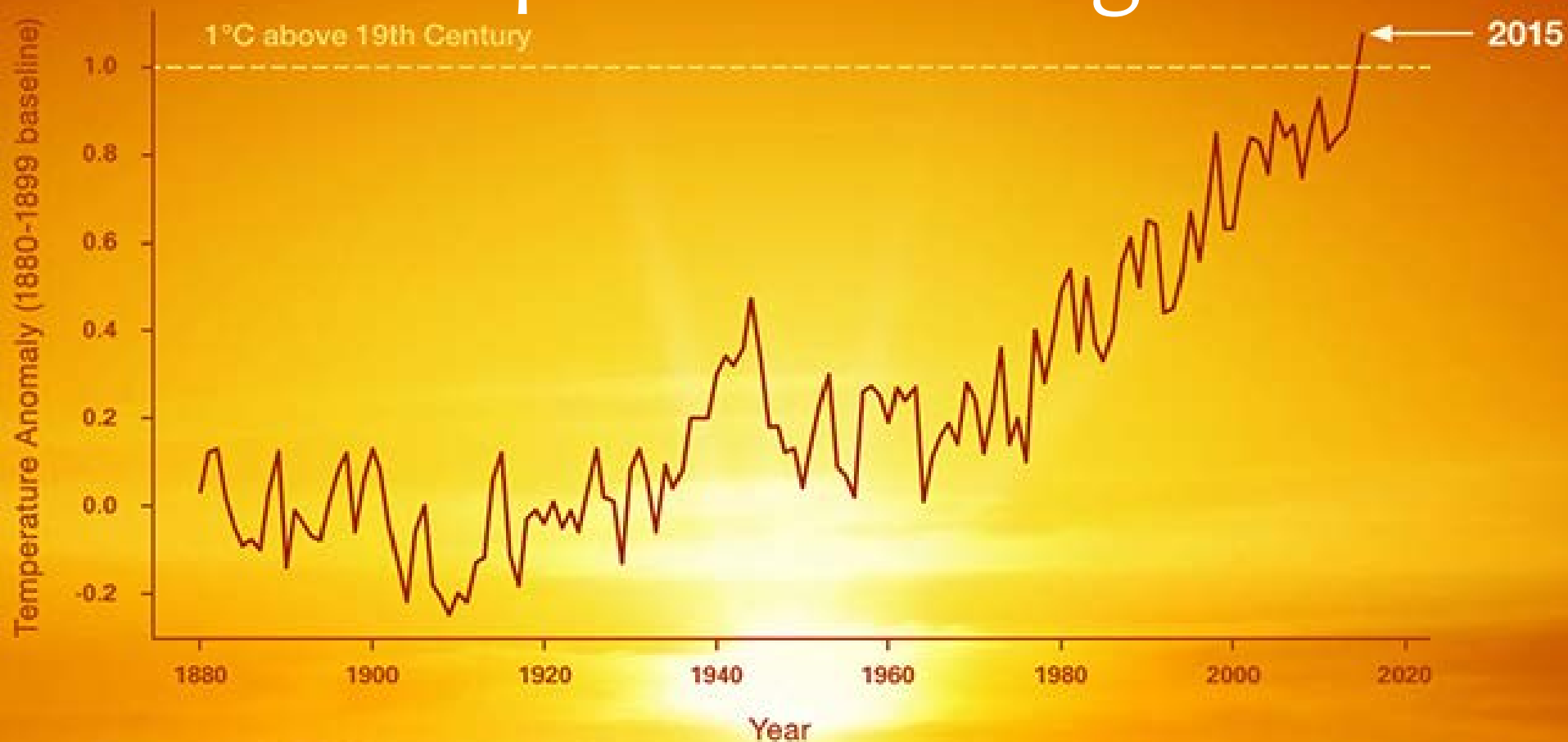
1.5°-2.0° Celsius Target



“1.5°C-2.0°C target will reduce some of the risks and impacts associated with a higher level of climate change including tipping points for irreversible, non-linear effects”

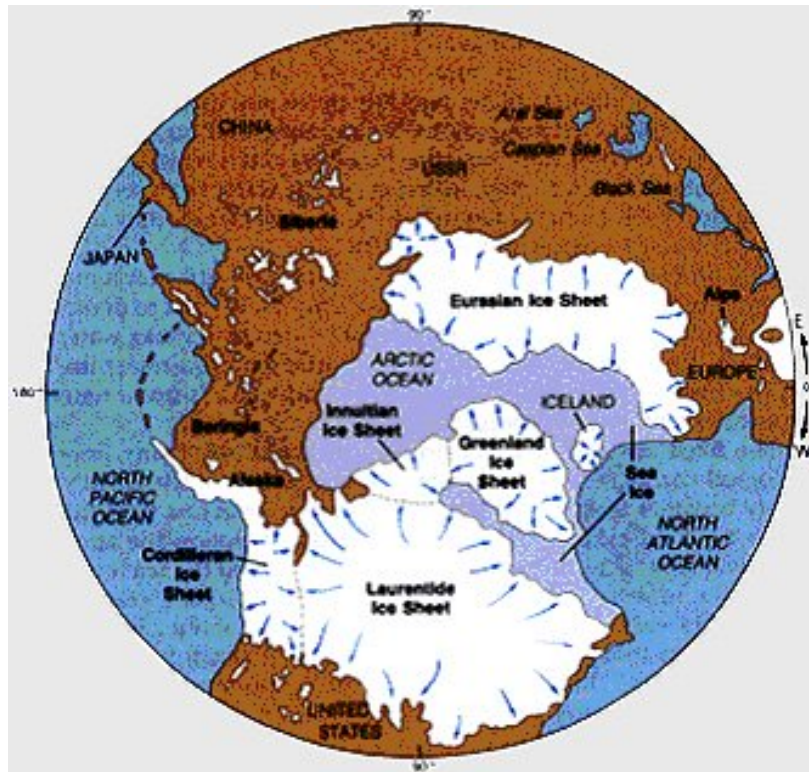
– Professor Brendan Mackey, Griffith Climate Change Response Program

Temperature Changes



- * Average global surface temperature increased by about 1.0°C (1.8°F) since 1880.
- * 1.0°C left of the 2.0°C agreed limit.
- * Most warming has occurred in past 35 years.

Temperature Changes



Glacial period - 20,000 years ago

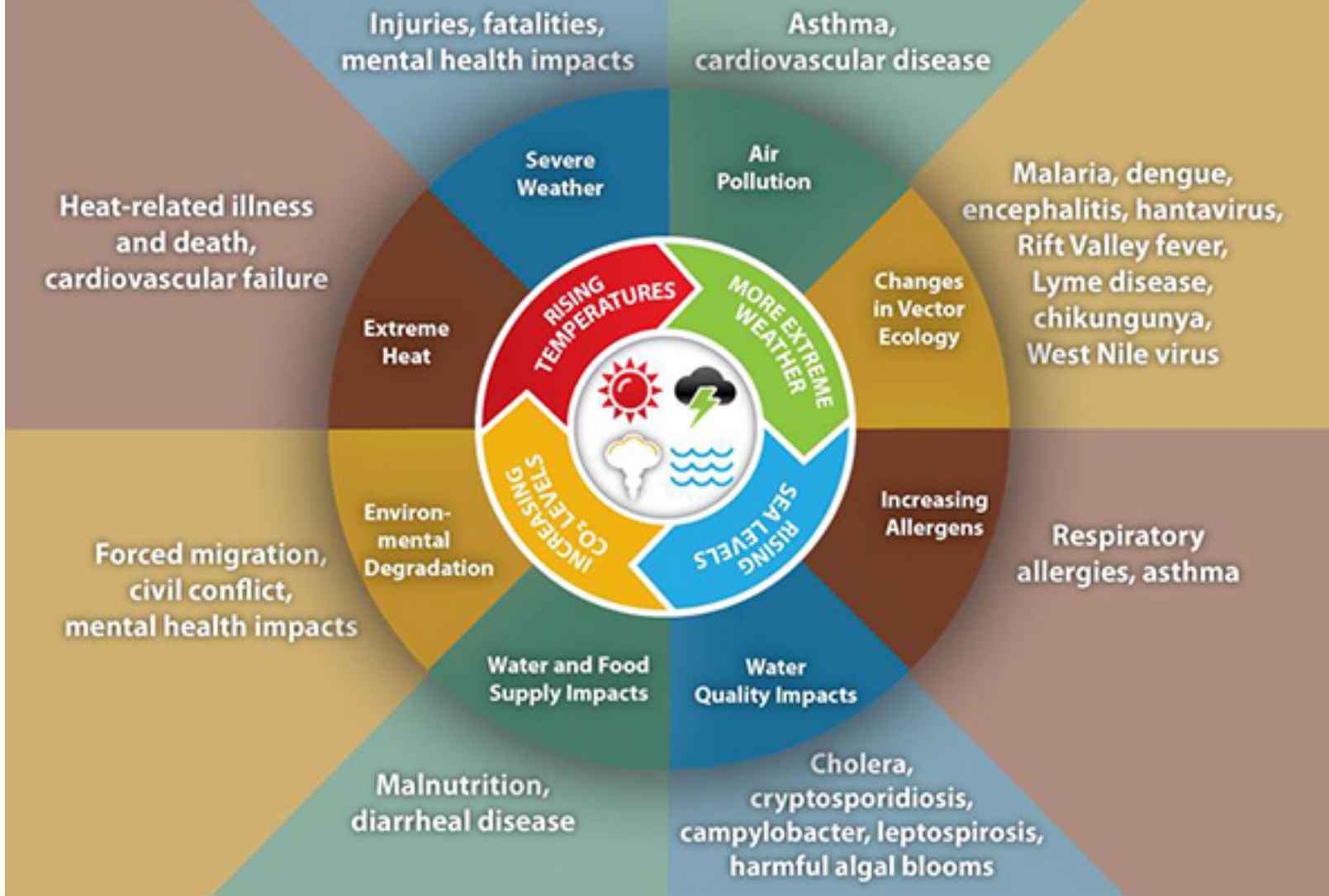
- * 1° - 2°C drop started the Little Ice Age
- * 5°C drop led to “towering mass of ice” burying much of North America 20,000 years ago.



Disease and Global Warming

- * 2 degrees Climate change to result in additional 250,000 deaths per year from 2030 to 2050
- * Cholera correlates with rising sea surface temperature
- * Malaria, Dengue fever, Lyme disease expected to expand as global temperature increases
- * Bird flu, Ebola, plague, and tuberculosis among diseases expected to spread and worsen as a result of climate change

Impact of Climate Change on Human Health



Temperature in Hawai‘i Quadrupled in Last 40 Years

- * Air Temperature:
 - * Rate increase quadrupled in the last 40 years to over 0.3°F per decade.
 - * This warming could cause thermal stress for plants and animals, and heat-related illnesses in humans as well as expanded ranges for pathogens and invasive species.
- * Sea Surface Temperature
 - * Increased 0.13°-0.41°F per decade in the Pacific for the last 40 years.
 - * Temperature increases are projected to accelerate, warming by 2.3°-4.9°F before the end of the century.
 - * This warming can influence ocean circulation and nutrient distribution.

Biodiversity & Climate Change

The slide features a dark blue background with a white title. At the bottom, there are several overlapping, wavy, light blue and white shapes that create a sense of movement or a horizon line.

Recent Events



- * Record low arctic sea ice: 525,000 square miles less than the 1981-2010 long-term average.

- * Kelp forests disappeared from 100 miles along Australia's coastline following maritime heat wave in 2011 and subsequent ocean warmth. Disappearance also means the loss of habitat for species like the abalone and for reef fish.



Climate Change & Extinctions



- * By 2050, climate change expected to threaten with extinction approximately one quarter or more of all land species.
- * Experts estimate that extinction rate today is between 1,000 and 10,000 times higher than the natural extinction rate

Scientists Speak Out

“There is **compelling, comprehensive, and consistent objective evidence** that humans are changing the climate in ways that threaten our societies and the ecosystems on which we depend.”

-Letter to SCIENCE magazine signed by 255 members of the National Academy of Sciences

E.O. Wilson

Pellegrino University Professor Emeritus, Entomology Department
Harvard University

We're destroying the rest of life in one century. **We'll be down to half the species of plants and animals by the end of the century if we keep at this rate.** Very few people are paying any attention, just dedicated groups. The only way we've been able to get people's attention is through big issues like pollution and climate change. They can't deny pollution because you can give them the taste test. You can say, "We just took this out of the Charles River. Here, drink." But they can deny climate change. We're in a state of cosmic or global denial."



Stephen Hawking

Dennis Stanton Avery and Sally Tsui Wong-Avery Director of Research at the
Department of Applied Mathematics and Theoretical Physics
University of Cambridge



“A rise in ocean temperature would melt the ice-caps and cause a release of large amounts of carbon dioxide from the ocean floor. **Both effects could make our climate like that of Venus, with a temperature of 250 degrees.**”



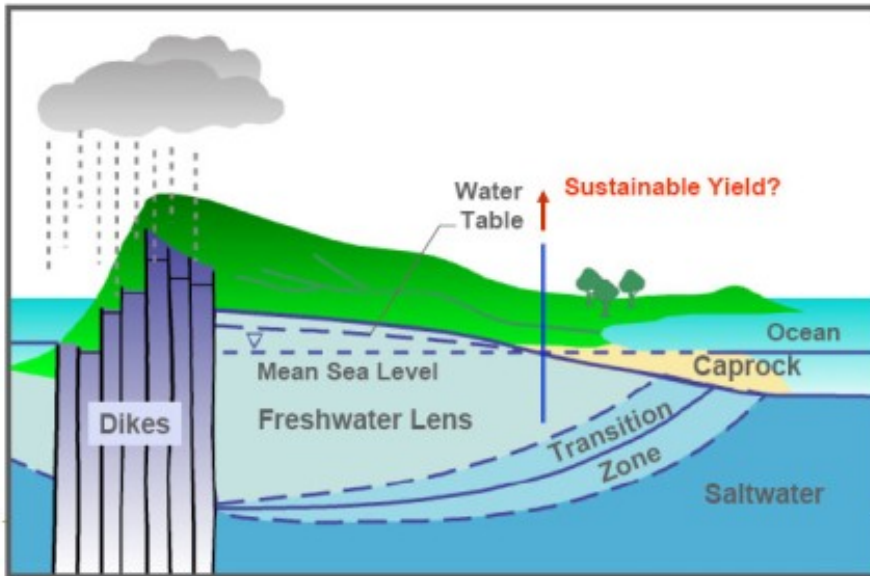
Effects of Climate Change in Hawai'i

Hawaii's Watersheds



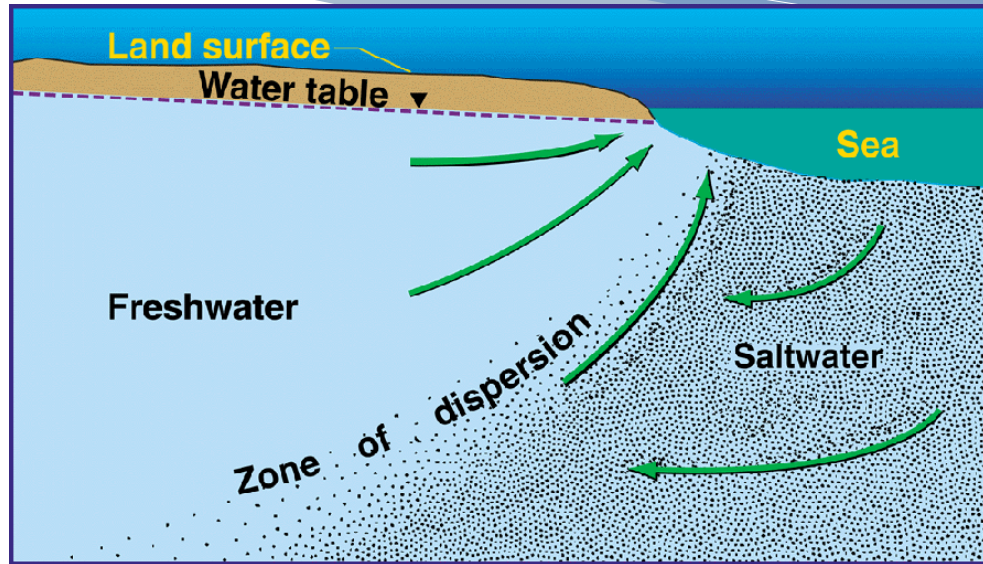
Hawai'i has already lost half of its natural forest cover. Forested lands are our islands' primary watersheds.

Pearl Harbor Aquifer



- * The Pearl Harbor Aquifer is the most important aquifer on the island of O‘ahu.
- * Supplies about 100 million gallons per day of fresh groundwater mainly for public supply.
- * Groundwater head levels in Pearl Harbor, which supplies 60 percent of Oahu’s municipal water, **have declined by half since 1910**.
- * **Salinity** of water pumped by some wells in the eastern part of the Pearl Harbor Aquifer have **risen** in recent years.
- * Decisions related to future infrastructure development and alternate sources of fresh water, including **desalinization**, will depend on the long-term sustainability of the groundwater resources in the Pearl Harbor Aquifer.

Aquifer Freshwater Declines



- * **Salt water intrusion associated with sea level rise** will reduce the quantity and quality of fresh water
- * Freshwater supplies will be adversely affected as air temperature rises
- * Declining rainfall has caused a decrease in stream flow, and could reduce aquifer recharge and freshwater supplies

Effects of Sea Level Rise

- * According to Professor Charles Fletcher, in the next 100 years ocean levels are expected to rise 39 inches due to global warming:
 - **Sea level rise will submerge** the Ala Wai Boat Harbor, the Hilton Hawaiian Village Lagoon, the banks of the Ala Wai Canal and most of the Ala Wai Golf Course.

Economic Impacts: Loss of Waikiki Beach Due to Erosion



- * Annual loss of \$2 billion in visitor expenditures
- * Impact on hotel revenues: as much as \$661.2 million annually.
- * Loss of Waikiki Beach could lead to annual loss of \$2 billion in visitor expenditures

Beach Erosion: Shoreline Retreat 1 ft/yr



ASSOCIATED PRESS

- * 70% of Hawaii's beaches are experiencing long-term erosion.
- * More than 13 miles of beach have been completely lost to erosion in the past century.
- * Shoreline retreat averaging 1ft per year statewide.
- * Wetland migration and cliff collapse due to erosion are now occurring.

Responsible Production and Consumption



Letters to the Editor: Beach in Waimanalo Overwhelmed by Trash

This past week I took my mainland visitor to Sherwoods Beach in Waimanalo and was horrified by the amount of trash in the water.

With every wave, pieces of plastic and other forms of debris washed ashore and surrounded the few people who ventured in. My guest and I were too disgusted to enter the water.

I found out from others that this filth has been here for weeks, but I have not seen anything reported in the news. Where is the trash coming from and why is it not being cleaned up?

This is certainly not what we want visitors to encounter at our beautiful beaches.

-7/23/16 Letters to the editor, Honolulu Star-Advertiser

Marine Ecosystems: Coral



- * Coral is an anchor species in Hawaii's ocean ecosystem.
- * Coral reefs are the foundation of the Hawaiian aquatic ecosystems and damage to them suggests a deterioration of the whole ecosystem.

Marine Ecosystems: Coral

- * Warmer oceans lead to increased coral bleaching and disease outbreaks in coral reefs
- * More than one-third of Great Barrier Reef killed by coral bleaching
- * Ocean acidification will reduce coral growth and health



Global Environmental Future



Sustainability Model = **PONO**



Nigerian Model = **HEWA**



Restoration
Model =
**MAL
AMA**

Nigerian Model Future



OR

Restoration Future





One of the world's most acclaimed environmental jurists, Brazil Supreme Court *Justice Antonio Benjamin*, has described climate change as the **single most important legal issue facing judges globally.**

Global Judicial Institute for the Environment

World Declaration on the Environmental Rule of Law



World Commission
on Environmental Law

Commission Mondiale de
Droit de l'Environnement | Comisión Mundial
de Derecho Ambiental

The environmental rule of law and robust institutions are essential to respond to increasing environmental pressures that threaten the ecological integrity of our planet, in a way that respects fundamental rights and principles of justice and fairness,

The environmental rule of law should thus serve as the legal foundation for achieving environmental justice, global ecological integrity and a sustainable future for all, including for future generations, at national, sub-national, regional and international levels.

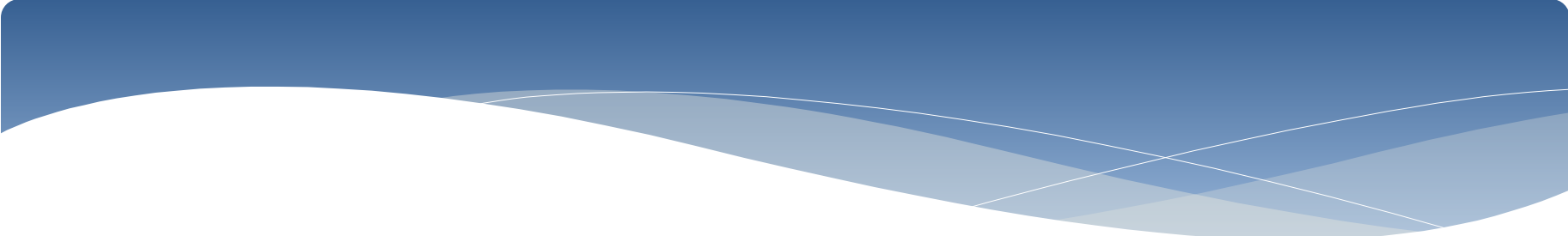
- * The declaration reflects the views of the participants of the IUCN World Congress on Environmental Law, Rio de Janeiro, April 27-29, 2016

Global Judicial Institute for the Environment

- * Justice Antonio Benjamin, IUCN World Commission on Environmental Law Chair
- * Initiative to educate judges on the legal issues involved in environmental challenges.
- * Build capacity of courts to adjudicate environmental issues.



**World Commission on
Environmental Law**



Recognizing the compelling need for the elaboration, implementation, compliance and enforcement of effective laws in responding to environmental crises, such as biodiversity loss and climate change, and in restoring and maintaining the ecosystems that support the community of life on Earth;

Affirming the critical role of judges in promoting the environmental rule of law, human rights, and climate justice, and the importance of judicial independence and integrity in fulfilling this imperative

Trust of the Law Resides in its Fair Application

- * Trust resides in a Judiciary that applies the Rule of Law with understanding of relevant science and factual issues.

Judicial Branch Applies Rule of Law to Social Issues

- * Slavery, Factory working conditions for children, Gender Equity, Control of Monopolies, Regulation of Financial Markets, Pollution, Domestic Abuse, Abortion



Climate Change:
UNLIKE ANY OTHER SOCIAL
ISSUE: **Impending Solution
Horizon**

Courts Face Climate Crisis

- * The dimension and scale of this social issue is without parallel. It has no equivalent. It's gravity deepens with time due to its impending consequences. Carbon emissions must be reduced before the earth heats another degree celsius. We have a margin of safety of approximately fifty years. This is what is facing the world's judiciary. A social issue that, unlike any other, has a **solution horizon**. The solution must occur before the earth warms another one degree celsius.

World Community Seeks Help from the Judiciary

Fair Application of the
Environmental Rule of Law

International Support for Global Judicial Institute

A partner to Inia, Brazil, Australia, & China

Chief Justice Rafael Asenjo Environmental Court Santiago Chile



Future of Resource Sustainability and Planetary Health Requires Change Through New Leadership



The IUCN is a proven engine of creativity inspiring *nature driven* leadership and community leadership.

International Union for the Conservation of Nature: Planet at the **Crossroads**



- * 217 states and government agencies are members
- * 1,066 NGOs are part of the IUCN network
- * Oldest conservation organization (68 years)
- * Approximately 8,000 Congress participants



Inger Andersen
IUCN Director General



Enrique Lahmann
Global Director, Union Development Group
Manager, World Conservation Congress
Director, IUCN Constituency Support Group



India closed 5000 New Delhi schools this week





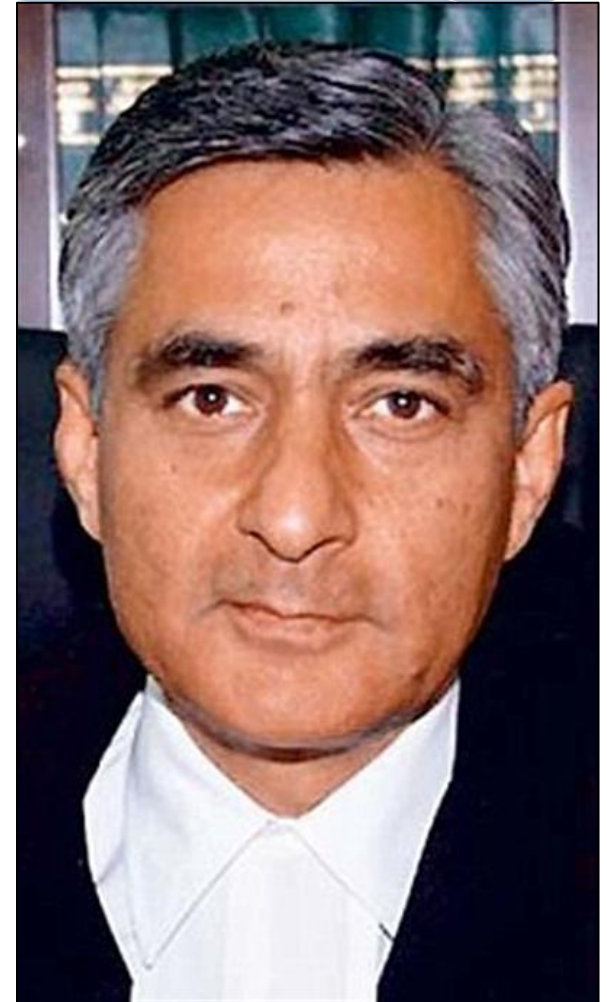
Justice Swatanter Kumar India Green Tribunal



Speaking at the Hawai'i Environmental
Court Symposium



**The Honorable Mr. Chief Justice
T.S. Thakur**
Supreme Court of India



Brazil



Justice Antonio Benjamin
Supreme Court of Brazil
IUCN World Commission on
Environmental Law

Australia



Justice Brian John Preston
Land and Environmental Court
of New South Wales



Judge Michael Rackemann
Planning and Environment Court,
Queensland

Hawai'i State Supreme Court



Hawaii: Earth's Ideal Environment

As the most enduring global image of an ideal environment, Hawai'i provides a crucial juxtaposition to the alarming environmental issues normally perceived by the world community.

These issues commonly have grave implications: the poisoning of the sacred Ganges River in India, decreased life expectancy for people in the world's most contaminated cities, destruction of the world's most important forest in the Amazon, radiation poisoning from the Tohoku tsunami, devastation of the marine ecosystem in the Gulf of Mexico from petroleum contamination, the states of emergency in California due to drought, and the oil spill that fouled the coastline of Santa Barbara.

Faced with epic demonstrations of environmental damage to the Earth's ecosystems, the world community needs a beacon of hope – a place of transcendent beauty where the power of nature is renowned for inspiration and healing. **Such a place is Hawai'i.**

Nature-Driven Leadership

The bottom of the slide features a decorative graphic consisting of several overlapping, wavy lines in various shades of blue and white, creating a sense of movement and depth.

Judges must be equipped for the legal issues of the anthropocene



Environmental Cultural Case Law

1. Kaiser Dev. v. Sandy Beach Initiative Coal., 70 Haw. 480, 777 P.2d 244 (1989). Sandy Beach, Nakamura Dissent.
2. In re Water Use Permit Applications, 94 Hawai'i 97, 9 P.3d 409 (2000). Waiahole Ditch.
3. Sierra Club v. Dpt. of Transp., 115 Hawai'i 299, 167 P.3d 292 (2007). Superferry.
4. Local 5 v. City & Cty. of Honolulu, 123 Hawai'i 150, 231 P.3d 423 (2010). Kawela Bay.
5. Cty. of Hawai'i v. Ala Loop Homeowners, 123 Hawai'i 391, 235 P.3d 1103 (2010). Agricultural land.
6. Kaleikini v. Yoshioka, 128 Hawai'i 53, 283 P.3d 60 (2012). Fixed rail.
7. Pila'a 400, LLC v. Bd. of Land & Natural Res., 132 Hawai'i 247, 320 P.3d 912 (2014). Coral damage.
8. Mauna Kea Hou v. Bd. of Land & Natural Res., 136 Hawai'i 376, 363 P.3d 224 (2015). Mauna Kea.

IUCN President Zhang Xinsheng (China)



China Seeks Eco-Civilization

- * China has established more than 250 environmental courts in less than twenty years
- * China has committed to reducing its GDP emissions per unit by 65% compared to 2005 levels
- * China pledged \$3 billion dollars to poorer countries to reduce their carbon emissions and prepare for weather decline

IUCN Motion – Environmental Courts & Tribunals

- * Proposed by: Environmental Law Program, William S. Richardson School of Law, University of Hawai‘i
- * Calls upon the IUCN Director General to work in coordination with the IUCN World Commission on Environmental Law to implement a framework for creating environmental courts and tribunals.
- * Urges Member States to establish their own environmental courts and tribunals.





Aloha

