

Session Notes from NAF
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Community Led-Adaptation Innovations and Policy Recommendations Special Sessions

- Mississippi river cities and towns initiative
 - 105 mayors
 - Number 1 food-producing river basin on earth
 - Ecological restoration standard and food security standard - going to COP to talk about this
- Local action for global good
 - More moonshot projects
 - Corridor scale project
- Produce more food in the next 10 years than humans have produced in the last 1000 years
- Help the ecology and empower the economy to fund these projects
 - Link the economic benefits of public infrastructure to these projects
- Wetlands help save cities from flooding - generate economy
- We need more success stories
- Baton Rouge mayor- first black woman mayor in history will be hosting a dialogue with other mayors and China

Panel:

- Ducks Unlimited - wetland conservation effort for wetland fowl
 - Turnkey conservation delivery - maintaining flyways between Canada, US, and Mexico
 - Conserved 18 million acres of wetlands in the US
 - 31 states in the Mississippi River basin
 - Most wetlands on the Mississippi are leveed - the infrastructure is getting old - looking to address the infrastructure failures
- Redlake band, Ojibwe, and white earth Tribal Nation
 - Mississippi initiative
 - A big source of wild rice
 - The drought really impacts the tribes because it impacts food supply and economic gain
 - Pipelines are a huge problem
 - Come through the aquifers and destroy the land
 - Needs to stay out of the reservations
 - Concentrated food factories - stealing land and water
 - Crucial for tribal nations to be partnered with the Mississippi River Cities and Towns initiative
- All mayors along the Mississippi are facing the same problems - heat, drought, infrastructure loss, flooding
 - The biggest expense is hurricanes, then drought

- Biggest problem - the way we spend money in this country is city by city, land owner by land owner, state by state— BIL and IRA have tried to remedy this - it hasn't worked out that way
- We are still seeing small projects using conventional methods - we need projects at a much bigger scale doing radical work
- Deploying money at larger multi-state scales
- FEMA and other organizations need to get away from state-by-state projects
- Deploy money to regions that are working together
- Success with big funding requests helps create these conservation initiatives
- A magic wand to solve one problem
 - Healthy and abundant water for the tribal nations - water is sacred
 - We have drained our water sheds - you can't put a wetland everywhere and fix that - however how much can feasibly come back if we work on that
 - All the federal agencies, engineering firms, and state governments, would move natural infrastructure up the solutions list
 - You can watch a park revitalize a neighborhood
 - Marshes, wetlands, and forests do so much more than concrete slabs or reservoirs
- We have a 30-year decline in water across the Mississippi basin
- So many industries that employ over a million people need abundant water – a massive economic recession will take place as water runs out

Panel 2:

- Alaska native tribal health consortium
- Alaska is warming 40 percent faster than the rest of the nation
- 40 tribal nations
- Food is harvested via subsistence
- Permafrost degradation is causing homes and infrastructure to lean
- Tribes are in great need of technical assistance for grants

Islands and Adaptation Session

- Karl Kim, PhD University of Hawaii
- National Disaster Preparedness Training Center
- Venice, Hawaii, Samoa and Azores (US Virgin Islands)
- Adaptation is not new
- Connections to planning
- Risk management
- Lessons from islands
- Local, indigenous knowledge
- Global threats and hazards
- climate/urbanization/governance
- Inclusivity and social justice
- Learning and transformation
- Planning - knowledge to action

- Spatial and temporal scales - context is everything
- Living with risk - risk and reward
- Hazards are apart of our heritage
- Culture and risk society (Beck)
- We live on active volcanoes, in coastal areas, on floodplains with “bas weather”
- How to we live with risk
- Doing work in indonesia
 - Working with emergency managers and first responders
- Venice is a fascinating place in terms of adaptation and water - 114 islands
 - Interested in archipeligos
- Military industrial complex is largely responsible for growth – particularly in las vegas - go watch the nuclear testing
- Bombing, testing, and destroying pacific islands – testing that happened during the cold war and after
- Still cleaning up the envrionemntal disaster – far most costly to do testing in the middle of the pacific than it was in nevada in the desert
- Major threats associated with militarization and development
- Landscapes are obliterated – no sense to remediate it

Living with risk, uncertainty, altered states

- Urban growth machine
- Military industrial complex, displacement/replacement
- New record in billion dollar disasters
- Maui firestorm urban disaster, august 2023 - 13 million dollars a day lost

Islands are disproportionately impacted by hazards and events

- Red hill tank has leaked contaminants into the aquifer
- So much harder to get mutual aid and assets to islands
- Collective good behaviors are more prevalent on islands
- Positive social capacity to share goods
- Coded into many of the laws and traditions– law of the splintered paddle
- Social vulnerability indices (SVIs) Island style
- Coping capacity... resources and intent– short, mid and, long term

What is structural vs non structural adaptation?

- Resilience hubs
 - Permanent structures
 - Pre-staging goods
 - Reinforced infrastructure
 - Community based initiatives!!
 - Sheltering
 - Distribution of relief
- Nature based solutions
 - Updated greenway development
 - Potential fire breaks
 - Capture the toxic run off
 - Economic and social activity

- Lafitte greenway following katrina
- Stronger focus on social justice– horizontal and vertical development
- Who can work from home?
- Uneven impacts
- Use tech to improve design and planning
- Adaptation is learning
 - Integrating diverse ideas

Sardegna and Venezia

- Some notes on adaptation of islands
 - Paola rizzi
- Conceptual model of urban resilience to disaster
 - We are living in risk-scapes
 - Venezia is the lagoon
 - The lagoon is the meaning of venezia
 - Venice is the product of the process
- Santurazmo - biggest island in venice
- Lagoon morphologies
- Combination of earth soil and water
- Small settlements located all around - tolomeo
- Famous map - jacopo de barbari - particolare
- Highly skilled engineers - moved the river in order to protect the city from the river
- Famous book - venice is not a fish
- Earth ways and water ways blur
- You can see layering up of construction
- Adaptation to the morphology - the forms of the buildings follow the water - water was the most important element of the city
- Has a lot of archeological remains and sites
- Venice is sinking - the tide is not the only problem
- An island under water - san marco
- Working with and not against the water
- Venice before covid was a lot more tourists than venetians
- Venice was shut down during covid
- It is very expensive to live - tourism is the only sector that is working in the city - not under control (flows and structured supply)
 - Elderly population
 - High tides
- Heavy rain is also an issue- strong rain going through the roofs and going through the channel
- What can we do? - main adaptation is trying to change the attitude to the tourist sector that is going to destroy everything
- Risky disneyland - policies around touristic development
- Industrial development in 1907 in venice
- Vicious cycle - prison, area to experiment, tourism is the development on islands

Question - how viable do you think floating cities are as an adaptation solution for islands?

Hawaii

- Private sector- the inability of planning to accept hawaiian knowledge as a way to come up with solutions
- Bridging the gap between hawaiian knowledge and the planning profession
- Ancestor lensing - How ancestors may have conceived of managing an issue
- Kupuna lensing- what was this place good for, what was this place known for, who was the chief? - articulate the management of an issue
- Kauai island
 - Case study - fish sharing - how far and wide does fish sharing go in halele a
 - 75% of the catch was shared within the district; 25% to sell
 - Rains trigger flooding and mud slides
 - Residents mobilized themselves after the event
 - Conducting their own consensus on what the damage was
 - Created community events to share resources on their own
 - Maintaining the cultural practices is connected to maintaining the resource
 - Constitution insures access to lands and resources.. But if the resource isn't there it doesn't matter
- Post volcanic activity and reforestation
 - Stories and history are one and the same in hawaii
 - Pale - goddess of the volcano
 - Pale - lava
 - Goddess is extremely destructive and hawaiians have found peace with her
 - Laka is the diety of endemic species and plants
 - Places called puna on hawaii island - give insight into the endemic indicators for a healthy environment after a disaster scenario
 - Idea of destruction and regrowth

Traditional fish ponds as adaptation

- First fish ponds in hawaii in maui
- Fish pond was created to address drought
- Rock wall fish ponds - nutrient rich stable food
- Fish ponds are highly regulated by the chiefs of the area
- Intention was to sustainably feed the people
- Ponds absorbed flood waters and mitigated run off
- Adapted fishing techniques to a walled fish pond to address periods of disaster like drought
- How to revitalize fish ponds? Their presence is vital - manage water quality and bring resilience and health back to coastal areas

Adaptation and resilience of small islands

H. Gingerlel Protor, PhD

- Talk story - A talanoa - discussion or dialogue
- Building relationships

- Pacific islands - melanesia, polynesia, micronesia - covers 1/3 of the earth - 33%
- 90% customary land tenure
- 30,000 islands
- Population over 10 m people
- 21 pacific island countries with varying political structures
- Pacific islands are heavily reliant on nature resources and environment
- Every aspect of the resources are used
- Medicinal functions, infrastructural, ect - resilience is built on what is available
- Impacts of severe weather
- Weather related extreme events remain the main threat to the islands
- Salination of water, loss of food
- Long term hazards vs immediate threats
- Tyranny of isolation

place-based strategies for adaptation

- Integration of traditional knowledge
- Mitigation and adaptation are pieces of a disaster management cycle
- Samoan proverb - stones may decay but stories do not
- Talanoa - collect knowledge through inclusive and transparent dialogue
 - Behavior of animals
 - Early Fruiting of plants
- Proverb - something you have already seen but you are not prepared for it

2nd strategy

- Regional collaboration - ict4dm: ranet
- Shift to using technology for multiple things
- Working through restrictive policies
- RANET systems and network – sponberg chatty beetle - two way texting system
 - Used through grassroots efforts
- Need a way to provide access to remote communities
- Need comes from remote communities - give us something simple
- Case: hunga tonga hunga ha apai volcanic eruption
- Lessons learned - maintenance of legacy systems to support climate adaptation is expensive
- Availability of parts and upgrades
- Redundancy - critical infrastructure failures repeating

Conclusion:

- Indigenous knowledge systems are resilience
- From the UN to the local organizations
- International development is complicated but you figure it out
- Islands exist within a network
- Post presentation chat
 - Architects are interested in preservation which can sometimes conflict with evolution

- Not all the islands are the same
- What is the same is that islands are exploited, misused, and neglected
- Book: sea of islands
- Ocean is not the separator - it is the connector between islands
- Islanders can share ideas and adapt them to be respectful to their own people
- Tension of tourism and resources and climate change
 - Is the tourism industry even in conversation with climate adaptation professionals?