Utilizing Earth Observations To Protect and Sustain Tribal/Indigenous Cultural Heritage

James Rattling Leaf, Sr. Sicangu Lakota Oyate
September 18, 2020
Introduction
“Sinte Gleska University was started by its founding fathers…to strengthen the Sicangu (Rosebud) Nation in all aspects of life. As such, this initiative will assist us in bringing two of the essential points of life, the sky and the earth, together spiritually and technically.”

Dr. Lionel Bordeaux, President, SGU
Upper Midwest Aerospace Consortium
Delivering Information from Space to the Public
USFS Region 1
USFS Fire Sciences Lab

- Montana – North Dakota-Zero-Tillage Association
- American Crystal Sugar
- Dakota Pasta Growers
- South Dakota Buick
- Prairie Public TV
- National Education Television Association
- Fort Berthold Indian Reservation
- SD Precision Agriculture Association
- Satellite and aerial data

- Pollatch Corporation
- Boise Cascade
- Plumb Creek Timber Co.
- Precision Agriculture Research Association
- Montana Watershed Inc.
- Triangle Agriculture – Services, LLC
- Yellowstone National Park

- University of Idaho
- University of Montana
- Montana State University
- South Dakota School of Mines & Technology
- Sinte Gleska University
- EROS Data Center
- University of North Dakota
- North Dakota State University
- University of Wyoming

- K-12 Education
- The Nature Conservancy
- BLM
- Wyoming Cattlemen’s Association
- Rosebud Sioux Reservation
Memorandum of Understanding
October 2000

Wolakota - A new way of doing business
Rez Mapper

A Geo-spatial/temporal Information System with a Vision:

- An ability to integrate, view and apply USGS Topo Maps, Satellite Imagery, Aerial Photographs, Digital Orto Quads with Lakota Data

for:

- Lakota Cultural Resource Management
- Reservation Land Use Determination
- Community Growth and Planning

"Unci Maka nahan Wichapi Oyate nahan Wamakaskan Oyate wolakota glutsutapi."

Interactive Community Mapping Program for the Rosebud Lakota Nation

"Unci Maka nahan Wichapi Oyate nahan Wamakaskan Oyate wolakota glutsutapi."

Sinte Gleska University, Sicangu Policy Institute

james@nentle.energy, www.spatialgisntleaksh.com
NEDTalks

NativeView

33 Native American Tribal Colleges

Applications:
- Education
- Community Development
- Treaty and Trust Responsibility
- Economic Development
- Natural Resource Management
- Cultural Resource Management
- Disaster Management
- Collaborative Research

eros Data Center
Sioux Falls, South Dakota
Ki Yanka O Canku (Race track)
Mato Tipi Paha (Devil’s Tower)
Paha Zipela (Slim buttes)
Paha Sapa (Black Hills)
Pe Sla (Old Baldy)
Hinhan Kaga Paha (Owl Butte)
Mato Paha (Bear Butte)
Mni Kata (Hot Springs)
Pte Tali Yapa (Buffalo Gap)
Wakiyan Paha (Thunder Butte)
He Sapa Oyate
A Summer Cultural and Science based Field Experience

Geoscience Community at the Heart of Everything That Is

The Camps
The camps are designed for students of all ages and backgrounds. The program emphasizes hands-on learning and collaboration among peers. Participants will engage in fieldwork, laboratory investigations, and cultural activities. The camps will explore topics such as geology, paleontology, and indigenous knowledge.

Camp Features
- Fieldwork in the Black Hills
- Laboratory investigations
- Cultural activities
- Guest speakers and experts from the field

How to Apply
Applications will be reviewed on a rolling basis. Early application is encouraged. For more information, visit the NEDTalks website or contact the organizers.

NEDTalks
Lakota Language: Lakota Wicowoyake Canku owapi
This story map was created to show how story maps can be used to teach and learn Native languages. Lakota (also Lakhota, Teton, Teton Sioux) is a Siouan language spoken by the Lakota people of the Sioux tribes. Though generally taught and considered by speakers as a separate language, Lakota is mutually intelligible with the other two languages (C. Dakota languages, and is considered by most linguists one of the three major varieties of the Sioux language. The Lakota language represents one of the largest Native American language speech communities in the United States, with approximately 6,000 speakers living mostly in northern plains states of North Dakota and South Dakota (Wikipedia).
Natural Law Conference
"Maka Sitomni"

Protecting Water, Land, Air, and Environment through Sovereignty, addressing the Green New Deal and Climate Change.

WHEN: JUNE 17-18-19, 2019
WHERE: PAVILLION CENTER - PRAIRIE KNIGHTS CASINO & LODGE FORT YATES, NORTH DAKOTA
Room Block Available: 701-559-7777

For info contact:
Janet 701-301-0267 (tthomas@standingrock.org)

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Oceti Sakowin Oyate Strategic Planning

Facilitators: Patrick Kincaid and Phil Two Eagle
Treaty Council’s, Tribal Council’s, FMNIP’s Directors, Tribal Employees, Tribal Colleges, Educators

January 30 & 31, 2020
Wakpa Sica Reconciliation Place
Pierre, SD

Tentative Agenda
- Mission, vision, and aspirations.
- Lakota values.
- Doctrine of Discovery
- Inherent Rights
- Traditional Lakota Government and Leadership
- Customary Laws and Traditional Protocols
- Territorial and Ancestral Boundaries
- Treaty Depreciations and Litigation Plan
- Strengths, weaknesses, opportunities, and threats.
- Objectives, strategies, and operational tactics.
- Measurements and funding streams.
- Role of the Treaty Council’s and Tribal Council’s
- International, Federal, and Tribal Laws
- Unity with Partners and Allies
- The Role of Education and Tribal Colleges

For More Information: Contact Phil Two Eagle—Executive Director, Sicangu Lakota Treaty Council, PO Box 841, Rosebud, SD 57570. Email: phil.twoeagle@rst-nsn.gov. Phone (605) 747-2381 extension 390. Please let us know if you are coming so we can plan for logistics! No registration fee required to attend. A survey is being emailed in advance. Hotel reservations are on your own. No block of rooms reserved.
GEO INDIGENOUS ALLIANCE

VISION
Protect and sustain Indigenous Cultural Heritage utilizing and contributing to Global Earth Observation science, data and technology.

Founding members, GEO Week Canberra Nov. 2019 (left to right) James Rattling Leaf Sr., Lawford Benning, Vonda Malone, Titus Letaapo, Mario Vargas.
GEO INDIGENOUS HACK4COVID

Join Indigenous communities in co-designing ICT tools to tackle COVID-19
www.earthobservations.org

Ongoing!
INDIGENOUS LEADERS BIOS

GEO COVID-19 HACKATHON 2020 JUNE 5-7

CLAUDINETE COLE’ DE SOUZA, QUILOMBOLA | BRAZIL
JAMES RATTLING LEAF SR., ROSEBUD SIOUX TRIBE | SOUTH DAKOTA, USA
LEO CERDA, KICHWA NATION | ECUADORIAN AMAZON
MARIO VARGAS SHAKAIM, SHUAR NATION | ECUADORIAN AMAZON
CHIEF ALMIR NARAYOMOGA SURUI | THE PATIER SURUI PEOPLE | BRAZILIAN AMAZON
TITUS LETAAPO, SAMBURU TRIBE | KENYA
NEDTalks

146 PARTICIPANTS
33 COUNTRIES
Symbols Maps Team

Proposing a new way to map a land using local symbols instead of traditional geographic coordinates.

Challenged submitted by: Titus Letaapo Samburu Tribe, Kenya
Team members: Mirosława A. Figueroa(Mexico/UK), Yoanna Dimitrova(Bulgaria/UK), Lucandrea Mancini(Italy), Nicolas M. Correa(Australia/Colombia)
Visibilidade
dade Team

"We are building a powerful tool that will help Indigenous communities to become more “visible” by making it super easy for them to share their story, data and maps.”

Challenge submitted by Claudinete De Souza, Brasil
Team members: Mirosława A. Figueroa (Mexico/UK), Yoanna Dimitrova (Bulgaria/UK), Lucandrea Mancini (Italy), Nicolas M. Correa (Colombia)
The right to Indigenous Peoples and Nations to govern the collection, ownership, and applications of their own data

- Inherent right to govern their lands, resources and people
- Community held information
- Treaties, court cases, recognition and human rights framework
- Knowledge belongs to the community
Questions for Us…

- How can data facilitate nation building?
- How can tribes influence the better collection of data on their people and resources by third parties?
- What are the opportunities and challenges inherent in data building and data governance?
- Build a community of practice for Indigenous data sovereignty and Indigenous nations' governance of data?
- Share data initiatives in Indian Country and across international Indigenous communities?
When Tribal nations collect data, we are telling our story in our own way.

As promoters of data, we are information gatherers and information keepers.

Just as our ancestors, we look at essential information to tell the stories.

These new stories are being told to sustain our people and forge our future.
Windows of Opportunity
August 31 - September 3, 2020
2020 NATIONAL TRIBAL & INDIGENOUS CLIMATE CONFERENCE
Tribal Resilience for Seven Generations

The Institute for Tribal Environmental Professionals (ITEP) is honored to host the United States’ first Biennial National Tribal and Indigenous Climate Conference (NTICC) along with support from the Bureau of Indian Affairs (BIA) Tribal Resilience Program. The NTICC is open to all US tribal nations and Indigenous Peoples from throughout the world, with an emphasis on including our Elders and Youth. The NTICC will convene experts on climate change and will include a balance of Traditional Indigenous Knowledge and Western Science.

We invite people to submit proposals discussing climate-related impacts, assessments, tools, adaptation planning, mitigation and actions in one or more of the below tracks.

Conference tracks include:
- Indigenous Knowledges • Health & Well-Being • Land
- Water • Relocation • Infrastructure • Energy Systems • Food Sovereignty • Ecosystems and Biodiversity, and other tracks.

This conference will allow an opportunity to share information and support one another. We welcome all to join us!

Location: Minneapolis - St Paul, MN
Registration Opens mid-March
- Before August 1, 2020: $200
- August 1, 2020 or later: $250
Call for Proposals Now Open!

Keynote Speaker
Winona LaDuke
AmeriGEO Week 2019 Participation

1. Americas Caucus & AmeriGEO Coordination Working Group (CWG) Meeting

- 7 Training Sessions
- 75 Total Institutions
- 105 People Trained

Top Outcomes:

A. Identified future AmeriGEO Week venues for 2020 (Mexico) and 2021 (El Salvador / SICA)

B. Selected new leadership framework and representatives: US, Chile, and Peru serving on Executive Committees, Americas Caucus, AmeriGEO Coordination Working Group

C. Reaffirmed the four priority areas for AmeriGEO: Agriculture & Food Security, Biodiversity & Ecosystem Management, Disaster Risk Reduction, and Water Resources Management

D. Identified Health as a new area of strategic importance for AmeriGEO

E. Endorsed a joint work plan with SRECC Americas for activities related to SDGs and Disaster Risk Reduction and to incorporate the work with the Caribbean countries, which includes collaboration with other regional organizations including IICA, IFFI, and others.
RISING VOICES 3 CONFERENCE
Bringing Together Science and Indigenous Ways of Knowing to Create Positive Solutions

National Center for Atmospheric Research (NCAR), Boulder, Colorado
June 29-July 1, 2015

A Summary of Learning and Sharing
by Cathy Techtmann-UW Extension Environment Outreach Specialist

Through the support of Epsilon Sigma Phi
The Navajo Epidemiology Center (NEC) is currently assisting with making data-driven decisions by collecting and analyzing data, and using these to develop appropriate strategies and actions for COVID-19 response on the Navajo Nation. NEC is working with partners to support initiatives, provide guidance, and support organizations, academic institutions, non-profit programs, and CDC to combat COVID-19. The center continues to serve as an information clearinghouse to help with data utilization. NEC also shares its daily COVID-19 situational awareness reports with local, tribal, and state partners to help with essential activities. Additional information can be found at [www.navajoebridge-epidemiology.org](http://www.navajoebridge-epidemiology.org).

What is epidemiology?

Epidemiology (studies diseases) is the study of disease in populations. It observes patterns by 'where', 'when', 'what', and 'who', and attempts to answer the questions: 'What?', 'Where?', 'When?' and 'Who?'. NEC collects information to learn what's working, what's not, what the next steps should be, and where it can help protect the residents of the Navajo Nation.
INDIGENOUS PEOPLES

2030 Agenda for Sustainable Development

Indigenous Peoples & the 2030 Agenda:
UNCI MAKHA TAWOUNSPE WAKITA
“Paying Attention to Grandmother Earth Teachings”
Tribal Climate Leaders Program

James Rattling Leaf, Sr.
Vice-Chair, Rosebud Sioux Tribe Climate Crises Working Group
Co-PI, North Central Climate Adaptation Science Center
Research Associate, CIRES
Principal, Rattling Leaf Consulting LLC
Our Collective Situation

- The need to restore the balance of care and respect for people and the Earth
- Human problems and environmental problems have not improved in spite of new technologies and increasing wealth
- Need to raise the consciousness of people
- We need all ways of Knowing
Continuing the Work

- Future research, education, and practice should be highly interwoven and requires emphasis on integrated and synthetic efforts
- Creative expertise from all relevant disciplines must be engaged to solve the common challenges facing research and education
- Advancement depends on extensive technology, observing systems, a trained workforce, and coordinated community participation
- Effective partnerships and communication among Tribes/Indigenous, academic, governmental, and private organizations are needed to address major challenges facing our world
Wopila Tanka Eciciyapelo

Email: james.rattlingleaf@Colorado.edu