



# Sticky Notes

GECO Newsletter  
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*Ready to Serve and Sustain Our Community*



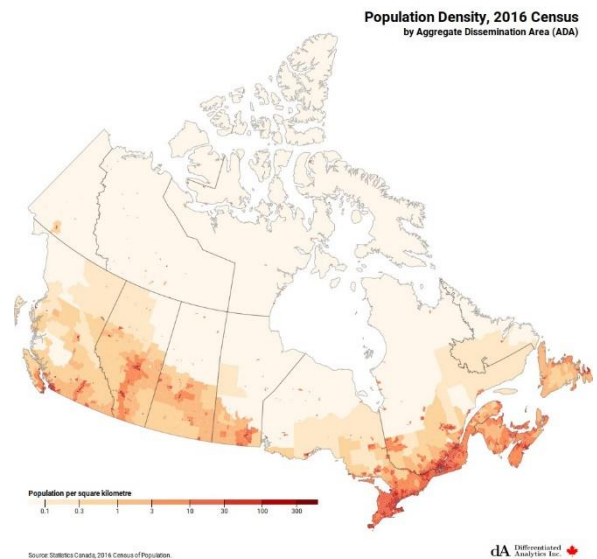
## Calls for Assistance & the Kindness of Strangers

A while ago, I coined the catch phrase “It’s better to network than to not work.” This has proven to be the case in the past few weeks.

**Northern Contact:** Ron VE8RT read about our EmPrep / EmComm efforts via the internet and got on our email announcement list. He contacted us saying many of the GECO ideas and topics initially done for remote rural places often found in third world countries seemed to fit conditions in his area (Northwest Territories, Canada). He wanted to

brainstorm ways to improve EmPrep, EmComm, and education there. All those topics are near and dear to our hearts. He was pleasantly surprised to get our enthusiastic response to help in any way we could. This led to connecting with Angela VYØYL in Nunavut, Canada.

The Northwest Territories (NT) and Nunavut (NU) are home to the 8 northern-most settlements in Canada. The images below show the sparse population of these regions. The left image below is a satellite view of North America at night. The lack of pinpoints of light in NT and NU are an indication of the challenges for EmComm operations. Over the years, the number of HAMs in the region has declined with few if any new HAMs to replace them. Ron summarizes the 21<sup>st</sup> century challenges for



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the Northwest Territories [and Nunavut—editor's addition] residents as:

- 1) the isolation of communities relative to regular and emergency communications and infrastructure.
- 2) difficulties of possible solutions to those communications challenges (i.e., rising costs and limited / diminishing income; lack of people with technical knowledge / skills; high latitude RF propagation).
- 3) the need for and the potential avenues of growing Amateur Radio, particularly in smaller [remote] communities.
- 4) reaching First Nations communities and learning about projects that may be of interest to schools (including difficulties of the digital divide and distance learning systems).
- 5) the need to consider changing the Amateur Radio exam procedures to accommodate isolated candidates who lack access to high-speed internet AND limited resources for exam preparation and methods to administer exams.

All these points are further complicated by language and culture complexities for First Nation peoples who are not fluent in English or French (the official languages for government interaction). These are major challenges for many governments when trying to be inclusive of smaller groups when considering program costs.

Some of the geo-hazards in the region: wildfires, flooding, melting permafrost, sea level rise, seismic events, ice tsunamis (aka ice shove, ice surge, ice push, ice heave, as well as native language names for these conditions). There are ecological implications reducing local food sources, income, and culture effectively threatening the lives and survival of the people. For many, spending to serve these communities is seen as too much money spent on too few people. There are no easy answers.

Many governments face credibility issues when dealing with minorities and marginalized groups. The burdens of history are heavy. Distrust of "outsiders" is common. Present generations must find a way to free themselves of these past burdens of injustice and move forward. It is easier said than done.

GECO (and its affiliates) is grassroots, direct people-to-people rather than dealing with governments and larger organizations which tend to be bureaucratic. We don't ignore or violate laws. As volunteers we don't bring "money to the table." We've found this approach avoids conflicts of interest and corruption. It's not easy to do, but we say, "Those who say a job is impossible to do should get out of the way of those doing the work." Our small efforts produced positive results in Asian countries where many folks admonished us not to try. We found local people willing to work with us on a people-to-people basis. We did what we could afford to do, and they provide local housing and food in exchange for our training them at no cost. The language barrier was bridged by finding one locally respected, credible contact with limited English ability, posters, hands-on demonstrations, much gesturing and laughter. We found transparency, sincerity, actions speaking louder than words, and being good decent human beings carried the day.

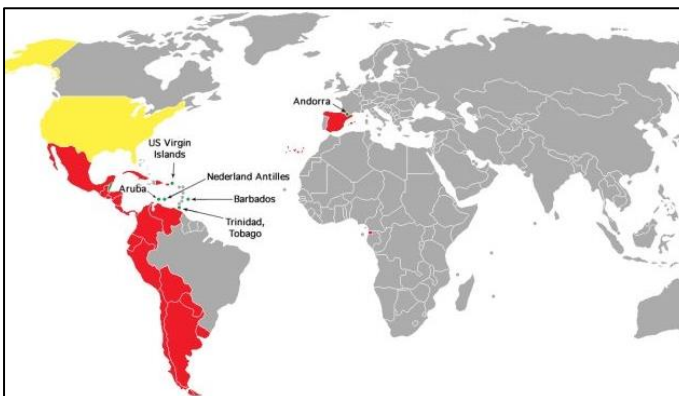
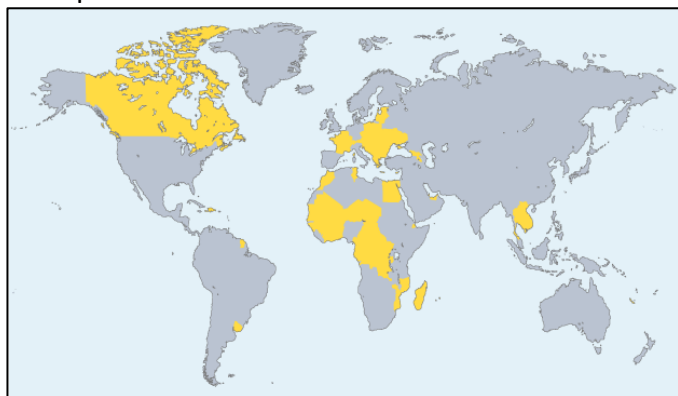
We are committed to help Ron is anyway possible to help him serve his community. Anyone with technical knowledge and skills in remote APRS weather stations; WSPR beacons; building and using NVIS antennas deployed over bedrock, ice, snow; cold weather QRP operating (especially poleward of 59-60°N) in 40m and 60m (based on Ron's experience). GECO's approach begins with imagining the worst possible EmComm scenario and going from there. In this case, First Nation people know their local environment and how best to survive. We need their input and active participation to adapt and develop EmComm equipment and practices to suit their needs and conditions.

Anyone with knowledge with relevant First Nation language and culture, as well as HAM radio and emergency services suitable for Arctic climates is welcome to contact us at [gecoradio@gmail.com](mailto:gecoradio@gmail.com)

**Foreign Language Translation:** The recent Haitian earthquake brought the need to translate GECO materials to other languages. In disasters, the top three needs are 1) medical attention for the injured; 2) safe drinking water; 3) sanitation. Hearing the news of the earthquake, GECO e-mailed quick reference e-card sets on gathering water and preparing safe water to the Haiti Digital Communications League ([HDLC](#)). In a series of email exchanges, we sent more materials. All were well-received. Nearly all GECO materials are in



English, and the Haitian HAMS said it would help if we had French translations available. A quick look at the maps of French and Spanish speaking countries shows the potential impact translating GECO materials could have. The maps below show countries where French (left map) and Spanish (right map) are the dominant languages. Many of the people in those countries live in high-risk geo-hazard zones. Having free GECO lessons and materials in those languages makes the information more accessible for people and HAMS to get and use as needed. All GECO materials are free for educational and personal use.



The primary focus is translating GECO EmPrep and EmComm materials to French and Spanish.

Although translations take time to do and validate, we saw the need and opportunity in the same context as emergency preparedness. Disasters and emergency will continue to happen. The sooner we begin a major push to translate, the better prepared we are to help HAMS in future emergencies.

The GECO translation project uses education methods and models from Applied Geography for Sustainable Living. GECO materials on emergency preparedness take priority for translation, but future translations can be expanded to the topics of community-based education, sustainable agriculture, emergency communications, as well as our various newsletters.

The pilot project integrates language translation with STEM/STEAM curriculum guidelines (enhanced to STEAMING by Integrating Nature and Geography), including a non-foreign language member to the translation team as a “content analyst” to provide background information to the translators. Teach-backs, self-review, and opportunities for introspection, developing interpersonal communications, negotiating/conflict resolution, Decision Support Analysis, collaborative learning, the use of SCANS checklists to monitor student achievement, community service, and exposure to HAM radio are included in the pilot. It is structured to require minimal time from the teacher and includes



an option for a non-faculty native speaker in lieu of the teacher. The validated translation would be posted to the GECO website with full attribution to the student translators, with certificates of appreciation and letters documenting their volunteerism. All these help students gain practical experience to build their resumes BEFORE graduating.

For now, English is the dominant language of science, technology, and commerce. There was a time when Arabic held that position. There is little doubt a prospective employee who are multi-lingual, have international experience and some specialized content knowledge and skills will be more likely to find employment regardless of the degrees and diplomas they hold.

**Key Components for Success:** The success of GECO activities is based on participant self-selection and curiosity. Students tend to learn what they want to learn. Geography systematically integrates all life, physical and social sciences. No matter what first piques a student's curiosity, their growing interest will link to more knowledge in areas not always directly related to the main topic of interest. However, the more intensely they pursue their curiosity, the greater their reach and connectivity extends to other bodies of knowledge. When learning becomes a life-long journey, there is never a dull moment. Change is part of life, so "new" things are happening all the time. You may not always notice them because your focus may be on other things you deem more important at any one time in your life.

**Continuous Networking:** Upon hearing of these developments, Mark N7YLA, an Elmer and long-time supporter of education and GECO (and its predecessor, the Rural Training Center-Thailand EmComm program), sent an email with links to a number of FEMA (US Federal Emergency Management Agency) free multi-lingual publications.

Education, emergency preparedness, and emergency communications, like so many other things in life, cannot all be done by one person. Yet, all over the world, there are folks, who for whatever reason, seem to carry the entire weight of the organization or task on their shoulders. In

Some cases it is the result of their passion, dedication, and unique knowledge and abilities. In other cases, it is exploitation of a subordinate with little or no power in the system. The reality is organizational strength and resilience is the result of teamwork built on trust, transparency, compassion, and sharing. 🌱

***A student's responsibility is to learn how they learn best; to never limit their learning by the teachers, books, and schools; to become their own best teacher; to become life-long learners; to freely care and share their knowledge and skills with others.***

---G. K. Lee

**Download the CERT Basic Training Materials**

**Instructor Guide**

CERT Instructor Guide

[English](#) | [Español](#) | [中文](#)

CERT Instructor Guide Hazard Annex

[English](#) | [Español](#) | [中文](#)

**Participant Manual**

CERT Participant Manual

[English](#) | [Español](#) | [中文](#) | [繁體中文](#) | [한국어](#) | [Viêt](#)

CERT Participant Manual Hazard Annex

[English](#) | [Español](#) | [中文](#)

**Presentation Slides**

CERT Basic PowerPoint Slides

[English](#) | [Español](#) | [中文](#) | [繁體中文](#) | [한국어](#) | [Viêt](#)

CERT Hazard Annex PowerPoint Slides

[English](#) | [Español](#) | [中文](#)

## ***Why EmPrep is Poor or Lacking***

There are many reasons folks don't prepare for emergencies. It can range from avoiding unpleasant thoughts of injury or lack of awareness / education. Australian psychologist [Steven Taylor](#) contends "people tend to be too preoccupied with the present to plan for the future..."

Some of the places most vulnerable to geo-hazards are characterized by high population densities, poverty, and low education. People struggling to get food on a day-to-day basis are not able to afford to prepare by setting aside supplies and food. Many children in these conditions are unable to attend school. Poverty becomes cyclic.

Changing attitudes is no easy task, and there is no simple solution. A common thought is "people act in their own self-interest." But that is relevant to the individual, and it is not obvious nor readily apparent. For example, studies of Pompeii showed some people did not flee the impending peril, or decided to flee when it was too late.

Other studies point to the fact one human response to impending doom / gloom is

to seek comfort in the familiar. This helps explain why some people refuse to evacuate; home is familiar. Mentally it is associated with comfort and security as their minds block out the unthinkable impending disaster.

We don't claim to have the answer, but our path of action is to use education to instill familiarity with a number of processes: local geo-hazard awareness, critical thinking, flexibility, stewardship, and conscious community building efforts. To be clear, education is NOT limited to formal schooling. GLS Community-based Education (C-bE) takes place in the community and can be formal or informal, direct or indirect. The earlier it begins, the more probable the lessons become habitual. In the long-term, it can become "normal" to think and do these things for community preparedness, sustainability, and resilience. Building a sense of community brings people together to confront hardships. There is strength in numbers. No one person can do it alone.

We may be swimming against the current of accumulation of individual wealth and power, and it may seem to be an impossible goal. But our feeling is simple: Those who say the job is impossible should get out of the way of those trying to do the work. 🌱

## ***Y.E.S. Gets an Overhaul***

When Greg Lee co-founded Earth Systems Science, Inc. (ESSI) in 2002, he started the Y.E.S. campaign in the community to garner support for the use of geography to train youth in community service projects. The project was multi-faceted:

It linked classroom lessons to practical job skills via community service planting native plants to beautify blighted urban neighborhoods. It included training for outdoor job skills. Y.E.S. stood for **Youth, Environment, Sustainability**. The reasoning was simple: It would be easy for a local business to support local youth for environmental beautification in the area to build more sustainable



*Old Y.E.S. (Youth, Environment, Sustainability); New  
Y.E.S. (Youth, Education, Service)*

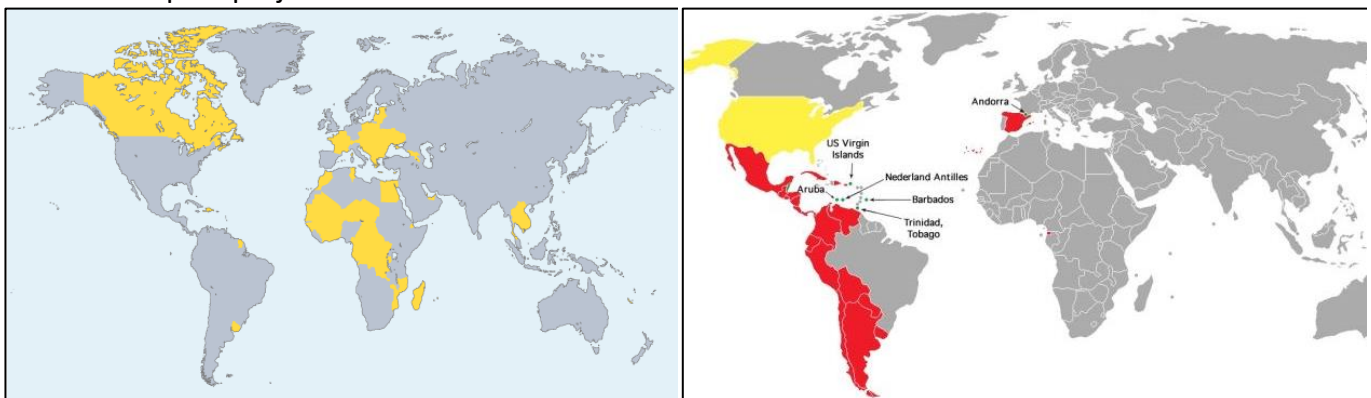
neighborhoods. It was a win-win. Businesses could support the effort in various ways: give money, donate materials and supplies, giving employees time off (with pay) to participate, or even just putting up posters in their stores to help publicize activities and events. In return, project events and activities would publicize the names of supporting businesses and encourage attendees and visitors to patronize the businesses.

Nearly two-decades of change saw Greg departing ESSI and co-founding the Rural Training Center-Thailand (RTC-TH). The use of geography for sustainable environments shifted from urban neighborhoods to small rural family farms (~2006-2014). Greg returned from Thailand and founded Applied Geography for Sustainable Living (AppGeog to go beyond just sustainable agriculture) and Grassroots Emergency Communications Operations (GECO) to carry on the emergency communications activity started under the RTC-TH.

After the recent earthquake in Haiti, GECO sent emergency preparedness information to the Haiti Digital Communications League. The materials were well-received. They expressed thanks and asked if more materials could be made available in French. Only a very few GECO materials were translated to French. GECO reached out for volunteers who could help translate materials. (See previous article on pages 1-4 of this issue.)

After the enthusiastic reception of the pilot translation project, we dusted off the original Y.E.S. and re-purposed it aiming in a new direction: Y.E.S. is now Youth, Education, Service. This ties in with our ideas of building a stronger sense of community as an integral part of emergency preparedness and disaster resilience.

The scope of the community-service ranges from local to global scale. GECO's global reach is via HAM radio, the "Sticky Notes" newsletter distributed internationally, and email with many HAMs. The newest facet of information dissemination comes from Christian KØSTH creator and producer of "100 Watts and a Wire" a HAM radio program on YouTube. He likes the GECO materials and has invited Greg KI6GIG to be a resource person for EmPrep and EmComm topics on his program. The details are yet to be worked out, but he envisions possible guest appearances for live-streaming events. This also opens the door for Christian to potentially have contact and input to student media efforts in the translation pilot project.



GECO is a volunteer grassroots community-based education group. Making all materials freely available is consistent with the HAM radio spirit of public service and developing international friendship and understanding. This effort directly supports Priority #1 of the UN Sendai Framework for Disaster Risk Reduction: Geo-Hazard Awareness. Participating students have many opportunities to put their classroom knowledge and skills to practical use to gain experience for their resumé. 🌍

## **GECO Basics**

For those new to GECO, we thought it useful to review some of the fundamental ideas used to create our group. GECO is an amateur (HAM) radio organization. Worldwide, HAM radio embraces three core functions: 1) the advancement of radio technology; 2) the non-commercial use of radio for public service, especially in times of emergency; 3) promoting international friendship and understanding. GECO focuses on the last two of these.

**Our Name:** The name Grassroots Emergency Communications Operations (GECO) comes from the functions of the group.

- Grassroots means local area (the lowest governmental jurisdictional unit). We prefer to work direct people-to-people whenever possible. For us, everything begins with the individual, family, and community (i.e., a group of individuals and/or families).
- Emergency Communications (EmComm) is one key aspect of HAM radio public service. Emergencies are events that are life-threatening or can cause damage / loss of property. Communications is plural, so we include both radio and non-radio means of information exchange.
- Operations means the working methods to organize, educate/train local people to do emergency communications work

**Our Logo:** The GECO acronym sound like gecko, a kind of lizard noted for its ability to cling to surfaces (even walking upside down on ceilings). The gecko symbolizes the need for EmComm operators (and disaster survivors) to hold on until help arrives. A common guideline is 72-hours (3 days). The traditional radio antenna/ground symbolizes we are a HAM radio group. The round shape symbolizes our vision and commitment to a holistic approach when helping HAMs to prepare and serve their local communities by EmComm, continuity from training to practice, and instilling the spirit of continuous life-long learning.



**Guiding Principles:**

- Mutual Respect, Mutual Benefit: Strive for win-win solution alternatives by recognizing cultural differences exist but identifying and building upon common universal needs of clean air, clean water, adequate food, safety, and shelter.
- Diversity and Inclusion: We espouse and live the [Aloha Spirit](#) and follow Nature (e.g., biomes and ecosystems). GECO relies on participant diversity and inclusion to build a sense of community (within GECO) and HAM volunteers for education and training. These services are free to groups and individuals who pledge to share these in their local areas. GECO accepts people are differently enabled. Those who “self-select” to adopt and live by GECO principles and practices are welcomed to join us to make the world a better place.
- Networking: Our catch phrase is “It’s better to network than to (k)not work.” Rather than re-invent the wheel, we prefer to collaborate with others. For example, we collaborate with GLS LLC for curricular / lesson development, Applied Geography for Sustainable Living for disaster recovery and community sustainability, and the Wanderers Amateur Radio Club to beta test GECO materials and lessons.
- Learning: We adopted the GLS LLC Community-based Education model to encourage HAMs to learn how they learn best, to become their own best teachers, and to become life-long learners.



- **Teaching:** We adopted the GLS LLC cyclic saying “Teachers should be students; students should be teachers.” GECO lessons and training use teach-backs and project-based learning methods of the GLS LLC Community-based Education program.
- **Policy Making:** We make policies using Science, Systems, Synergy, Sustainability, Society ([S<sup>5</sup>](#)).
- **Geography:** Teach and use the [Geographic Systems Model](#) and Yin-Yang for problem-solving and understanding life.
- **“Accidental” EmComm Guidelines:** The “accidental” EmComm HAM is a lone operator in a remote region. In an emergency, they step up to do EmComm work (though they have little to no training for the job). Ideally, their equipment (radio and non-radio) must be robust (e.g., dust, water, shock resistant), simple (e.g., no cost/low-cost, no tech/low tech; use parts off-the-shelf, discard, recycled); designed for single-handed operation, using 12 VDC power. In the worst case, the HAM will be operating portable (not from a fixed base, which may have been destroyed). The transceiver, antenna, and power should fit in a backpack.

**What We Do:** We help and support amateur radio operators (HAMs) in remote rural areas and disaster areas. They often have no opportunity for emergency communications training. Many are not members of any official emergency groups.

**How We Do It:** GECO actively collaborates with:

- **Applied Geography for Sustainable Living:** Source of the Geographic Systems Model and Community-based Education model used to develop lessons.
- **Greg Lee Says, LLC:** A synergistic integration of GECO and Applied Geography for Sustainable Living to support the UN Sendai Framework for Disaster Risk Reduction and the UN Soils Management effort of the UN Decade of Ecosystem Restoration.
- **Wanderers Amateur Radio Club:** This is the beta test bed for GECO lessons, training, and proto-type field equipment.

All HAM radio and emergency preparedness and communications materials are on the [GECO website](#).

**Information Sharing:** The full power of information is only realized when it is shared. Therefore, all GECO collaborative information and materials are distributed free for educational and personal use through our [website](#), the GECO newsletter “[Sticky Notes](#),” the Wanderers ARC newsletter “[Footprints](#),” and by VHF/UHF-EchoLink transmissions via KI6GIG and KM6EON. Sustainable living topics (including agriculture) are posted to the AppGeog websites ([1](#), [2](#)) and newsletter “Eye on the World.” All four organizations respond to direct email inquiries. If appropriate, they can collaborate on the responses.

**Accepting Requests:** GECO (and its collaborating partners) are open to accepting requests on a deferred basis. Our ongoing projects have priority. We do not solicit any funding but will consider licensing the commercial use of our materials. Consulting and training are also considered on a cost recovery basis. Anyone seeking volunteer experience to build their resumé are welcome to [submit](#) a written request. Acceptance depends on how a request aligns with ongoing projects. We suggest all request include a [SCANS Checklist](#) detailing knowledge and skills being sought. 🌱

