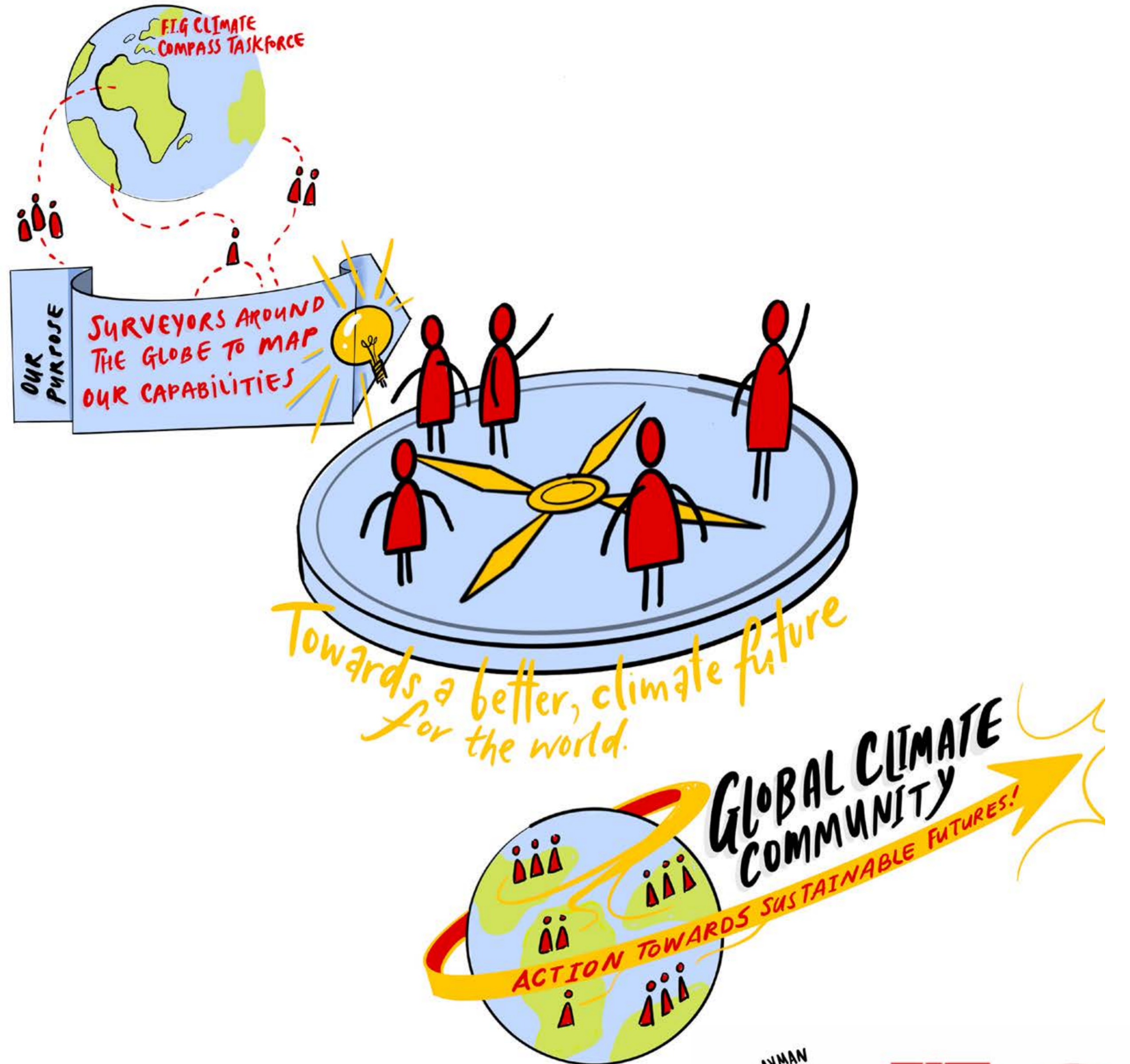
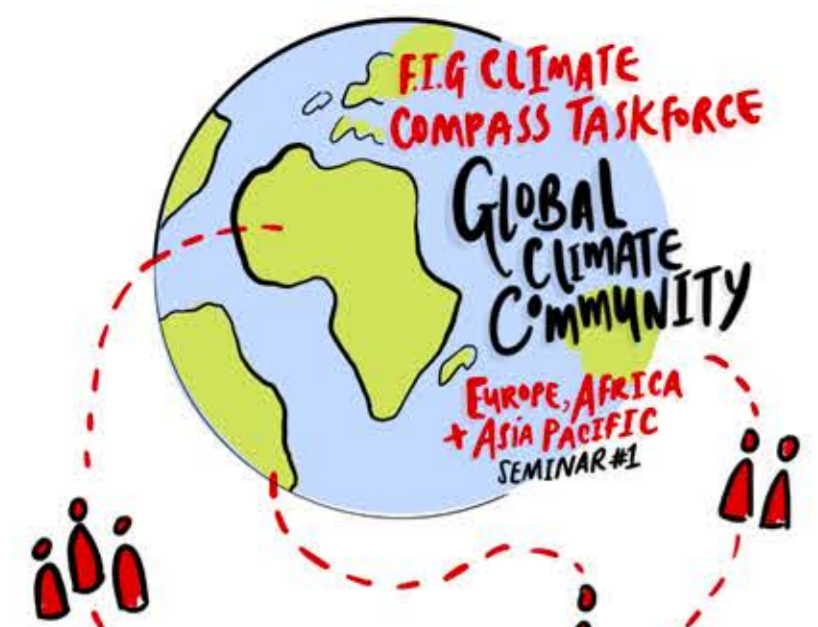


FIG Climate Compass Global Seminars

Graphic Recording Summary
Dayna Hayman Design





OUR PURPOSE
SURVEYORS AROUND THE GLOBE TO MAP OUR CAPABILITIES

A SUSTAINABLE CLIMATE? BETTER FUTURE!

A QUICK INTRO TO THE GLOBAL CONTEXT...

9 PLANETARY BOUNDARIES LAND CHANGE = 19% ANNUAL IMPACT.

1972 Earth Summit
COP 15

Conference of Parties / Government # Meetings since inception

Clarissa Augustinus



ENSURE: Data collected + Meta data is checked and compared. Add some corrections, vertical land movement



"Capability building in new technologies will help surveyors battle climate change."

Eranda Gunathilaka



ONE STOP SHOP FOR CITIZENS AND PROFESSIONALS

Digital Framework Supporting Netherlands Environmental Planning Act.



1. Location
2. Activity
3. Dynamic Questions
4. Activity to do

Can I build in a riverbed?

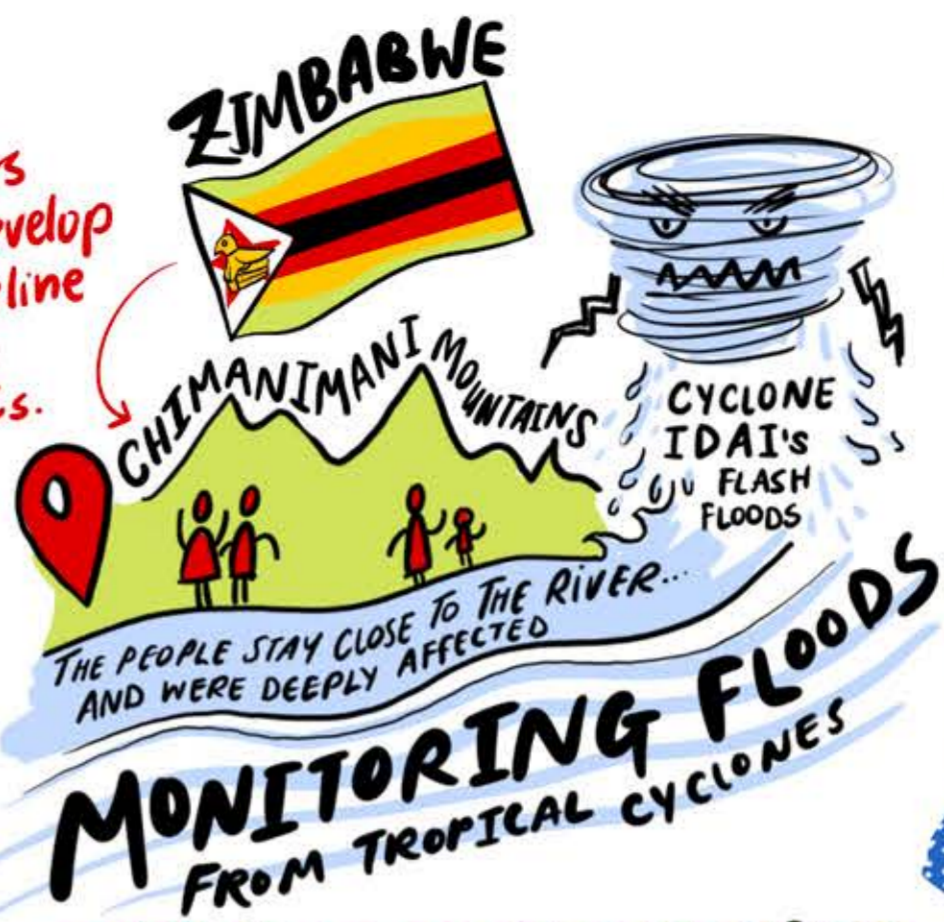
Answer questions.

Provides guidance on what you need to do... eg. building permit

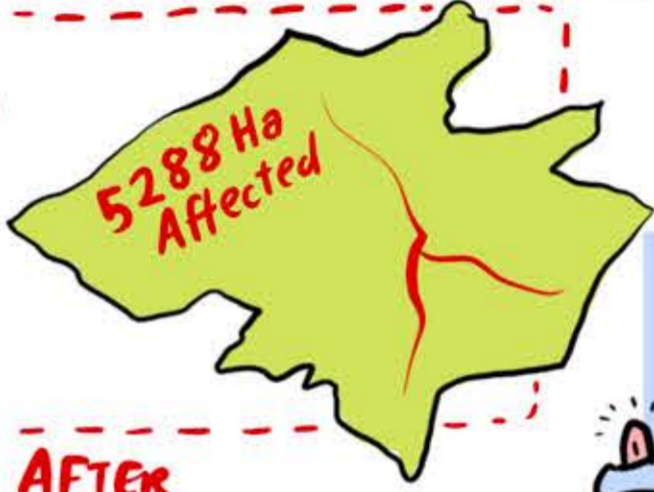
"The biggest challenge was bringing it all together from across governments - the environmental act helped."

Paul van Asperen

Surveyors will develop the baseline data for NDCs.



- DATA:
- Radar
 - Optical
 - Indices



COMPARING BEFORE AND AFTER DATASETS FOR INSIGHTS.

"Embracing new technologies to enhance data for decision makers..."

Rumbidzai Chivizhe

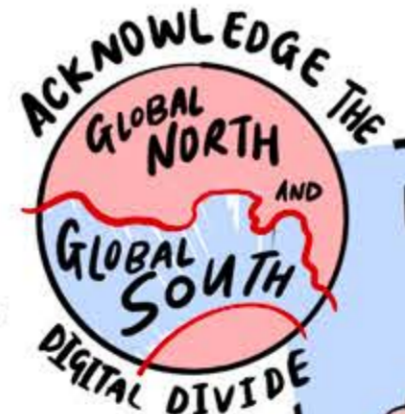
We all have a role to play!

SURVEYOR'S SKILL + ROLE

- ✓ GIS
- ✓ Hydrology
- ✓ Changes over time
- ✓ Planning + designing
- ✓ Education + Advocacy

WHAT BENEFITS OF G.I.S. TECHNOLOGY?

- Early warning for community response!
- Better infrastructure planning
- Long term planning decisions
- Monitoring stations



LEADING IN COMPLEXITY
CYNEFIN MODEL



What does this mean for Surveyors?

As surveyors, we are skilled in the detail, certainty quantities. But we must get better at working with uncertainty to support others. We are stronger together.

Roshni Sharma



LOOK FOR DATA + CHECK FOR FREE SOURCES

Report issues to right authorities...

THE FUTURE?

→ More students → Connect with your Gov's national plans



- Approach problems differently
- Multi-disciplinary collaboration skills
- So that students are future ready!
- Tech training + access, particularly for the Global South.

BRING GRAPHIC RECORDING TO YOUR EVENT - NO MATTER WHERE YOU ARE! REACH OUT AT:





"We must address the interconnected challenges of human impact on climate!"

1972 Earth Summit

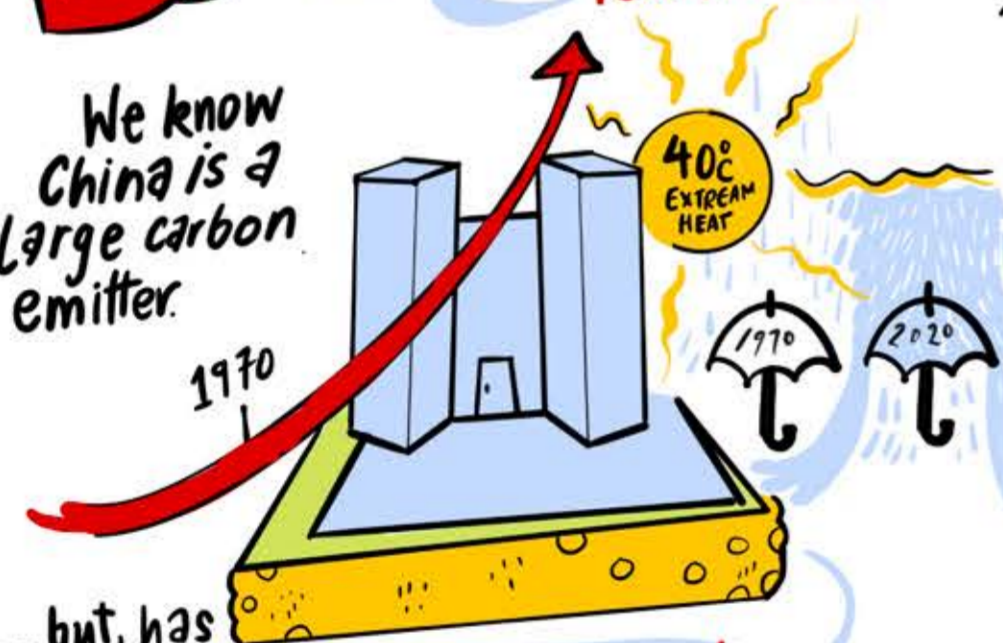


Surveyor's roles are connected to who gets what when... and through government National Environment Plans + will be needed to achieve change!

CLIMATE CHANGE IMPACTS in CHINA

Ruishan Chan

We know China is a large carbon emitter.



...but, has done a great effort in mitigation through:

"DUAL CARBON" GOALS for Carbon Neutrality by 2060!



BRING GRAPHIC RECORDING TO YOUR EVENT - NO MATTER WHERE YOU ARE! REACH OUT!



FROM SYSTEMATIC ADJUDICATION & TITLING

- Available credit, insurances
- Appropriate land regulations + policy
- Spontaneous + voluntary

TO SOCIAL TENURE DOMAIN MODEL

- ✓ Social acceptance to change
- ✓ Institutional acceptance of legality to scale
- ✓ Technologies + opp. to both community & institutions.

WHAT WE'VE BEEN WORKING ON:



Small Islands with SLOPES

colonial history family land with no docs Spontaneous, informal use + occupation

- CLIMATE CHANGE IMPACTS:
- FLOODING
 - LAND SLIDES
 - SPECIES CHANGE



Land Tenure in the Caribbean

Dr. Charisse Griffith-Charles

Case Studies from Asia-Pacific

Kate Fairlie

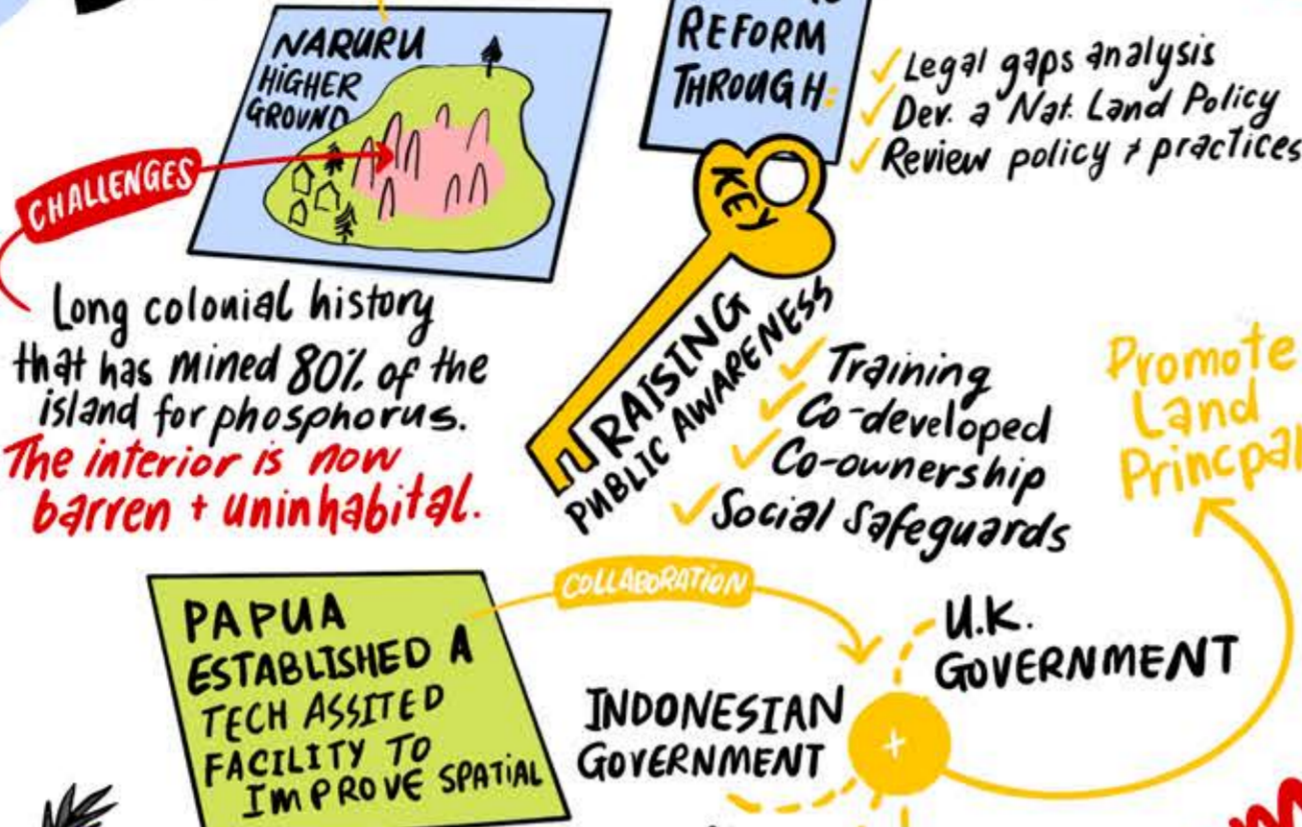


FIG CLIMATE COMPASS TASKFORCE GLOBAL CLIMATE COMMUNITY ASIA PACIFIC + AMERICAS SEMINAR #2



Towards a better, climate future for the world.

SEMINAR DISCUSSION



Not about new tech

F.P. Fit for purpose standards... Best standards from the West might not be needed or possible.

Laws impact practice!

Get better at talking + meshing of the minds

SHOW How their work engages with climate issues. GET THEM to share data, not mandate it. GO ASK them about their needs to share!

Headed towards DATA POLLUTION (not accurate + too much) We will need to be able to filter + targeted application!

DATA INEQUALITY ACROSS: CITY DEVELOPER ↔ RURAL DEVELOPING

"Getting people to see their similarities as opposed to their differences to come together is HARD!"



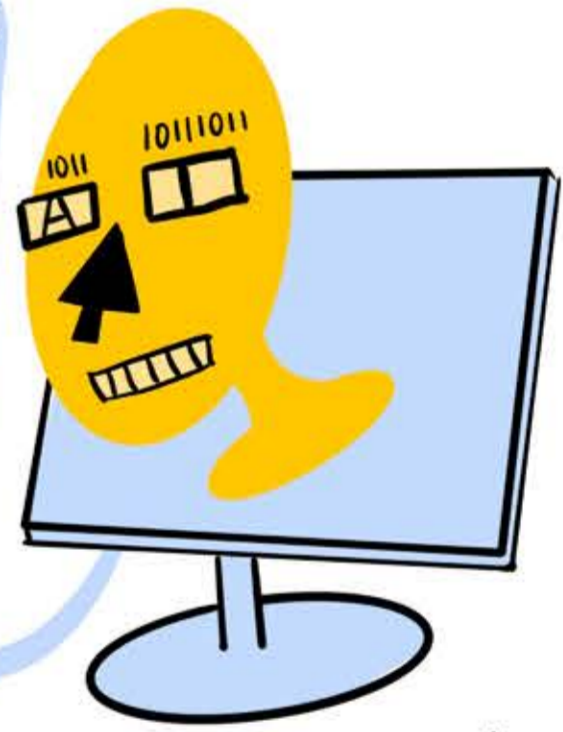
CYNEFIN MODEL OF COMPLEXITY

| | |
|-------------------------------------|---------------------|
| COMPLEX UNKNOWN | COMPLICATED CLEAR |
| UNPREDICTABLE PATTERN-BASED CHAOTIC | BEST PRACTICE CLEAR |

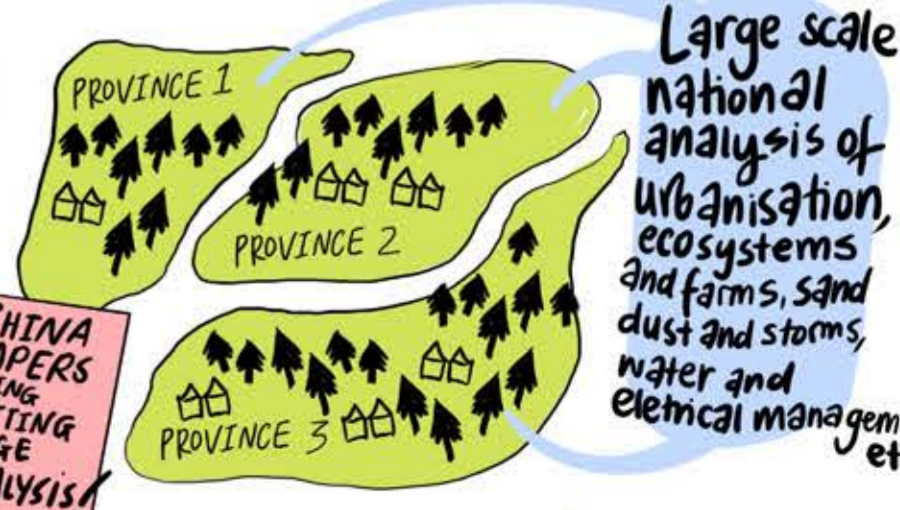
NEW, NOVEL UNKNOWN CAPABILITY, DECISIONS + LEADERSHIP SIDE.

FAMILIAR, KNOWN: PRACTICES CAUSE + EFFECT + DATA SIDE.

I can do BIG MODELS IN ONE DAY! It took 8 of you to do!



Remember, a lot of data information A.I can't capture everything...



We can see our shared eco-systems across borders!

TODAY: OPPORTUNITIES + GAPS FOR SURVEYING AND CLIMATE!



HOW ARE WE LINKED

HOW CAN SURVEYORS USE DATA, TECH, DIGITAL TRANSFORMATION AND INNOVATION FOR CLIMATE ACTION!?

TO LEARN AND SHARE BETWEEN EACH OTHER!



Explore + Embrace uncertainty

Empower decisions in chaotic spaces

Embrace new capabilities

CYNEFIN MODEL OF LEADERSHIP + MINDSETS NEEDED FOR COMPLEXITY!



Towards the future!!

COPERNICUS LAND MONITORING SYSTEM

EUROPEAN SPACE AGENCY

- Atmosphere
 - Climate Change
 - Land
 - Emergency
 - Marine
 - Security
- SENTINEL SATELLITE DATA



USUE DONEZAR

FREE!! GLOBAL DATA!

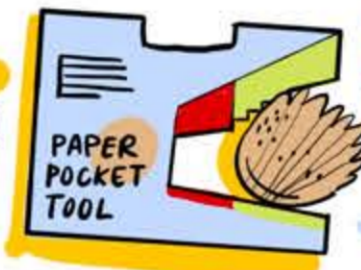
COLOMBIA MANGROVE FOREST + EARTH OBSERVATIONS

MANGROVE FORESTS LINKED TO: FOOD SECURITY, HOUSING, LIVELIHOOD

Nelson Andres Nieto Valencia

A simple measuring device that help guide locals to improve practices.

A BASIC INTERVENTION



- ✓ 21-23 Expedition
- ✓ Spectroradiometry
- ✓ Separability Analysis
- ✓ Spectral Libraries + Satellite Images

Teach others to use + contribute to an expert system.

Role of Academics? + EDUCATION

Listen to industry needs on what, how etc. for future innovations!

Look out! There is always something being released.

→ Govs.

→ Industry.

→ Academics.

New Climate Technologies?

Sensors are always improving

Be resilient as people for the work.

COMMUNITY BASED APPROACH FOR SUSTAINABLE WETLANDS

BUTALEJA, KYOGA PLAINS

SIMON PETER MWESIGYE



BUILDING COMMUNITY TRUST

- Raising awareness
- CONTINUOUS ENGAGEMENT
- Understand past experiences.

Link the Evolution of the Service to policies!

Future skills?

Communicate to others

CONTINUING OF CUSTOMARY OF LAND RIGHTS APPROACH + FRAMEWORK

MUST BE ALLOWED TO EVOLVE

GLTN

Not a problem! Individualised systems have done harm...

- PROJECT INTERVENTIONS
- IMPROVED TENURE SECURITY FOR WOMEN, MEN + YOUTH.
 - INCLUSIVE, CLIMATE-SMART LAND USE PLANNING.
 - IMPROVED AWARENESS ON CUSTOMARY RIGHTS + LAND PLANS

BIGGEST CHALLENGE IS IMPLEMENTATION!

May be the only way for some in the future.

Customary Rights



Which products are fit for purpose. Eg: Local Spanish data might work locally but won't work in France.

Confidence to start using Earth Data?

You don't need to program alot.

Just Jump in and have a go!

Open source online trainings

I have a say! I have rights!

We can balance our economics, environment + social change!



BRING GRAPHIC RECORDING TO YOUR EVENT - NO MATTER WHERE YOU ARE! REACH OUT AT:



WHAT I HEARD + LEARNT
ACROSS THE THREE
F.I.G CLIMATE COMPASS
GLOBAL SEMINARS...



*Created post events.

GRAPHIC RECORDING THEMATIC REFLECTIONS

BY DAYNA HAYMAN



INSIGHT ONE: Surveyors are the experts connecting the local, national, and global efforts towards climate change.

With formalised global intent from the 1972 Earth Summit, a complex governance process emerged to address "the interconnected challenges of human impact on ecosystems & climate."

- Voluntary commitment from country-level governments to achieve climate action & adaption towards a global effort to keep CO2 emissions down.
- Every country has their own National Plans & Policies (E.g. Sri Lanka's National Environment Plan, Netherlands' National Planning Act & closely linked & supportive Digital Framework & implemented Portal for citizens and professionals).
- Surveyor roles are intrinsically connected to decisions made about land, water & marine (e.g. planning & utilisation) and implementing action & technologies to gather, evaluate & measure data and manage climate disasters.
- These plans are often disconnected in governance & operations - however, intersect heavily with surveyors & other geospatial/earth scientists/experts across land, water & marine through data, technology and required expertise for decision markets to achieve impact towards climate change.
- Surveyors will have the expertise and skills to connect these plans.

Research & check out your own country's commitments! We don't have to solve everything all at once and by ourselves, together we can all play our small role towards a global future of a sustainable climate!

INSIGHT TWO - Surveyors & climate action case studies from around the world.

Countries around the world are already feeling the impacts of climate change and delivering climate adaptation projects across various scales. E.g. China's solar fields across mountains & deserts, to Caribbean islands moving from a systematic adjudication & titling land governance model to a social tenure domain model. There are plenty of things we can learn from each other at national and local levels to adapt & there is hope for the future!

INSIGHT THREE - The Global South Vs The Global North

The capability gaps between the Global South and Global North are clear; particularly felt in access to data and new technologies. However, best practice climate adaptation and land tenure policy projects are being delivered across the Global South continents & countries. These projects feature:

- Fit for Purpose data adaptation from surprising sources can be a more effective process for these Countries. Example: historical colonial data paired with local & neighbouring country satellite data. It's not just about new tech.
- Projects often required to navigate and deliver interventions within social, political and policy spaces to raise awareness and achieve change.
- The Global South and Global North must be flexible in moving away from Western's rigid standards of data and understand fit for purpose interventions.

INSIGHT FOUR - Data, Data, Data!

Data - Surveyors create it, use it, and love it. Data is everything and will continue to play a cross-cutting and connective role in climate action across new technologies, planning, implementation, measurement & evaluation. However, we mustn't forget that technology can't capture everything and there will always be a need for field surveys. Data has its own impacts on emissions and climate change. E.g. Data storage will be the next big form of pollution.

There are growing, quality sources for free data! Keep sharing these around!

INSIGHT FIVE - Role of Surveyors

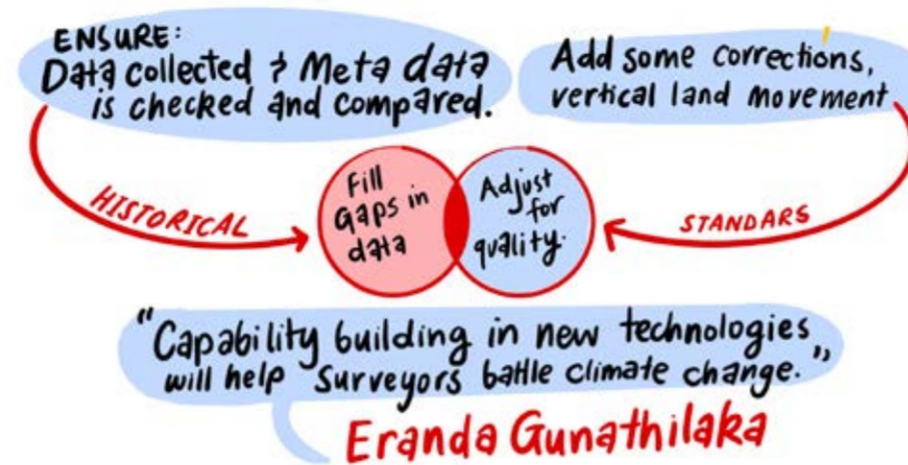
- Surveyors' role will continue to grow and need to embrace novel mindsets to work and make decisions through complex and chaotic scenarios and processes.
- Surveyors will have to get faster at processing data and keeping ahead of training needed for new technologies.
- Surveyors will have to develop skills to collaborate with multi-disciplinary teams & influence decision-makers.
- Surveyors will need to link the evolution of services to national plans and policies.
- Attracting new students into the surveying field with new approaches and practices.

Registro Gráfico de Seminarios Globales de la Brújula Climática de FIG.

VISIÓN UNO: Los topógrafos son los expertos que conectan los esfuerzos, tanto locales, nacionales y global contra el cambio climático.

Con la intención global que se formalizo en la Cumbre de la Tierra de 1972, donde surgió un proceso de gobernanza complejo para abordar "los desafíos interconectados del impacto humano en los ecosistemas y el clima".

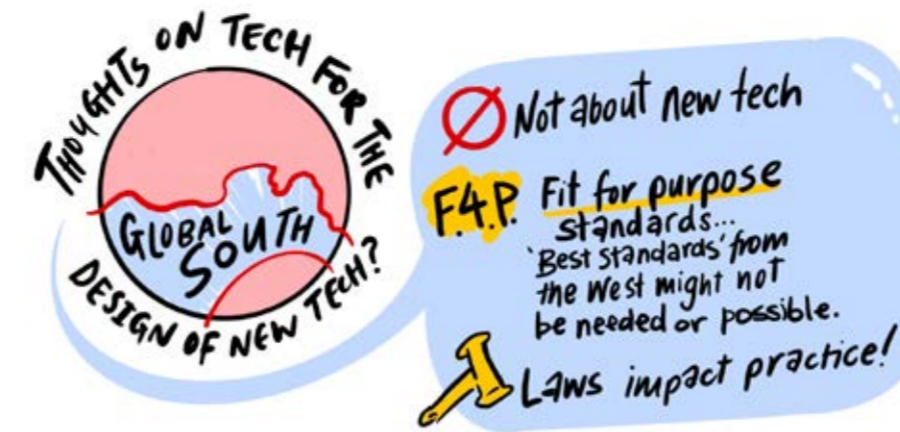
- Compromiso voluntario de los gobiernos de los distintos países para actuar y adaptarse al cambio climático en el marco de un esfuerzo mundial para reducir las emisiones de CO2.
- Cada país tiene sus propios planes y políticas nacionales (por ejemplo, el Plan Nacional de Medio Ambiente de Sri Lanka, la Ley de Planificación Nacional de los Países Bajos y un marco digital estrechamente vinculado y de apoyo, un portal implementado para ciudadanos y profesionales).
- Las funciones de los topógrafos están intrínsecamente relacionadas con las decisiones que se toman sobre la tierra, el agua y el mar (por ejemplo, planificación y utilización) y con la aplicación de medidas y tecnologías para recopilar, evaluar y medir datos, así como gestionar los desastres climáticos.
- Estos planes suelen estar desactivados en cuanto a gobernanza y operaciones; sin embargo, se entrecruzan en gran medida con los topógrafos y otros científicos / expertos geoespaciales / profesionales de la tierra, el agua y el mar a través de los datos, la tecnología y los conocimientos necesarios para que los mercados de decisiones logren un impacto en el cambio climático.



- Los topógrafos tendrán la experiencia y las habilidades para conectar estos planes.
- ¡Investiga y verifica los compromisos de tu propio país! No tenemos que resolver todo de una vez y por nosotros mismos, juntos podemos desempeñar nuestro pequeño papel hacia un futuro global de un clima sostenible.

VISIÓN DOS: Estudios de casos sobre topógrafos y la acción climática de todo el mundo.

Los países alrededor del mundo ya están sintiendo los impactos del cambio climático y llevando a cabo proyectos de adaptación climática en diversas escalas. Por ejemplo, los campos solares de China entre montañas y desiertos, las islas del Caribe que están pasando de un modelo de adjudicación y titulación de tierras sistemático a un modelo de tenencia social. Hay muchas cosas que podemos aprender unos de otros a nivel nacional y local para adaptarnos, hay esperanza para el futuro.



VISIÓN TRES: El Sur global, frente al Norte global.

Las brechas de capacidad entre el Sur Global y el Norte Global son evidentes, particularmente en el acceso a datos y nuevas tecnologías. Sin embargo, se están llevando a cabo proyectos de políticas de adaptación al clima y tenencia de tierras de buenas prácticas en los continentes y países del Sur Global. Estos proyectos incluyen:

- La adaptación de datos aptos para este propósito, provenientes de fuentes sorprendentes, puede ser un proceso más efectivo para estos países. Por ejemplo, datos coloniales históricos combinados con datos satelitales locales y de países vecinos. No se trata solo de nueva tecnología.
- A menudo, los proyectos requieren navegar y realizar intervenciones dentro de espacios sociales, políticos y de políticas para crear conciencia y lograr los cambios.
- El Sur Global y el Norte Global deben ser flexibles al alejarse de los estándares rígidos occidentales de datos y comprender las intervenciones aptas para este propósito.



VISIÓN CUATRO: ¡Datos, Datos, Datos!

Datos: los topógrafos los crean, los utilizan y los adoran. Los datos lo son todo y seguirán desempeñando un papel transversal y de conexión en la acción de las nuevas tecnologías, la planificación, aplicación, medición y evaluación. Sin embargo, no debemos olvidar que la tecnología no puede capturarlo todo y siempre será necesario realizar los levantamientos y encuestas en el terreno. Los datos tienen su propio impactos sobre las emisiones y el cambio climático. Por ejemplo, el almacenamiento de datos será la próxima gran forma de contaminación.

Cada vez hay más fuentes de datos gratuitas y de calidad. ¡No dejes de compartirlas!

VISIÓN CINCO: El Papel de los Topógrafos.

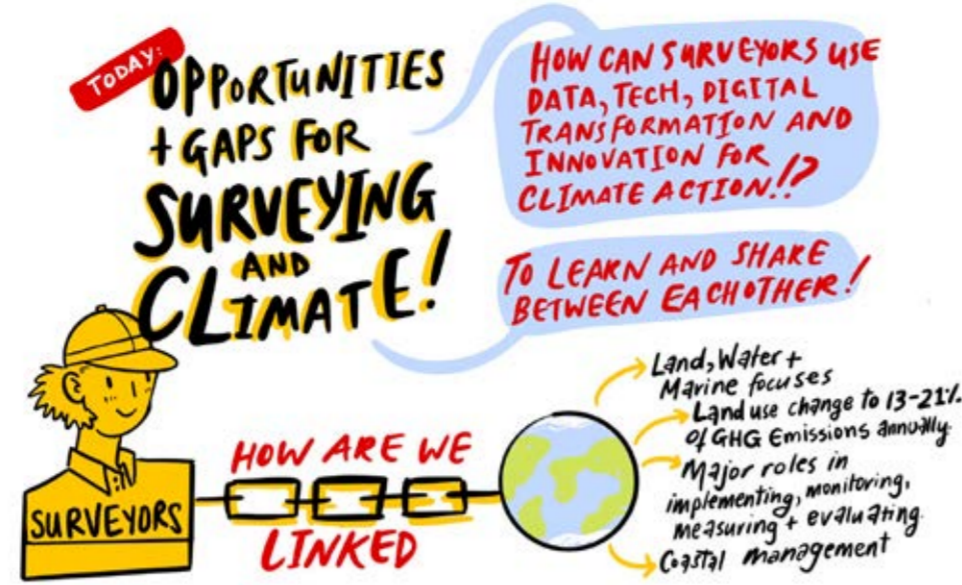
- El rol de los topógrafos seguirá creciendo y necesitarán adoptar mentalidades novedosas para trabajar y tomar decisiones en escenarios y procesos complejos y caóticos.
- Los topógrafos tendrán que volverse más rápidos en el procesamiento de datos y mantenerse al día con la capacitación necesaria para nuevas tecnologías.
- Los topógrafos deberán desarrollar habilidades para colaborar con equipos multidisciplinarios e influir en la toma de decisiones.
- Los topógrafos necesitarán vincular la evolución de los servicios con los planes y políticas nacionales.
- Atraer nuevos estudiantes al campo de la topografía con enfoques y prácticas innovadoras.

FIG Climate Compass Global Seminars traduction de l'enregistrement graphique : FRANÇAIS.

INSIGHT ONE : Les géomètres sont les experts qui relient les efforts locaux, nationaux et mondiaux en matière de changement climatique.

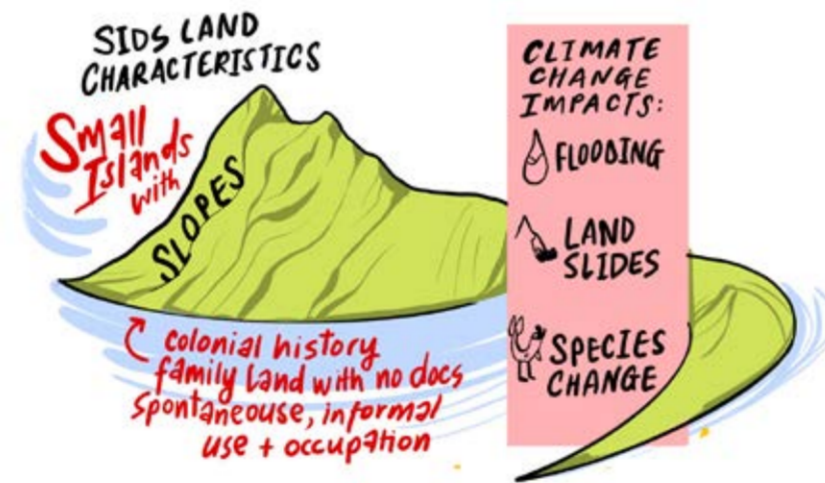
Avec l'intention mondiale formalisée lors du Sommet de la Terre de 1972, un processus de gouvernance complexe est apparu pour relever "les défis interconnectés de l'impact de l'homme sur les écosystèmes et le climat".

- Les gouvernements nationaux s'engagent volontairement à prendre des mesures en faveur du climat et à s'adapter aux changements climatiques dans le cadre d'un effort mondial visant à réduire les émissions de CO2.
- Chaque pays dispose de ses propres plans et politiques nationaux (par exemple, le plan national pour l'environnement du Sri Lanka, la loi néerlandaise sur la planification nationale et le cadre numérique et le portail mis en œuvre pour les citoyens et les professionnels, qui sont étroitement liés et qui les soutiennent).
- Le rôle des géomètres est intrinsèquement lié aux décisions prises concernant la terre, l'eau et la mer (par exemple, la planification et l'utilisation) et à la mise en œuvre d'actions et de technologies pour collecter, évaluer et mesurer les données et gérer les catastrophes climatiques.
- Ces plans sont souvent déconnectés en termes de gouvernance et d'opérations, mais ils se recoupent largement avec les géomètres et autres scientifiques/experts en géospatial et en sciences de la terre dans les domaines de la terre, de l'eau et de la mer, grâce aux données, à la technologie et à l'expertise requise pour les marchés décisionnels, afin d'avoir un impact sur le changement climatique.



- Les géomètres auront l'expertise et les compétences nécessaires pour relier ces plans.

Faites des recherches et vérifiez les engagements de votre propre pays ! Nous ne sommes pas obligés de tout résoudre en même temps et par nous-mêmes. Ensemble, nous pouvons tous jouer notre petit rôle pour un avenir mondial de climat durable !



INSIGHT TWO - Études de cas sur les géomètres et l'action climatique dans le monde entier.

Les pays du monde entier ressentent déjà les effets du changement climatique et mettent en œuvre des projets d'adaptation au climat à différentes échelles. Par exemple, les champs solaires de la Chine à travers les montagnes et les déserts, ou les îles des Caraïbes qui passent d'un modèle de gouvernance foncière fondé sur l'adjudication systématique et l'attribution de titres de propriété à un modèle de domaine foncier social. Il y a beaucoup de choses que nous pouvons apprendre les uns des autres aux niveaux national et local pour nous adapter et il y a de l'espoir pour l'avenir !

INSIGHT THREE - Le Sud mondial contre le Nord mondial

Les écarts de capacités entre le Sud et le Nord sont évidents, notamment en ce qui concerne l'accès aux données et aux nouvelles technologies. Cependant, les meilleures pratiques en matière d'adaptation au climat et de politiques foncières sont mises en œuvre sur les continents et dans les pays du Sud. Ces projets se caractérisent par

- L'adaptation de données adaptées à l'objectif visé, provenant de sources surprenantes, peut être un processus plus efficace pour ces pays. Exemple : des données coloniales historiques associées à des données satellitaires locales et des pays voisins. Il ne s'agit pas seulement de nouvelles technologies.
- Les projets doivent souvent naviguer et réaliser des interventions dans les espaces sociaux, politiques et stratégiques afin de sensibiliser et d'obtenir des changements.
- Les pays du Sud et du Nord doivent faire preuve de souplesse en s'éloignant des normes occidentales rigides en matière de données et comprendre que les interventions sont adaptées à l'objectif visé.

INSIGHT FOUR - Des données, des données, des données !

Les données - les enquêteurs les créent, les utilisent et les aiment. Les données sont essentielles et continueront à jouer un rôle transversal et connectif dans l'action climatique à travers les nouvelles technologies, la planification, la mise en œuvre, la mesure et l'évaluation. Cependant, nous ne devons pas oublier que la technologie ne peut pas tout capturer et qu'il y aura toujours un besoin d'enquêtes sur le terrain. Les données ont leur propre impact sur les émissions et le changement climatique. Par exemple, le stockage des données sera la prochaine grande forme de pollution.

Les sources de données gratuites sont de plus en plus nombreuses et de qualité ! Continuez à les partager !

INSIGHT FIVE - Rôle des géomètres

- Le rôle des géomètres va continuer à se développer et ils devront adopter de nouvelles mentalités pour travailler et prendre des décisions dans le cadre de scénarios et de processus complexes et chaotiques.
- Les géomètres devront devenir plus rapides dans le traitement des données et rester à la pointe de la formation nécessaire aux nouvelles technologies.
- Les géomètres devront développer des compétences pour collaborer avec des équipes pluridisciplinaires et influencer les décideurs.
- Les géomètres devront relier l'évolution des services aux plans et politiques nationaux.
- Attirer de nouveaux étudiants dans le domaine de la topographie grâce à de nouvelles approches et pratiques.

FIG CLIMATE COMPASS GLOBAL SEMINARS GRAPHIC RECORDING TRANSLATION: SWAHILI

UFAHAMU WA KWANZA - Wapima ramani ni wataalam ambao hujumuisha juhudi za wenyenji, kitaifa na kimataifa kuhusu mabadiliko ya hali ya tabianchi.

Kutoka kwa Mkutano wa Dunia wa 1972 wenye nia rasmi ya kimataifa, mchakato wa utawala ulio tata ulijitokeza kushughulikia "changamoto za mwingiliano wa binadamu katika mifumo ya ikolojia na hali ya tabianchi".

- Ahadi za kujitolea kwa serikali kubuni hatua za hali ya hewa na mabadiliko ya tabianchi kuelekea juhudi za kimataifa za kupunguza uzalishaji wa CO2.
- nchi mingi ziliiga mipango na sera za kitaifa (kwa mfano. Mpango wa Mazingira wa Sri Lanka, Sheria ya Kitaifa ya Upangaji wa Uholanzi, na Jukwaa la Dijiti lenye Msaada wa Karibu na lango la kutekeleza kwa raia na wataalamu).
- Vyeo vya wapima ramani vinahusiana kwa asili na maamuzi yanayofanywa kuhusu ardhi, maji, na bahari (kwa mfano, upangaji na matumizi) na kutekeleza hatua na teknolojia za kukusanya, kutathmini, na kupima data na kusimamia majanga ya hali ya hewa.
- Mipango hii mara nyingi imekatishwa tamaa katika utawala na operesheni, hata hivyo, wachunguzi na wataalamu wa nyaja za ardhi, maji, na bahari hubuni data, teknolojia, na ujuzi uliohitajika kwa maamuzi ili kufikia suluhu na kuzuia athari zinazotokana na mabadiliko ya tabianchi.
- Wapima ramani watakuwa na ujuzi na stadi zinazohitajika kwenye mipango iliopo.

Tafiti na hakiki ahadi za nchi yako! Hatuhitaji kutatua kila kitu mara moja na kwa kujitolea pekee, pamoja tunaweza kuchangia jukumu letu dogo kuelekea mustakabali wa dunia wenye hali ya hewa endelevu.

UFAHAMU WA PILI - Uchunguzi na mifano ya vitendo vya hali ya hewa kutoka sehemu mbalimbali duniani.

Kwa njia moja au nyingine, nchi mingi duniani zimehisi athari za mabadiliko ya hali ya tabianchi na kubuni mikakati kwa vipimo mbalimbali, kama vile: Uchina inajenga nishati ya jua kwenye milima na jangwani, Visiwa vya Karibiani vinabadilika kutokana na mfumo wa utawala wa ardhi na usuluhishi wa umiliki wa ardhi na kujimuisha jamii kwenye umiliki. Mengi tumejifunza kutoka kwa kila sera katika viwango vya kitaifa na vya kienyeji ili kuboresha suluhisho kwa sasa na siku zijazo.



UFAHAMU WA TATU - Kusini dhidi ya Kaskazini ya Dunia

Makundi ya uwezo kati ya Kusini ya Dunia na Kaskazini ya Dunia ni dhahiri; haswa kwa upande wa upatikanaji wa data na teknolojia mpya. Hata hivyo, miradi bora ya kubadilika kwa hali ya hewa na sera za umiliki wa ardhi inatekelezwa katika mabara na nchi za Kusini ya Dunia. Miradi hii inajumuisha:

- Kubadilisha data kuwa na umuhimu kutoka vyanzo visivyotarajiwa kunaweza kuwa mchakato wenye ufanisi zaidi kwa nchi hizi. Mfano: data ya kihistoria ya ukoloni ikilinganishwa na data ya satelaiti ya nchi za karibu na za kikanda. Sio tu kuhusu teknolojia mpya.
- Mara nyingi miradi inahitaji kupitia na kutekeleza mipango ya kuingilia kati katika nafasi za kijamii, kisiasa, na sera ili kuongeza ufahamu na kufikia mabadiliko.
- Kusini mwa Dunia lazima ziwe na mawazo mazuri ya kuelekea kujiondoa kutoka kwa viwango vya data vya Magharibi na kuelewa muingiliano unaofaa wa kuingilia kati.



UFAHAMU WA NNE - Data, Data, Data!

Data - Wapima ramani wanaiunda, wanaitumia, na wanaipenda. Data ni kila kitu na itaendelea kucheza jukumu la kuunganisha na kuunganisha katika hatua za hali ya hewa kupitia teknolojia mpya, upangaji, utekelezaji, kupima, na tathmini. Hata hivyo, hatupaswi kusahau kwamba teknolojia haziwezi kukamata kila kitu na kutakuwa na daima haja ya uchunguzi wa eneo. Data ina athari zake kwa uzalishaji wa gesi chafu na mabadiliko ya hali ya hewa. Kwa mfano, uhifadhi wa data utakuwa aina kubwa inayofuata ya uchafuzi.

'Kuna vyanzo vinavyoongezeka vya data huru yenye ubora! Endelea kushirikisha hizi kila mahali!'

UFAHAMU WA TANO - Jukumu la wapima ramani

- Jukumu la wapima ramani litazidi kukua na haja ya kukubali mtazamo mpya wa kufanya kazi na kufanya maamuzi kupitia mazingira na michakato yenye utata na machafuko.
- Wapima ramani lazima wawe wepesi katika kusindika data na kuendelea mbele kwa mafunzo yanayohitajika kwa teknolojia mpya.
- Wapima ramani lazima wajenge ujuzi wa kushirikiana na timu za utalamu mbalimbali na kuathiri wafanyafasi maamuzi.
- Wapima ramani watahitaji kuunganisha ukuaji wa huduma kwa mipango na sera za kitaifa.
- Kuvutia wanafunzi wapya katika uwanja wa uchunguzi kwa njia na mazoea mapya.

This document contains the visual, synthesis capture of the Climate Compass Global Seminars presented by F.I.G. and expert, keynote presenters from around the globe. Recorded and produced by Dayna Hayman.

PROJECT TEAM & KEYNOTE CONTRIBUTORS

FIG SEMINAR LEADERS & SUPPORT COMMITTEE

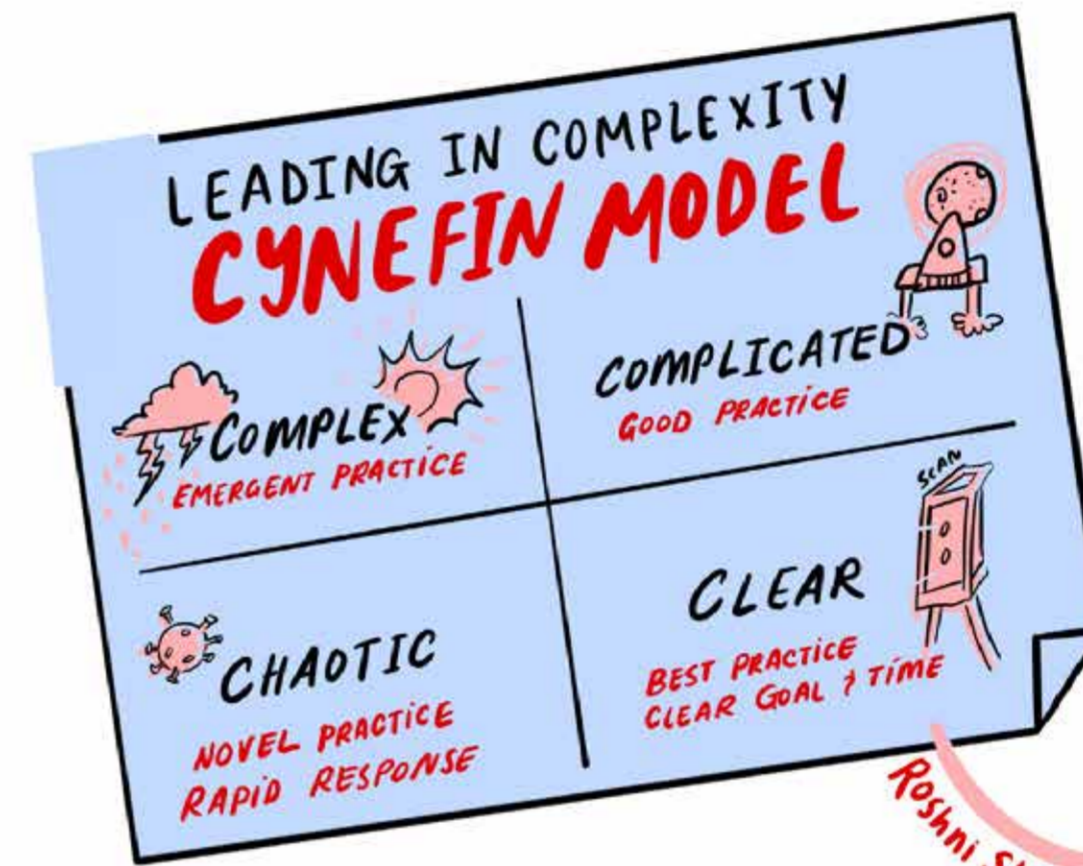
- Clarissa Augustinus
- Roshni Sharma
- Cromwell Manaloto
- David Elegbede
- Simon Ironside
- Angela Anyakora
- Gordana Jakovljevic
- Naa Dedei Tagoe

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TRANSLATION ACKNOWLEDGMENTS

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What does this mean for Surveyors?
 As surveyors, we are skilled in the detail, certainty quantities. But we must get better at working with uncertainty to support others.
We are stronger together.



OUR PURPOSE

SURVEYORS AROUND THE GLOBE TO MAP OUR CAPABILITIES

A QUICK INTRO TO THE GLOBAL CONTEXT...

- 9 PLANETARY BOUNDARIES LAND CHANGE = 19% ANNUAL IMPACT.
- 1972 Earth Summit COP 15
- Conference # Meetings since inception of Parties/Government
- Clarissa Augustinus

FIG CLIMATE COMPASS TASKFORCE GLOBAL CLIMATE COMMUNITY ASIA PACIFIC + AMERICAS SEMINAR #2

Case studies from Asia-Pacific Kate Fairlie

- NARURU HIGHER GROUND** Challenges: Long colonial history that has mined 80% of the island for phosphorus. The interior is now barren + uninhabitable.
- TENURE REFORM THROUGH** Legal gaps analysis, Def. a 'Nat Land Policy', Review policy + practices.
- PAPUA ESTABLISHED A TECH ASSISTED FACILITY TO IMPROVE SPATIAL**
- INDONESIA GOVERNMENT LOCAL EXPERTS**
- U.K. GOVERNMENT GLOBAL EXPERTS**
- PROMOTE LAND PRINCIPLES** Training, Co-developed Co-ownership, Social safeguards.

CLIMATE CHANGE IMPACTS IN CHINA Ruishan Chen

We know China is a large carbon emitter

Land Tenure in the Caribbean Dr. Charisse Griffith-Charles

SMALL ISLANDS WITH SLOPES

CLIMATE CHANGE IMPACTS: FLOODING, LAND SLIDES, SPECIES CHANGE

WHAT WE'VE BEEN WORKING ON:

- FROM SYSTEMATIC ADJUDICATION + TITLING TO SOCIAL TENURE DOMAIN MODEL
- Available credit, insurances
- Appropriate land regulations + policy
- Spontaneous + voluntary
- Social acceptance to change
- Institutional acceptance of legality to scale
- Technologies + app. to both community + institutions

SEMIMAR DISCUSSION

THINKING ON TECH FOR THE DESIGN OF NEW TECH?

Not about new tech

FAP: Fill for purpose standards. Best standards from the West might not be needed or possible. Laws impact practice!

Get better at talking + meshing of the minds

Surveys capability for climate action

Show how their work engages with climate issues. GET THEM to share data, not mandate it. Go ASK them about their needs to share!

Remember, a lot of data information AI can't capture everything...

CYNEFIN MODEL OF COMPLEXITY

COMPLEX UNKNOW, UNPREDICTABLE PATTERN-BASED CHAOTIC

COMPLICATED CLEAR, BEST PRACTICE CLEAR

NEW, NOVEL UNKNOWN CAPABILITY, DECISIONS + LEADERSHIP

FAMILIAR, KNOWN: PRACTICES CAUSE + EFFECT + DATA

WE CAN SEE OUR SHARED ECO-SYSTEMS ACROSS BORDERS!

Large scale national analysis of urbanisation, ecosystems, and farms, sand dust and storms, water and chemical management etc.

MONITORING FLOODS FROM TROPICAL CYCLONES

ZIMBABWE

Survivors will develop the baseline data for NDCs.

CHIMAMANT MOUNTAINS

THE PEOPLE STAY CLOSE TO THE RIVER AND WERE DEEPLY AFFECTED

CYCLONE IDA'S

FLASH FLOODS

WE ALL HAVE A ROLE TO PLAY!

SURVEYOR'S SKILL + ROLE

- GIS
- Hydrology
- Changes over time
- Planning + designing
- Education + Advocacy

WHAT BENEFITS OF GIS TECHNOLOGY?

- Early warning for community response
- Better infrastructure planning
- Long term planning decisions
- Monitoring stations

LEADING IN COMPLEXITY

CYNEFIN MODEL

COMPLEX EMERGENT PRACTICE, GOOD PRACTICE, CHAOTIC NOVEL PRACTICE RAPID RESPONSE, CLEAR BEST PRACTICE CLEAR GOAL + TIME

WHAT DOES THIS MEAN FOR SURVEYORS?

As surveyors, we are skilled in the detail, certainty quantities. But we must get better at working with uncertainty to support others. We are stronger together.

Approach problems differently

Multi-disciplinary collaboration skills

So that students are future ready!

Tech training + access, particularly for the Global South

ERANDA GUNATHILAKA

"Capability building in new technologies will help Surveyors battle climate change."

RUMBIDZAI CHIVIZHE

"Embracing new technologies to enhance data for decision makers..."

PAUL VAN ASPEREN

"The biggest challenge was bringing it all together from across governments - the environmental act helped."

ROHINI SHARMA

Report issues to right authorities

THE FUTURE?

More students - Connect with your Gov's national plans

CLARISSA AUGUSTINUS

ONE STOP SHOP FOR CITIZENS AND PROFESSIONALS

Digital Framework Supporting Netherlands Environmental Planning Act

1. Location, 2. Activity, 3. Dynamic Questions, 4. Activity to do

Can I build in a riverbed?

Answer questions.

Provides guidance to do what you need to do, eg. building permit

Key word search for activity eg. build

200 STAFF / 8 YEARS

388 PERMITS SYSTEM

COMBINE SYSTEMS: Land Management, Water Management

Into an integrated system

ACKNOWLEDGE THE GLOBAL NORTH AND GLOBAL SOUTH DIGITAL DIVIDE

FIG

OPPORTUNITIES + GAPS FOR SURVEYING AND CLIMATE!

HOW ARE WE LINKED

COPELYNICUS LAND MONITORING SYSTEM EUROPEAN SPACE AGENCY

Atmosphere, Climate Change, Land, Emergency, Marine, Security

GLOBAL LEVEL DATA!

Land, Water + Marine focuses

Land use change to 13-21% of GHG emissions annually

Major roles in implementing, monitoring, measuring + evaluating

Capital management

USUE DONEZAR

COLOMBIA MANGROVE FOREST + EARTH OBSERVATIONS

Nelson Andres Nieto Valencia

21-23 Expedition, Spectra radiometry, Separability Analysis, Spectral Libraries + Satellite Images

A simple measuring device that help guide locals to improve practices

FREE!! GLOBAL DATA!

LINKED TO: MANGROVE FORESTS, FOOD SECURITY, HOUSING, LIVELIHOOD

BASIC INTERVENTION

COMMUNITY BASED APPROACH FOR SUSTAINABLE WETLANDS BUTALETA, KYOGA PLAINS

Simon Peter Mwasighe

BUILDING COMMUNITY TRUST

Raising awareness, Continuous engagement, Understand past experiences

Link the Evolution of the Service to policies!

Future skills?

Be resilient as people for the work

Communicate to others

Confidence to start using Earth data?

Open source online trainings

Just Jump in, have a go!

Customary Rights

Which products are fit for purpose. Eg: Local Spanish data might work locally but won't work in France.

You don't need to program a lot.

Chiefs + leaders, Statutory Bodies (eg Gov), Customary Community

May be the only way in the future.

BIGGEST CHALLENGE IS IMPLEMENTATION!

IMPROVED TENURE SECURITY FOR WOMEN, MEN + YOUTH.

INCLUSIVE, CLIMATE-SMART LAND USE PLANNING.

IMPROVED AWARENESS ON CUSTOMARY RIGHTS + LAND PLANS

GLTN

Not a problem! Individualised systems have done harm.

I have a say! I have rights!

We can balance our economics, environment + social change!

NEW CLIMATE TECHNOLOGIES?

Look out! There is always something being released.

Govs, Industry, Academics.

Sensors are always improving

TOWARDS THE FUTURE!!

EXPLORE + EMBRACE UNCERTAINTY

Empower decisions in chaotic spaces

Embrace new capabilities

CYNEFIN MODEL OF LEADERSHIP + MINDSETS NEEDED FOR COMPLEXITY!

Teach others to use + contribute to an expert system.

Role of Academics? + EDUCATION

Listen to industry needs on what/how etc for future innovations!

FIG

WHAT I HEARD + LEARNT ACROSS THE THREE F.I.G CLIMATE COMPASS GLOBAL SEMINARS...

GRAPHIC RECORDING THEMATIC REFLECTIONS

BY DAYNA HAYMAN

DAYNA HAYMAN

FIG

CLIMATE COMPASS

*Created post events.

DAYNA HAYMAN

FIG

CLIMATE COMPASS