

NCSE DRAWDOWN 2021 CONFERENCE

Research to Action: Science & Solutions
for a Planet Under Pressure



GLOBAL COUNCIL for
SCIENCE and the ENVIRONMENT

PROJECT
DRAWDOWN.



Graphic Recordings
by Karina Branson

Research to Action

WELCOME!

VALERIE LUZADIS

NCSE Board of Directors

We explicitly + publicly affirm our identity as an anti-racist, multicultural organization

NCSE IS DELIGHTED to ANNOUNCE... we are Now the **GLOBAL COUNCIL FOR SCIENCE + the ENVIRONMENT**

MICHELLE WYMAN AND **CHAD FRISCHMANN**
NCSE Executive Director Drawdown - Senior Director of Research + Technology

LEARN · SHARE · ACT

SO MANY YOUNG FOLKS ARE HERE!

together for **REAL IMPACT**
FOR PEOPLE and PLANET

THANK YOU for JOINING US this WEEK!

our world is full of UNCERTAINTY...

LEADERSHIP CREATIVITY ACTION

Illustrated by CONVERSKETCH.COM



National Council for Science and the Environment

PROJECT DRAWDOWN

Opening Keynote | Scaling Up Solutions to Global Environmental Challenges: Critical Roles for Scientific Research

DAY 1
JANUARY 5, 2021

#NCSEDrawdown2021

SCALING UP SOLUTIONS TO GLOBAL ENVIRONMENTAL CHALLENGES: CRITICAL ROLES FOR SCIENTIFIC RESEARCH



INGER ANDERSEN

Under-Secretary-General of the UN and Executive Director of the UNEP

- JANUARY 5, 2021 -

WE ARE FACING MULTIPLE PLANETARY CRISES...

COVID-19 PANDEMIC

POLLUTION + WASTE

CLIMATE

BIODIVERSITY LOSS

WE HAVE an OPPORTUNITY to CHANGE the PATH

I CAN MAKE AN IMPACT!

REINFORCE SCIENCE

MAKE SCIENCE ACCESSIBLE

ACKNOWLEDGE OUR BIASES

You are the PEOPLE who HAVE the POWER to MAKE POSITIVE CHANGES WE CAN DO IT TOGETHER!

SCIENCE IS OUR BEDROCK

Illustrated by CONVERSKETCH.COM



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PROJECT DRAWDOWN

TOGETHER WE CAN BRIDGE POLICY, SCIENCE and ACTION

Plenary Panel | Indigenous Knowledge and Western Science: Collaboration, Relationships and Climate Solutions

JOHN H. CHAFEE MEMORIAL LECTURE

INDIGENOUS KNOWLEDGE and WESTERN SCIENCE: COLLABORATION, RELATIONSHIP, and CLIMATE SOLUTIONS

DAY 1
JANUARY 5, 2021

#NCSIEDrawdown 2021

VALERIE LUZADIS

GCSE Board, The State University of New York, ESF

WE need to be willing to put our HEARS into SCIENCE

INDIGENOUS SCIENTIFIC LENS
LIVING SYSTEMS are CONSTANTLY MOVING TOWARD HARMONY

HOLISTIC INCLUSIVE HUMILITY
VALUE OF LIFE OVER PROFIT

SHERRI MITCHELL WEH'NA HA'MU KWASSET

Indigenous rights activist, lawyer, + spiritual teacher

THREE FIRES SPIRITUAL TEACHING

SCIENCE must be able to SEE BEYOND its IMPLICIT BIAS

MIND
OPENING of POSSIBILITIES
BODY

WHO HAS THIS FRAMEWORK INTENTIONALLY EXCLUDED?

INSTITUTIONAL [DE-COLONIZING]

DARREN RANCO

Native American Programs + Research Director, University of Maine

CAN WE SHIFT OUR APPROACH?

RESEARCH

How is a question asked? Who gets to ask it?

Centering + Prioritizing indigenous people

Illustrated by CONVERSKETCH.COM

LAURA WEILAND

GCSE - Senior Advisor - MODERATOR-

DO WE HAVE the COURAGE to SURVIVE?

THERE is MORE than ONE WAY of KNOWING

RECOGNIZING EACH OTHERS' HUMANITY

PEDAGOGY

MAMABEZU DO WE HAVE ENOUGH?

TWO-EYED SEEING
SHORT-TERM PREDICTIVE
LONG-TERM KNOWING

National Council for Science and the Environment

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Opening Keynote | Science and Local Water Solutions

DAY 2
JANUARY 6, 2021

#NCSIEDrawdown 2021

SCIENCE and LOCAL WATER SOLUTIONS

LYNDA HOPKINS

District 5 Supervisor County of Sonoma, CA
Also co-owner of Foggy River Farm

SONOMA COUNTY + SONOMA WATER FORMED:

APPLIED SOLUTIONS
WATER
WILDFIRES
RESILIENCE

WHAT do WILDFIRES have to do with WATER? EVERYTHING.

2017

LIVES LOST
BILLIONS IN DAMAGE

WE ARE NO LONGER TALKING about CLIMATE CHANGE. WE ARE TALKING ABOUT a CHANGED CLIMATE

WE can be PROACTIVE!

WHAT CAN WE DO?

AFFORDABLE COMMUNICATION STRATEGY
sirens

REFORESTING EFFORTS!

ENHANCED FORECASTING

Reservoir levels
Red Flag warnings
Infrared cameras on mountain tops!

COLLABORATING to LEVERAGE DATA for RAPID RESPONSES + INFORMED DECISIONS

Groundwater + Surface water IMPACTED

Illustrated by CONVERSKETCH.COM

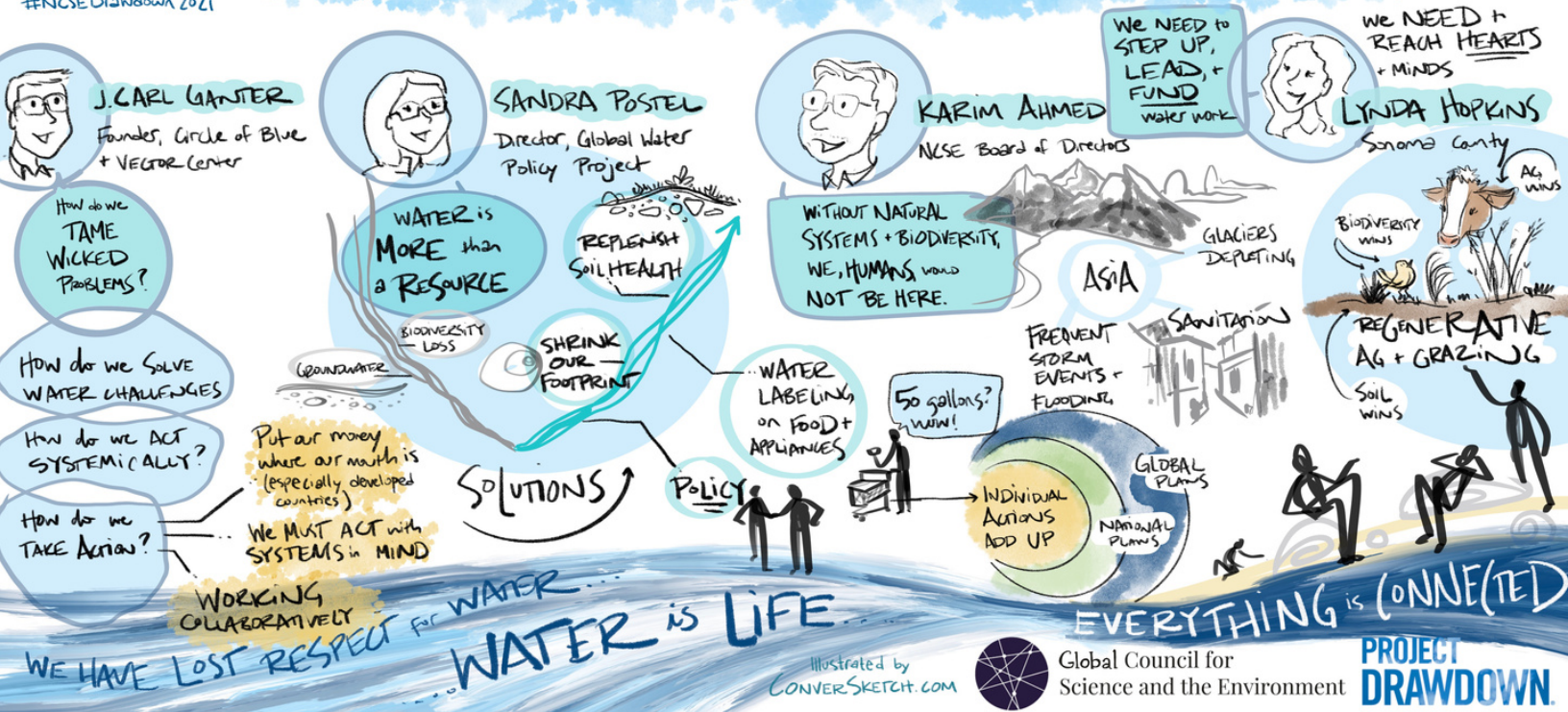
Global Council for Science and the Environment

PROJECT DRAWDOWN

Plenary Panel | Risk, Stress, and Scarcity: Water Challenges on a Planet Under Pressure

DAY 2
JANUARY 6, 2021
#NCSEdrawdown 2021

RISK, STRESS, and SCARCITY: WATER CHALLENGES on a PLANET UNDER PRESSURE

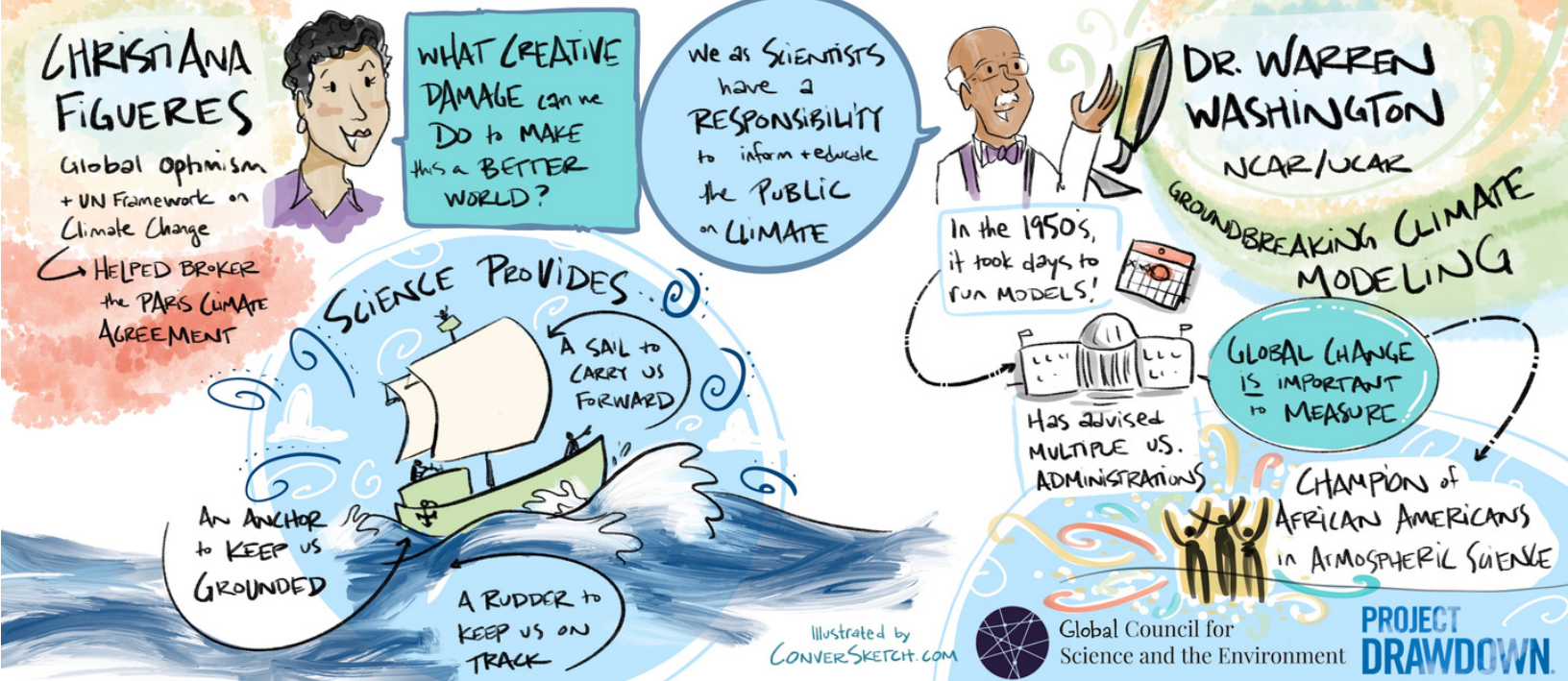


NCSE Lifetime Achievement Award

DAY 2
JANUARY 6, 2021
#NCSEdrawdown 2021

NCSE LIFETIME ACHIEVEMENT AWARD

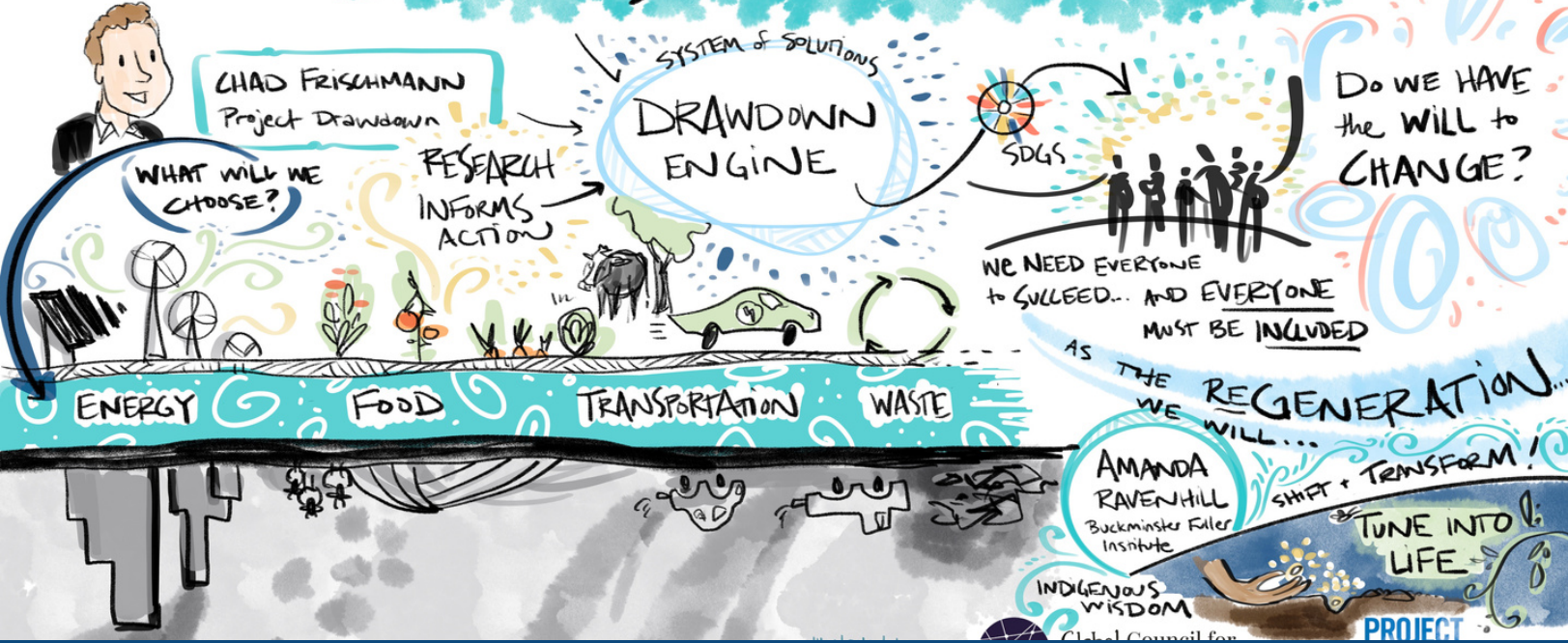
FOR GROUNDBREAKING WORK ON CLIMATE + POLICY



Keynote | Building a Regenerative Future: Science and Solutions for People and Planet

DAY 3
JANUARY 7, 2021
#NCSedrawdown 2021

BUILDING A REGENERATIVE FUTURE: SCIENCE + SOLUTIONS for PEOPLE and PLANET



Keynote | Role of Technology in Accelerating Science and Solutions for a Planet Under Pressure

DAY 3
JANUARY 7, 2021
#NCSedrawdown 2021

ROLE of TECHNOLOGY in ACCELERATING SCIENCE and SOLUTIONS for a PLANET UNDER PRESSURE



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Global Council for Science and the Environment

PROJECT DRAWDOWN

Plenary Panel | Pandemic Perspectives: Global Health in Altered Ecosystems

DAY 3
JANUARY 7, 2021
#NCSedrawdown 2021

PANDEMIC PERSPECTIVES: GLOBAL HEALTH IN ALTERED ECOSYSTEMS

What gives you hope?
RANDY BURD
NCSE Board Member
Long Island University
- Moderator -
PRIVATE SECTOR, ACADEMIA, + PUBLIC SECTOR
WORKING ACROSS SECTORS
+ IMPORTANT TO HAVE A PLAN
How can we REIMAGINE how we MANAGE DISASTERS?
COLLABORATIVE

Record vaccine development
PETER SCHLOSSER
Global Futures Laboratory
Arizona State University
We DON'T CONTROL the SYSTEM... we're PART of it
HOLISTIC PERSPECTIVE
We are PUTTING STRESS on the PLANET...
... COVID-19 is a RESPONSE to that STRESS
DISASTER PREPAREDNESS
DATA-DRIVEN
USING NATURAL ASSETS to REDUCE RISK

Thank you to ALL the Federal employees working towards our wellbeing + change
SERENA SOWERS
Swiss Re
Public Sector
Let's come TOGETHER to BUILD RESILIENCE FOR ALL!
INSURANCE Provides an ENTERPRISE PERSPECTIVE on GLOBAL TRENDS
How do we FINANCE SOLUTIONS that are:
o PROACTIVE +
o EQUITABLE
Vulnerable individuals are SUPPORTED

EXAMPLE in MEXICO: PAYMENT + SUPPORT of ECOSYSTEM SERVICES
PROTECTING CORAL REEFS → PROTECTS BEACHES → PROTECTS TOURISM + ECONOMY
WHO WILL PAY for CATASTROPHES + CLIMATE CHANGE?
Governments + individuals
AND the COSTS are INCREASING!

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Keynote | Linking Arms for the Future We Want

DAY 3
JANUARY 7, 2021
#NCSedrawdown 2021

LINKING ARMS FOR THE FUTURE WE WANT

LET US START by ACKNOWLEDGING CURRENT EVENTS in the US...

GCSE OATH to be ANTI-RACIST
We explicitly + publicly affirm our identity as an anti-racist multi-cultural organization.
We resolve to develop + work to implement strategies that dismantle racism within all aspects of our organization + society
We commit to recognize, address, + oppose all forms of racism, injustice, oppression, intolerance, + hate.

MICHELLE WYMAN AND **CHAD FRISCHMANN**
GCSE Executive Director
Drawdown - Senior Director of Research + Technology
ANNOUNCEMENTS:
Now the GLOBAL Council for Science + the Environment
A NEW DRAWDOWN SOLUTIONS PLATFORM!
FROM MORE than 86 COUNTRIES!
More than 1/3 of Participants are STUDENTS!
ADVANCING the SCIENCE + TAKING ACTION
We can MOBILIZE a GLOBAL MOVEMENT to SOLVE CLIMATE CHANGE!
BE PREPARED to LEARN, SHARE, + CO-CREATE SOLUTIONS!
WE are STRONGER TOGETHER

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Keynote | Inclusive Sustainability, and the Need to Integrate Indigenous Peoples and Scientific knowledge

DAY 3
JANUARY 7, 2021

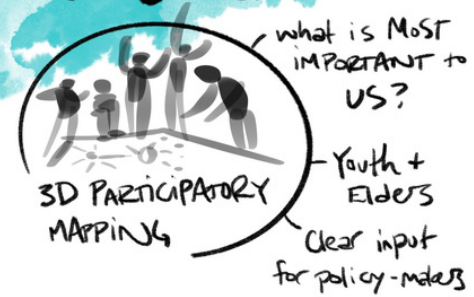
#NCSedrawdown 2021

INCLUSIVE SUSTAINABILITY, and the NEED to INTEGRATE INDIGENOUS PEOPLES and SCIENTIFIC KNOWLEDGE



HINDOU UMAROU IBRAHIM
President, Association for Indigenous Women and Peoples of Chad

I AM READY to FIGHT for PEOPLE and PLANET.



WE EXPERIENCE CLIMATE CHANGE DIRECTLY

MY PEOPLE LIVE + DEPEND on NATURE

We MUST work TOGETHER to PROTECT the MOST VULNERABLE

TRADITIONAL KNOWLEDGE WE OBSERVE.

Hindu! The ants say it will rain today!

She's always right!



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PROJECT DRAWDOWN

Naming the Goal: Perspectives from Around the World

DAY 3
JANUARY 7, 2021

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NAMING the GOAL: CREATING a REGENERATIVE FUTURE TODAY

THIS IS ABOUT PEOPLE

WE CANNOT EAT COAL WE CANNOT DRINK OIL

VANESSA NAKATE
Founder, RISE UP Movement
Young leader UN SDGs

EDUATE WOMEN + GIRLS

3% of Global Emissions...

YOUR ACTION IS NEEDED.

COMMUNITY KNOWSHIP

MARQUES ANDERSON
Founder/Director, World Education Foundation
From Pro Football Player

REGENERATIVE FUTURES

AI to fight climate change

Ancient + Indigenous Wisdoms

SALLY ANN RANNEY
President, GLOBAL CHOICES

ARCTIC W/ SEA ICE LOSS

Albedo - what? Albedo Effect!

WE CANNOT plant more ICE.

ARCTIC GLOBAL COMMONS PROTECTED AREA

PEGGY LIU
Chairperson, JUCCCE

CHINA currently World's largest producer of emissions

Carbon neutral by 2060

change is positive

Healthy Eating

Legacy

Optimistic vision Business plan

VIRGINIJUS SINKEVICIUS
Commissioner, Environment, Oceans, + Fisheries, European Commission

REGENERATION

WE NEED DEEP TRANSFORMATIVE CHANGE

EUROPEAN GREEN DEAL

ANDREAS KUHLMANN
CEO, German Energy Agency (dena)

We are working in Germany + Europe for CLIMATE SOLUTIONS

Partnerships Drawdown Solutions

ALEXANDRA VILLASEJOR
Founder, Earth Uprising

Our new US Administration CARES!

LIVING in HARMONY with the PLANET

YOUTH are the MORAL CONSCIOUS VOICE

How can we RECONNECT to OUR LOVE for MOTHER NATURE?

INDIGENOUS APPROACHES

CRISIS

DR. AJAY MATHUR
Director General, TERI
Prime Minister's Council on Climate Change, India

Working toward 24/7 renewable energy

Efficient appliances

Solar Power

THE HONORABLE CORY BOOKER
Democrat - New Jersey

Farmers sequestering Carbon

NATURAL CLIMATE SOLUTIONS

RESTORATIONS

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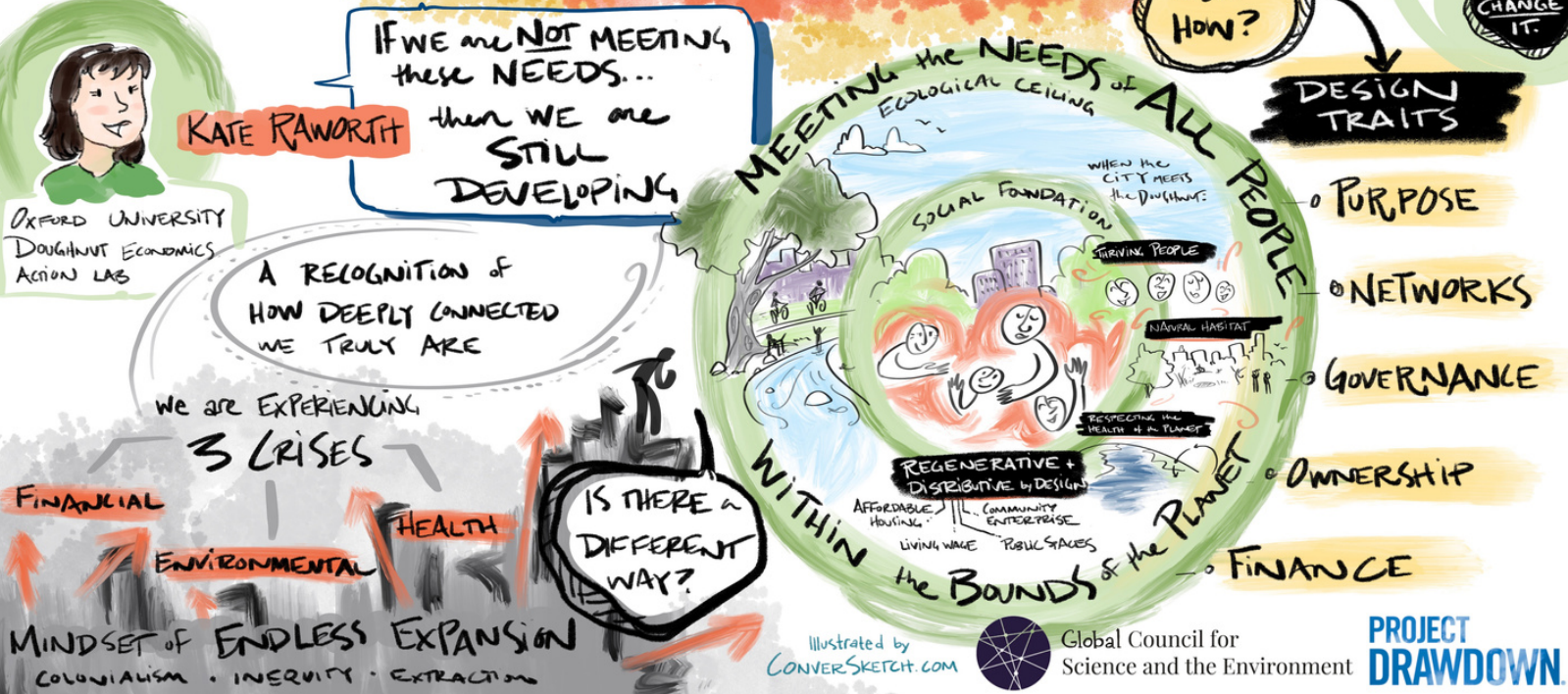
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Keynote | Solutions for a Regenerative Economy that Works for All

DAY 4
JANUARY 8, 2021

#NCSedrawdown 2021

SOLUTIONS for a REGENERATIVE ECONOMY that WORKS for ALL



Change Framing the 21st Century Economic Growth Agenda

DAY 4
JANUARY 8, 2021

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VISION for the FUTURE WE WANT CHANGE FRAMING the 21ST CENTURY ECONOMIC GROWTH AGENDA



Keynote | A Generous Economy for Spaceship Earth

DAY 4
JANUARY 8, 2021
#NCSDrawdown 2021

VISION for the FUTURE WE WANT

REMEMBER TO ZOOM OUT...

A GENEROUS ECONOMY for SPACESHIP EARTH



AMANDA RAVENHILL
Executive Director, Buckminster Fuller Institute

PESSIMISM is a LUXURY
for a LESS URGENT TIME

HOLDING the VISION
for the FUTURE

YOU NEVER CHANGE SOMETHING
BY FIGHTING...
TO CHANGE SOMETHING,
BUILD a NEW MODEL
that MAKES the OLD ONE
OBSOLETE

SHARING · SERVICE · CIRCULAR ECONOMY · COOPERATION

DIS-SOLVING
ROOT CAUSES

Separation from nature
Narrow Focus
Money + Corruption
Othering + Colonization

SCARCITY
WEAPONRY



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Closing Remarks and Song

DAY 4
JANUARY 8, 2021
#NCSDrawdown 2021

CLOSING REMARKS

song

MAMTA MEHTA
Project Drawdown

Deep in my HEART
I do BELIEVE, that

WE SHALL OVERCOME

FOR OUR PLANET, WE CAN OVERCOME!



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DRAWDOWN

DAYS
JANUARY 9, 2021
#NCSedrawdown 2021

DRAWDOWN 2.0: ACCELERATING SOLUTIONS

Moment in time we "bend" the greenhouse gas curve

WE GET TO RE-IMAGINE our WORLD... WE NEED to do it TOGETHER

JONATHAN FOLEY
Executive Director,
Project Drawdown

EXERCISE YOUR LEADERSHIP!

SOLUTIONS

IF WE TAKE ACTION... the MATH SHOWS WE CAN ACHIEVE DRAWDOWN!



ACCELERATORS



THE ATMOSPHERE is the ULTIMATE ARBITRATOR

NATURAL CARBON SINKS

[V. GOOD WITH ACCOUNTING]

FORESTS

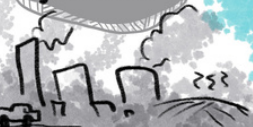
OCEANS

CLIMATE SOLUTIONS

FROM THEORY ... TO PRACTICE



SOURCES



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DAYS
JANUARY 9, 2021
#NCSedrawdown 2021

SCIENCE IS OUR SUPERPOWER

MICHELLE WYMAN
Executive Director,
Global Council for Science
+ the Environment

ASK + LISTEN

LEVERAGE SCIENCE

WE CAN SOLVE CHALLENGES TOGETHER

CURIOSITY TENACITY INGENUITY COURAGE



HUMAN FACTOR

NEVER FORGET... We are EXPERIENCING HISTORY FIRST HAND



We are PRIMARY SOURCES... How will OUR ACTIONS INFLUENCE the FUTURE?

COPERNICUS

NEWTON

FARADAY

JOHNSON

WATSON + CRICK

WEST - GPS

MONTAGNIER + GALLO HIV

CALENDAR

MCCLELLAN COVID-19 VACCINE

DISCOVERY



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Keynotes | A New Business Model for a Regenerative Future and Indigenous Perspectives for a Regenerative Future

DAYS
JANUARY 9, 2021

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A NEW BUSINESS MODEL for a REGENERATIVE FUTURE

THE VISION FOR THE FUTURE WE CHOOSE TO CREATE

OUR COMMUNITIES ARE NOT ISLANDS... WE NEED TO WORK TOGETHER

INDIGENOUS PERSPECTIVES for a REGENERATIVE FUTURE

CHRISTIAN KROLL
Founder + CEO of Ecosia

Not for Sale

Search Engine

that PLANTS TREES

When you're not a PROFIT MAXIMIZING COMPANY, A LOT OF OPTIONS BECOME VIABLE

POSITIVE ENVIRONMENTAL IMPACTS

POSITIVE SOCIAL IMPACTS

HOW CAN WE SHIFT MINDSETS?

Billionaire
Removed 1 Billion TONS of CO₂

Absorbing 1kg of CO₂... PER SEARCH!

REGENERATIVE COMPANY

200% Renewable Energy!

NAWASHATU YAWANAWA-BERGIN (SARA)

(Aceque (chief) of the Aldeia Shukunewa Yawanawa

IN BRASIL SHUKUNWA VILLAGE

Language + Culture

Connection to the Land

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WUSHOUNUNAN KESIKBESER

MAXE RUA SACHEM HAWESTEM

Sachem (chief) of the Schaghticoke First Nations

IN NEW YORK

BRINGING BACK...

Medicines

Teaching our future generations

Food Systems

COMMUNITY

WE ARE JUST ONE PART OF THE ECOSYSTEM...

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Indigenous Perspectives for a Regenerative Future

DAYS
JANUARY 9, 2021

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CLOSING REMARKS

STAY INVOLVED with OUR COMMUNITIES

MICHELLE WYMAN GCSE



RESEARCH to ACTION

CHAD FRISCHMANN Project Drawdown



A REGENERATIVE FUTURE WE CHOOSE!

LET'S WORK TOGETHER to IMPLEMENT a SYSTEM of SOLUTIONS for PEOPLE + PLANET!

BEYOND 2030

SDGs

DRAWDOWN

SCIENCE ... ONWARD to ACTION!

BUILT on a FOUNDATION of

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