CONNECTING CITIZEN SCIENCE AND ENVIRONMENTAL DECISION MAKING

Miistakis Institute

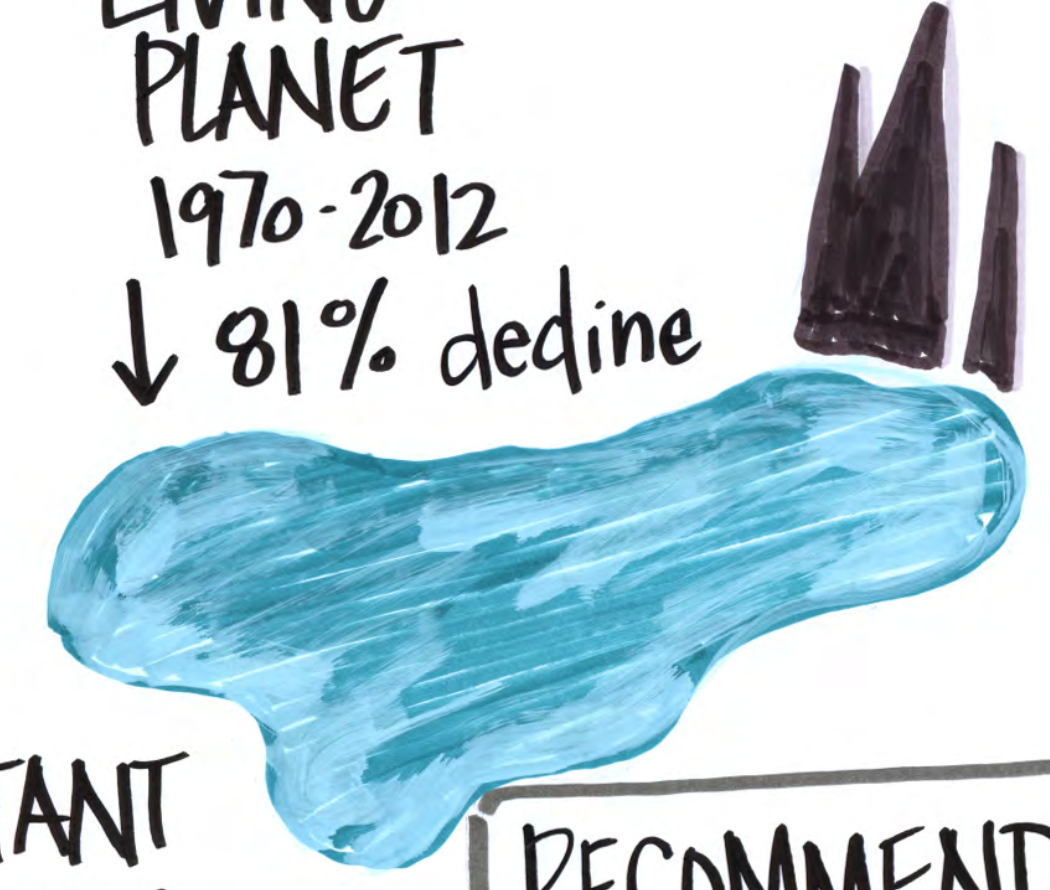
Alberta

WWF CANADA FRESHWATER

ELIZABETH HENDRIKS

GLOBAL WATER CRISIS IS REAL

LIVING PLANET
1970-2012
↓ 81% decline



MOST IMPORTANT RESOURCE

INDICATORS:
quality, hydrology, fish
invertebrates
STRESSORS

BARRIERS + NEEDS
Somewhere to put the DATA
ATLANTIC DATASTREAM

FINDINGS:
- 53 of 167 STRESSED
- 93 watersheds HABITAT LOSS
- 21 of 167 CLIMATE CHANGE
- 110 of 167 DATA DEFICIENT (can't assess health)

RECOMMENDATION:
- ✓ local conditions
- ✓ standardized reporting
- ✓ nationally linked regional

CITIZEN SCIENCE to collect data

WHAT NOW?
- invest where need is critical
- CABIN training
- DNA technology

TAKE HOME
- Do facts matter?
- Transparency of Decisions
- Shared Resources + Responsibility
- Fail faster, fail better

"Citizen Science more IMPORTANT than ever"

PROBLEMS:
- Collisions
- Fragmentation of Habitats

SOLUTIONS:
right locations

CITIZEN SCIENCE:
need community of support

TRACY LEE

CONTRIBUTIONS
- HIGHWAY 3 JOURNEY
  "ROAD WATCH IN THE PASS"
  identified mitigation sites
  cost benefit model
  pressure on Alberta Transport
- COLLISION COUNT
  1052 transects walked
  Correction factor of 1.5 multiplier on roadkill data
  (just used in an RFP for Highway 1)
- ROADWATCH BC
  app being used in Idaho
  more records than Transport had collected in 5 years
  NOT using CITIZENS

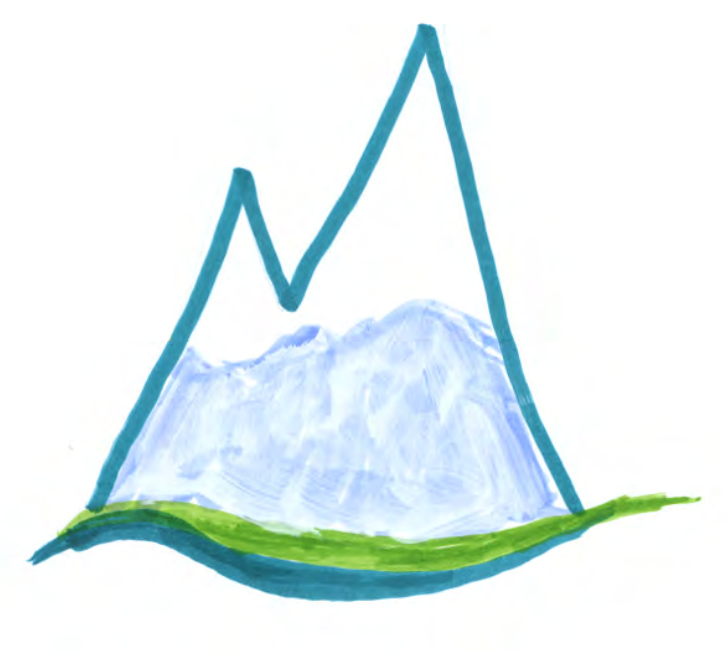
LESSONS LEARNED:
- defined conservation outcomes
- CitSci not a silver bullet but can play significant role
- engage decision makers EARLY
- present/translate info to be HELPFUL to decision maker
- scale of data — scale of decision

? IF DATA SHOWS HIGH RISK + PROVINCE KNOWS, IS THE PROVINCE LIABLE?
Builds responsibility but not sure.

? SCALING UP? HOW DOES AT. THINK ABOUT IT?
Highway 3 Project has advanced the issue
be thoughtful about what can be achieved realistically

? WHAT IS SUCCESS?
What are we trying to achieve?
Resonant · effective · meet objectives
Well built · designed · accessible
people understand them
Manage expectations of the population
· Be grateful for the STAR users

TANYA RUSHCALL



ALBERTA AQUATIC INVASIVE SPECIES PROGRAM

SUPPORT FROM OTHER MINISTRIES

MONITORING — invasive mussels — spiny waterflea
└ initiates rapid response

USED TO:
develop plans
find gaps in education, policy, monitoring
report BACK to you
find TRENDS + deal with in timely manner

PLEASE DOWNLOAD!

EDDMAPS
online + smartphone
View + Report → sent for Verification
Bulk, negative, control data

OR 24-7 HOTLINE

? OTHER INVASIVE SPECIES? HOW CAN WE COORDINATE WITH YOU? WHY DON'T WE KNOW ABOUT YOU?
We will come to you · We want to connect
We have a lot of knowledge + are happy to share
Provide with DATAFORMS
Partner with municipal governments

? APPS THAT USE TRIP? PROBLEMS WITH BUY-IN/PRIVACY?
- some individuals not happy being tracked in their vehicles — ie. SPEEDING TICKETS
- data strips out user-names
  ↳ GOOD COMMUNICATION
- does hinder participation

GRIZZLY BEARS threatened

HOW TO INVENTORY?
- pop. size
- core areas
- education

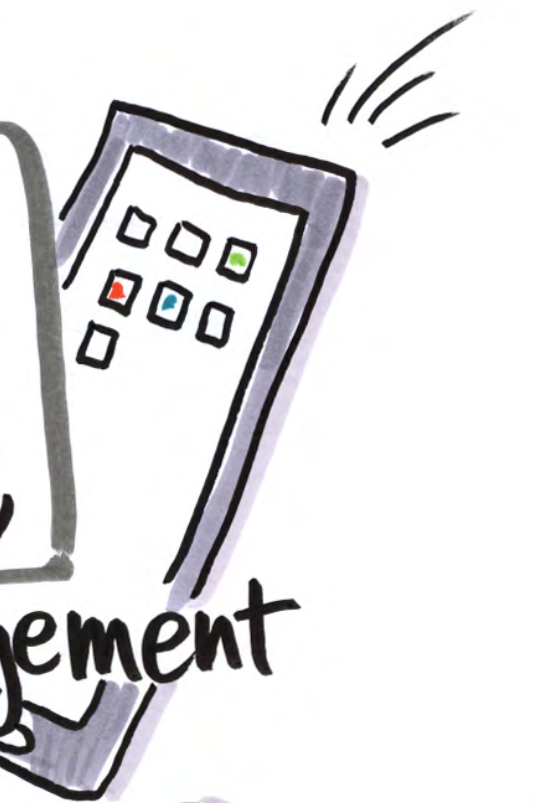
KAYEDON WILCOX

COLLABORATION?
"not hoping to see necessarily"

INFORMING DECISION MAKING
- view observer effort
- speak quantitatively
- inform BMA needs

NEXT STEPS
- User habit maintenance
- obtain sufficient sighting
- continued collaboration
- find additional opportunities

TAKE OUT YOUR PHONE for resource management



GRIZZTRACKER

HOW OFTEN ARE YOU SEEING. NOT SEEING BEARS?
- ✓ formalize existing efforts
- ✓ engage stakeholders + industrial workers
- APP BASED · GPS linked · sightings/time · education

uses "trip in progress"
models effort on the landscape

? WHO HAS ACCESS? CONCERNS ABOUT POACHING?
Identifying risks · to date, no need to address
Filters · Privacy
data is delayed for a week
alerts → instant feedback if necessary
advocates

? NEED FOR NATIONAL INTEGRATION
ARE YOU AWARE OF THE HISTORY?
HOW DO WE THINK ABOUT THE 2 STEPS FORWARD · 1 STEP BACK?
- Other angles + hooks to get commitment
- Federal funding can't be the solution · interest in capitalizing on working with stakeholders
- Levers with companies

? RECRUITMENT? AND WILL THERE BE OVERWHELM IN THE FUTURE?
- tools should not be competing
- should there be a HUB?
- upfront with expectations · ie using Grizztracker in the south
- not everyone is interested in the same issues

Volunteers are really smart!
Will choose well designed programs
Forced collaboration

RECRUITMENT: rely on coordinators
demographics · how to engage