Incorporating Social and Cultural Sciences into Technical Work
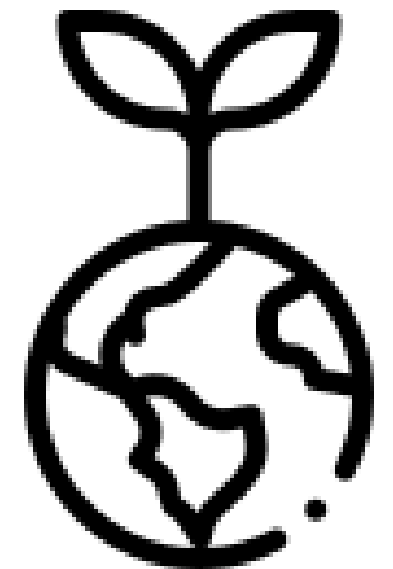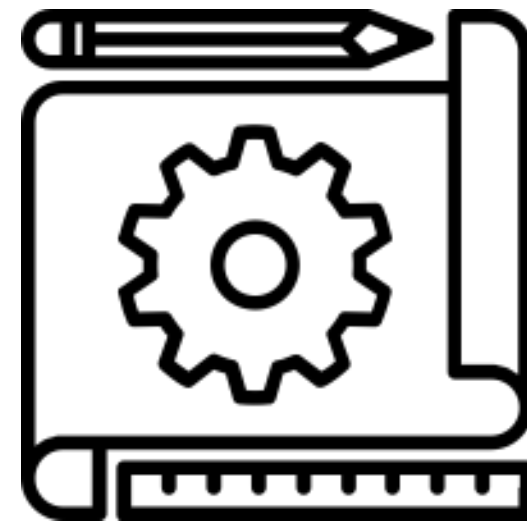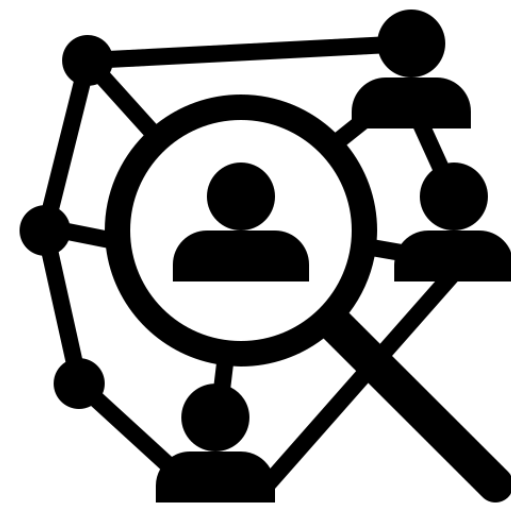
Lori Bradford (she/her/hers), CRC Tier 2 in Incorporating Social and Cultural Sciences into Engineering Design
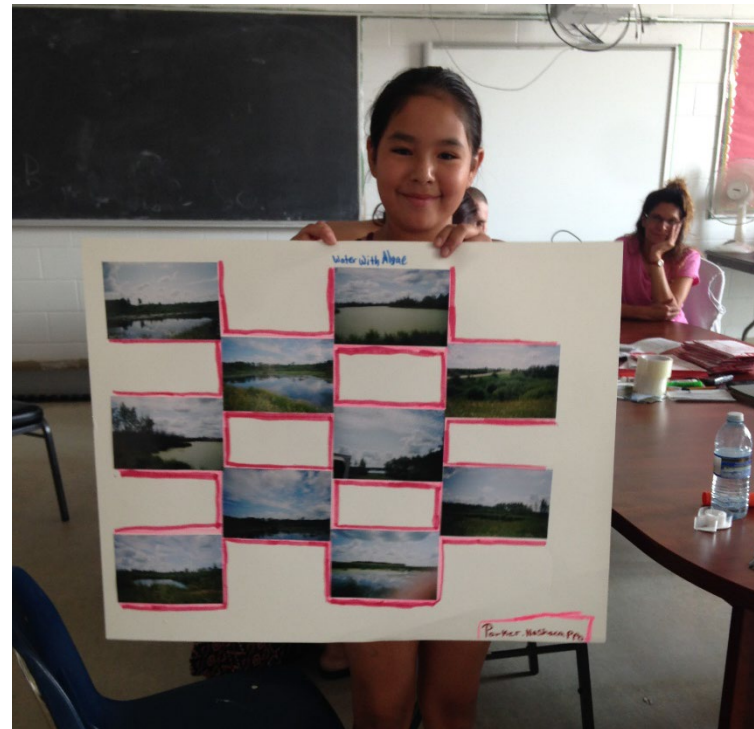
Short Bio

- Hons BSc (Biochem, English), M.Env.S, PhD (Social Psychology)

- New role: CRC Tier 2 in Incorporating Social and Cultural Sciences into Engineering Design, SoPD College of Engineering and SENS
- Member: GIWS, AMIP, CoE SIGMA
- Current Grants: CRC; CFI-JELF; SSHRC Ideas Lab, Aid to Scholarly Journals; Genome Canada LSARP; ECCC LWBP; P-SSHRC (2), SHRF, New Frontiers (2)(Nazemi, Comte), NSERC Create (Zhang); ISC (3); DFO (1); ECCC (2) (Cheecham-Uhrich/CRDN; Mitchell/PAGC)

Show of hands!

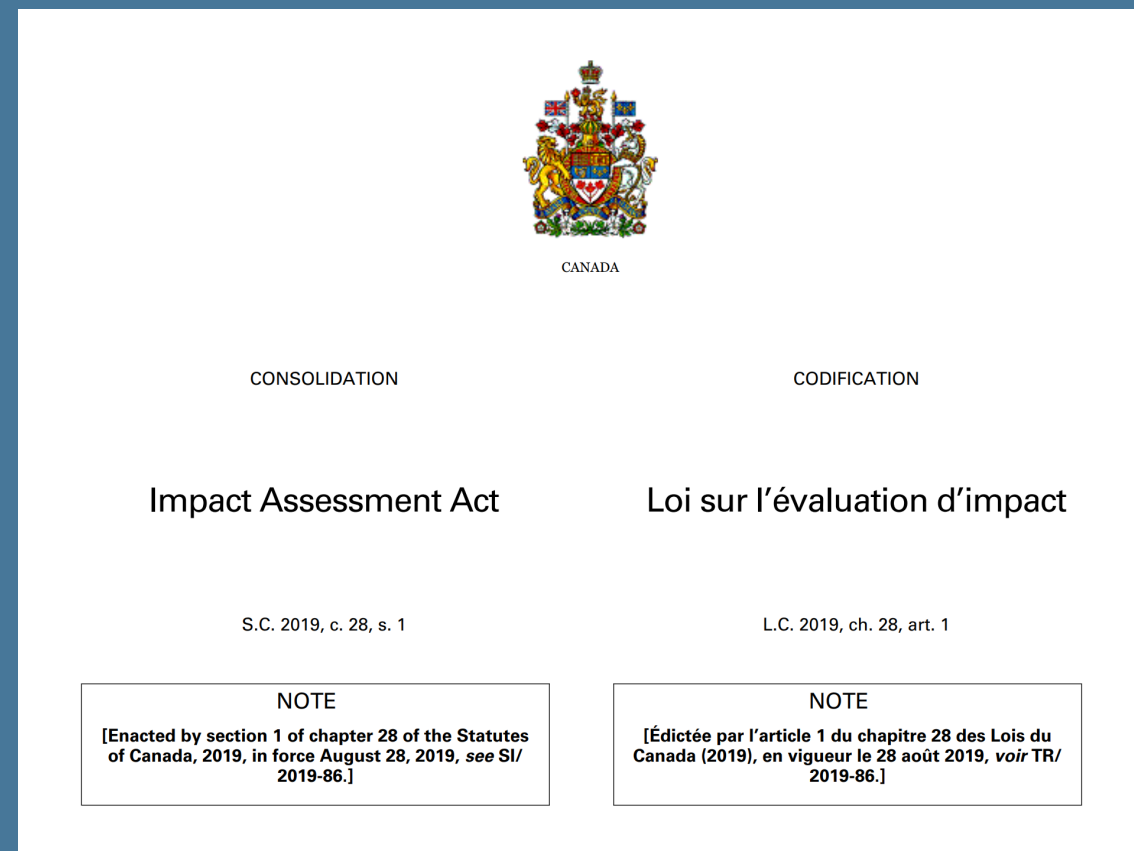**Does your work have social impact?**

What impact(s) do you think it has?

Images include one of child holding up poster of photos they took of waterways around their home, and another of man standing on a culvert about half a body length under the road surface being repaired after road washout.

Global Institute for Water Security
GIWS
USASK

Did you know?

In 2019, Canada's Impact Assessment Act changed?

- There are now additional steps to assess the environmental, **social, health,** economic, and **cultural impacts** of major projects, and
- The effects of projects on Indigenous peoples and their rights

GI IWS **Global Institute for Water Security** USASK

But where are we now?

Image is of three sustainability pillar labelled circles overlapping, but smaller social sustainability circle appears, with shaded empty area indicating that we don't do as much research on social sustainability overall
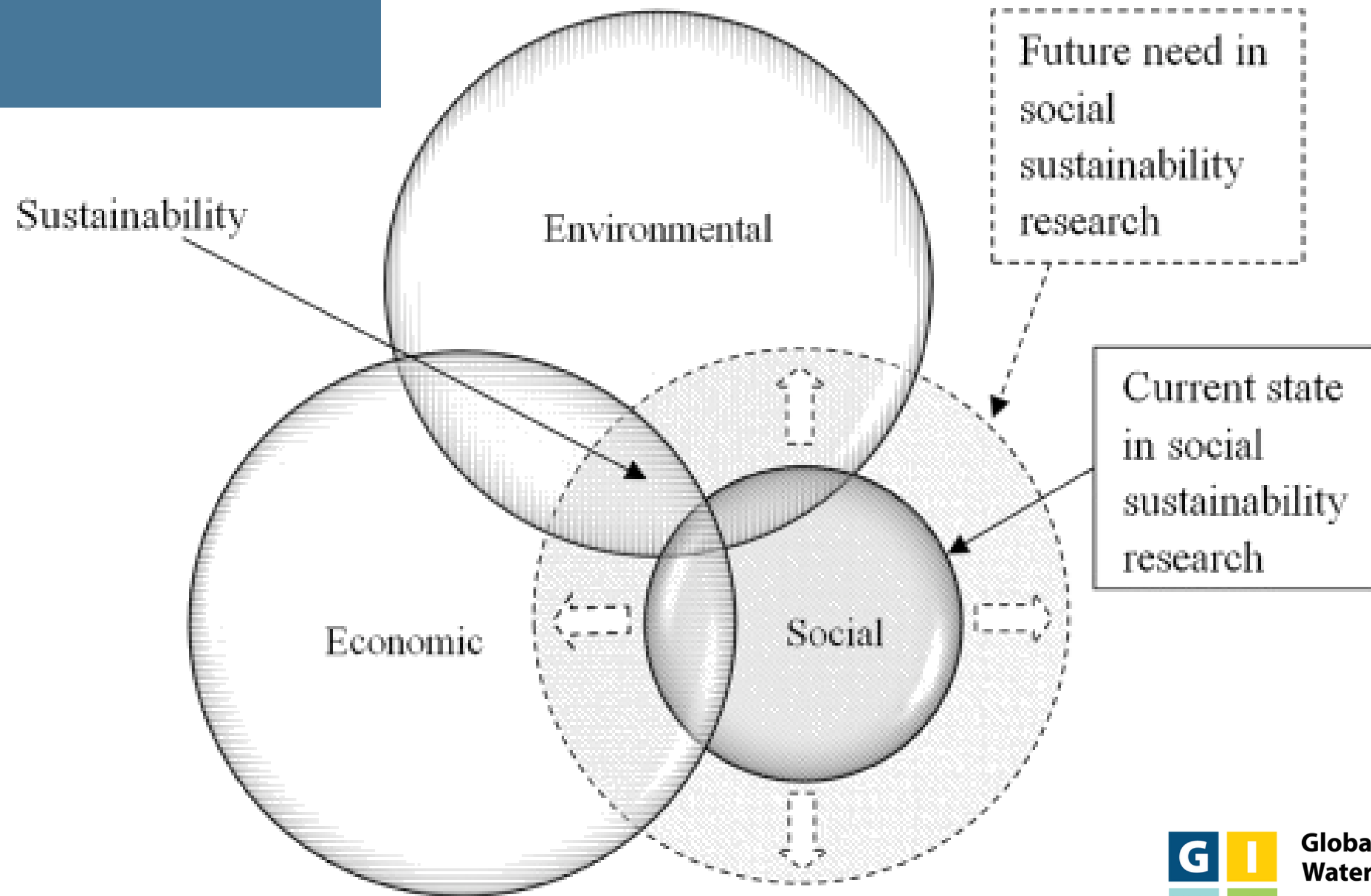

Figure from: You, F. (2015). *Sustainability of products, processes and supply chains: Theory and applications*. Elsevier.

Think of a Social and/or Cultural Science...

Accounting	Kinesiology
Archaeology	Languages, Literatures, and
Anthropology	Cultural Studies
Business Administration	Law
Commerce	Leadership
Drama	Linguistics
Economics	Marketing
Education	Media Production
English	Music
Entrepreneurship	Philosophy
Finance	Political Studies
Fine Arts	Psychology and Health
Gender and Disability Studies	Studies
Geography and Planning	Public Policy
History	Religious Studies
Indigenous Studies	Sociology

Mutualism in design

- Why Ravens and Wolves Hunt Together
- Awechigewin and Ełèts'eezhà
- Sustainability and Post-Sustainability – quadruple top line

I need you!

- Systematic review of engineering social sciences
- Case studies (student thesis work)
- Social network analyses
- Pre- and post- seminar series intervention
- Scientists as subject
- Curriculum review
- Experimental design labs
- Process evaluation
- Gaming for mutualistic design

Thank you!

UNIVERSITY OF SASKATCHEWAN

10

GIWS

YEARS
2011-2021

Image: A painted image of a coyote hiding behind slender wheatgrass plant in cross-section. In the coyotes mouth is a dead rabbit, its blood leaking down into wetland and being filtered by plant roots and microbes. The blood turns into water and two hands, one adult sized and one small child sized catch the blood/water as it enters wetland

Cheryl Buckmaster (2022)
Filtering
Ink and acrylic on Mulberry paper
18w x 42h resized