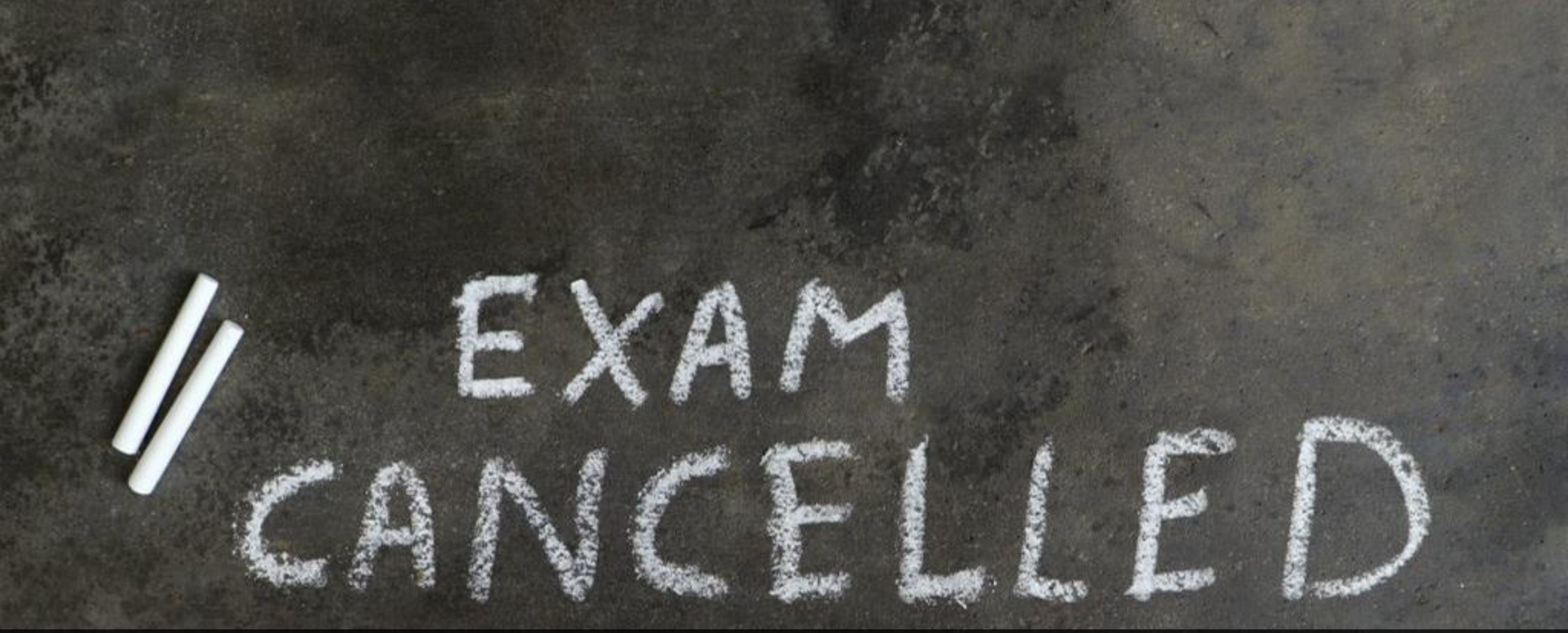


Exams? No Thanks!

Mike Tennant, Centre for Environmental Policy

9th June 2021

MSc Environmental Technology

"The application of scientific knowledge, policy and engineering to solve environmental problems and address sustainability."

teaches interdisciplinary problem-solving skills for policy, management

~150 students p.a. drawn from natural science, social science, humanities

"generalist" MSc

creating "T-shaped" learners

https://www.imperial.ac.uk/environmental-policy/msc/

What assessment is appropriate for students who

- …work across environmental and social sustainability sectors
- …conduct practically-focused policy making
- …through report & recommendation writing
- …using analytical, interdisciplinary and group work skills?

“Authentic” learning – our aims

Students should be able to tackle complex and relevant sustainability problems

- in groups, and relying on team mates
- by finding and synthesising appropriate knowledge across multiple domains
- and critically analysing that to develop policy recommendations

and…

- the work should be inclusive
- reward process as well as content
- can’t be boring for students or staff…

“Authentic” Learning

Assignment Type	Overall Weighting	
	Pre-Curriculum Review	*Post-Curriculum Review*
Timed examinations	40%	0%
Essays	5%	30%
Group Work	15%	30%
Peer Assessment	0%	x0.6 – 1.2
Research Project	40%	40%

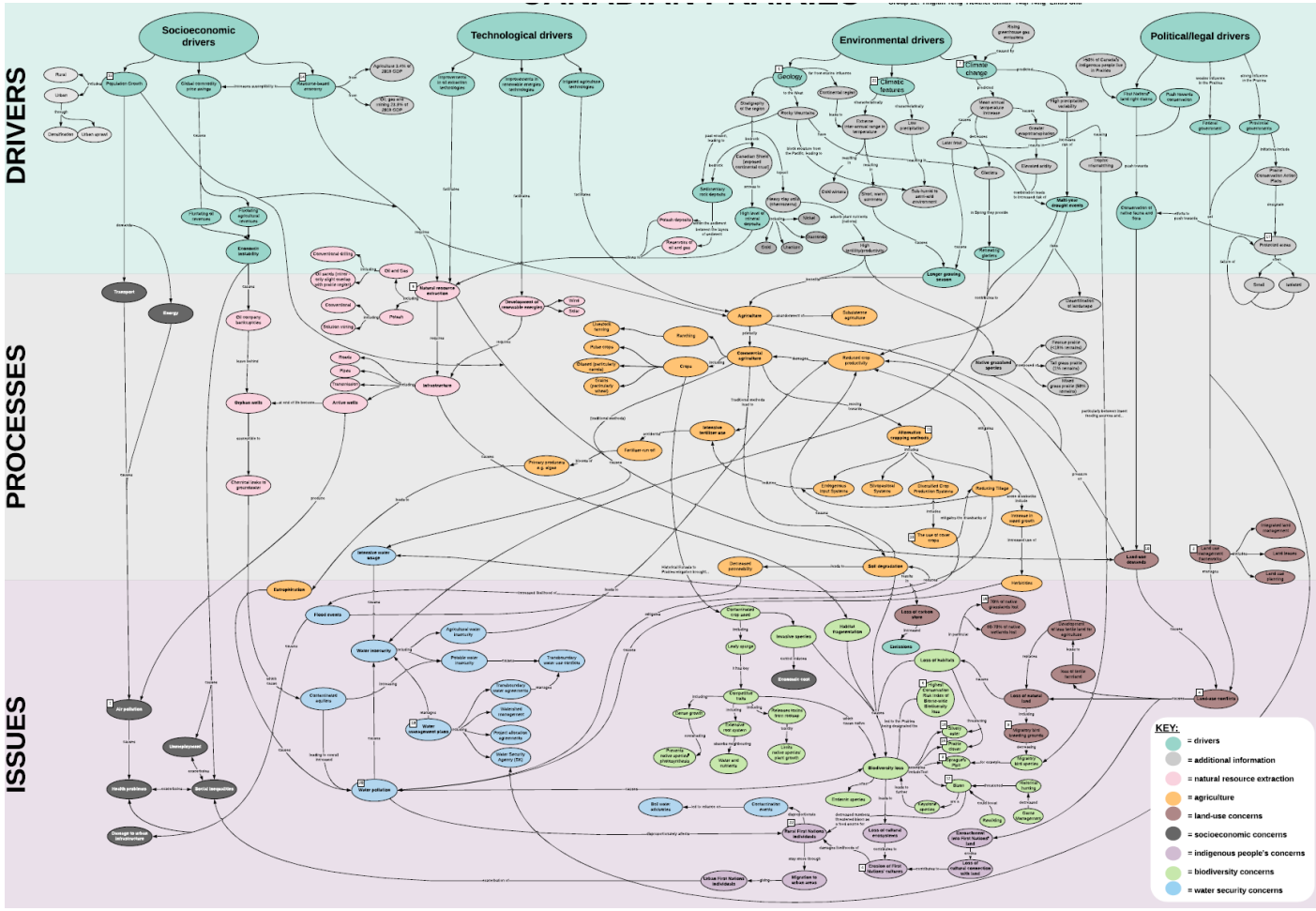
range of assessments: *pre*: traditional, open book. *post*: timed essays, videos, posters, short reports, reflective essays, peer

Concept Maps

concepts maps allow us to understand the environment associated with a problem:

- *concepts* are linked to form *propositions*
- *hierarchical* ordering from general to specific
- *clusters* delimit domain knowledge

the environment can be used to inform policy recommendations



A Concept Map for the Management of the Artic Biome

Marking Concept Maps

The Process

- concept maps are “organic” and not captured precisely by rubric descriptions
- a staff team negotiates an individual group mark – “*rank and calibrate*”
- individual peer assessment modifies the group mark
  - categories aligned to criteria that represent “good team work”
  - students taught to give constructive feedback against those categories

Some Issues

- we have lost students who felt they couldn’t score well in group work
- many students haven’t worked on *high pressure* projects in *well-managed* group environments before
- peer assessment is attributed (not blind)
  - students don’t want to be seen as the “bad guy” so give average marks and vague feedback
- “Panopticon” induces stress
  - Big Brother Effect cf. developmental feedback

Pro/contra

On the positive side

- group work is effective for teaching a multitude of skills simultaneously
- group work is important and should be assessed. Peers are best placed to assess each other
- group work is inclusive, especially in regards to English language proficiency

And the negative side

- exams are efficient
- without exams students may not have a strong foundation from which to apply their knowledge.
- more preparation of students needed
- marking can be seen as subjective
- group work (*process*) perceived as being legitimate only if assessed by staff.