Education for Sustainability Network

Eden Centre for Education Enhancement

CREATING A SUSTAINABLE FUTURE
-
INSIGHTS ON THE EDUCATION FOR SUSTAINABILITY INTERNSHIP

Valerie (Haiwei) Huang
Global Media and Communications (LSE and USC)
h.huang48@lse.ac.uk
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OUTLINE

1. Internship Snapshot

2. Research Outcomes: Internship Highlights

3. Internship Impact: Shaping the Course Curriculum

4. Key Learnings: The Role of Education in Sustainability

5. Improvement Suggestions for the Program

1. INTERNSHIP SNAPSHOT

Research Assistant (RA)

Supervisor: Dr. Jean-Christophe Plantin

MC434 Digital Platforms and Media Infrastructures

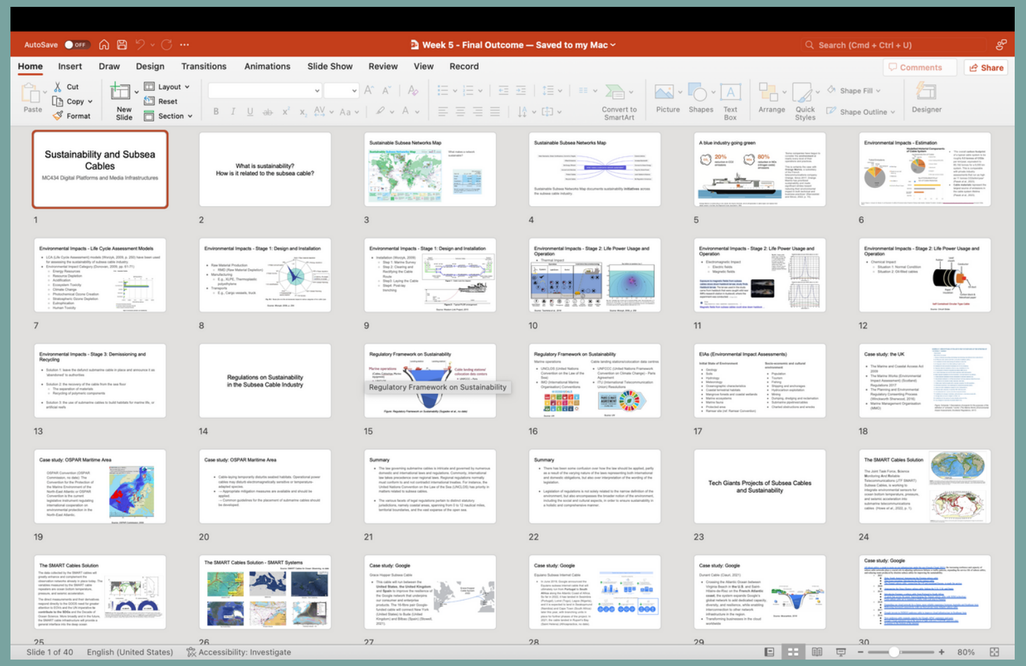
25h

Wednesday May 10, 2023 – Wednesday June 14, 2023

Key Duties

- Identify relevant documents and data on sustainability in the subsea cable industries
- Provide synthesis of key findings
- Production of data visualizations of key findings

2. RESEARCH OUTCOMES: INTERNSHIP HIGHLIGHTS

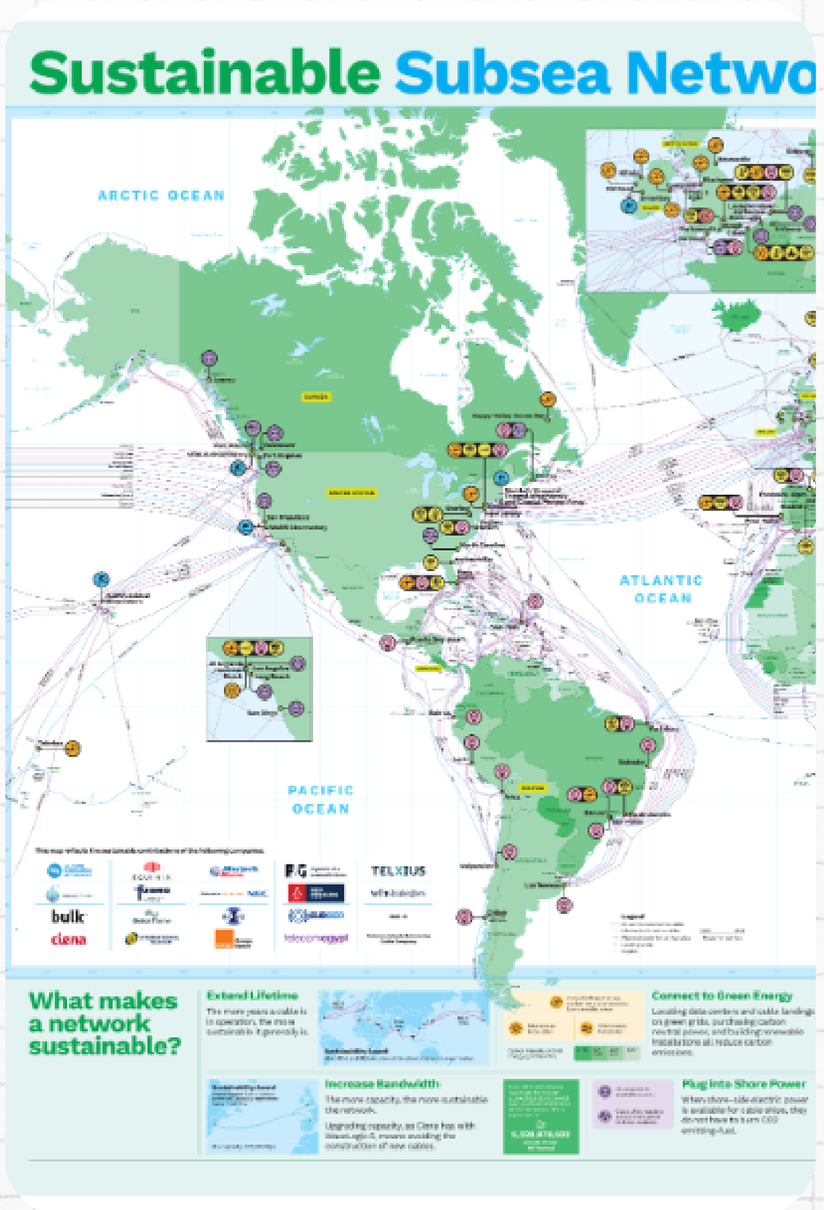


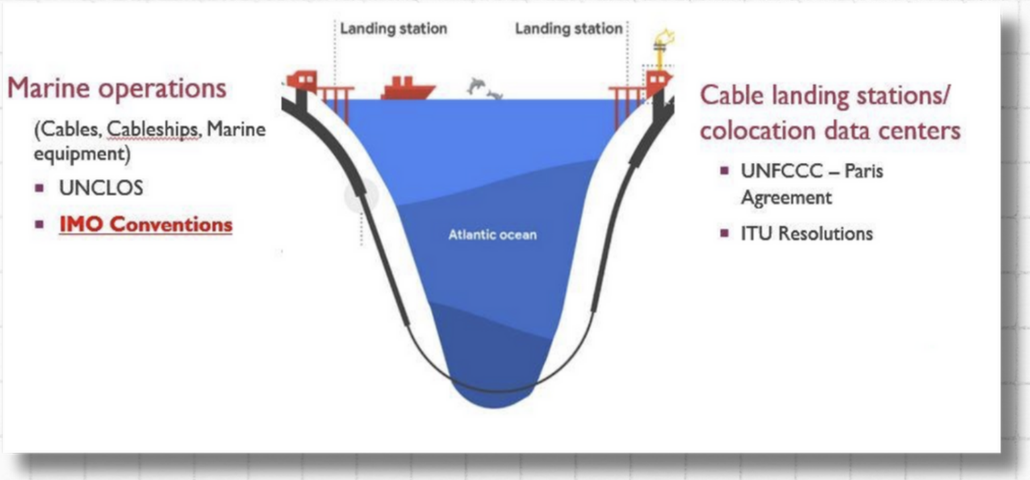
Final Outcome:
40-page slides

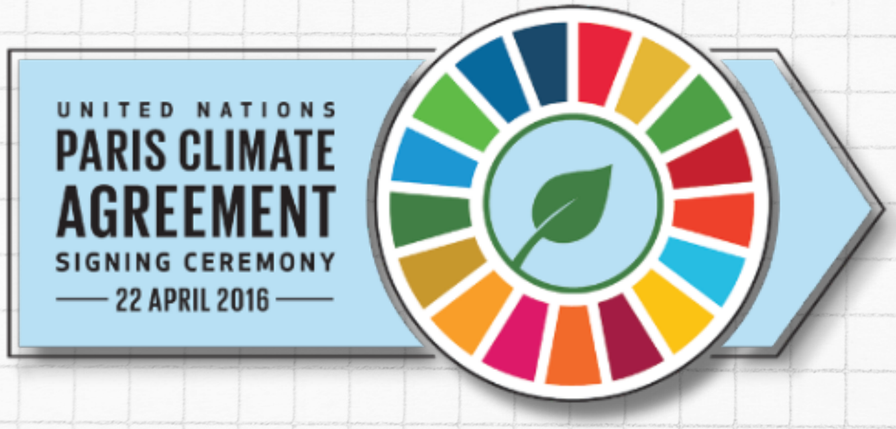
2. RESEARCH OUTCOMES: INTERNSHIP HIGHLIGHTS

What is sustainability? How is it related to the subsea cable?

- Sustainable Subsea Networks Map
- “A blue industry going green”(Starosielski and Silcox, 2022): e.g., Orange Marine
- Environmental Impacts
  - Estimation
  - Life Cycle Assessment Models
  - Stage 1: Design and Installation
  - Stage 2: Life Power Usage and Operation
  - Stage 3: Decommissioning and Recycling







2. RESEARCH OUTCOMES: INTERNSHIP HIGHLIGHTS

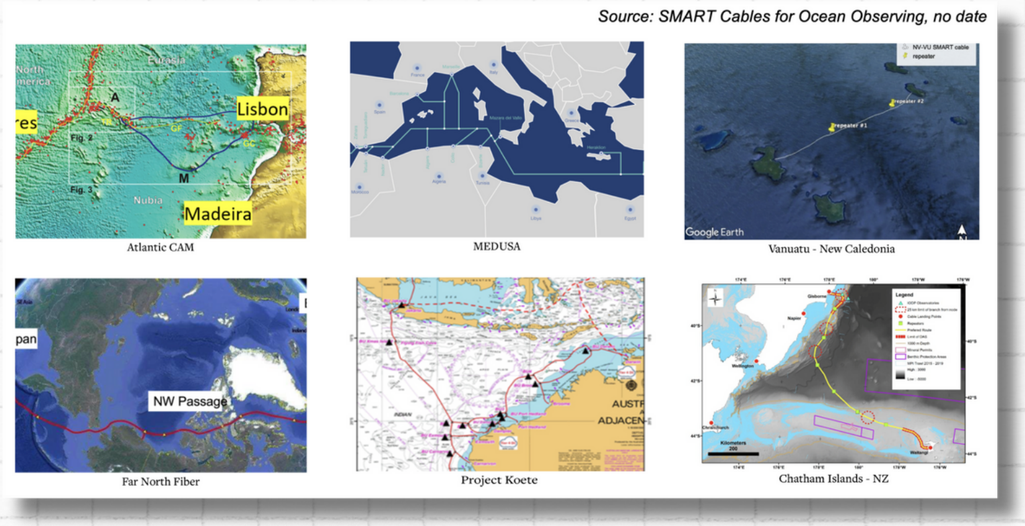
Regulations on Sustainability in the Subsea Cable Industry

- Regulatory Framework on Sustainability
  - Marine Operations
  - Cable landing stations/colocation data centers
- EIAs (Environmental Impact Assessments)
  - Initial State of Environment (e.g., soil, Geology, etc.)
  - Socio-economic and cultural environment (e.g., population, tourism, etc.)
- Case Studies
  - the UK
  - OSPAR Maritime Area

2. RESEARCH OUTCOMES: INTERNSHIP HIGHLIGHTS

Tech Giants Projects of Subsea Cables and Sustainability

- The SMART Cables Solution
- Case studies
  - Google (e.g., Grace Hopper Subsea Cable)
  - Facebook (e.g., MAREA cable)
  - Amazon (e.g., Hawaiki cable)



Protests against Subsea Cable Projects

- “Protesters line shorelines in Portsmouth to oppose Aquind cable plans - with some warning they could become ’militant’” (Lemmer, 2020)

2. RESEARCH OUTCOMES: INTERNSHIP HIGHLIGHTS

Possible interesting resources

https://www.youtube.com/watch?v=hP7Agu65NDU&ab_channel=SubTelForum
https://subtelforum.com/magazine/
https://www.iscpc.org/publications/submarine-cable-protection-and-the-environment/
Submarine Cable Map https://www.submarinecablemap.com/

Industry bodies

https://subtelforum.com/
SubOptic https://suboptic.org/
International Cable Protection Committee (ICPC) https://www.iscpc.org/
European Subsea Cables Association (ESCA) https://www.escaeu.org/
International Cablemakers Federation (ICF) https://www.icf.at/
Submarine Cable Networks (SCN) https://www.submarinenetworks.com/en
Subsea 7 https://www.subsea7.com/en/sustainability.html
Subcom https://www.subcom.com/

Organisations

Sustainable Subsea Network https://www.sustainablesubseanetworks.com/
Submarine Telecoms Forum https://subtelforum.com/
Society for Underwater Technology https://sut.org
OSPAR Commission https://www.ospar.org/about: the mechanism by which 15 Governments & the EU cooperate to protect the marine environment of the North-East Atlantic.
National Oceanic and Atmospheric Administration (USA) https://www.noaa.gov/general-counsel
Biscay Marine Energy Platform https://www.bimep.com/en/
Marine Management Organisation (UK) https://www.gov.uk/government/organisations/marine-management-organisation
Fiber Optic Sensing Association (FOSA) https://fiberopticsensing.org/
Oracle Cloud Infrastructure (OCI) https://www.oracle.com/cloud/

3. INTERNSHIP IMPACT: SHAPING THE COURSE CURRICULUM

- Provide Insights into how subsea cables play a crucial role in global connectivity and sustainable practices.
- Bridge a gap between theoretical understanding and practical applications in sustainability.
- Highlight the importance of interdisciplinary learning

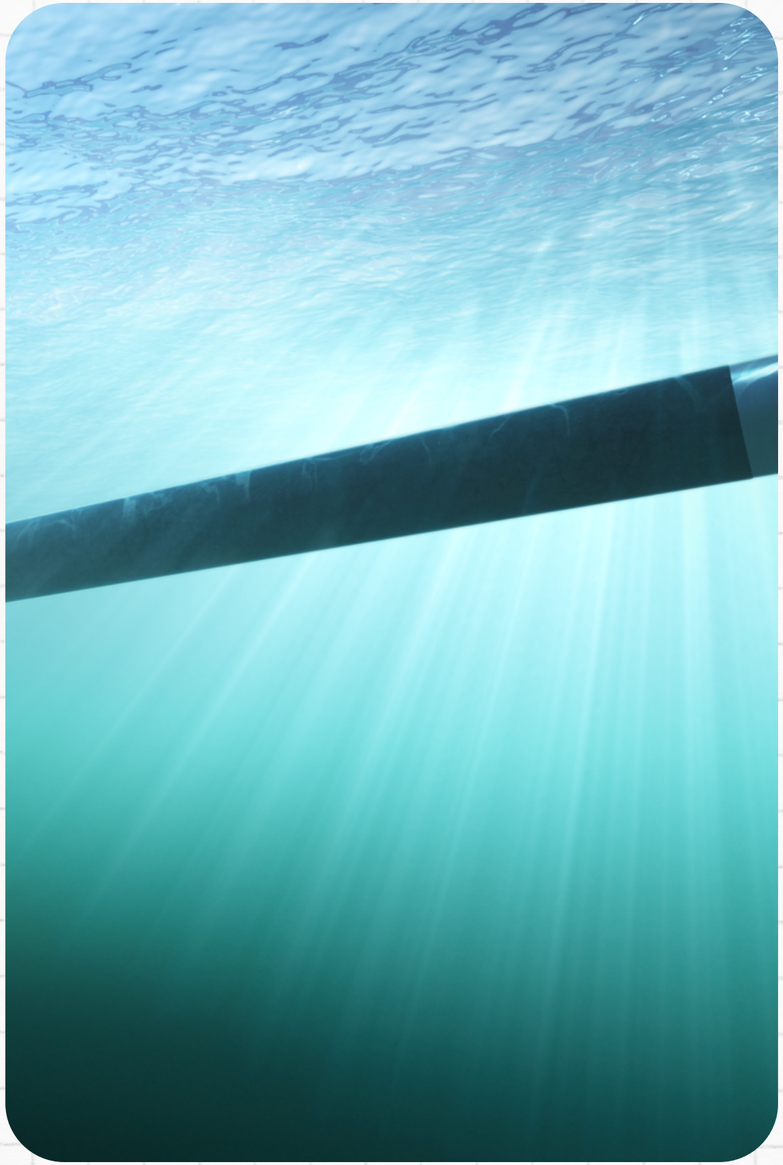
4. KEY LEARNINGS: THE ROLE OF EDUCATION IN SUSTAINABILITY

- The undeniable power of education in driving sustainable change.

- Education in sustainability is not just academic. It's about real-world impacts.

5. IMPROVEMENT SUGGESTIONS FOR THE PROGRAM

- Extend internship duration
- Balance of guided and independent research (we did well!)
- Implement a robust feedback system



THANK YOU!