

UCL and Chile

Postgraduate opportunities of mutual benefit

Mining
Water resources
Resilience to natural disasters

Dr Stephen Edwards
s.edwards@ucl.ac.uk



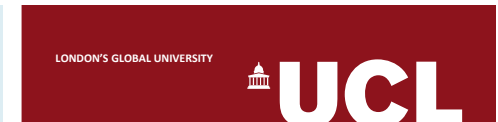
Chilean guests of government at UCL

UCL and Chile



Mining Minister, SERNAGEOMIN
and Ambassador of Chile at UCL

- UCL founded in 1826 in the heart of London; now
 - 40,000 students (53% postgraduate) from 150 countries
 - world top 20 “super-elite” multidisciplinary university
 - Chile is a priority country
- UK and UCL the preferred global destinations for Chilean scholarship postgraduate students; at UCL
 - 83 on taught programmes
 - 73 on research programmes
- Vibrant UCL Union Chilean Society



**Destino número uno en UK
para estudiantes chilenos de posgrado**

Ven y únete a ellos

UCLU | University College London Union



**The number one destination in the UK
for Chilean postgraduate students**

Come and join them



<http://www.ucl.ac.uk/prospective-students/international>

Human capital development

CONICYT priorities

- Mining
- Water resources
- Energy
- Resilience to natural disasters
- Food & health
- Education & social development
- Digital transformation

UCL institutes and centres

- Sustainable Resources
- Climate & Water Research Unit
- Energy
- Hazard Centre and EPICentre
- Global Health
- Education
- Innovation and Public Purpose

Mining, water and natural disasters

Example MSc programmes

- Global Management of Natural Resources
- Geophysical Hazards
- Earthquake Engineering with Disaster Management
- Urban Sustainability and Resilience

Risk reduction theme

$$\text{RISK} = \text{Hazard} \times \text{Vulnerability} \times \text{Exposure}$$



$$\text{Risk} = \frac{\text{Hazard} \times \text{Vulnerability} \times \text{Exposure}}{\text{Resilience or coping capacity}}$$

Careers

- Academia
 - research, teaching
- Business and industry
 - risk and resource management
- Government
 - urban and emergency planning
- NGOs
 - disaster and climate risk reduction

The MARAI initiative

Manejo de Amenazas y Recursos Andinos Integrados

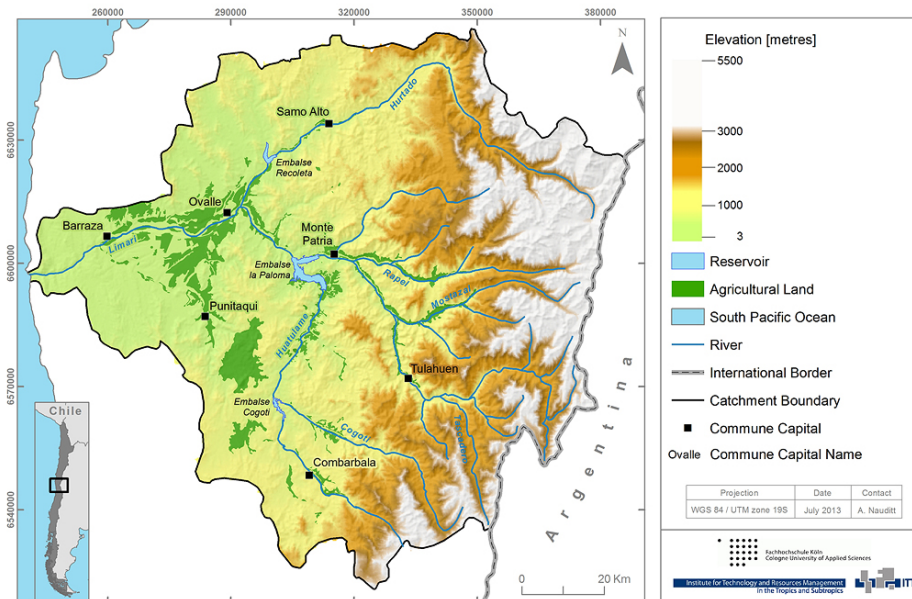


Hazards and resources closely linked in Andes

Aims to reduce risk and build resilience through

- multi-stakeholder engagement and partnerships
- research, training and education

Limari Catchment, Chile - Physical Features



Photos: S. Edwards (2017)

Photo: D. Aitken (2018)
Map: <http://www.hidro-limari.info>

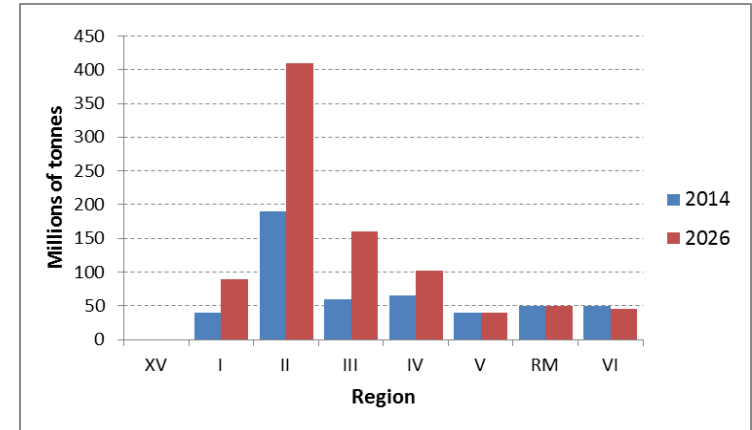
Tailings (relaves) risk management in Chile

696 Tailings deposits today

>40 Incidents since 1915

31 seismically induced

>9 rainfall induced



Tailings in Chile (COCHILCO 2015)

Present and future tailings risk



Andacollo

UCL Hazard Centre is developing scenarios for earthquake- and rainfall-induced failures

Principal collaborators in Chile



PONTIFICIA
UNIVERSIDAD
CATÓLICA
DE CHILE



CIGIDEN

Centro de Investigación
para la Gestión Integrada
del Riesgo de Desastres

SMICEChile

The International Centre of
Excellence in Chile



British Embassy
Santiago



TABALI



Se parte de nosotros
Muchas gracias

