European Commission

JUST TRANSITION PLATFORM MEETING

COAL REGIONS IN TRANSITION VIRTUAL WEEK

CARBON-INTENSIVE REGIONS SEMINARS

15 - 17 NOVEMBER 2021

Just Transition of carbon-intensive regions: transatlantic dialogue – *Pittsburgh Region*

Raymond W. Gastil - Remaking Cities Institute
David Lewis/Heinz Endowments Director of Urban Design
& Regional Engagement. CMU School of Architecture

REMAKING Cities

Carnegie Mellon University

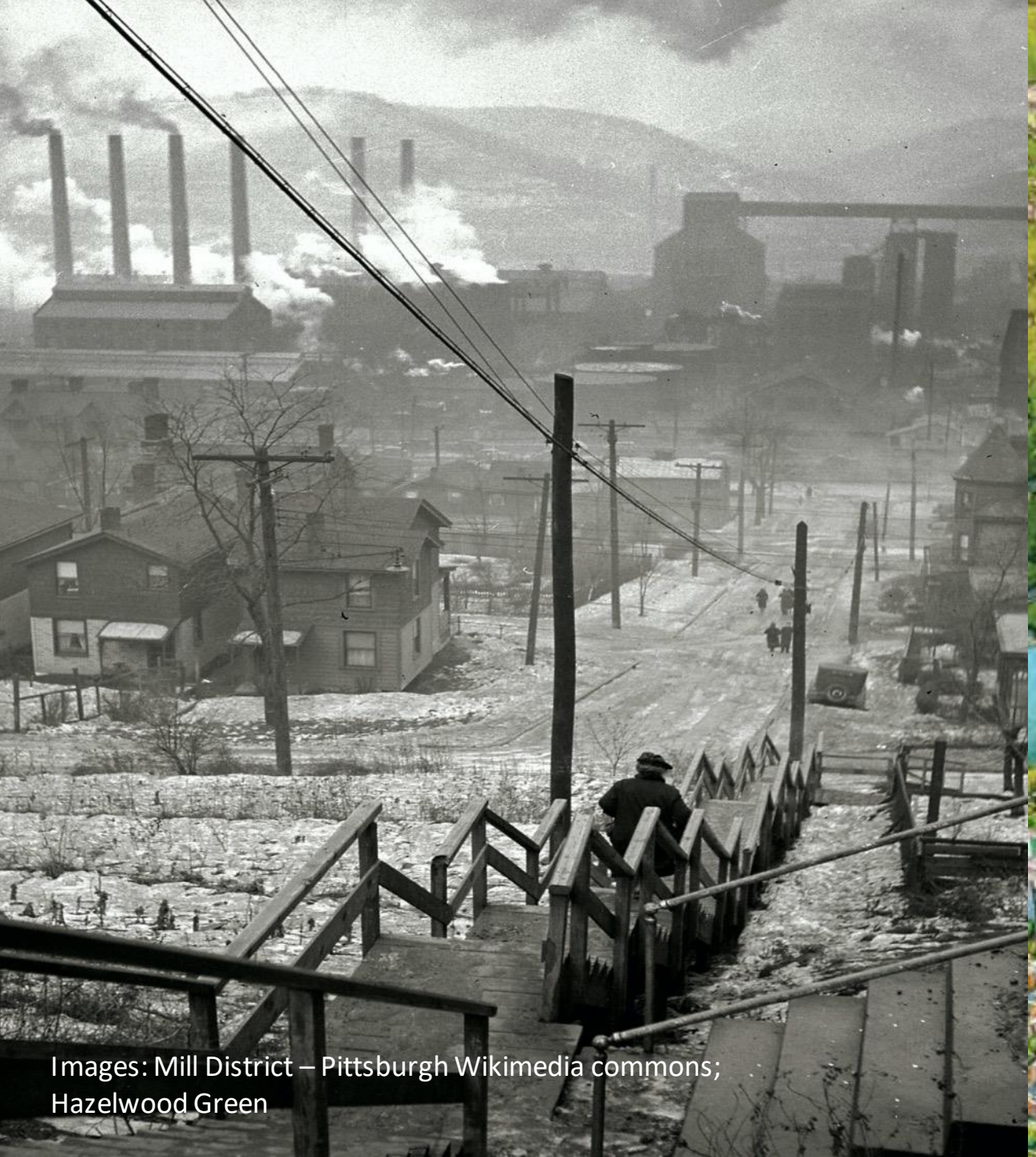
Image: Carnegie Library of Pittsburgh

1980s:

- steel collapse
- unemployment at great depression level
- three decades more of population decline

1980s forward:

- 1984 – Cultural District
- 1985 -- Strategy 21
- 1994 – Working Together
- 1995 – Regional Asset District
- 1990s-2010s – Education, Planning, Investment, Brownfields Strategy



Images: Mill District – Pittsburgh Wikimedia commons;
Hazelwood Green

Innovation Economy

1986
National Robotics Engineering Center

Image: R.Gastil

Adaptive Reuse Advanced Robotics Manufacturing

Image: R. Gastil

AV Innovation Cluster

- (1987) CMU Autonomous TERREGATOR
- (1994) NREC (National Robotics and Engineering Center)
- (2007) DARPA Urban Challenge
- (2009) Traffic21
- (2011) CMU/GM Cadillac SRX
- (2015) Uber Advanced Technology Center
- (2016) Uber AV Demonstration/Launch
- (2017) AV Proving Ground designation by U.S.DOT
- Multiple AV testing and related R&D

Carbon-Intensive to Health:

U.S. Steel to UPMC 2008

Image: R. Gastil

Ongoing Challenges

- Equity and Opportunity communities left behind
- Carbon-intensive legacy
- Carbon-intensive second wave

In a Region of Corridors, Systems, and Centers

The Steel System

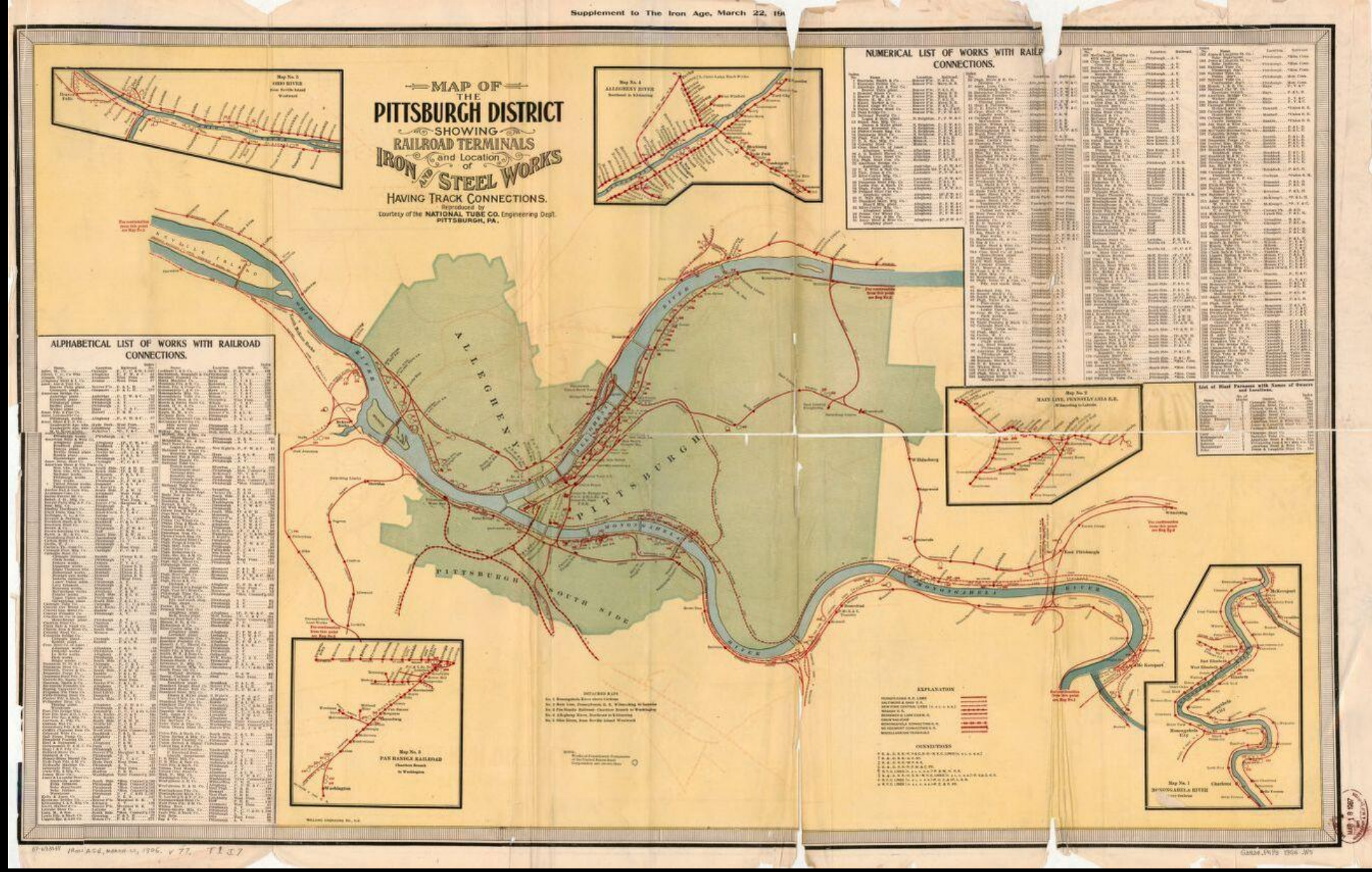


Image: Map of the Pittsburgh district showing railroad terminals and location of iron and steel works having track connections, Williams Engraving Co., National Tube Co. Engineering Department, 1906.

OHIO RIVER
Industrial Corridors
Equity and Opportunity across demographics and regions

Image: Route65, R. Gastil

Relationship to Carbon-Intensive Second Wave

Image: R. Gastil

Existing and Emerging Frameworks for the Future

-Scale

-Regional Leadership

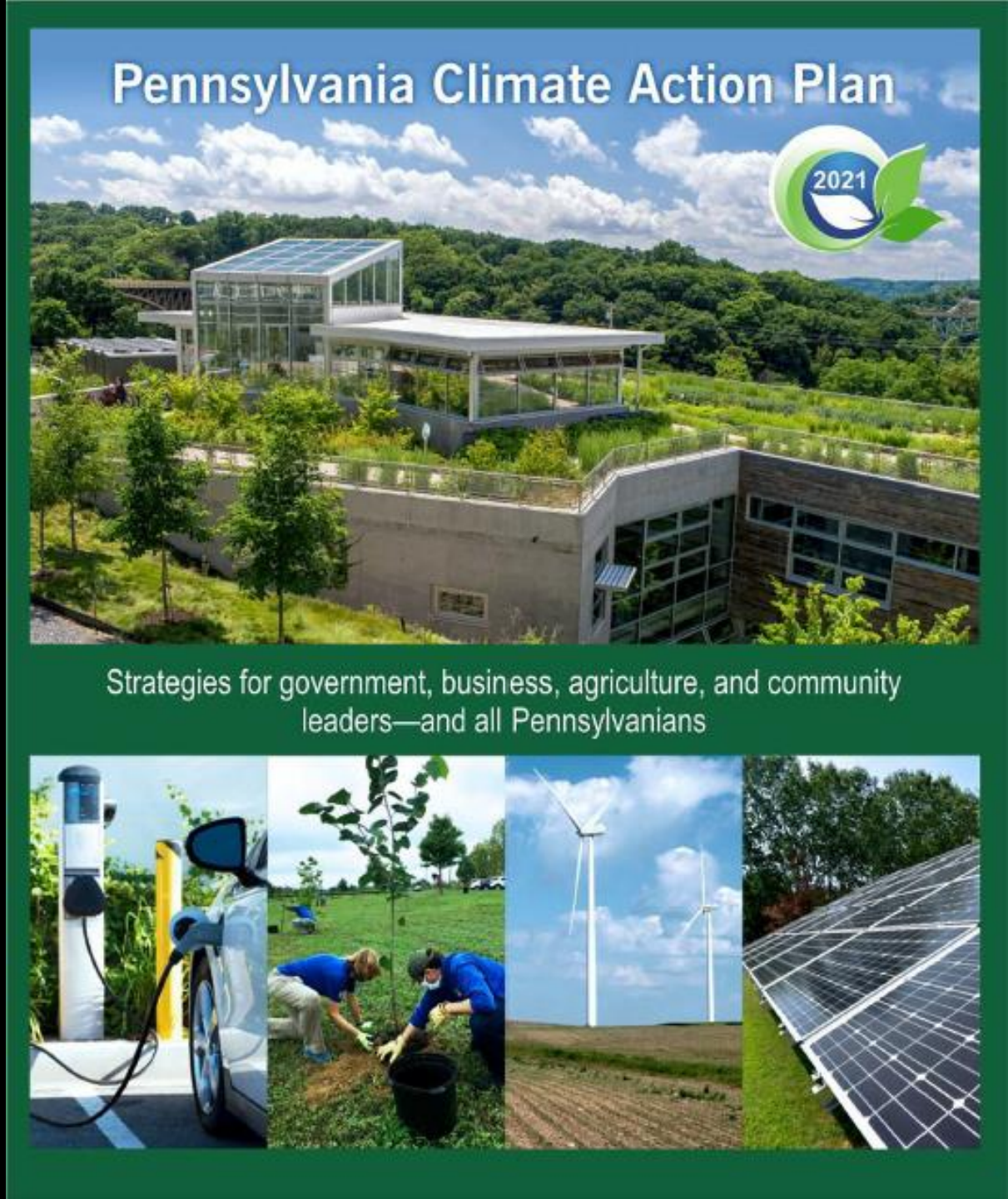
-Community

-Carbon Reduction Link

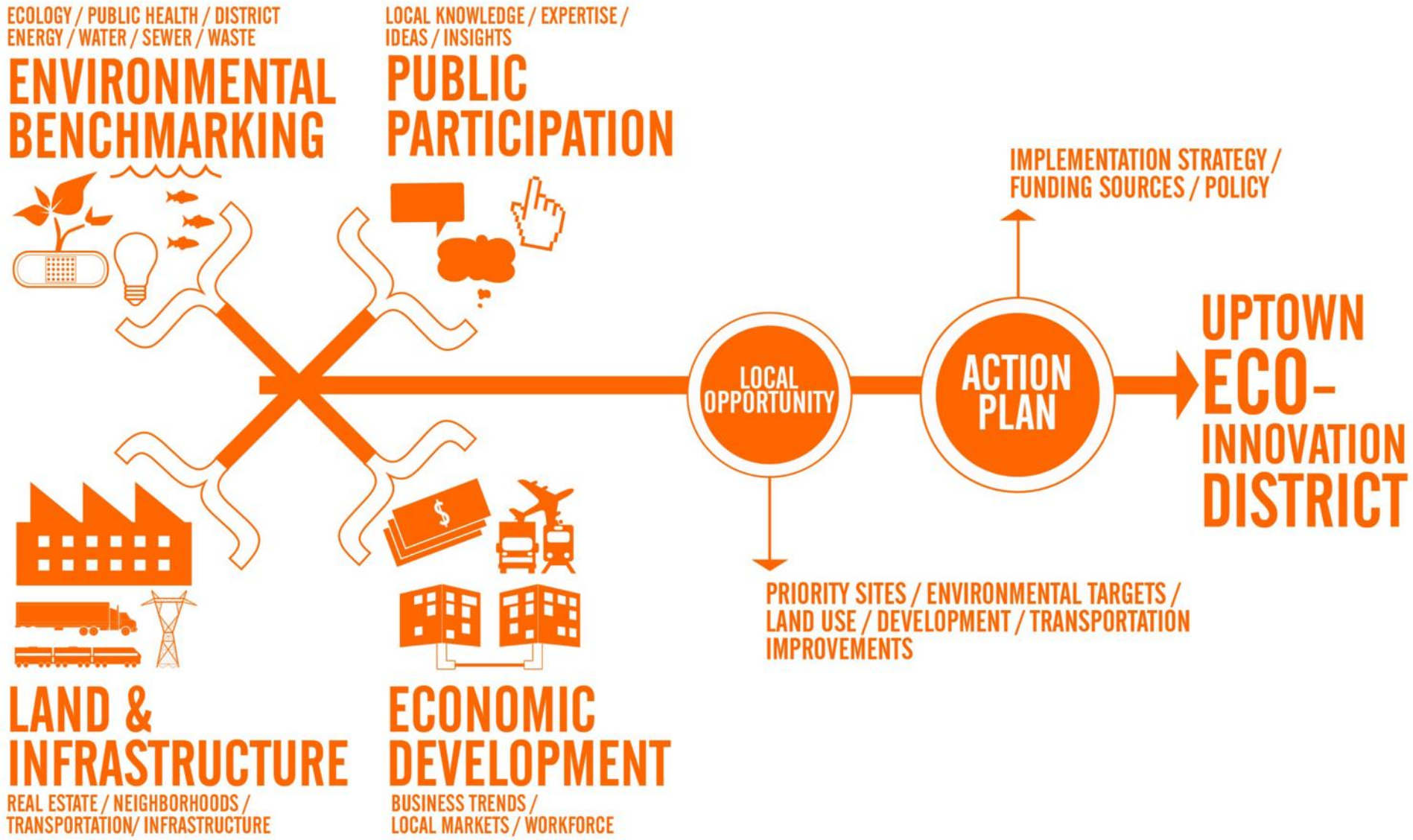
Multi-State Scale
OHIO RIVER

- City of Pittsburgh
- UN Sustainable Development Network
- Steel Valley Authority
- Heartland Capital Strategies Network

SCALES
STATE
METRO/MULTI-COUNTY
COUNTY
CITY
COMMUNITY



COMMUNITY


ECOLOGY / PUBLIC HEALTH / DISTRICT ENERGY / WATER / SEWER / WASTE
ENVIRONMENTAL BENCHMARKING
LOCAL KNOWLEDGE / EXPERTISE / IDEAS / INSIGHTS
PUBLIC PARTICIPATION
IMPLEMENTATION STRATEGY / FUNDING SOURCES / POLICY
LOCAL OPPORTUNITY
ACTION PLAN
UPTOWN ECO-INNOVATION DISTRICT
PRIORITY SITES / ENVIRONMENTAL TARGETS / LAND USE / DEVELOPMENT / TRANSPORTATION IMPROVEMENTS
LAND & INFRASTRUCTURE
REAL ESTATE / NEIGHBORHOODS / TRANSPORTATION/ INFRASTRUCTURE
ECONOMIC DEVELOPMENT
BUSINESS TRENDS / LOCAL MARKETS / WORKFORCE

IFMETALL

Just transition of carbon-intensive regions: transatlantic dialogue

Ellika Berglund Aas

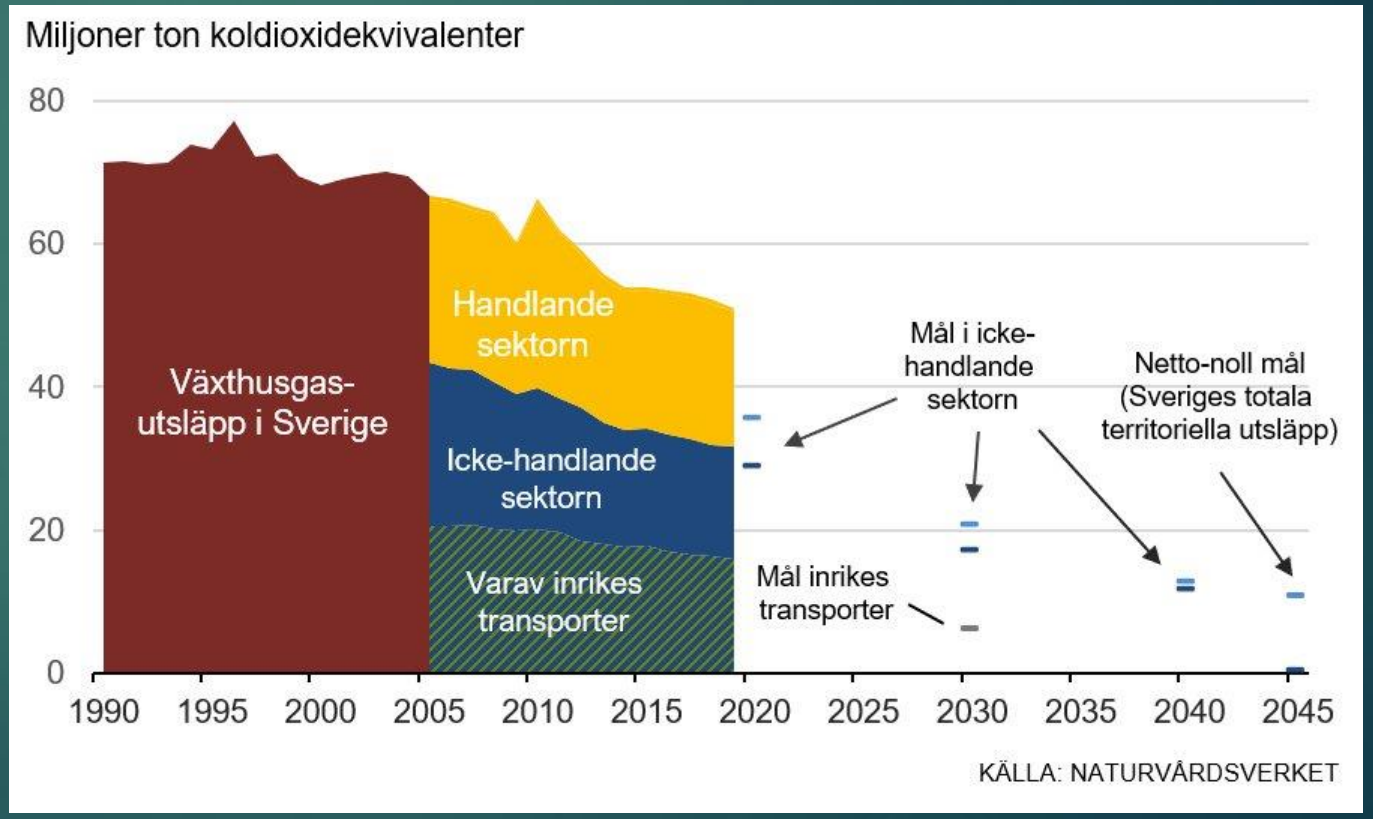
Sweden's national climate policy framework

By 2045:

No net emissions of greenhouse gases in to the atmosphere

By 2030 :

Emissions from domestic transport are to be reduced by at least 70%

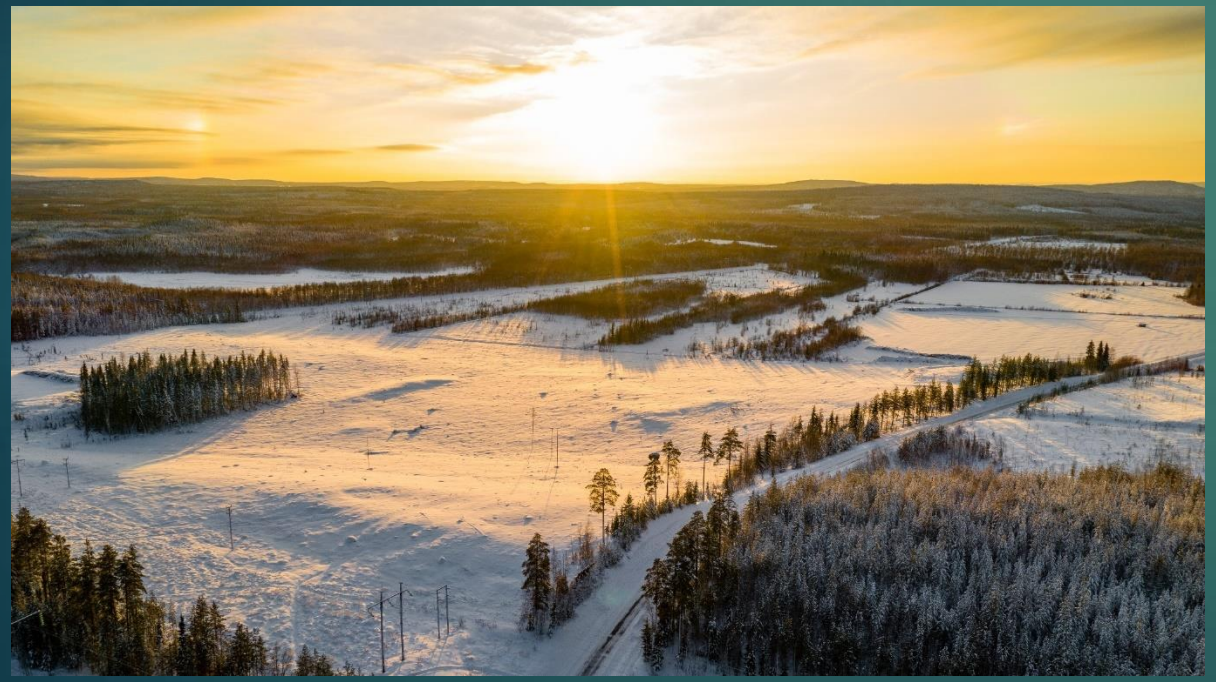


Steel Industry in Norrbotten

IFMETALL

H2 green steel

HYBRIT
FOSSIL-FREE STEEL



Green Jobs?

Sustainable industrial policies!

Challenges for the steel industry

- Skilled labour
- Electricity system
- Processes of permit

How can we manage a just transition?

A comparative review of policies to support a just transition from carbon intensive industries

Dr. Tamara Krawchenko, Assistant Professor Public Administration
University of Victoria, Canada
Research Assistant: Megan Gordon

SSHRC CRSH

I acknowledge with respect the lək̓ʷəŋən peoples on whose traditional territory the university stands and the Songhees, Esquimalt and W̱SÁNEĆ peoples whose historical relationships with the land continue to this day.

University of Victoria

Outline of presentation

1. Canada's steel industry and decarbonisation
2. How can we manage a just transition? Lessons from comparative policy learning

I gratefully acknowledge the support of the Social Sciences and Humanities Research Council of Canada for this research.

University of Victoria

1. Canada's industry and decarbonisation

- Canada has never met its GHG reductions targets
  - 40% of Canada's GHG emissions are in the industrial sector
  - Industrial sector = 11% of nominal GDP and 2% of direct employment

- Industrial transitions are central to meeting Canada's climate commitments, ***but progress has been slow***

University of Victoria

Canada’s steel industry—high hopes to green the industry

- 23,000 workers directly employed in steel industry; $3.8 billion value
- Relatively low carbon intensity (BlueGreen Alliance) in some provinces; coal-fired phase-out in others
- Net zero 2050 goal
- R&D: Elysis facility in Québec aims to commercialise the world's first zero-carbon aluminium smelting technology.

Elysis facility, Québec

University of Victoria

2. How can we manage a just transition? What *are* just transition policies?

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Research approach

Look for just transition policies *in the places and regions that have experienced them.*

- Places that have had +25% share industrial employment over the past 20 years, which subsequently declined
- Comparable advanced OECD economies
    - **26 countries, 74 regions (130 sub regions – NUTS 3)**

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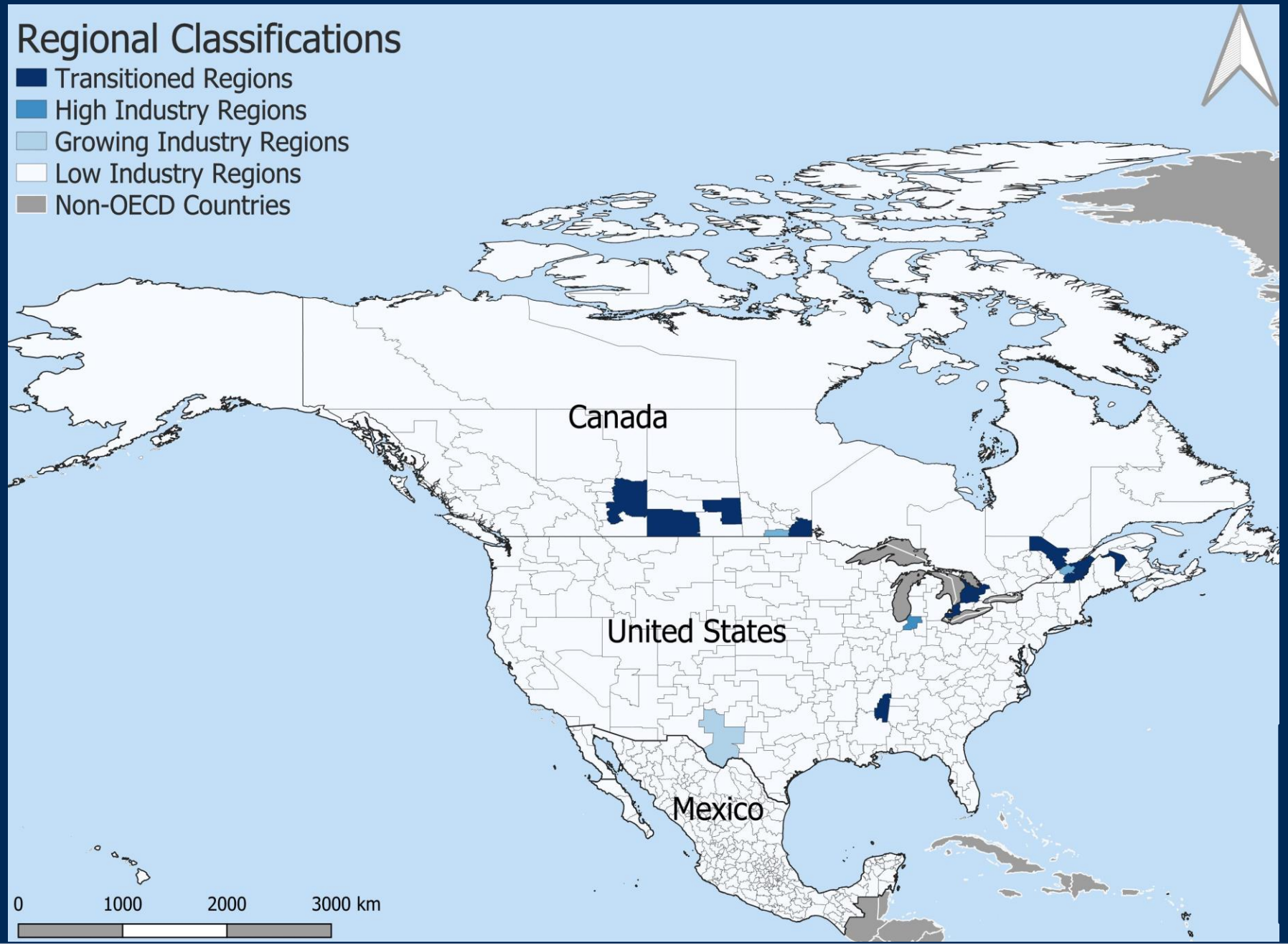
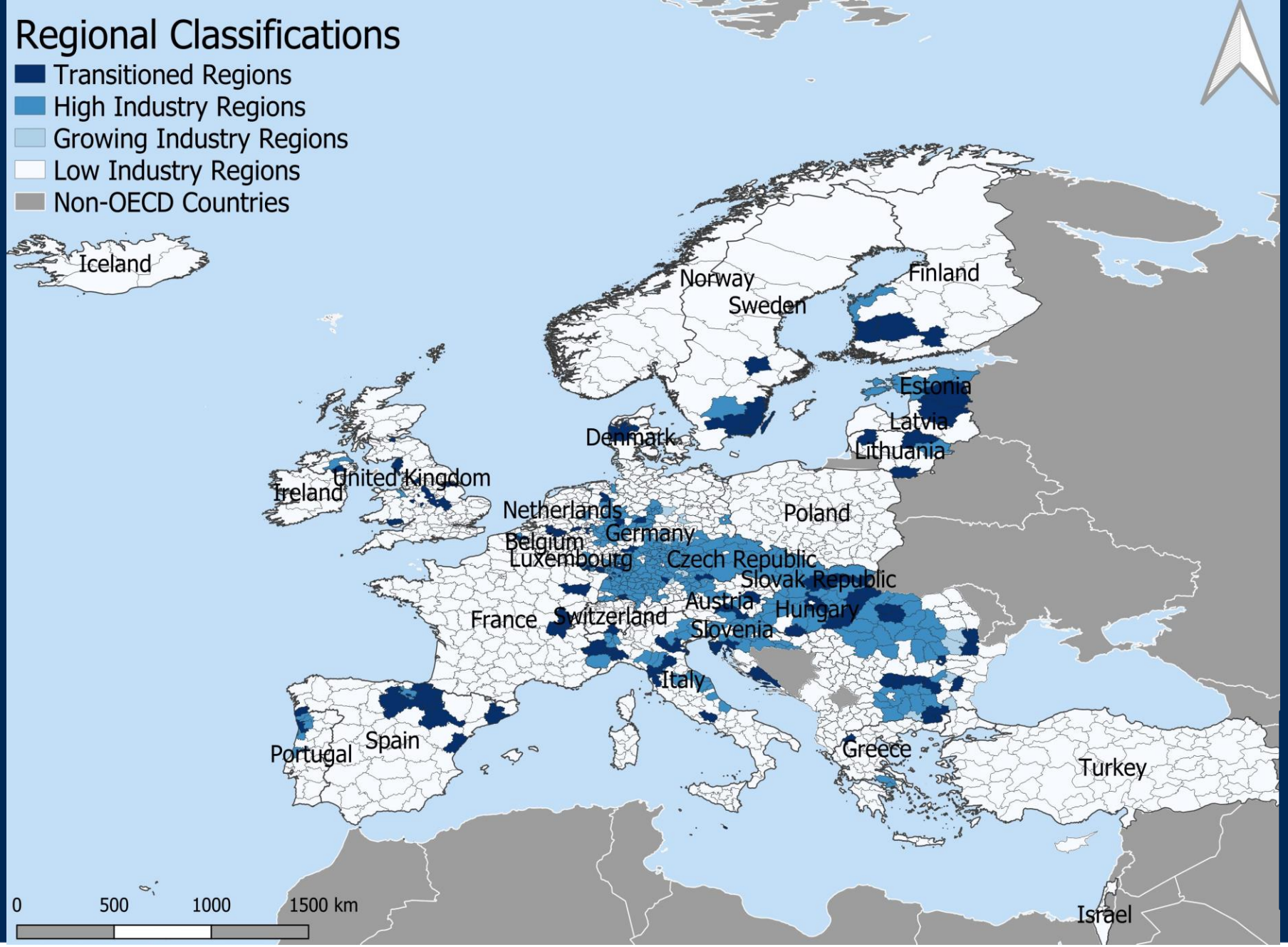
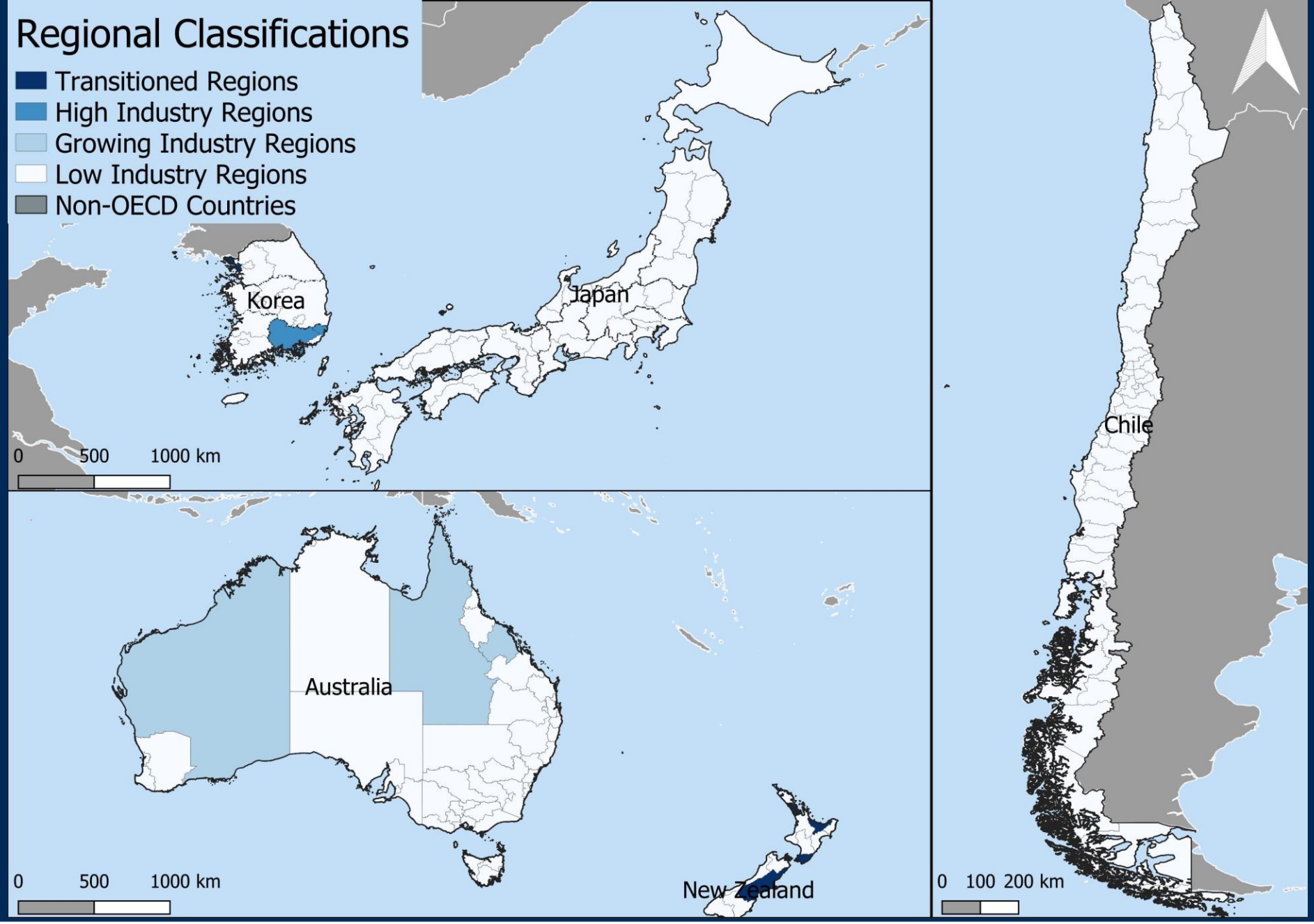
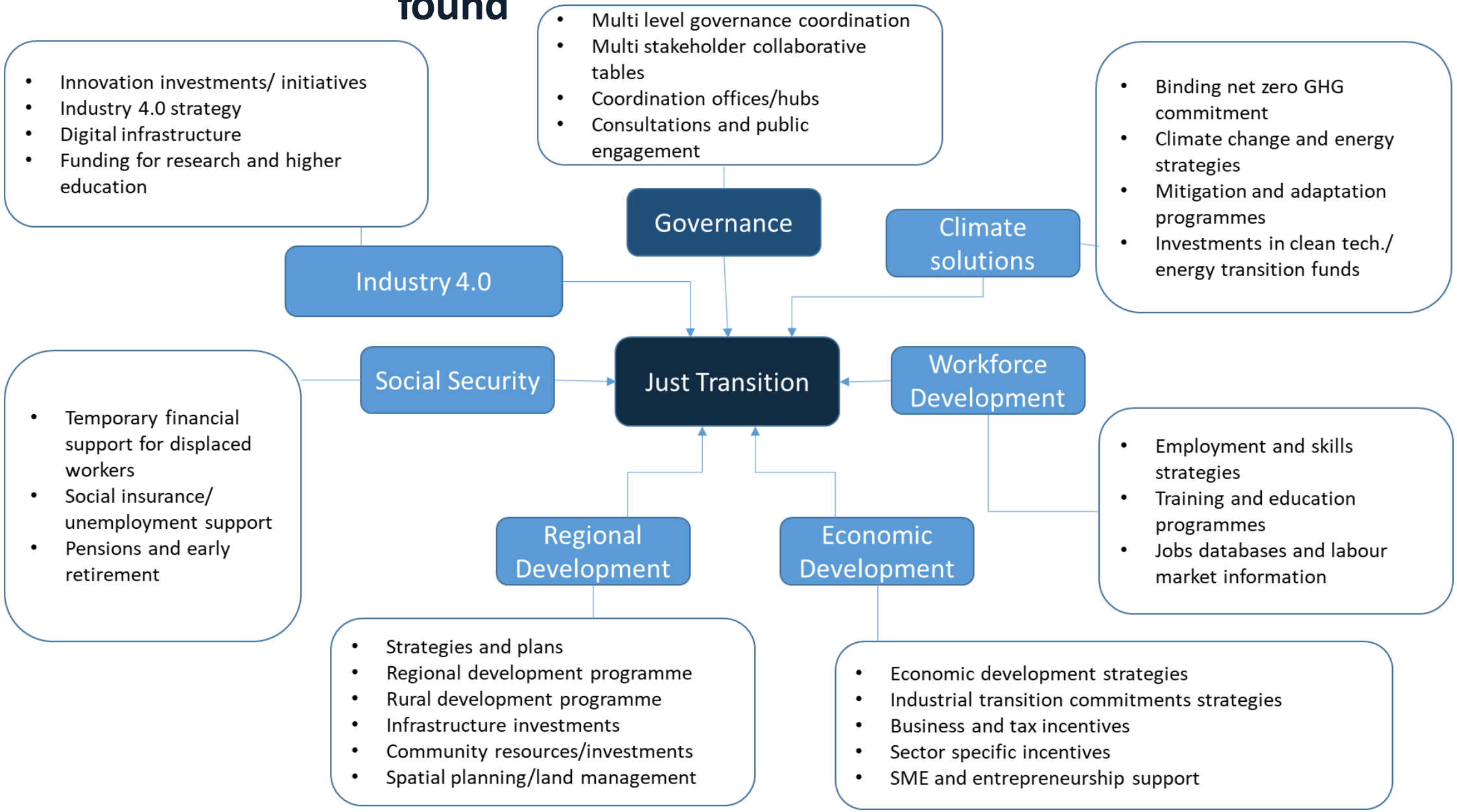

Regional Classifications
Transitioned Regions
High Industry Regions
Growing Industry Regions
Low Industry Regions
Non-OECD Countries
Canada
United States
Mexico
0
1000
2000
3000 km

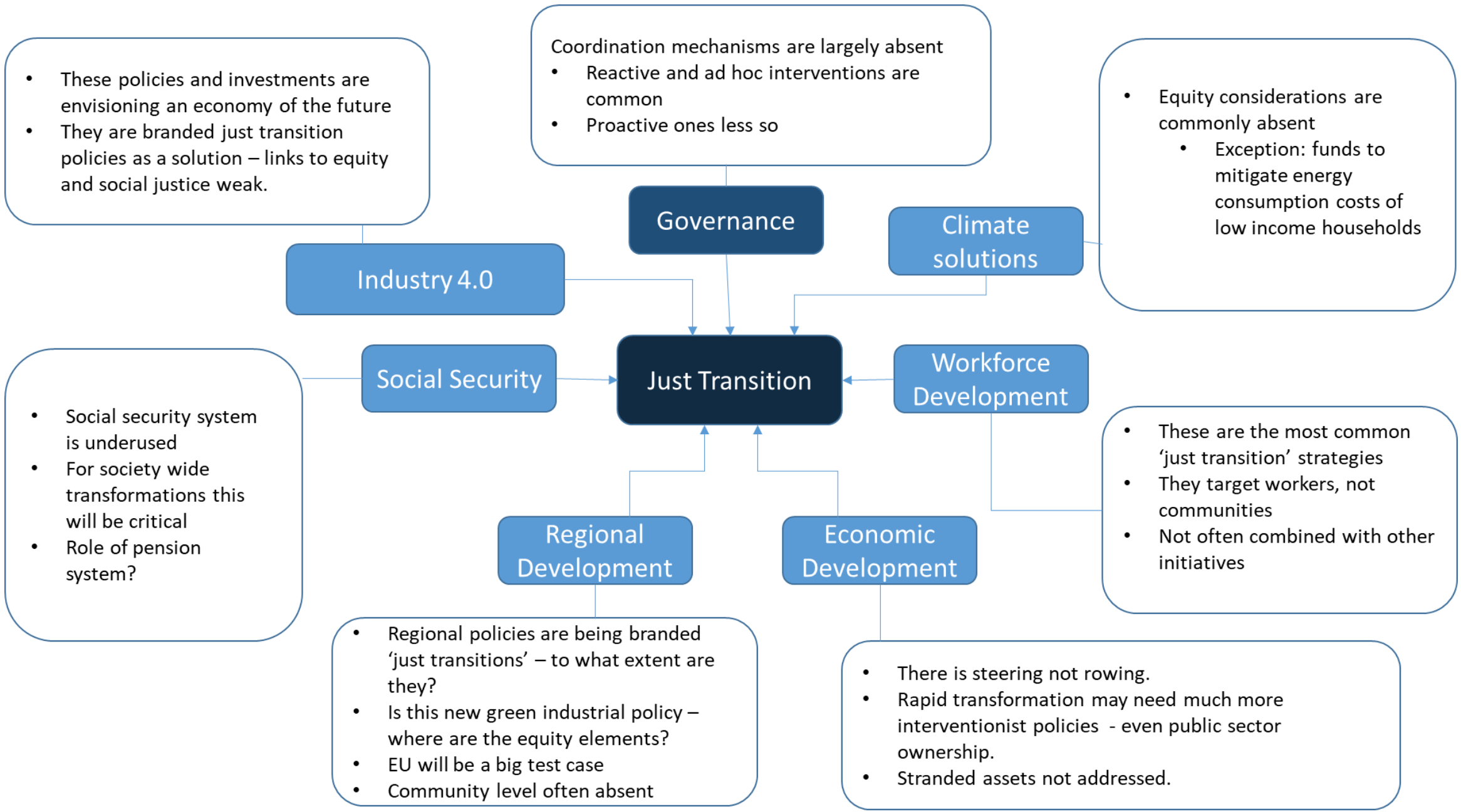

Regional Classifications
Transitioned Regions
High Industry Regions
Growing Industry Regions
Low Industry Regions
Non-OECD Countries
Iceland
Norway
Sweden
Finland
Estonia
Latvia
Lithuania
Denmark
United Kingdom
Ireland
Netherlands
Poland
Germany
Belgium
Luxembourg
Czech Republic
Slovak Republic
Austria
Hungary
France
Switzerland
Slovenia
Italy
Spain
Portugal
Greece
Turkey
Israel
0
500
1000
1500 km


Regional Classifications
Transitioned Regions
High Industry Regions
Growing Industry Regions
Low Industry Regions
Non-OECD Countries
Korea
Japan
0 500 1000 km
Australia
0 500 1000 km
New Zealand
Chile
0 100 200 km

The policies and approaches we found



The *gaps* we found



Thank you for your attention!

We welcome your comments and questions

Contact: TamaraKrawchenko@UVic.ca

University of Victoria