CCS LAW AND REGULATION – OVERVIEW OF DEVELOPMENTS AND PRIORITIES

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IAN HAVERCROFT
PRINCIPAL CONSULTANT – POLICY, LEGAL AND REGULATORY

GLOBAL CCS INSTITUTE

CCS-SPECIFIC LAW AND REGULATION

- Significant development of CCS-specific legislation over the past 10-15 years, with notable developments internationally.
- CCS-specific legislation, that addresses either the full-chain or discrete aspects of the process, may now be found at the international, regional, national and sub-national level.
- In several instances this legislation has been tested, with regulators in several jurisdictions granting early-stage permits and licenses.
- Renewed focus upon the need for legislation in recent years has led to further intervention in some jurisdictions, as well as tentative steps towards the development of frameworks in others.

INTERNATIONAL LAW

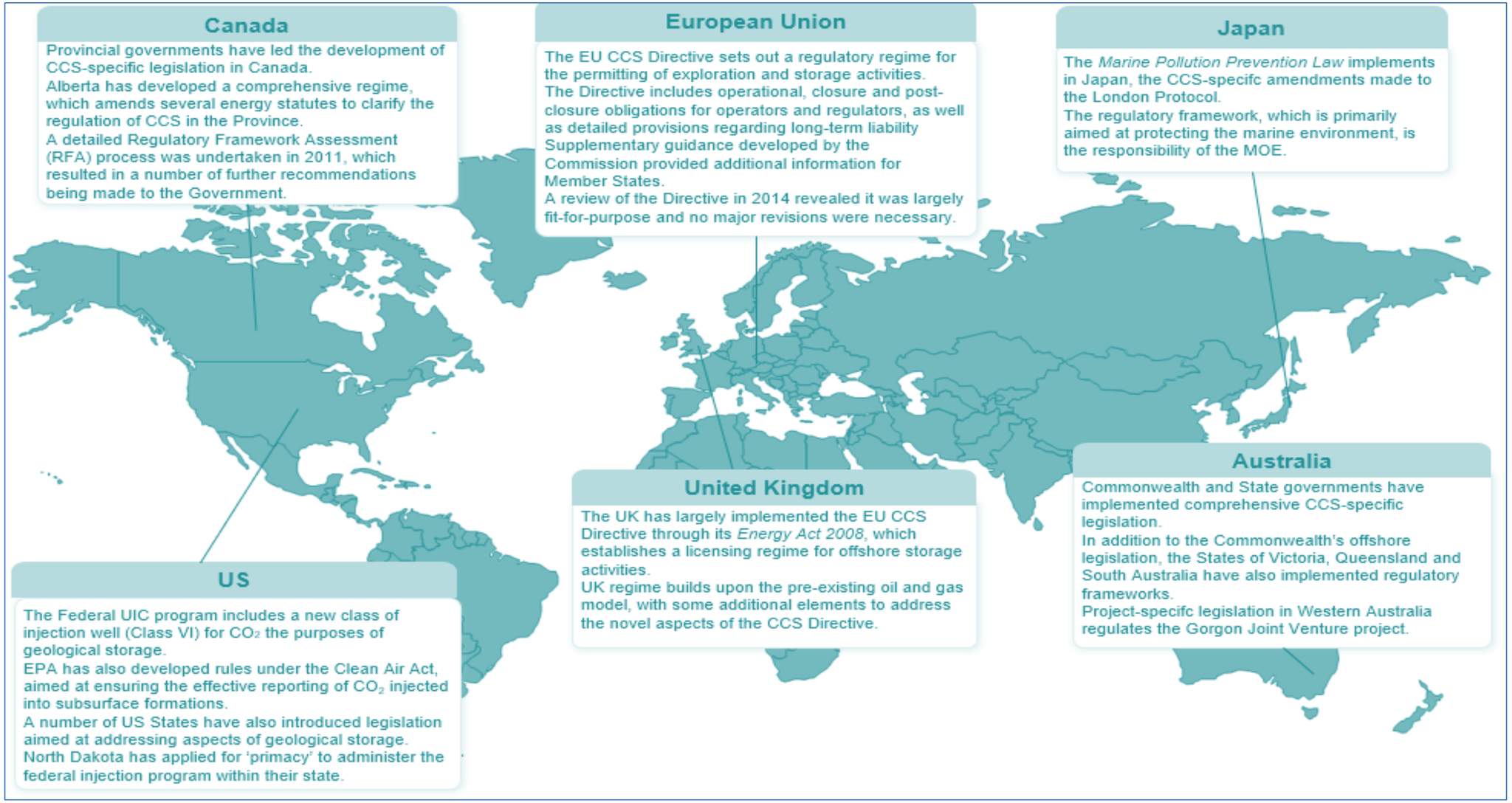
- Addressing the legality of CCS operations within international agreements was a significant step in the history of CCS-specific legislation.

- **London Protocol**
  - 2006 amendment formally recognised offshore storage of CO_2 – introduced procedures and guidance for Parties.
  - A subsequent 2009 amendment – governing the export of wastes – proved an obstacle until Parties agreed to the Provisional Application of the amendment.
  - Subject to the requirements of the 2019 agreement, transboundary movement of CO_2 is permissible under the Protocol.

- **Basel Convention**
  - The status of CCS activities is less-certain under the Basel Convention – is CO_2 to be considered a "hazardous waste"?
  - Were CO_2 to be considered hazardous, various notification and permitting requirements will be triggered for transboundary operations.

- **International climate agreements**
  - Emissions reporting and subsequent crediting for CCS activities, where there is a transboundary element to operations.

REGIONAL AND NATIONAL LEGISLATION



EARLY LEGAL AND REGULATORY MODELS

- **United States**
  - Federal amendments to the EPA's UIC programme – introduction of Class VI wells – dedicated CCS-specific permitting regime.
  - Some States have secured/securing primacy to regulate Class VI operations (e.g., North Dakota)
  - At the State-level, 20+ States have introduced provisions aimed at regulating aspects of the process.

- **Europe**
  - Development of one of the first, CCS-specific regulatory frameworks, now transposed by all MS.
  - Although high-level, addressed key issues for CCS and provides an important foundation in the EU.

- **United Kingdom**
  - Detailed model, builds upon EU framework to go-beyond in several key areas (e.g., liability).
  - Successfully incorporated CCS within the existing O&G regulatory regime.

- **Canada**
  - The regulation of CCS activities are largely delegated to the provinces (save for interprovincial or international aspects of a project).
  - Alberta has developed a highly detailed regulatory framework, which regulates the entirety of the CCS project lifecycle.

EMERGING LEGAL AND REGULATORY MODELS

- A new generation of regulators are now considering their approach to developing CCS-specific legal and regulatory models.

- In several instances activity is being driven by the development of CCS projects.

- Increased activity from policymaker and regulators in:
  - **Europe**: Further projects announced, proponents and regulators start to consider gaps and further requirements.
  - **Japan**: Review of the domestic legal and regulatory regime.
  - **Americas**:
    - Widespread activity across the United States with State-level regulators developing CCS-specific regimes or addressing discrete issues.
    - Federal regulators in the US are also developing offshore legislation.
    - Brazilian policymakers are debating a bill to regulate CO_2 storage and re-use.
  - **Middle East**: Law and regulation identified by several governments as an important issues to be addressed.

SOUTH EAST ASIA - POLICY AND REGULATORY ENVIRONMENT

	MALAYSIA	INDONESIA	VIETNAM	THAILAND	SINGAPORE	BRUNEI
International Climate Change Commitment (NDC)	✓ (45% reduction in GHG emission intensity against GDP by 2030)	✓ (32% reduction and conditional reduction target up to 43% of the business-as-usual scenario, by 2030)	✓ (Unconditional 15.8% reduction of GHG emissions by 2030)	✓ (30% reduction of GHG emissions by 2030)	✓ (Reduce GHG emissions to around 60 MtCO2e in 2030)	✓ (20% reduction of GHG emissions relative to BAU by 2030)
Net Zero Target	✓ (Pledge – 2050)	✓ (Proposed – 2060)	✓ (Pledge – 2050)	✓ (Pledge – 2050)	✓ (Policy – 2050)	✓ (Proposed – 2050)
Party to the London Protocol	✗ (Limited to UNCLOS)	✗ (Limited to UNCLOS)	✗ (Limited to UNCLOS)	✗ (Limited to UNCLOS)	✗ (Limited to UNCLOS)	✗ (Limited to UNCLOS)
CCS-specific domestic policies or incentives	✓ Tax incentives proposed for CCS in 2023 Budget	✓ National Action Plan recognizes role of CCS	✗ (Latest NDC includes a reference to CCS within a technology transfer objective)	✓ Corporate tax exemptions	✓ EDB commitment MOU with Australia	✗
CCS project(s) proposed/in development	✓	✓	✗	✓	✗	✗
CCS-specific legal and regulatory framework	✓ (Under development)	✓ (Under development)	✗	✗	✗	✗
Existing legislation applicable to CCS operations	✓	✓	✓	✓	-	-

PRIORITY ACTIONS FOR POLICYMAKERS AND REGULATORS

- **Consideration of CCS within national policy architecture**:
  - CCS in Nationally Determined Contributions (NDCs) under the Paris Agreement.
  - Role of technology within national climate change and energy policy, particularly in light of net zero commitments.
  - International, regional and domestic financing mechanisms to support CCS initiatives – e.g., international grants, carbon crediting schemes, tax relief.

- **Review of domestic legal and regulatory regimes**:
  - Consider the legality and identify potential barriers to CCS operations.
  - Determine the extent to which existing legislation will support CCS project deployment.
  - Institutional arrangements that support existing regimes – regulatory authorities and oversight.

- **Timely development of legal and regulatory frameworks**:
  - Establish a framework to mitigate and manage risks across all stages of the CCS project lifecycle.
  - Address the novel aspects of the technology, for example site selection, monitoring and verification and the apportionment of liabilities.
  - Determine the rights and responsibilities of operators and relevant authorities throughout the lifetime of a project.

GLOBAL CHALLENGES, REGIONAL FOCUS, DOMESTIC PRIORITIES

- Closer scrutiny of international law is required, to ensure outstanding uncertainties are addressed:
  - Provisional application of London Protocol's amendment an important step
  - Broader issues of international law should be prioritised.

- Significant potential for the deployment of CCS in South East Asia, must not be undermined by the absence of national policy and regulatory frameworks.
  - Only two countries in the region have taken steps to develop a legal and regulatory regime to support national deployment of the technology.
  - Absence of legislation presents high-levels of uncertainty for project proponents.
  - Existing models afford useful examples for governments to draw upon.

- At the domestic level, many countries must now focus upon moving beyond the framework
  - Consider practical requirements of operation
  - Address newer elements to CCS (e.g. non pipeline transport), or different forms of capture (DACC)
  - Look beyond the preliminary stages of the regulatory lifecycle.

- In all instances, the timely consideration of legal and regulatory regimes that will support deployment is essential
  - All experience to-date has highlighted the significant timeframes necessary for developing and implementing legislation.

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IAN HAVERCROFT
PRINCIPAL CONSULTANT – POLICY, LEGAL AND REGULATORY
IAN.HAVERCROFT@GLOBALCCSINSTITUTE.COM

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