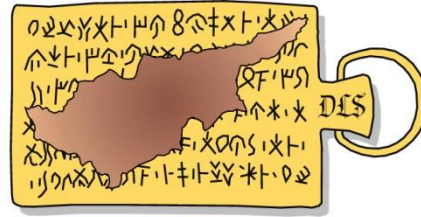




kadaster



‘Building LADM for new themes’

Symposium in honour of the two young doctores

Christiaan H.J. Lemmen

João Paulo Hespanha



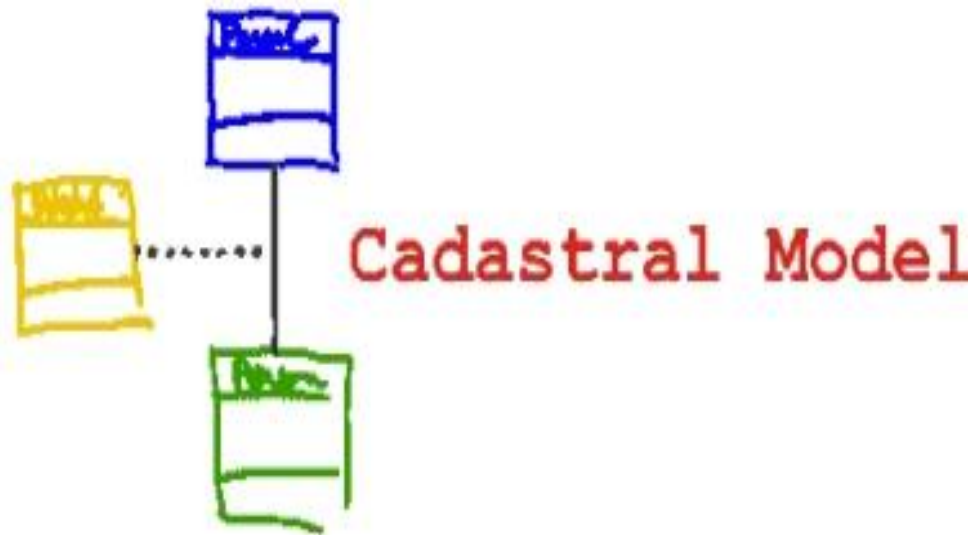
Paul van der MOLEN

University Twente Faculty Geoinformation Science and Earth Observation

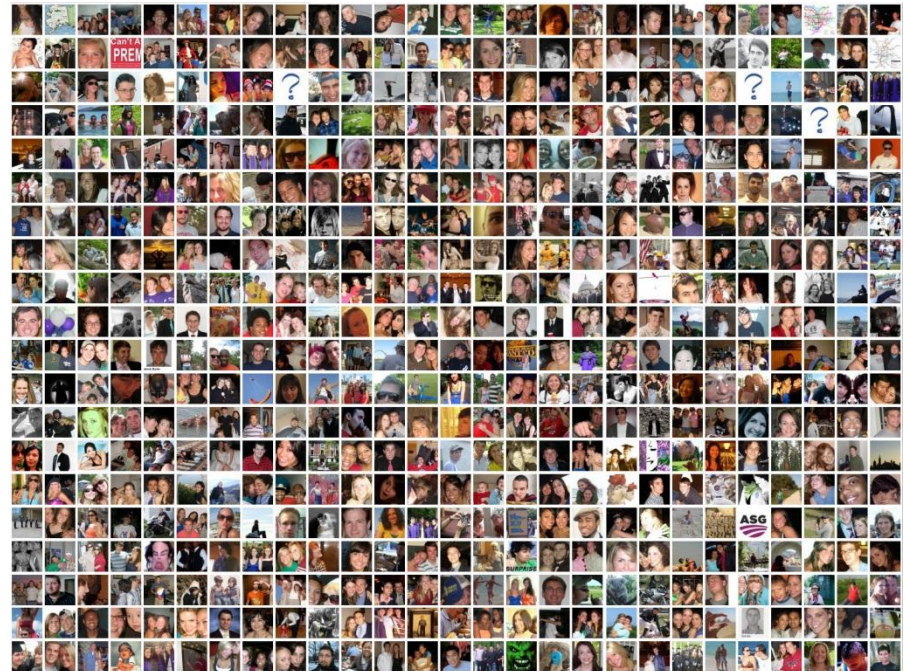
Kadaster-ITC-UNU School for Land Administration Studies



The LA Domain Model



Subject: from one to many



Relationship private property



chil
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offic

CAVEAT EMPTOR/BUYER BE WARE

1. LRV: 2935 Folio 21 Plot 607& 608 Land at Bugembe
2. Block 298 Plot 2 land at Senge, Mutuba V, Mengo (Mukono District)
3. Block 289 Plot 34 land at Kitigoma, Mutuba II, Mengo (Mukono District)

We act for and on behalf of **CONSTANCE MERCY MULONDO, SAMUEL KAZUNGU J. and ALBERT EMMANUEL K. MULONDO** children of the late **YESERI KAZUNGU MULONDO**.

TAKE NOTICE that our clients do claim interest in the above captioned properties as Beneficiaries to the Estate of the Late **YESERI KAZUNGU MULONDO** and forbid the registration of any person as transferee or proprietor of the above captioned lands or any instrument affecting the said lands.

Any person who purchases or deals in the above captioned lands does so at his or her own risk.

STAND DULY WARNED!
Dated at Kampala this 30th day of 2002

COUNSEL FOR THE CAVEATORS

DRAWN BY:
**NGOBI NDIKO ADVOCATES, FIRST FLOOR CONRAD HOUSE,
PLOT 30 JINJA ROAD, P. O. BOX 21625, KAMPALA.**

Relationship of common property



Relationship of State Property



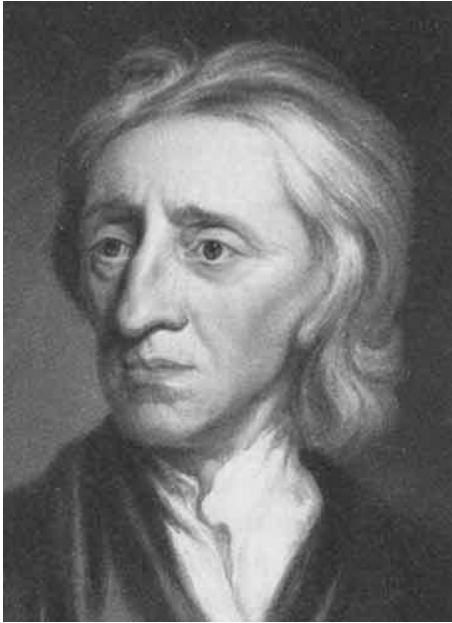
Objects



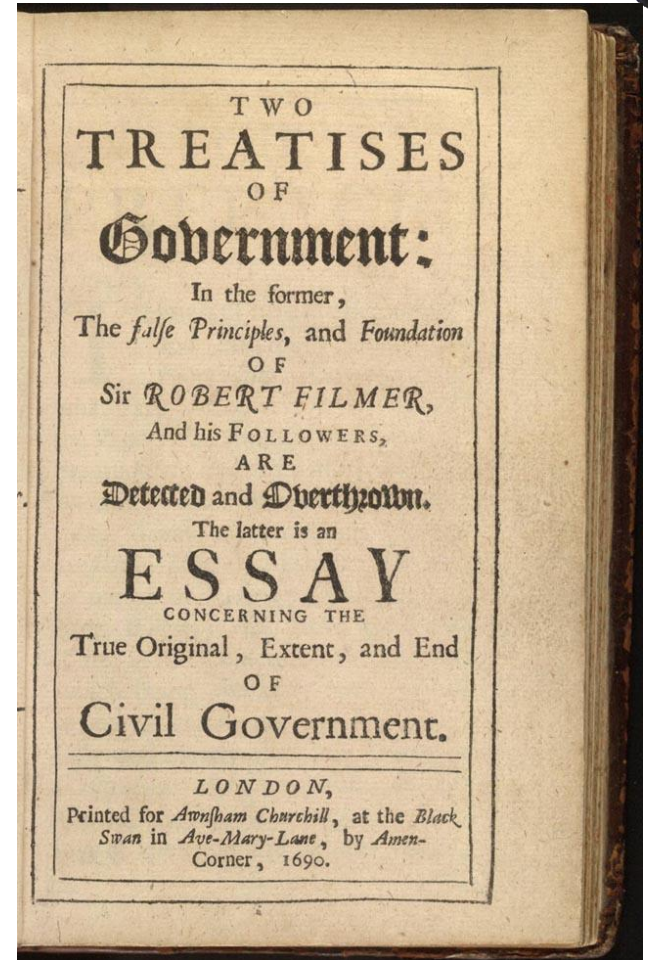
Parcelnumber on facade distillery



Pro Property: John Locke



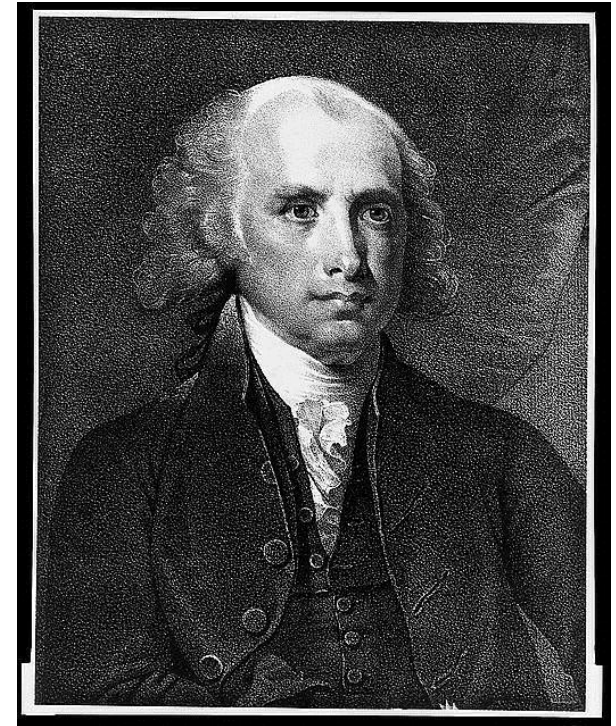
John Locke (1632-1704) in Book II of Two Treatise (1690): 'Governments have no other end but the preservation of property'



John Locke and the Founding Fathers

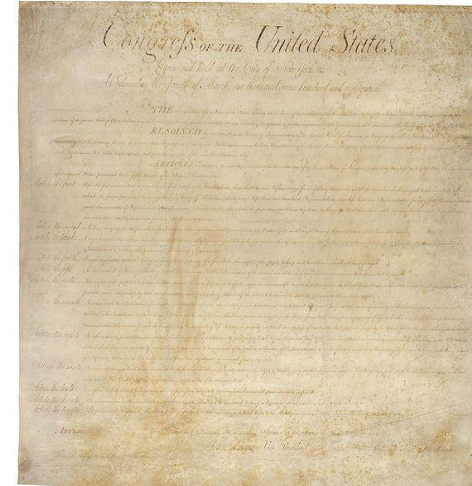


Signing of the U.S. Constitution at Independence Hall in Philadelphia, Pennsylvania, 1787



James Madison
(1751-1836)

Private Property core US Constitution



John Locke ideas basis for US Constitution 1787 and Bill of Rights 1791:

‘.... nor shall private property be taken for public use, without just compensation’. Based on James Madisons (1751-1836, 4th Pres USA) notes that ‘.. the rights of persons, and the rights of property, are the objects, for the protection of which Government was instituted...’.

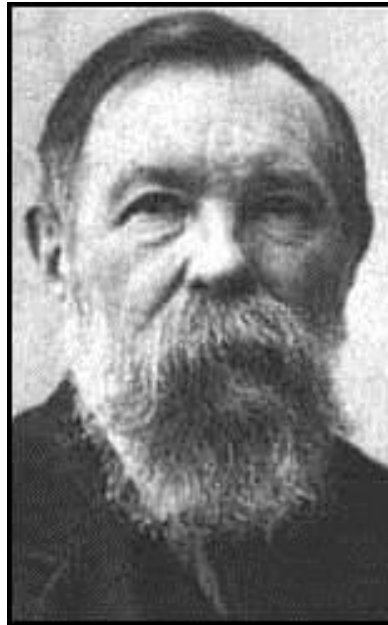
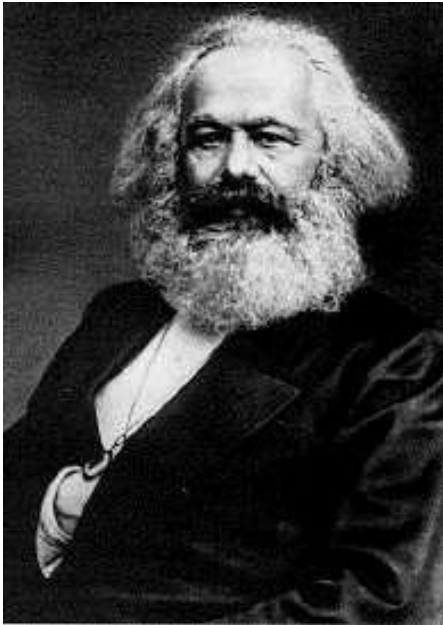
Anti property: Pierre Joseph Proudhon



Pierre Joseph Proudhon (1809-1865)
in 'What is property' (1841); 'Property
is theft'

QU'EST-CE QUE
LA PROPRIÉTÉ?
OU
RECHERCHES SUR LE PRINCIPE
DU DROIT ET DU GOUVERNEMENT,
PAR
P.-J. PROUDHON.
Adversus hostem aeterna auctoritas esto.
Contre l'ennemi, la revendication est éternelle.
LOI DES DOUZE TABLES.
PREMIER MÉMOIRE.
PARIS,
A LA LIBRAIRIE DE PRÉVOT,
RUE BOURBON-VILLENEUVE, 61.
1841.

Communist Manifesto



Karl Marx (1818-1883) and Friedrich Engels (1820-1895) in the Communist Manifesto 1848: 'abolish private property'



Socialist property core Constitution RSFSR



1918 Constitution of the
Russian Soviet Federated Socialist Republic



Article One
Article Two
Article Three
Article Four
Article Five
Article Six
Amendments

Constitution 1918 Article 2:

(a) For the purpose of attaining the socialization of land, all private property in land is abolished, and the entire land is declared to be national property and is to be apportioned among agriculturists without compensation of the former owners, to the measure of each one's ability to till it.



©David Derrick Wordpress

What is Property: Hohfeld (1879-1918)



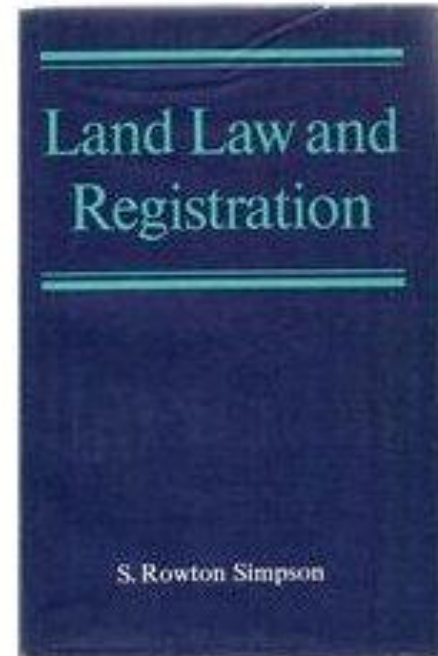
Four basic "Hohfeldian rights":

- a "claim-right" (which Hohfeld calls a "right *stricto sensu*," a right in the strict sense);
- a "liberty" (which Hohfeld calls a "privilege");
- a "power";
- an "immunity".

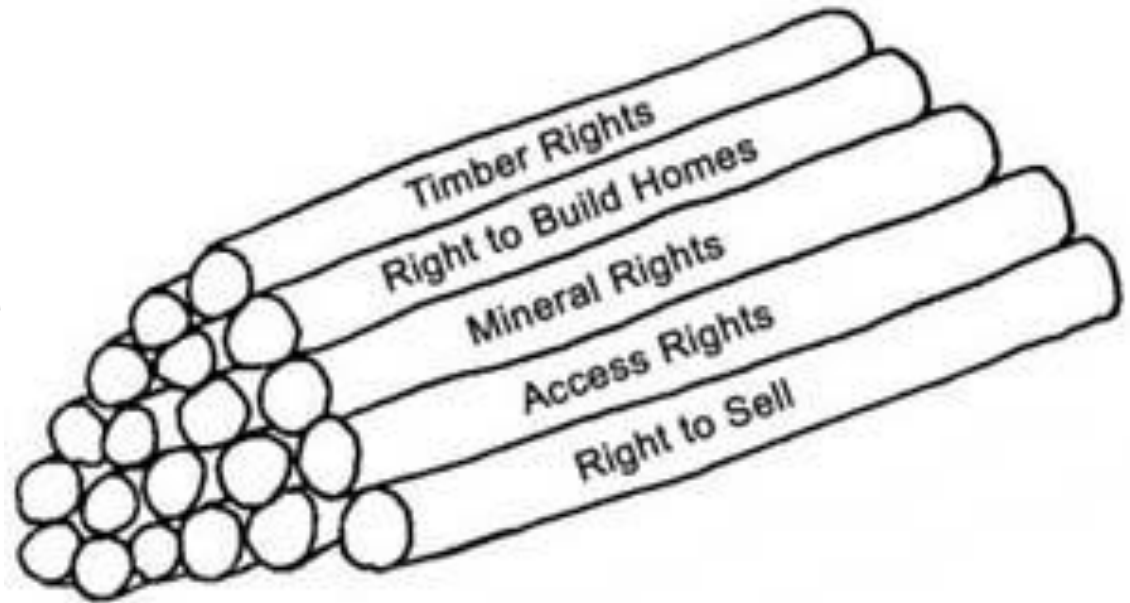
Stanhope Rowton Simpson (1899-1976)



In 'Land Law and Registration' (1976): 'The collection of rights pertaining to any one land parcel maybe likened to a bundle of sticks. From time to time the sticks may vary in number (representing the number of rights), in thickness (representing the size or 'quantum' of each right), and in length (representing the duration of each right). Sometimes the whole bundle may be held by one person or it may be held by a group of persons'



Bundle of rights: unbundling....?



Example: mineral rights

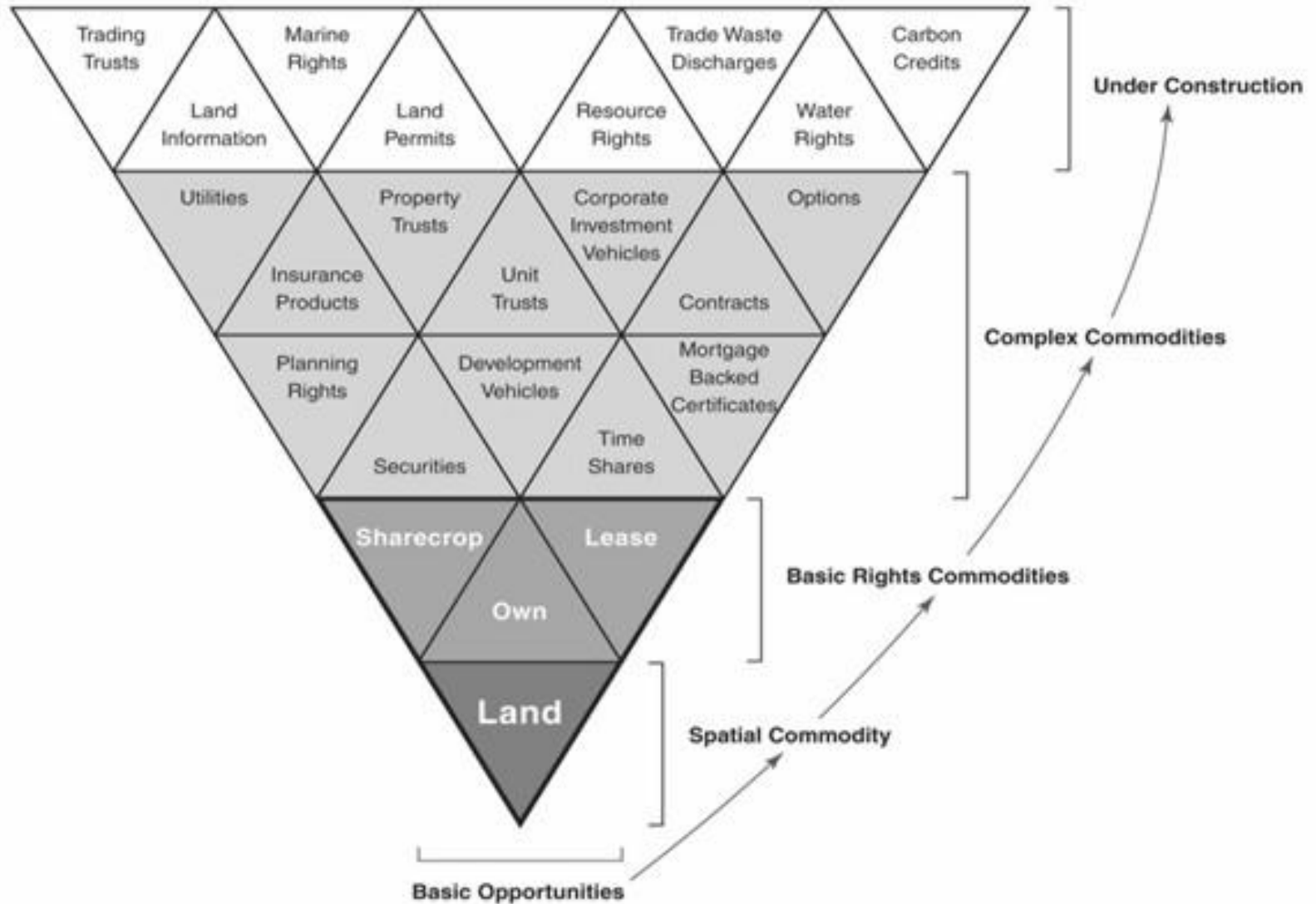


In NL: minerals > 100 m State

In NL: minerals < 100 m Owner



Land Market (Jude Wallace, 2005)



A famous complex commodity: CDO's

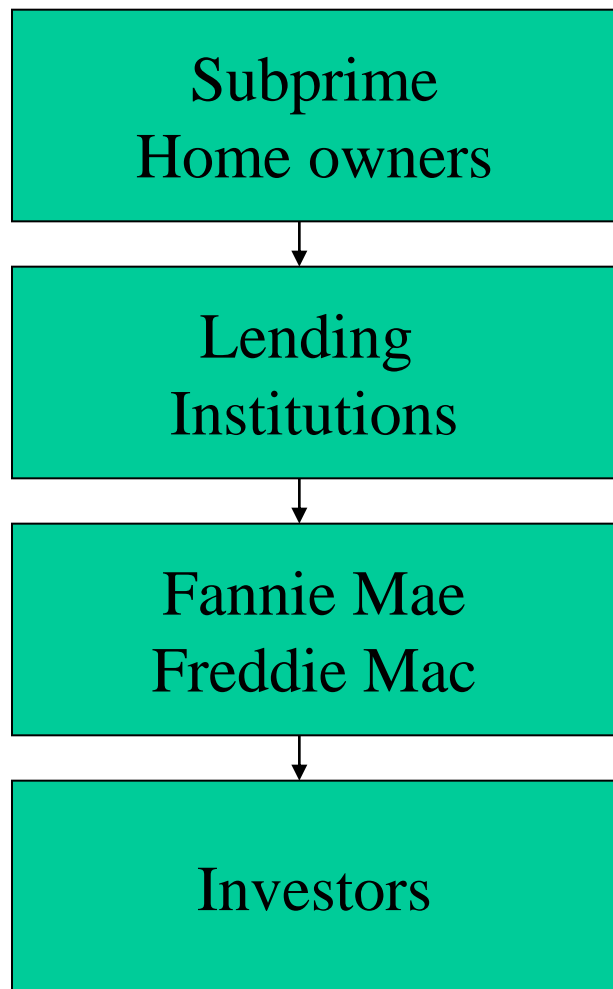


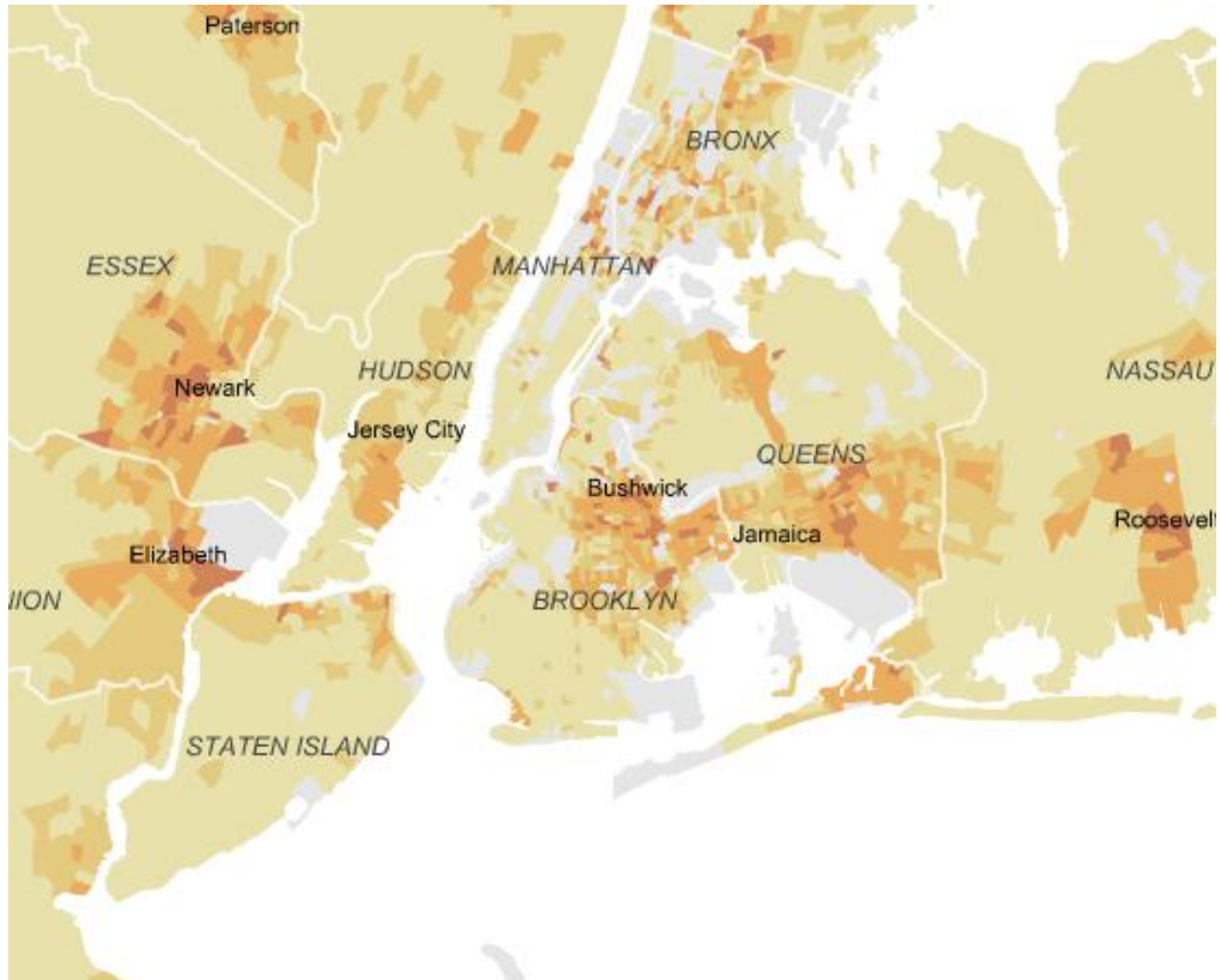
PHOTO: JOSHUA ROBERTS/BLOOMBERG/LANDOV

Impact

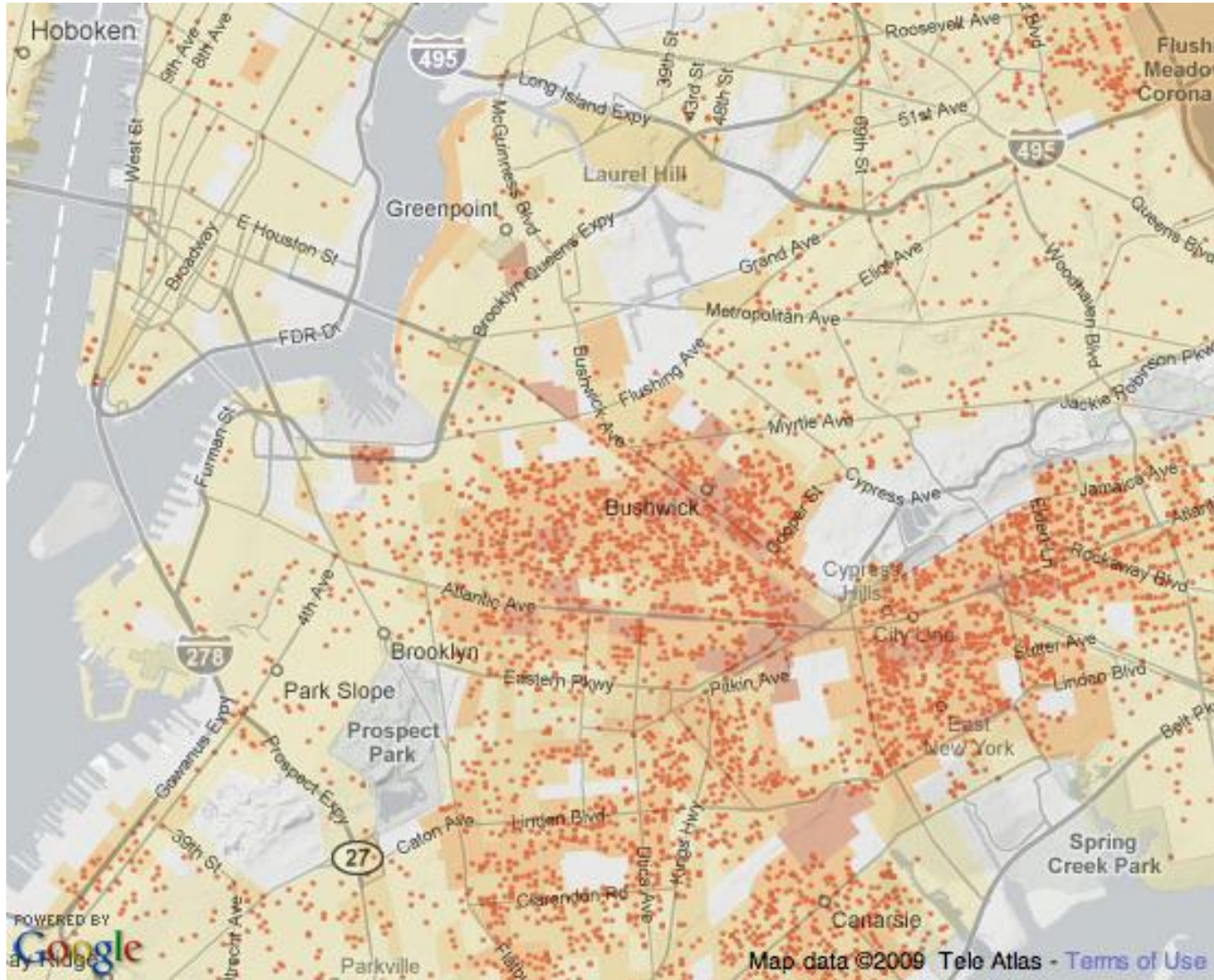
- 1,3 trillion \$ 2008
- Drop house prices
- Drop value mortgages
- 6 mln foreclosures until 2013 (Bloomberg)
- Value CDO 9 billion 2008
- Lehmann Bros:
 - loss 60 miljard \$
 - 73% stocks value
- 15 september 2008



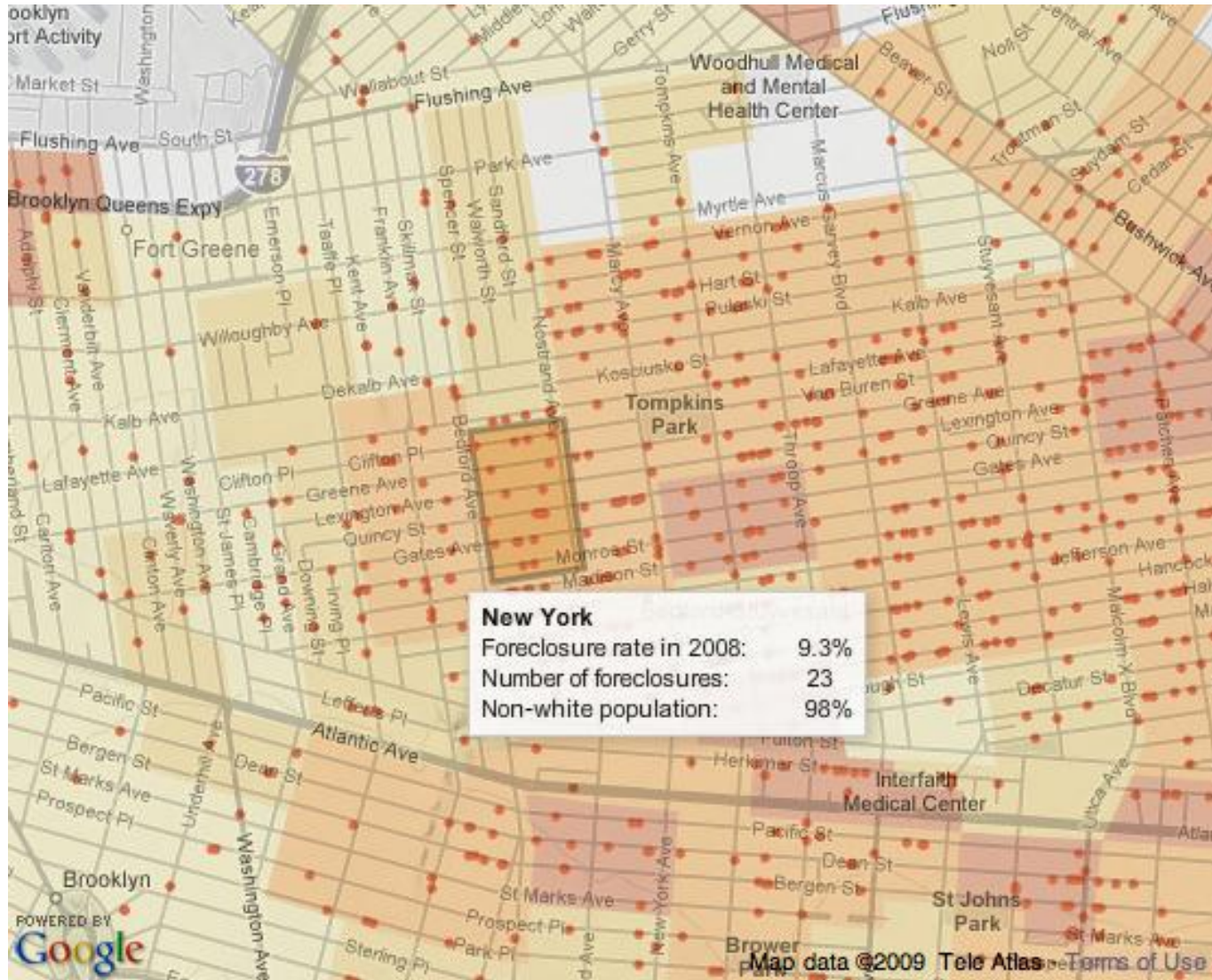
Foreclosures 1 million 2008



Already 3 million 2011



Expected up to 6 million in 2013.



CDO and LADM



- Does relation subject-right-object change? No, relation mortgagee and mortgager remains intact
- Cadastre as an early warning system (von Meyer & Cowen, 2009)? Only to monitoring foreclosures
- Conclusion: no impact on LADM

Watterights on sea: competing interests



Sea ways

Oil rigs



Nees for regulation



pipng

environment



UN Convention Law of the Sea



living

aquaculture



From Mare Liberum (1608) to UNCLOS (1994)



- Ocean covers 2/3 earth surface
- Since 17th century ‘Freedom of the seas’ doctrine’.
- National jurisdictions are limited to a narrow belt of sea.
- Territorial waters within ‘canon shot’ (3 miles)
- Until 20th mid century

Problems arising mid 20th century



- Depletion of fish stock and political tensions
- threat of pollution and waste from transport ships
- oil tankers carrying noxious cargoes
- prospects for rich harvests
- increased presence of maritime powers
- pressure of long distance navigation and 'transit passage'

Reaction of countries



- 1945: USA claims continental shelf (for oil-, gas- and mineral exploitation)
- 1946: Argentina claims shelf
- 1947: Chile and Peru claim 200 miles zone
- 1950: Ecuador claims 200 miles zone
- >1950: Egypt, Ethiopia, Saudi Arabia, Libya, Venezuela, eastern European states claim 12 miles zone
- >1950: Indonesia claims all sea between the 13.000 islands
- 1970: Philippines likewise
- 1970: Canada claims 100 miles
- general trend to accept 12 miles as territorial zone

Call for stable order



- Legal aspects:
 - 1967: first discussion in UN General Assembly
 - 1967-1982: UN Seabed Committee
 - 1973: UN Conference on the Law of the Sea (New York)
 - 1982: UN Convention on the Law of the Sea (UNCLOS)
 - 1994 (16th November) in force.
- Organisational:
 - Division for Ocean Affairs and Law of the Sea (DOALOS)
 - International Seabed Authority
 - International Tribunal for the Law of the Sea
 - Commission on the Limits of the Continental Shelf



Which jurisdictions within these limits?



- <12 miles (territorial waters): fully national jurisdiction, however ‘innocent passage’ must be allowed.
- 12-24 miles (contiguous zone): certain rights may be implemented like coastguard, naval police to pursue drug smugglers, illegal immigrants, custom and tax evaders etc.
- 12-200 miles (exclusive economic zone): certain rights to exploit, develop, manage, and conserve all resources (like oil, gas, fish, gravel, nodules, sulphur etc.) to be found in the waters, on the ocean floor, and in the subsoil .
- >200 miles (continental shelf): nations may claim jurisdiction up to 350 miles or 100 miles from 2500 m depth, depending on criteria such as sedimentary deposition and under endorsement of the International UN Commission on the Limits of the Continental Shelf.

Ratifying UNCLOS means acceptance 'package'



■ RIGHTS:

- exclusive rights to exploit, develop, manage, and conserve all resources



■ OBLIGATIONS:

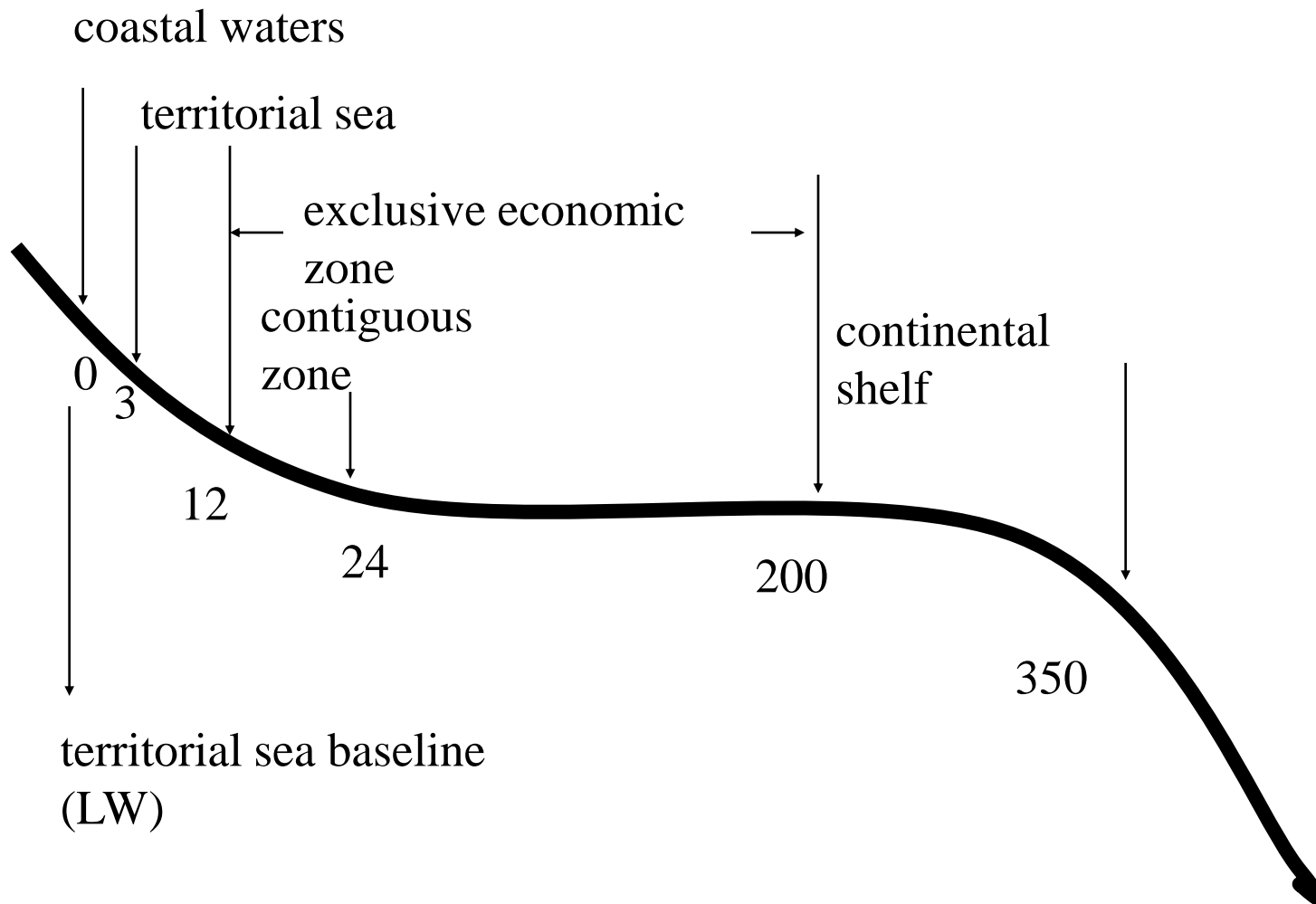
- establish a jurisdiction
- optimum use of fish stocks and avoid depletion through over-fishing
- give access to neighbouring countries and land locked countries to a catch
- obligation to protect and preserve marine environment
- formulate standards and rules
- states are liable for damage

Establish a jurisdiction

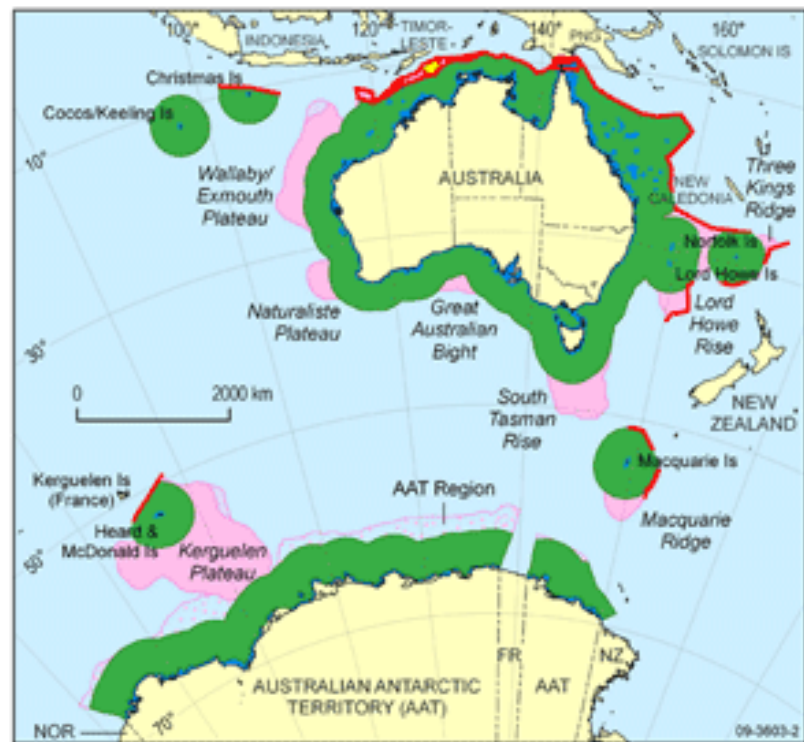
- Marine spatial planning system
- Regulate rights, restrictions and responsibilities in the marine environment
- Marine cadastre (FIG publication 36, 2006)



A stable order: 'A matter of limits'

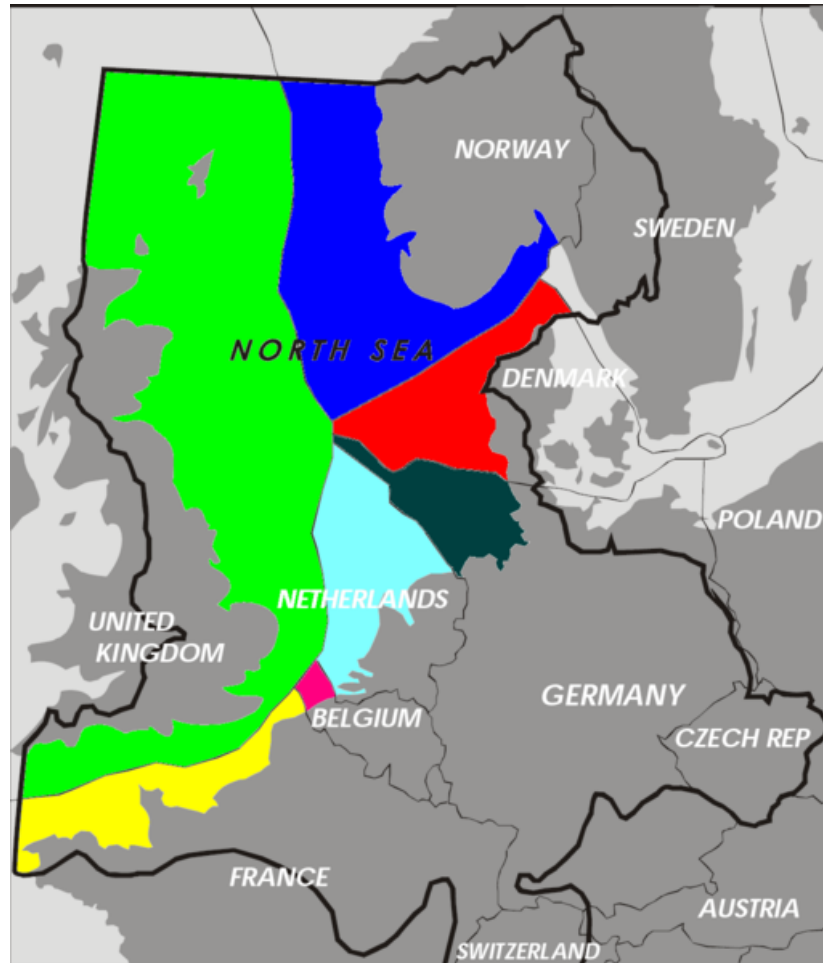


Claim Australia



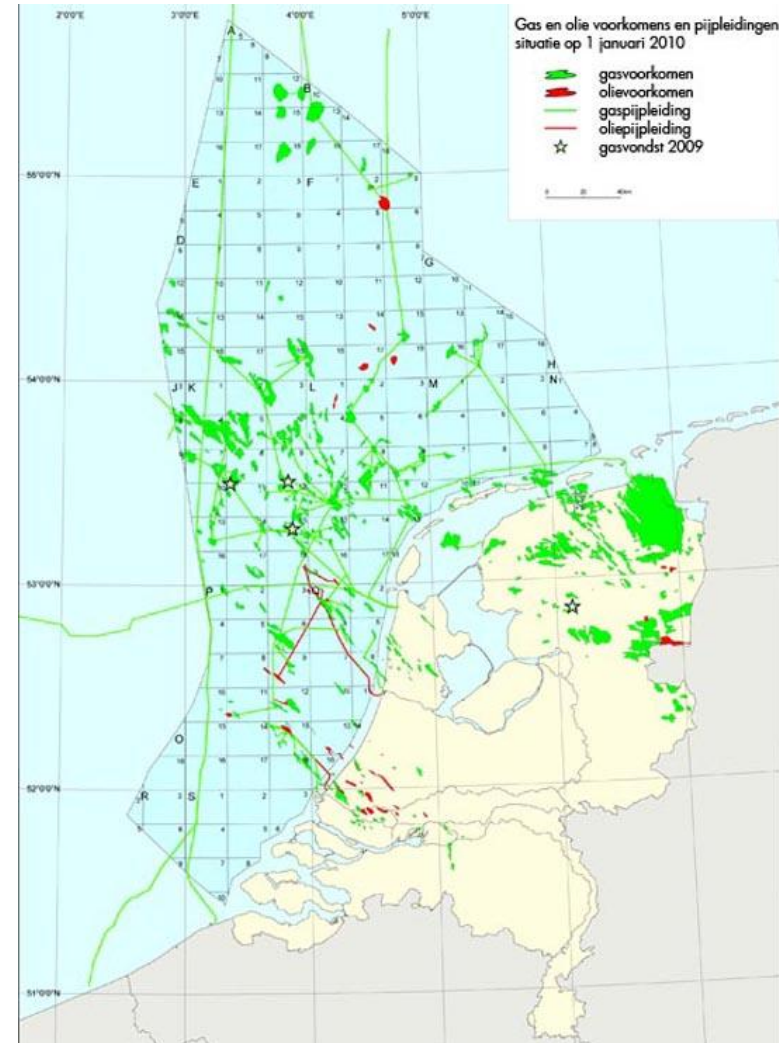
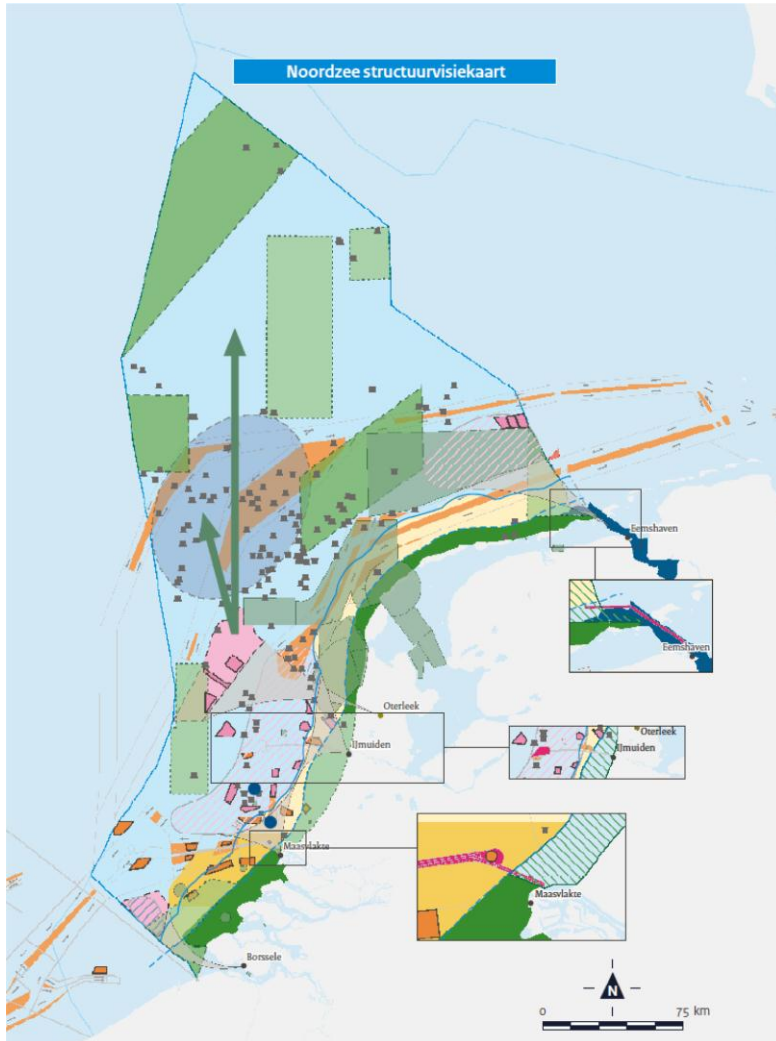
- Territorial sea and internal waters
- Australia's exclusive economic zone as defined by UNCLOS and certain treaties (not all in force).
- Australia's extended continental shelf (ECS) beyond 200M as confirmed by the Commission on the Limits of the Continental Shelf and as defined by certain treaties (not all in force).
- Australia's ECS considered by the Commission and yet to be resolved.
- Australia's ECS off Antarctica as submitted on 15 Nov 2004 to the Commission that Australia requested not be considered for the time being.
- Joint Petroleum Development Area as defined in the Timor Sea Treaty between Australia and Timor-Leste.
- Treaty boundary with opposite or adjacent State.

What about those limits in the North Sea?



Catchment area North Sea

Manifest economic interests



Spatial plan 2015

Concessions

Conclusion



- UNCLOS requires water use planning and regulation of RRR's as on land
- Regulation of RRR means introduction of rightholders and rights (ownership and derived rights)
- Need for delimitation marine boundaries
- Need for appropriate registration
- LADM highly relevant

Greenhouse Gas Emission reduction

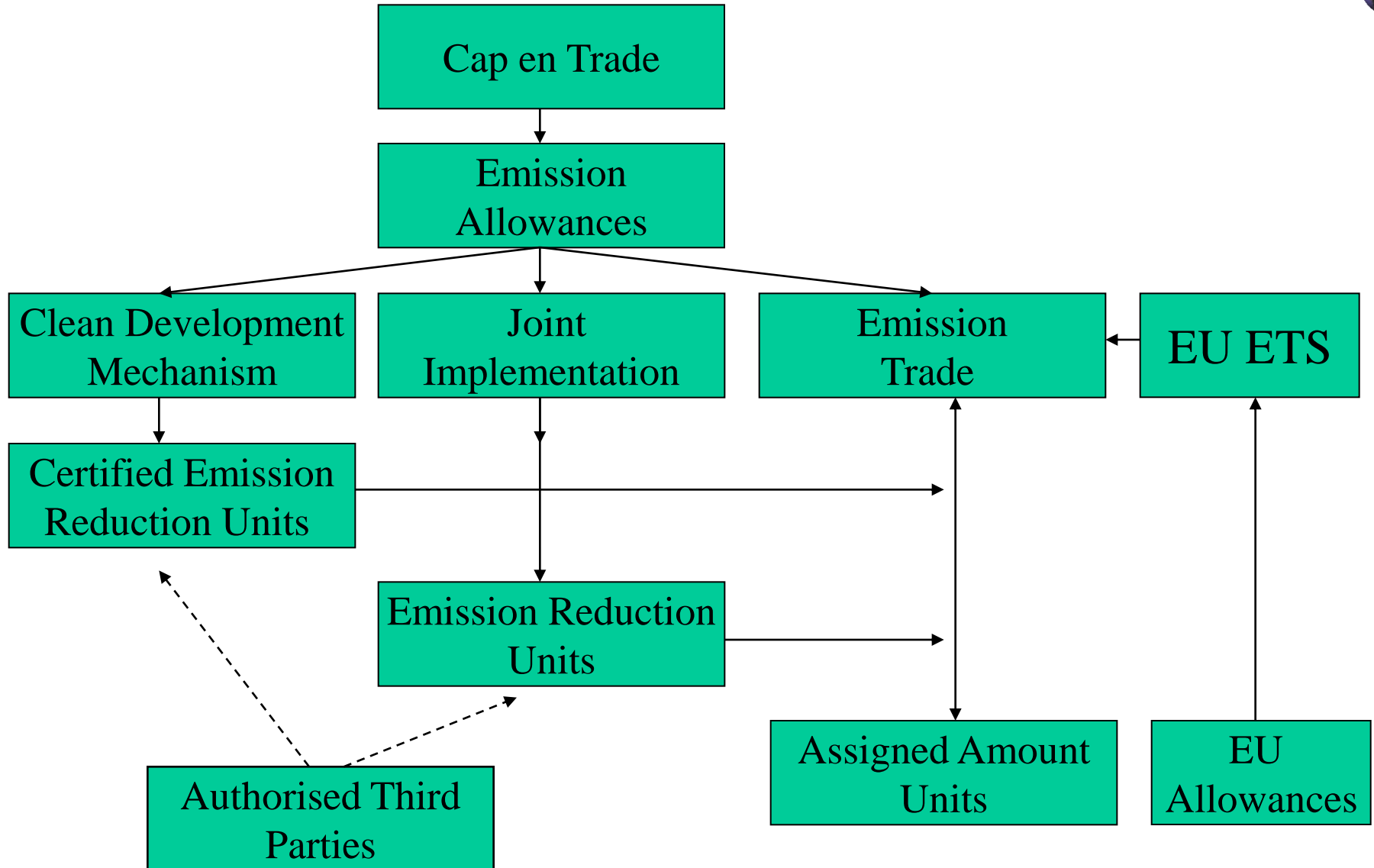


- Kyoto protocol 1997
- In force 2005
- Cap and trade 2008-2012,
- Emission allowances
- Clean Development Mechanism
- Joint Implementation Programme
- Emission Trade System

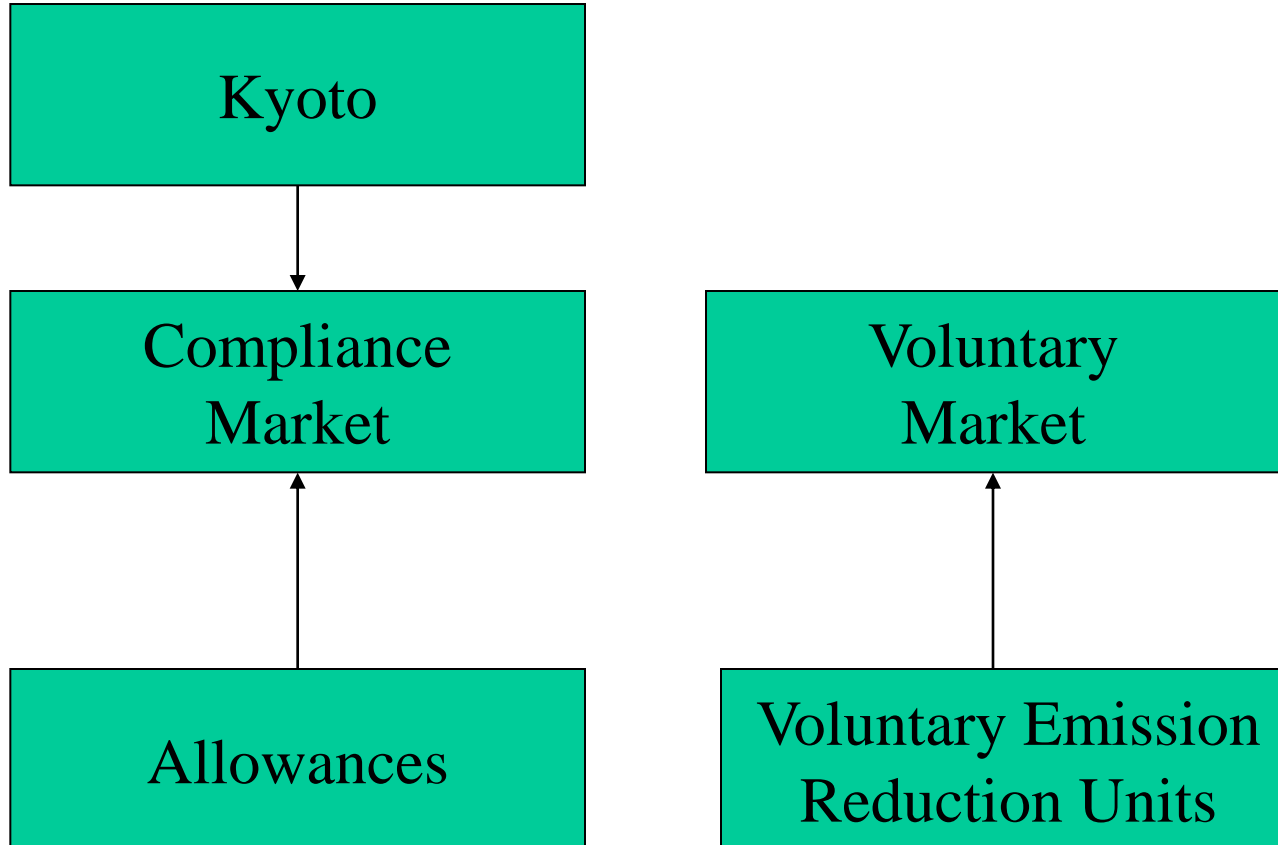


Durban 2011: successor Kyoto should be there in 2012, in force 2020.

Mechanism of Kyoto: compliance



Voluntary Carbon Market: non-Kyoto



Kyoto Compliance Market



Market of:

AAU's

CER's

ERU's



Buying Carbon credits: voluntary market



Market of:
VER's



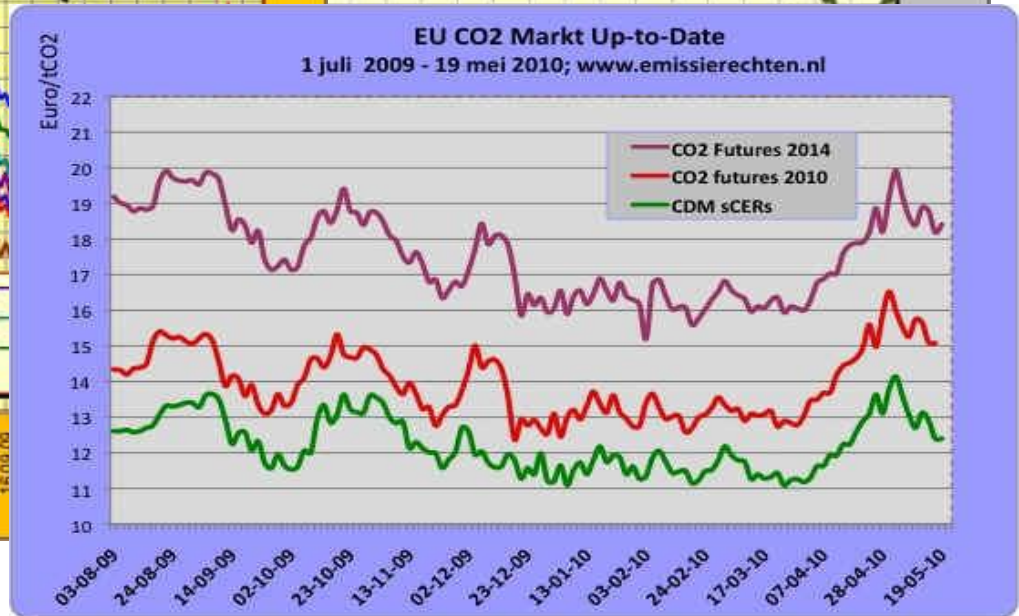
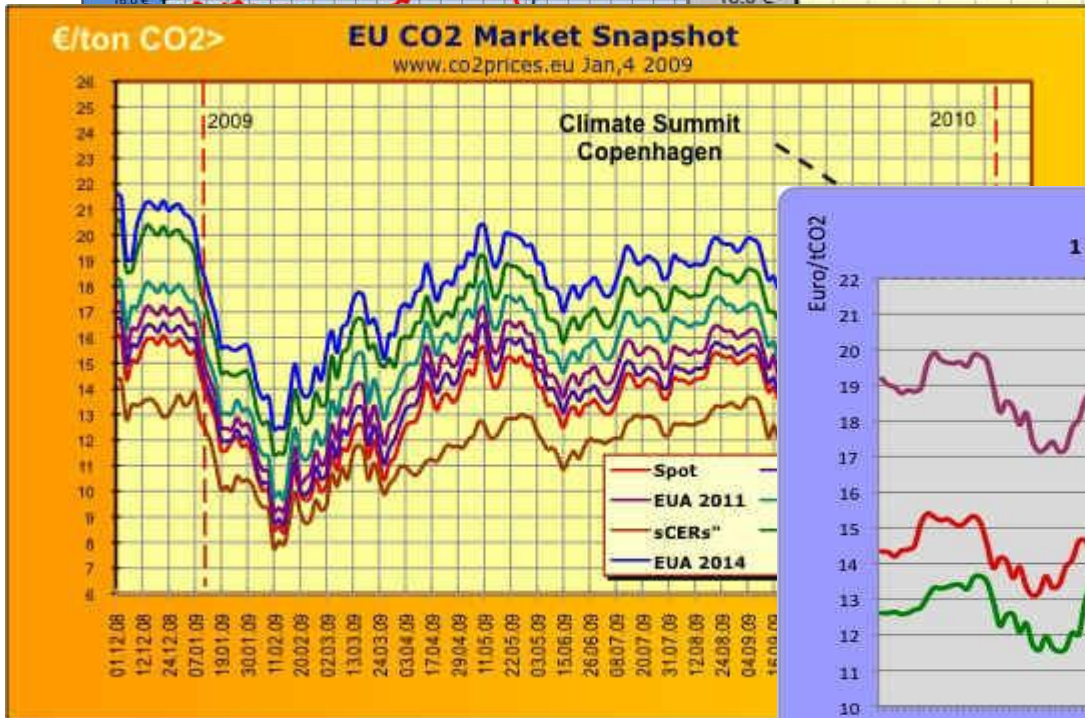
(Since 1 January Aviation also under Kyoto)

Value Carbon Market (Worldbank, 2012)



Unit	2010 Volume MtCO2e	2010 Value \$ million	2011 Volume MtCO2e	2011 Value \$ million
EU/EUA	6,789	133,508	7.853	147,848
EU/CER EU/ERU	1,266	20,547	1,810	23,113
Global	8,772	158,191	10,281	176,020

Really a 'market'



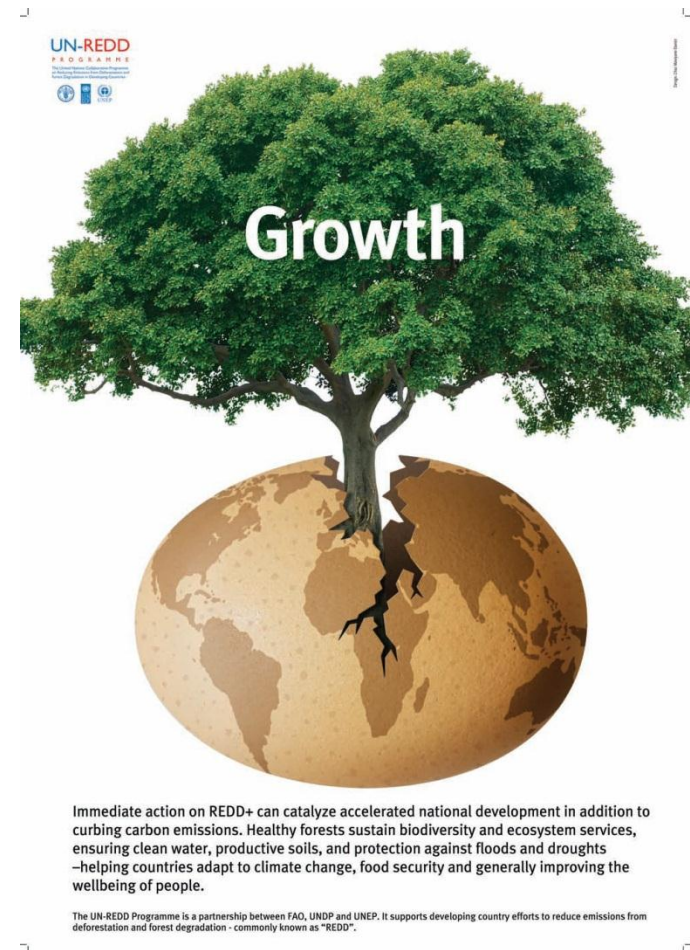
Bloomberg: State of VCM 2011



VCM	2009	2009	2009	2010	2010	2010
market	Volume MtCO2e	Price US \$	Value Mill US \$	Volume MtCO2e	Price US \$	Value Mill US \$
Global	98		415	131		424
Over the Counter	55	6.5	354	128	6	414
Chicago	41	1.2	50	2	0.1	0.2
Others	2	6.2	12	2	6	10

A VER producer: REDD and REDD+

- Alm: reducing emission from deforestation and forest degradation
- Loss: 130,000 km²
- = 20% GHG emission
- Planting: 40,000 km²
- Carbon credits: 30 miljard US \$



Immediate action on REDD+ can catalyze accelerated national development in addition to curbing carbon emissions. Healthy forests sustain biodiversity and ecosystem services, ensuring clean water, productive soils, and protection against floods and droughts –helping countries adapt to climate change, food security and generally improving the wellbeing of people.

The UN-REDD Programme is a partnership between FAO, UNDP and UNEP. It supports developing country efforts to reduce emissions from deforestation and forest degradation - commonly known as "REDD".

A VER producer: Australian farmers



- Carbon Farming Initiative
- Produces ACCU's
- Australian Carbon Credit Units
- Traders regulated through Australian Securities and Investments Act 2001



A CER and VER producer: LULUCF



- Land Use (LU)
- Land Use Change (LUC)
- Forestry (F)



House of Commons: Problems VCM (2007)



- VCM market of ‘carbon cowboys’
- Concern about legitimacy
- What is it that is traded?
- Needs regulation



Carbon Credits property?



NO

- ACCU's are 'financial products' (Australia)
- US Carbon Credits (1990 Clean Air Amendment)
- Kyoto: no rights created (Marrakech Accords 2001)

YES

- Exclusive use
- Market value
- Tradable
- UK Court
- International Accounting Standards Board
- US Congress
- 'Bad' CDM Credits
- IIED
- Demsetz, North....

Conclusion



- Nature of carbon permits and carbon credits is like property
- Insufficient awareness policy makers about property as a bundle of rights
- Governments reluctant because of fear for compensation payment when ‘taking’ (EU, US)
- LADM highly relevant

Thanks for listening



Delft University of Technology

In honour of
Christiaan and João



Congratulations for
the young doctores

