

Blockchain and the Governance of Land Registries



UNIVERSITÉ PARIS II
02/03/2020
PANTHÉON - ASSAS



Outline

① Land Tenure and the Commons in Sub-Saharan Africa

② Blockchains and Land Registries

③ Blockchains for Horizontal Governance of Land Property Rights

UNIVERSITÉ PARIS II

DE LA FACULTÉ DES SCIENCES

Plan

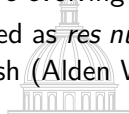
- 1 Land Tenure and the Commons in Sub-Saharan Africa
- 2 Blockchains and Land Registries
- 3 Blockchains for Horizontal Governance of Land Property Rights



UNIVERSITÉ PARIS II
PANTHÉON - ASSAS

The Commons and Customary Land Tenure

- The Commons represent about 70% of land in SSA (Alden Wily, 2011)
- Customary land rights are evolving (Platteau, 1995)
- The Commons, considered as *res nullius*, are threatened by enclosures and global land rush (Alden Wily, 2012; Cotula, 2012)



Source: StormSignal/Flickr Creative Commons

The Legal Implications of This Threat

- So far the answer has mostly been either **no registration of tenure or individualisation of property rights**.
- Gutwirth and Stengers, 2016 call for legal innovation to match the need of the Commons
- Specialising in rural land tenure in Africa Alden Wily, 2008, 2011; Cotula, 2004; IIED, 1999 make a point for a adaptive system more aware of the specificities of the customary Commons

Plan

- 1 Land Tenure and the Commons in Sub-Saharan Africa
- 2 Blockchains and Land Registries
- 3 Blockchains for Horizontal Governance of Land Property Rights



UNIVERSITÉ PARIS II
PANTHÉON - ASSAS

Blockchains, a Revolution for Land Registries?

As distributed ledger recording transparently transactions and property rights, Blockchains are appealing for land registries. The idea gained traction with:

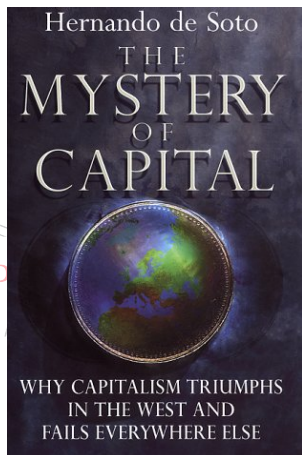
Scholars: Discussing opportunities and feasibility (Kshetri, 2017; Vos, Lemmen, and Beentjes, 2017)

Legal Practitioners: Discussing the legal implications and the how it would affect their work (Arruñada et al., 2017; Méndez, 2018)

National Governments: With some initiatives already under development (Dubai, Georgia...)

A Tendancy Towards Individualisation

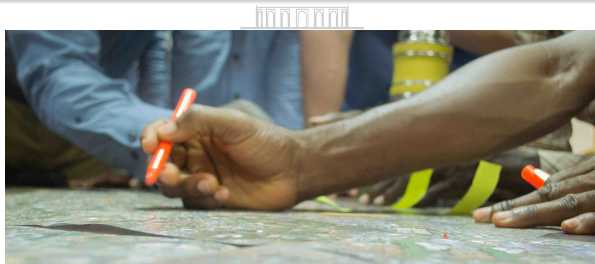
- De Soto, 2000 was very influential in international cooperation policies
- International organizations, such as the World Bank (Makala and Anand, 2018) or the OECD (Berryhill, Bourgery, and Hanson, 2018), work on blockchains-based land registries
- Mostly individual property rights



Beyond Individual Property Rights

And Other Forms of Tenure?

Blockchains offer the chance to move away from *numerus clausus* inherited from European legal systems that may not match customary realities.



Source: Personal Photography

Plan

- 1 Land Tenure and the Commons in Sub-Saharan Africa
- 2 Blockchains and Land Registries
- 3 Blockchains for Horizontal Governance of Land Property Rights**



UNIVERSITÉ PARIS II
PANTHÉON - ASSAS

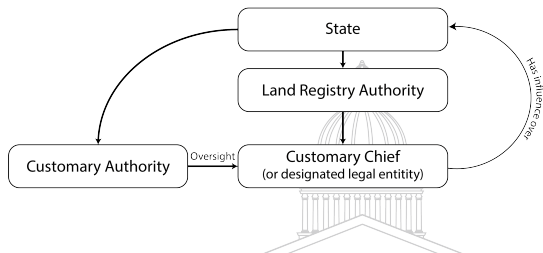
How Can Blockchain be Used?

- “Private from the outside, commons on the inside” Bollier, 2014, p.102 \implies Blockchain as a support for horizontal governance
- Blockchain for the governance of the titles, not the registration
- Compatibility and transition with current legal framework
- Inclusivity of all users



UNIVERSITÉ PARIS II
PANTHÉON - ASSAS

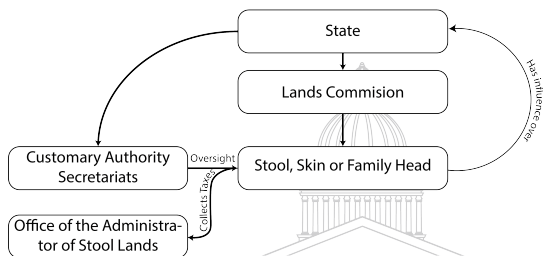
A Simple Proposal



UNIVERSITÉ PARIS II
PANTHÉON - ASSAS

Figure: Current System in Many Countries

A Simple Proposal



UNIVERSITÉ PARIS II
PANTHÉON - ASSAS

Figure: The example of Ghana (Internation Business Publications, 2018; Ubink and Quan, 2008)

A Simple Proposal

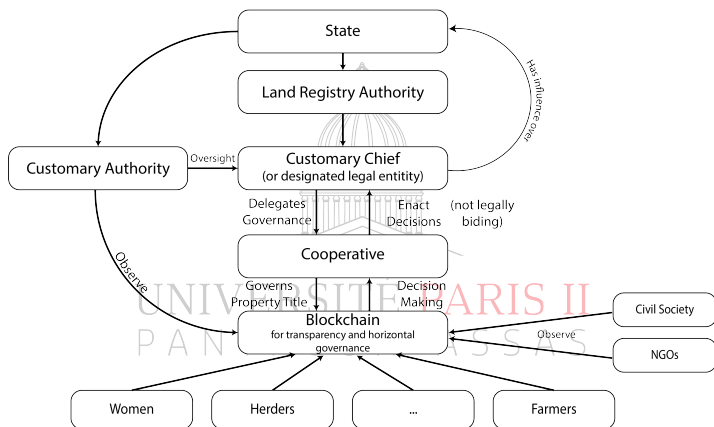


Figure: Proposed System

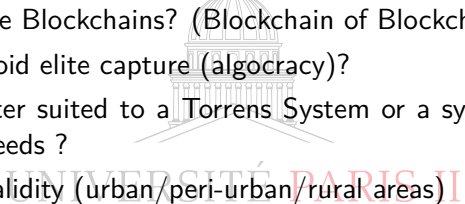
Discussing Implementations

- Third parties and the **legal status** of community decisions (rights *in rem* vs. *in personam*) (Arruñada et al., 2017; Peiró and Martínez García, 2017)
- Private or hybrid blockchain? (Graglia and Mellon, 2018; Pisa and Juden, 2017)
- Validity against the theory of the bundle of rights



Source: CGIAR, after Schlager and Ostrom, 1992

Further Research Questions

- 
- Scale of the Blockchains? (Blockchain of Blockchain?)
 - How to avoid elite capture (algorocracy)?
 - Is this better suited to a Torrens System or a system relying on property deeds ?
 - Areas of validity (urban/peri-urban/rural areas)


The End

Thank you for your attention






UNIVERSITÉ PARIS II
PANTHÉON - ASSAS

Bibliographie I

-  Alden Wily, Liz (Jan. 2008).
 “Custom and commonage in Africa rethinking the orthodoxies”.
 en. In: *Land Use Policy* 25.1, pp. 43–52.
-  – (2011). “‘The Law is to Blame’: The Vulnerable Status of
 Common Property Rights in Sub-Saharan Africa”. en.
 In: *Development and Change* 42.3, pp. 733–757.
-  – (July 2012). “Looking back to see forward: the legal niceties of
 land theft in land rushes”.
 In: *The Journal of Peasant Studies* 39.3-4, pp. 751–775.
-  Arruñada, Benito et al. (2017). *IPRA-CINDER International Review: Blockchain and Land Registries*. Anglais. 1st ed. Quinta Editorial.
-  Berryhill, Jamie, Théo Bourgery, and Angela Hanson (June 2018).
 “Blockchains Unchained”. en. In:

Bibliographie II

-  Bollier, David (2014). *Think like a commoner: a short introduction to the life of the commons*. eng. OCLC: 859046380.
Gabriola Island: New Society Publishers.
-  Cotula, Lorenzo (2004). “Securing the Commons in an Era of Privatisation: Policy and Legislative Challenge”. In: pp. 115–120.
– (July 2012).
“The international political economy of the global land rush: A critical appraisal of trends, scale, geography and drivers”.
In: *The Journal of Peasant Studies* 39.3-4, pp. 649–680.
-  De Soto, Hernando (2000). *The mystery of capital: why capitalism triumphs in the West and fails everywhere else*. eng.
First paperback edition. OCLC: 231876400.
New York, NY: Basic Books.

Bibliographie III



Graglia, J. Michael and Christopher Mellon (July 2018).

“Blockchain and Property in 2018: At the End of the Beginning”.
 en. In: *Innovations: Technology, Governance, Globalization* 12.1-2,
 pp. 90–116.



Gutwirth, Serge and Isabelle Stengers (2016).

“Le droit à l'épreuve de la résurgence des commons”. en.
 In: *Revue Juridique de l'Environnement* 2016/2, pp. 306–343.



IIED (1999). *Land Tenure and Resource Access in West Africa: Issues and opportunities for the next twenty five years*. Tech. rep.



International Business Publications, IBP (Sept. 2018).

Ghana Land Ownership and Agricultural Laws Handbook Volume 1 Strategic Information, Policies, Regulations. en.
 Google-Books-ID: OZ2tDwAAQBAJ. Lulu.com.

Bibliographie IV

-  Kshetri, Nir (Aug. 2017). “Will blockchain emerge as a tool to break the poverty chain in the Global South?”
In: *Third World Quarterly* 38.8, pp. 1710–1732.
-  Makala, Baloko and Aanchal Anand (2018).
Blockchain and Land Administration. en. The World Bank.
-  Méndez, Fernando P (2018).
“Smart Contracts, Blockchain and Land Registry”. en. In: p. 22.
-  Peiró, Nicolás Nogueroles and Eduardo J. Martínez García (Dec. 2017). “Blockchain and Land Registration Systems”. en.
In: *European Property Law Journal* 6.3.
-  Pisa, Michael and Matt Juden (July 2017).
“Blockchain and Economic Development: Hype vs. Reality”. en.
In: p. 49.

Bibliographie V



Platteau, Jean-Philippe (1995).

Reforming Land Rights in Sub-Saharan Africa: Issues of Efficiency and Equity | Publications | UNRISD.

Tech. rep. Discussion Paper N60.



Schlager, Edella and Elinor Ostrom (1992). "Property-Rights Regimes and Natural Resources: A Conceptual Analysis". In: *Land Economics* 68.3. Publisher: [Board of Regents of the University of Wisconsin System, University of Wisconsin Press], pp. 249–262.



Ubink, Janine M. and Julian F. Quan (Apr. 2008).

"How to combine tradition and modernity? Regulating customary land management in Ghana". en.

In: *Land Use Policy* 25.2, pp. 198–213.

Bibliographie VI



Vos, J., C. H. J. Lemmen, and B. Beentjes (2017).

“Blockchain-based Land Administration: Feasible, Illusory or Panacae?” English.

In: *Responsible Land Governance: Towards an Evidence Based Approach, Washington, D.C. March 20-24, 2017 : Proceedings of the Annual World Bank Conference on Land and Poverty.*

UNIVERSITÉ PARIS II
PANTHÉON - ASSAS