



PASTRES

Pastoralism, Uncertainty, Resilience

Pastoralists and uncertainties

An evolving relationship

Michele NORI



European University Institute

PASTRES

global pastoralism and uncertainties



M.De Angeli

Central Asia



Central Asia rangelands



UNCERTAINTY DOMAIN	Central Asia : pastoralists incorporation	
ENVIRONMENT /RESOURCES	Vaste and heterogeneous rangelands Climatic extremes Wide range of livestock and culture diversity State-led environmental engineering Mineral / oil explorations Tibetan plateau strategic environmental asset	Debates on rangeland degradation Cchange visible in Hkush & Mongolia
MARKET / COMMODITIES	Important growth in demand for livestock products State-led market integration Domestic and regional markets	Financialised and diversifed pastoral livelihoods
INSTITUTIONS/ GOVERNANCE	Important revolutions – Soviet & Chinese Centralised socialist command Shifting and contradictory political agendas - mixing economic growth, poverty alleviation and ecological concerns Infrastructure, <i>One Belt One Road</i> Housing, services, credit and insurance systems Post-Soviet decollectivization	Historical patterns Changes in property rights regimes* Sedentarisation as underlying pattern Indebtedness / borrowing cycles Programs rigidities and flexibilities

South Asia



Source: [DFID, 2003](#)

South Asia rangelands

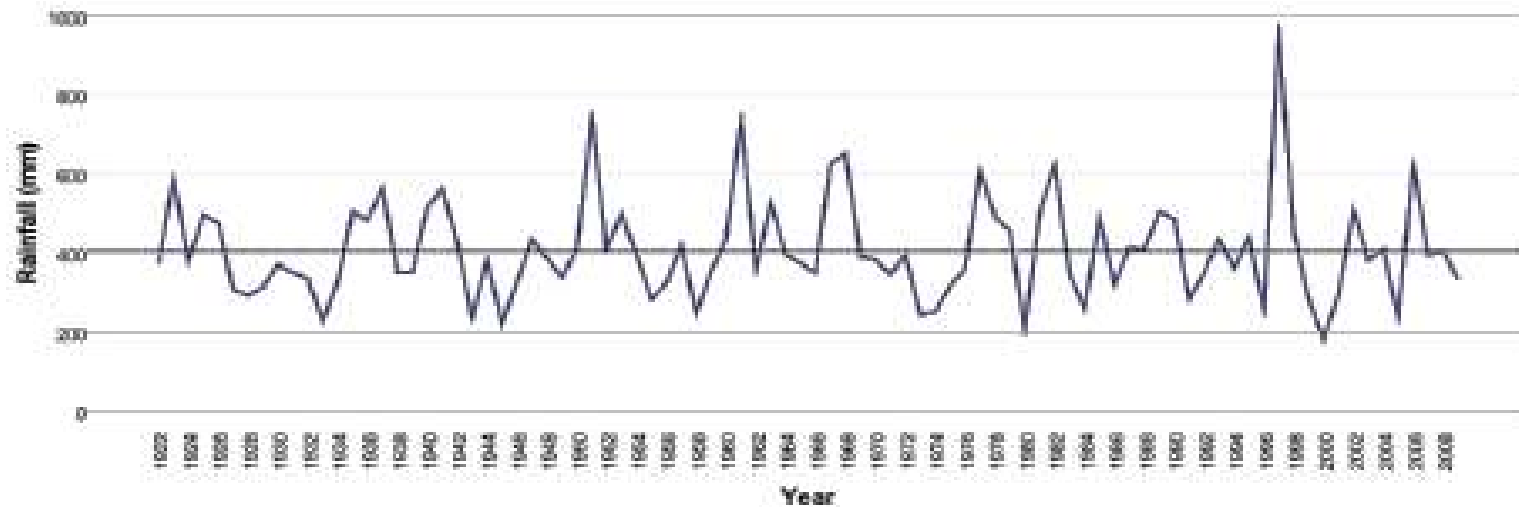
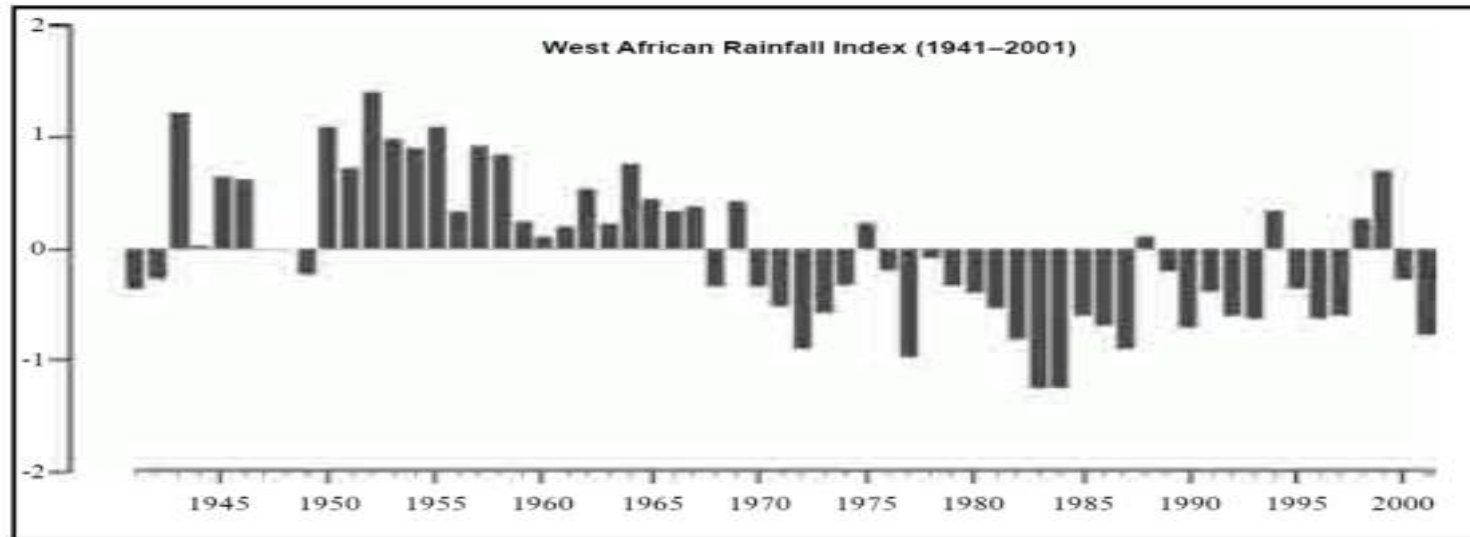


UNCERTAINTY DOMAIN	South Asia : facing the Green Revolution	
ENVIRONMENT/ RESOURCES	<p>Huge, diverse, rich rangeland settings Wide livestock and culture diversity* Diversified climate settings GR transformations - Rangeland conversión Less graze, more feed Diverse mobility patterns</p>	<p>Cchange impacts visible HKush Dams, irrigation, forestry plantations Crop-livestock intertwined Destiny competition and synergies Changing roles of livestock species (ie. goats)</p>
MARKET / COMMODITIES	<p>Large and shifting domestic market demands Dairy boom and meat taboos Pashmina fibre in HK Regional export</p>	<p>Constrasting and contested market niches</p>
INSTITUTIONS/ GOVERNANCE	<p>Livestock social and cultural values India socio-cultural setting Green Revolution - financial, political and techno investments Shifting and contradictory political agendas - mixing economic growth, poverty alleviation and ecological concerns Conflictive regions</p>	<p>Political marginalisation Playing opportunistically with policy inconsistencies / interstices Impo of collective action Geo and social polarisation</p>

Sub-Saharan Africa



Climate: Variability in sub-Saharan African rainfall



The Sahel



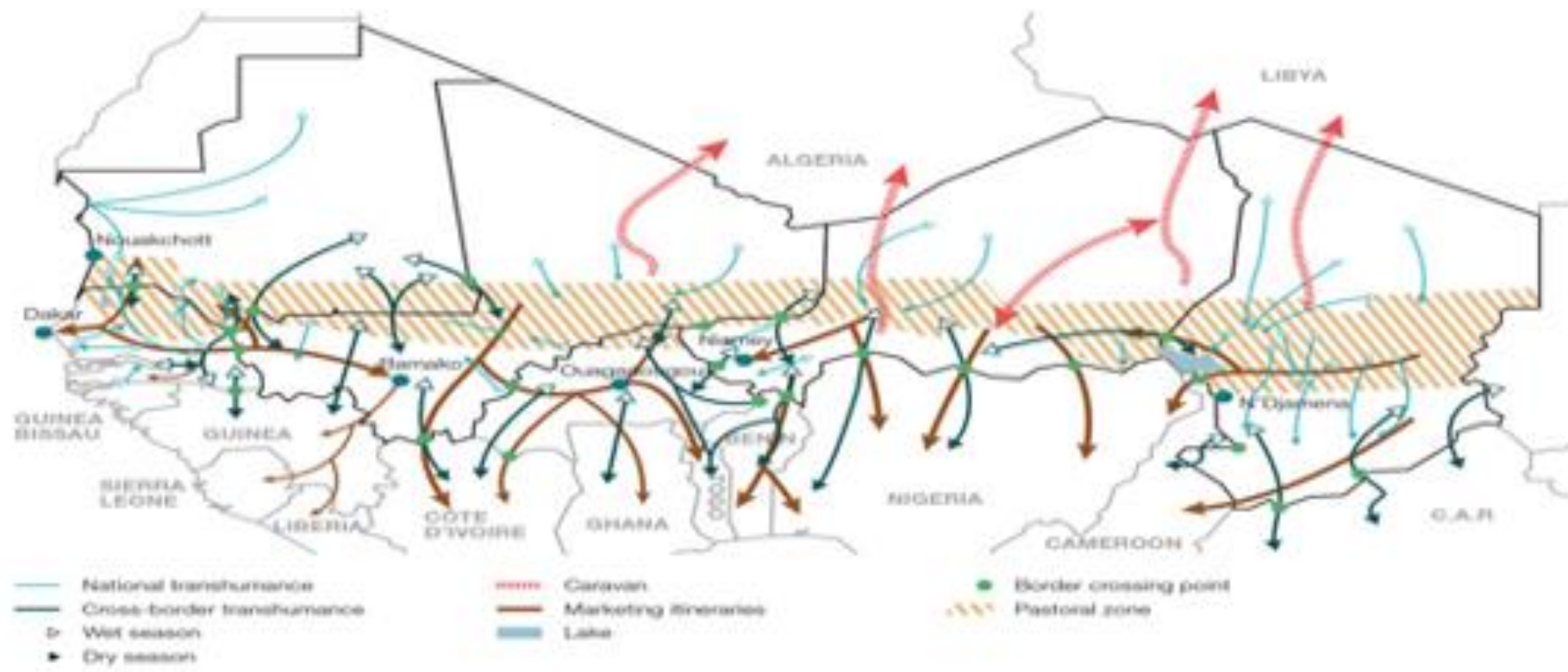
UNCERTAINTY DOMAIN	Sahel: Transhumance integrating territories	
ENVIRONMENT/ RESOURCES	<p>Extensive and diverse rangelands Sharp rainfall gradient N/S</p> <p>Huge demographic growth</p> <p>Drought events 1973 and 1984 tsetse flies and trypanosomiasis</p>	<p>Transhumance – ecological necessity</p> <p>Forms of agro-pastoralism - herding and farming: combination, coop and conflict</p> <p>Climate change – maybe beneficial ?</p>
MARKET / COMMODITIES	<p>Regional, cross-border markets connecting inner drylands and coastal consumers</p>	<p>Transhumance – regional integration</p> <p>Regional complementarity Trafficking and smuggling</p>
INSTITUTIONS/ GOVERNANCE	<p>Few large herding groups Conflictive relationship with State</p> <p>Regional integration Decentralisation</p>	<p>Transhumance – social construction</p> <p>Regional and national levels CDEAO, ROPPA and BMaroobé Pastoral Codes</p>

Ecological perspective



<https://eros.usgs.gov/westafrica/node/147>

Transhumance patterns in Sahelian countries



Source: FAO-CIRAD, 2012

Horn of Africa



M. Caravanni

UNCERTAINTY DOMAIN	<h1 style="text-align: center;">Horn of Africa:</h1> <h2 style="text-align: center;">fragmented and contested rangelands</h2>	
ENVIRONMENT/ RESOURCES	<p>Large and diversified rangelands Encroachments and insecurity</p> <p>Droughts and floods</p> <p>Diverse socio-cultural patterns</p>	<p>Farming, natural conservation, banditry, raiding and militias, refugee camps</p> <p>Rinderpest</p>
MARKET / COMMODITIES	<p>Growing regional and global demands</p> <p>Evolving market networks</p> <p>Regional and global diaspora</p>	<p>Somali trading infrastructure</p> <p>Limited mkt diversification</p> <p>Linking pastoralists to urban and market options</p>
INSTITUTIONS/ GOVERNANCE	<p>Political evolutions (3 new States + 1) Little regional integration – border disputes</p> <p>Regional integration</p> <p>Devolution processes and ethnicization</p> <p>Weaponry</p>	<p>Internal and international conflicts</p> <p>Poor state presence in drylands Fragmented pastoral constituency Pastoral marginality and exclusion Widening social differentiation and stratification</p>

Marketing of camel milk



MENA Maghreb and Mashreq

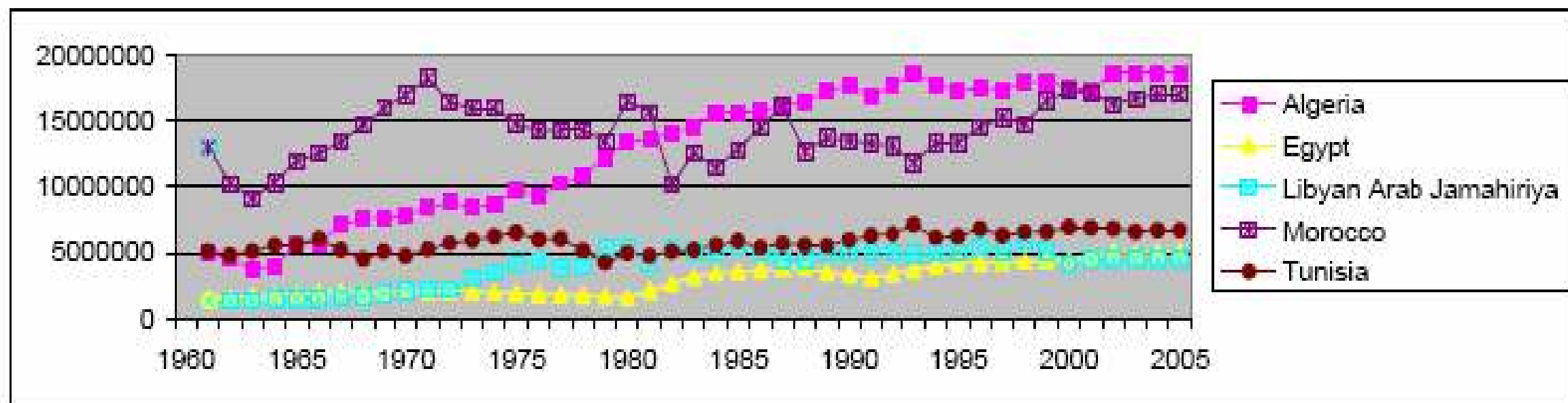


MENA rangelands



UNCERTAINTY DOMAIN	MENA-Maghreb & Mashreq: reconfiguring mobility	
ENVIRONMENT/ RESOURCES	<p>Large drylands water scarcity, little agricultural potential High growth rate human and livestock population*</p> <p>Exposure climate change</p>	<p>1970s dramatic drought events The politics of land tenure Over- and under-grazed pastures</p>
MARKET / COMMODITIES	<p>Huge dependency on food imports State-led market integration (subsidy to an. prod.) Livestock producers serving urban consumers</p> <p>One every two oil-wealth</p>	<p>Market exposure and integration Mkt dependence for inputs and outputs</p> <p>Relevance aid and remittance Livestock intensifies, livelihoods diversify</p>
INSTITUTIONS/ GOVERNANCE	<p>Limited regional integration Agricultural & Trade Shifting policy fwork Community ties and Islamic rule Tighten border regimes and recent conflicts Insurgent movements</p>	<p>Tensions over rangelands control Institutional hybrids: <i>Cooperatives ethno-lignageres</i></p> <p>International emigration</p>

Sheep population trend in the North African region (1962-2005)

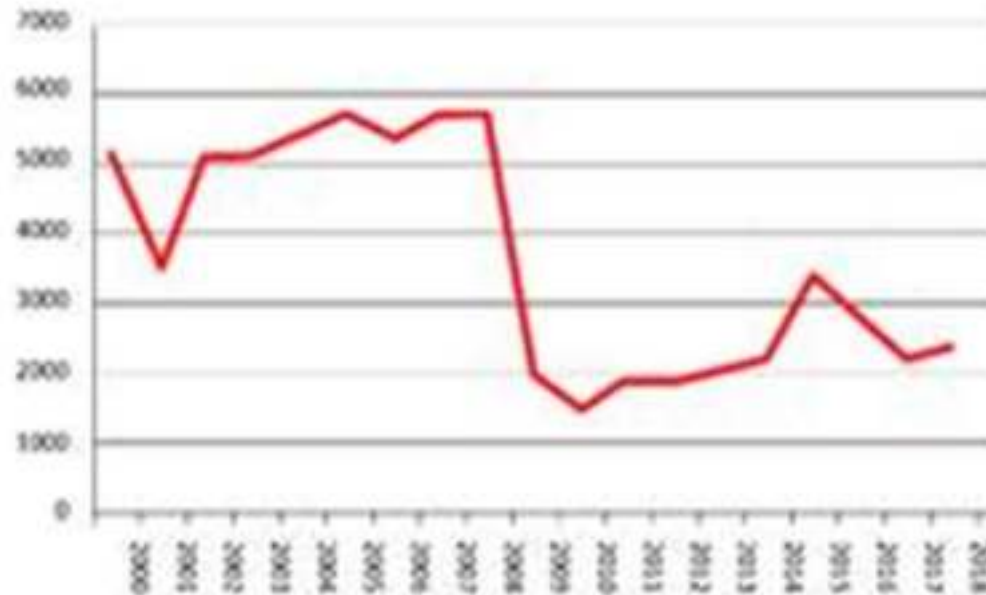


Source: Dutilly-Diane, 2006

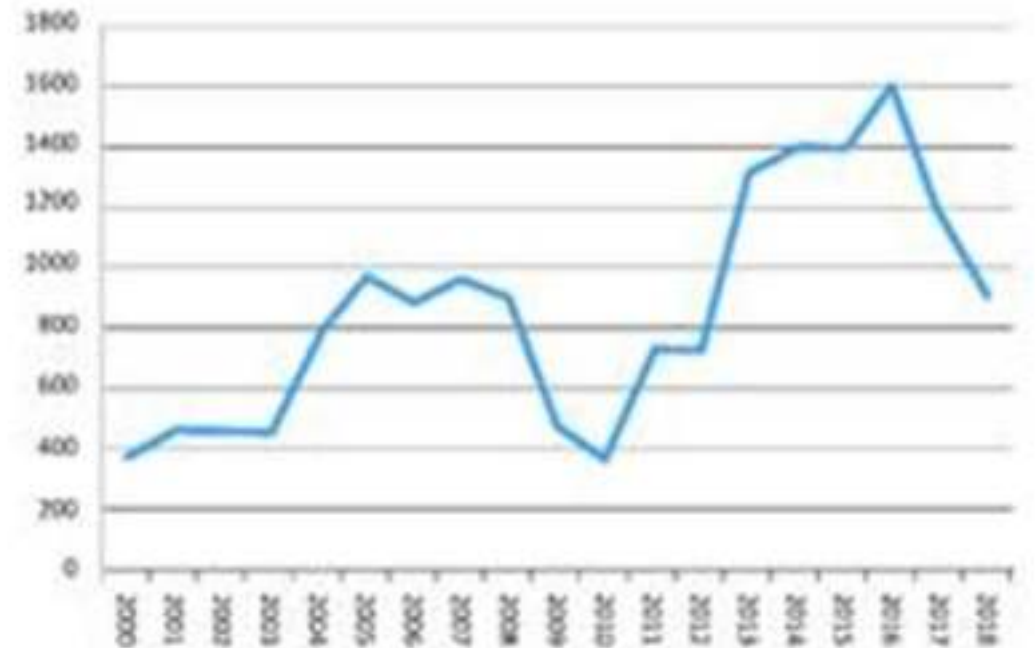
Shift in livestock production systems

Evolution of livestock products in Tataouine 2000-2018

Trend in red meat production (tons)



Trend of milk production (tons)



Mediterranean Europe





Atlantic Ocean

PORTUGAL

SPAIN

MOROCCO

ALGERIA

TUNISIA

LIBYA

EGYPT

GERMANY

FRANCE

SWITZERLAND

AUSTRIA

SLOVAKIA

UKRAINE

MOLDOVA

ROMANIA

HUNGARY

SLOVENIA

CROATIA

BOSNIA

SERBIA

BULGARIA

Black Sea

ITALY

MONTENEGRO

KOSOVO

MACEDONIA

ALBANIA

GREECE

TURKEY

SYRIA

CYPRUS

LEBANON

ISRAEL

PALESTINE

JORDAN

Balearic Sea

Tyrrhenian Sea

Ionian Sea

Adriatic Sea

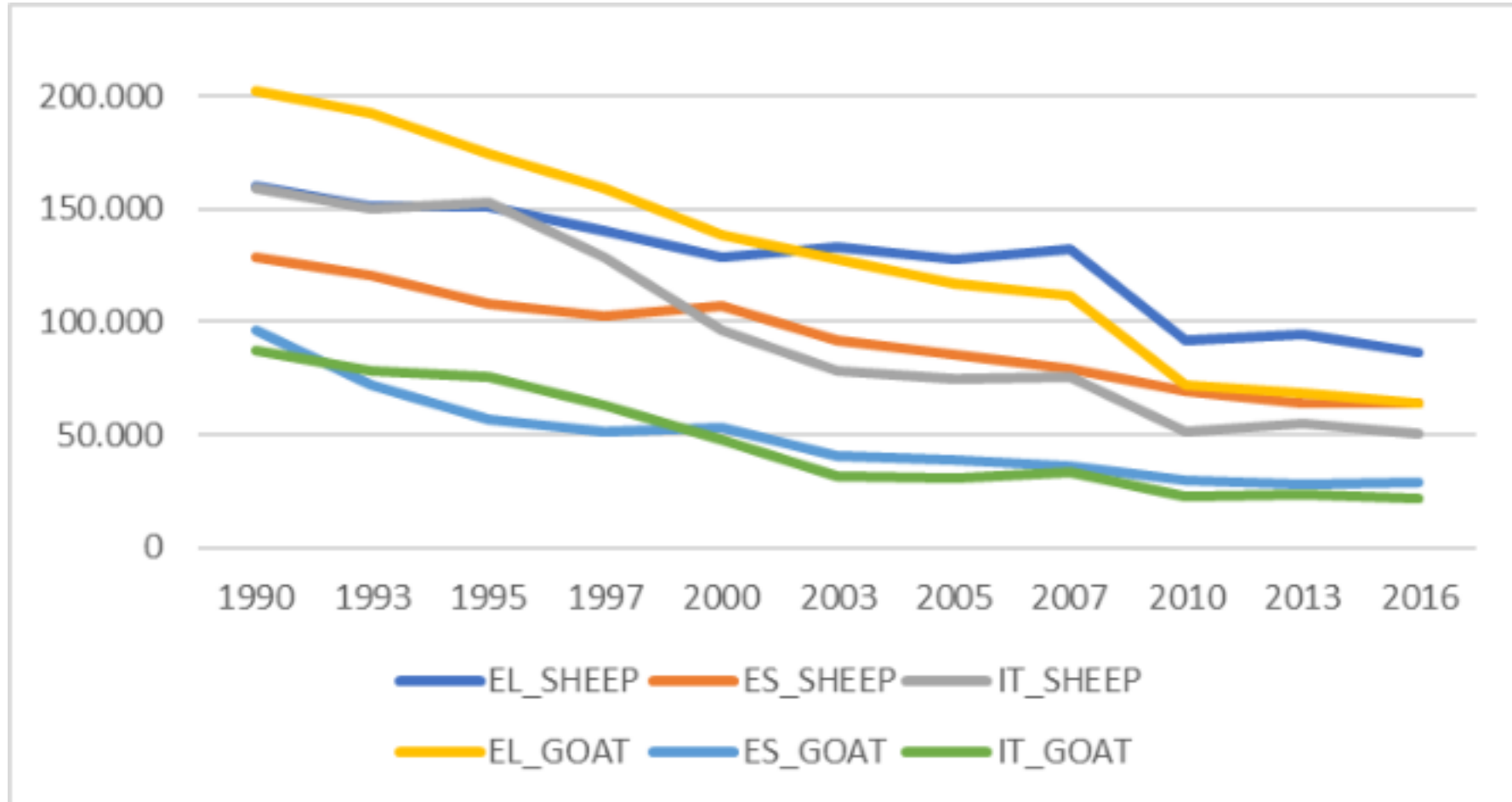
Aegean Sea

M e d i t e r r a n e a n S e a

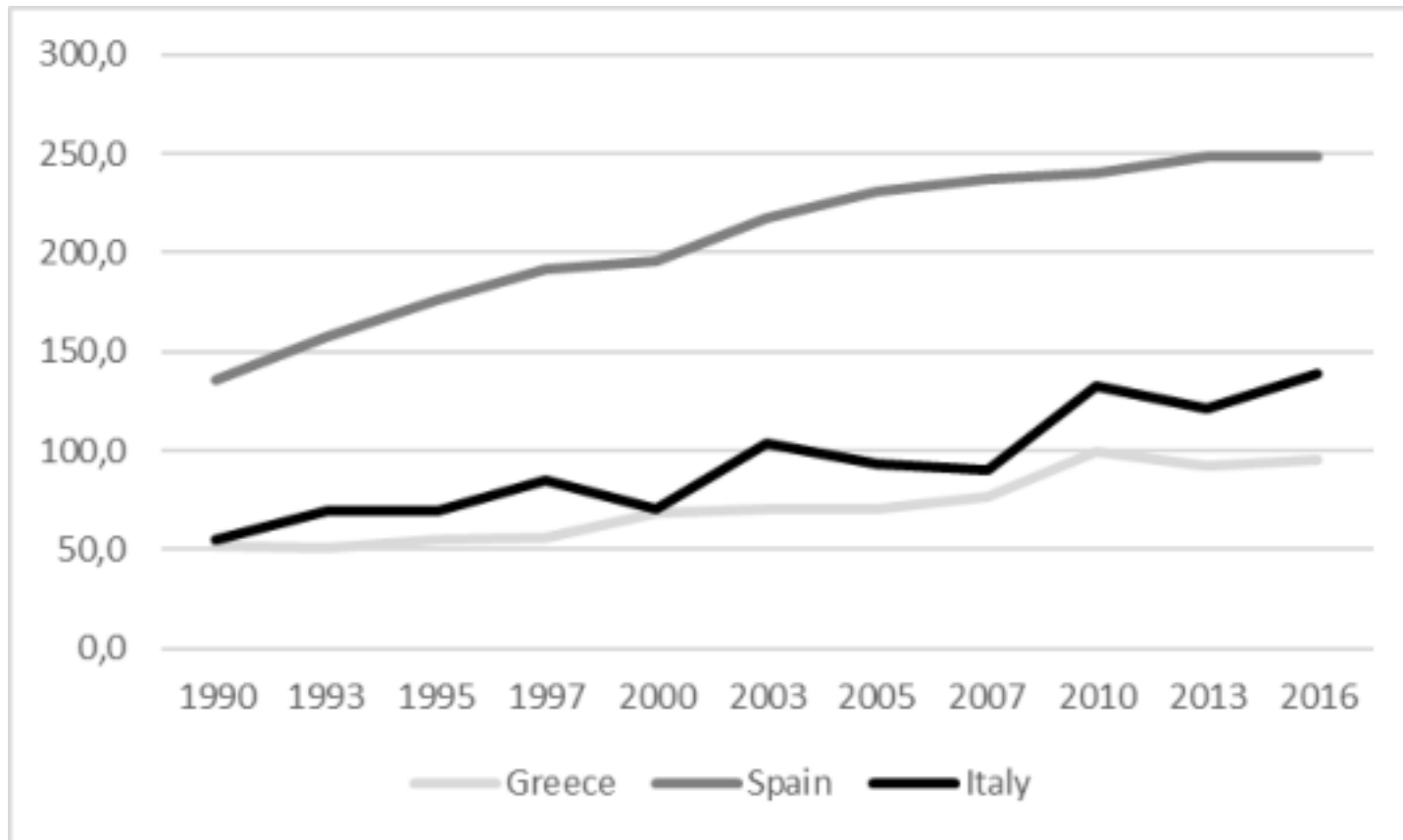
WWW.FREEWORLDMAPS.NET

UNCERTAINTY DOMAIN	Mediterranean Europe: CAP rural welfare	
ENVIRONMENT/ RESOURCES	<p>Mountainous settings, backbone of Europe Over- and under-grazed pastures</p> <p>Socio-ecosystem services Natural 2000 and predators</p> <p>Decreasing livestock and farms</p>	<p>Less Favoured Areas and High Nature Value Shifting climate</p> <p>Shifting sheperding profession - CAP influences access to lands, herd composition, mkt strategies</p> <p>Territorial polarization</p>
MARKET / COMMODITIES	<p>From wool, proteins, to services</p> <p>CAP & State financial support</p>	<p>Changing consumption habits and demands</p> <p>Subsidies 40 to 80% revenue</p>
INSTITUTIONS/ GOVERNANCE	<p>Regional integration EU Common Agricultural Policy Shifting attitudes, demands and roles</p> <p>Socio-ecosystem services</p>	<p>Favourable policy setting (subsidies and programs) Schizophrenic attitude</p> <p>Lacking sheperding workforce Immigrant labour</p>

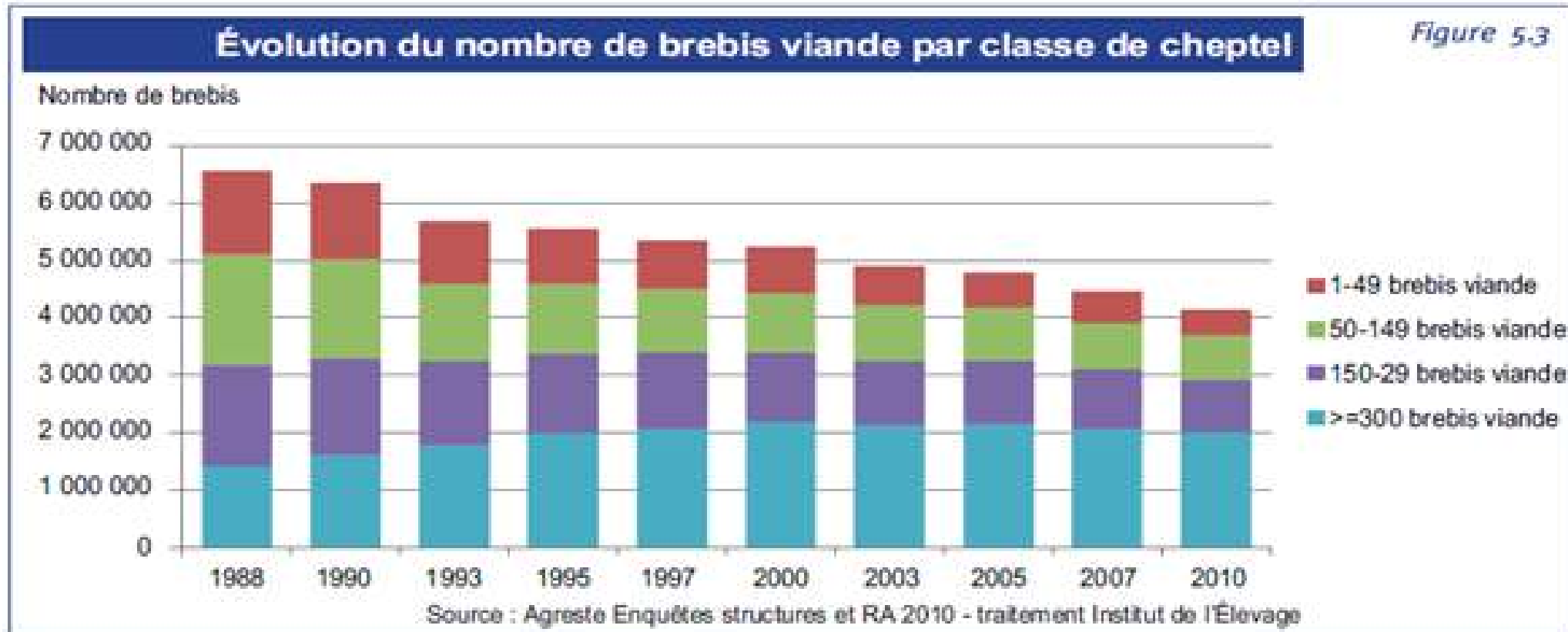
Evolutions of sheep and goat farms in Greece, Spain and Italy (1990-2016)



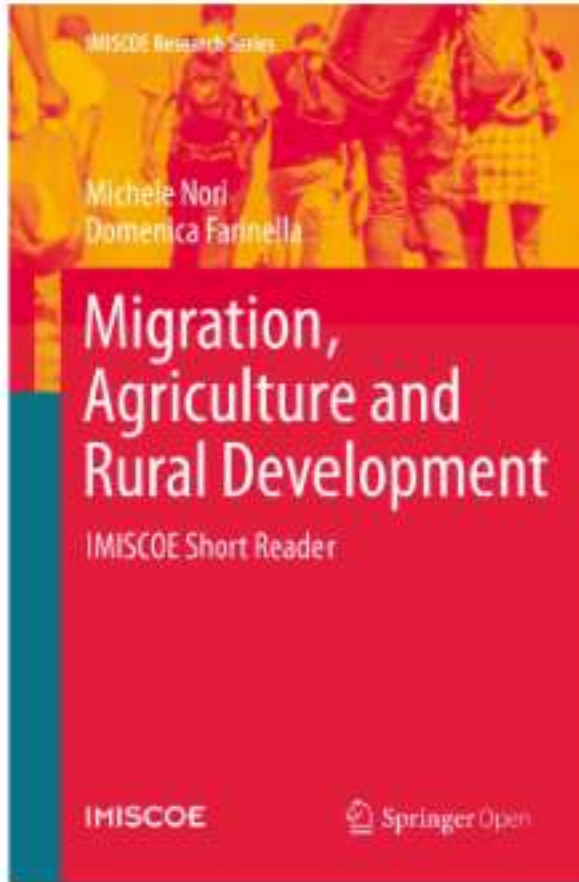
Trend for average sheep farm size



Evolution of the number and size of flocks in the sheep meat industry in France (1988-2010) (IDELE, 2010)



Immigrant shepherd workforce



Michele Nori, Domenica Farinella

Migration, Agriculture and Rural Development

IMISCOE Short Reader

Series: IMISCOE Research Series

- This open access short reader analyses contemporary rural migrations in a very accessible way
- Describes the reconfiguration of agriculture systems and rural landscapes following intense immigration
- Addresses non-intensive agricultural systems and more marginal rural settings
- Examines the relevance of migrant communities to EU agro-pastoralism

This open access short reader looks into the dynamics which have reshaped rural development and human landscapes in European agriculture and the role of immigrant people. Within this

<https://www.springer.com/gp/book/9783030428624> emergence of immigrants in relation to the incorporation of agrarian systems into global markets, the European agricultural governance (CAP) and the struggle of local territories as differentiated practices in constant

1st ed. 2020, X, 139 p. 19 illus.

Printed book

Commonalities amongst regions



UNCERTAINTY DOMAIN	Commonalities / global trends	
ENVIRONMENT/RESOURCES	Growing demography Problems with mobility Climatic change Rangelands degradation Range encroachment Sedentarisation	Pressures & Migration Seeing like the State Increasingly unpredictable patterns Desertification: whose responsibility Contested rangelands Urbanisation
MARKET / COMMODITIES	Market integration Specialisation and diversification Socio-economic differentiation Regional trade	Livestock revolution Dependency on income generation Social stratification New cleavages
INSTITUTIONS/ GOVERNANCE	Political marginalisation Relationships with central State Pastoralism as threatening the nation Triggering events/ ecological or social shock	Controversial agendas * Conflicts From undeveloped to dangerous Droughts, famine, conflict

Environmental uncertainties

Environmental changes

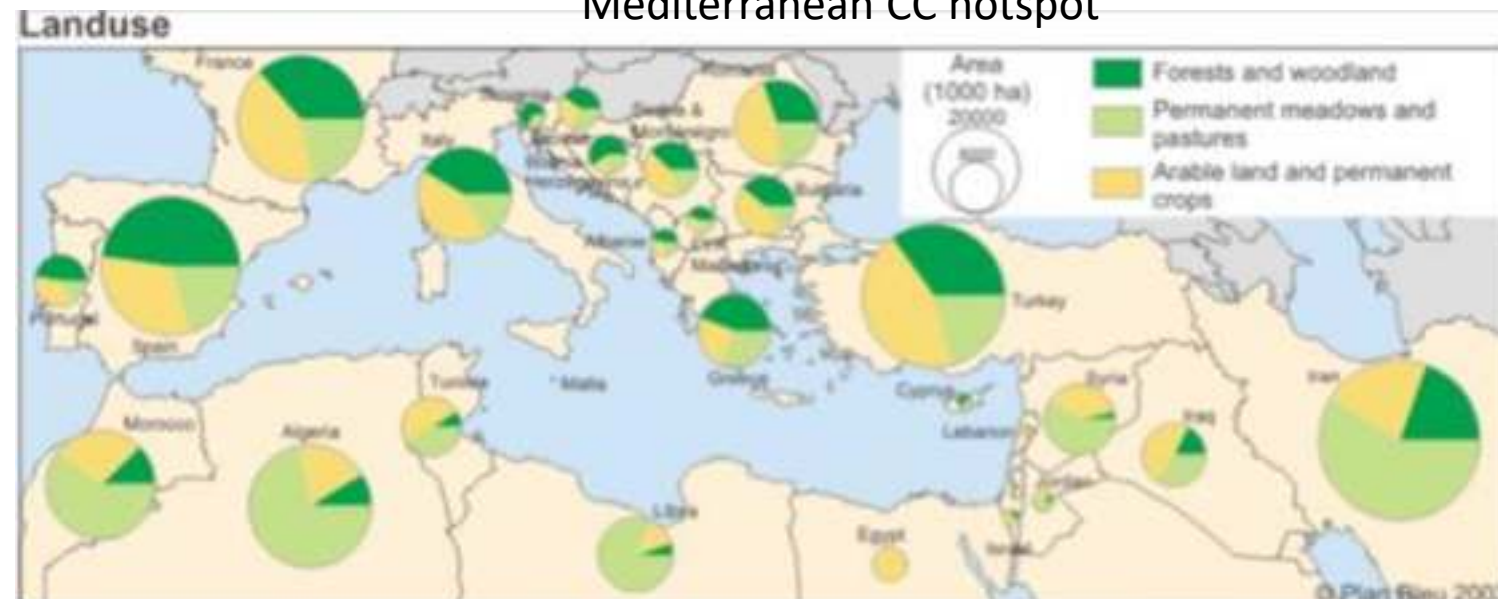
- Encroachment on land use
- Demography
- Range degradation
- Relationships with parks and wildlife



Climate changes

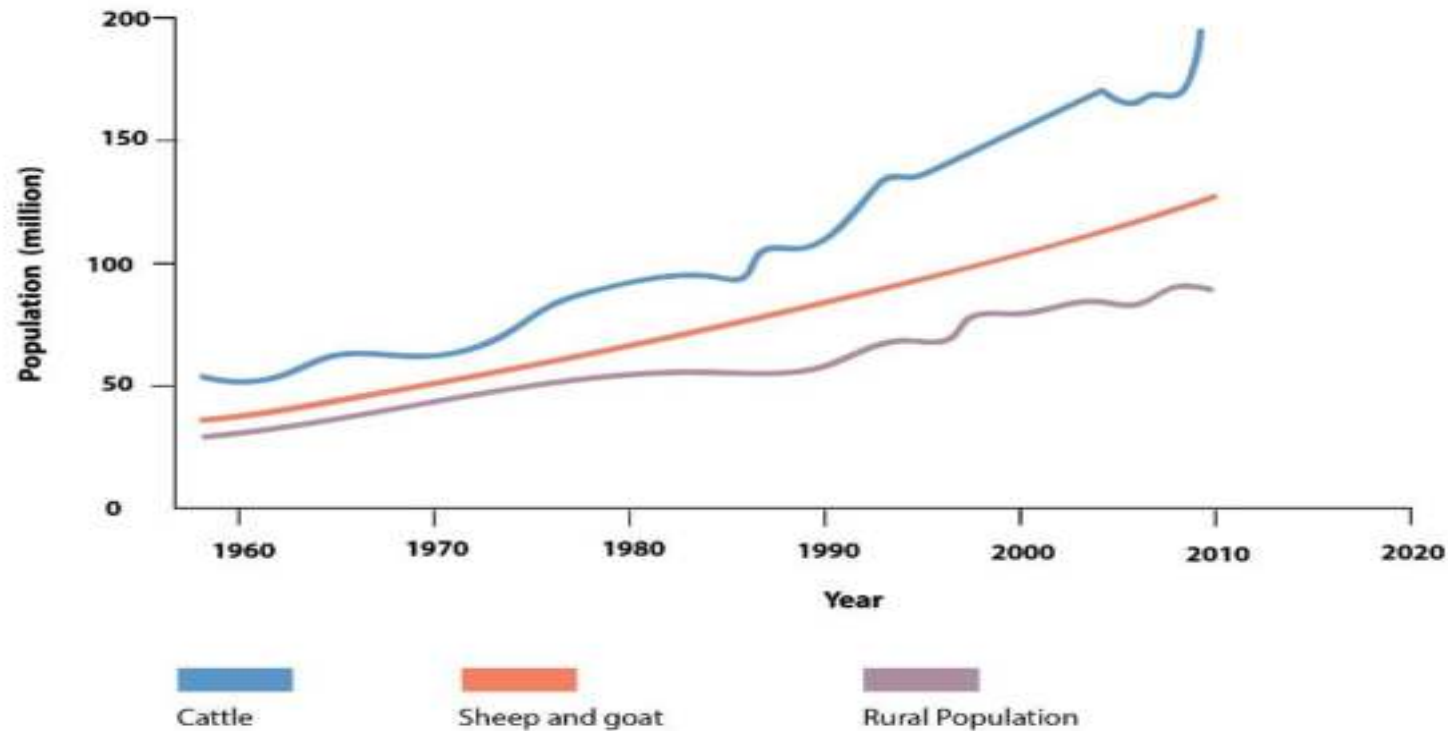
- Warmer and drier
- Increase of extreme events
- Growing unpredictability

Mediterranean CC hotspot



Environmental changes

Growth of livestock numbers and rural human population in African drylands – 1960-2010 (millions)



Source: elaboration from FAOStat, 2015

Market uncertainties

Commoditization of pastoral resources

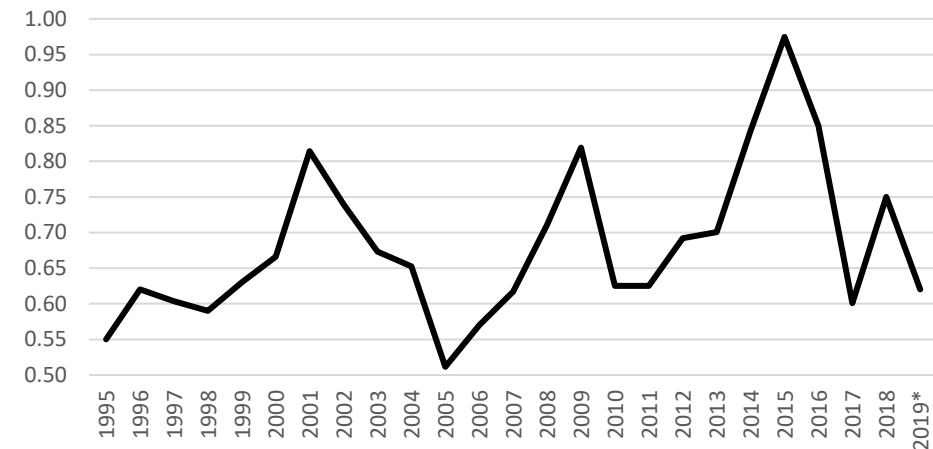
- Livestock
- Land
- Labour

Dependency

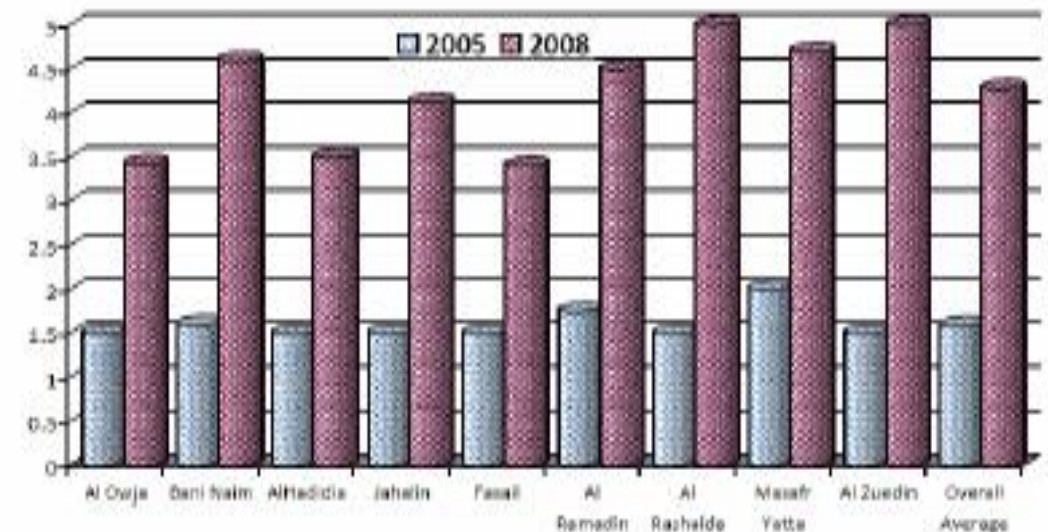
Competition

Social stratification

Volatility of the price of sheep milk in Sardinia (€/liter)



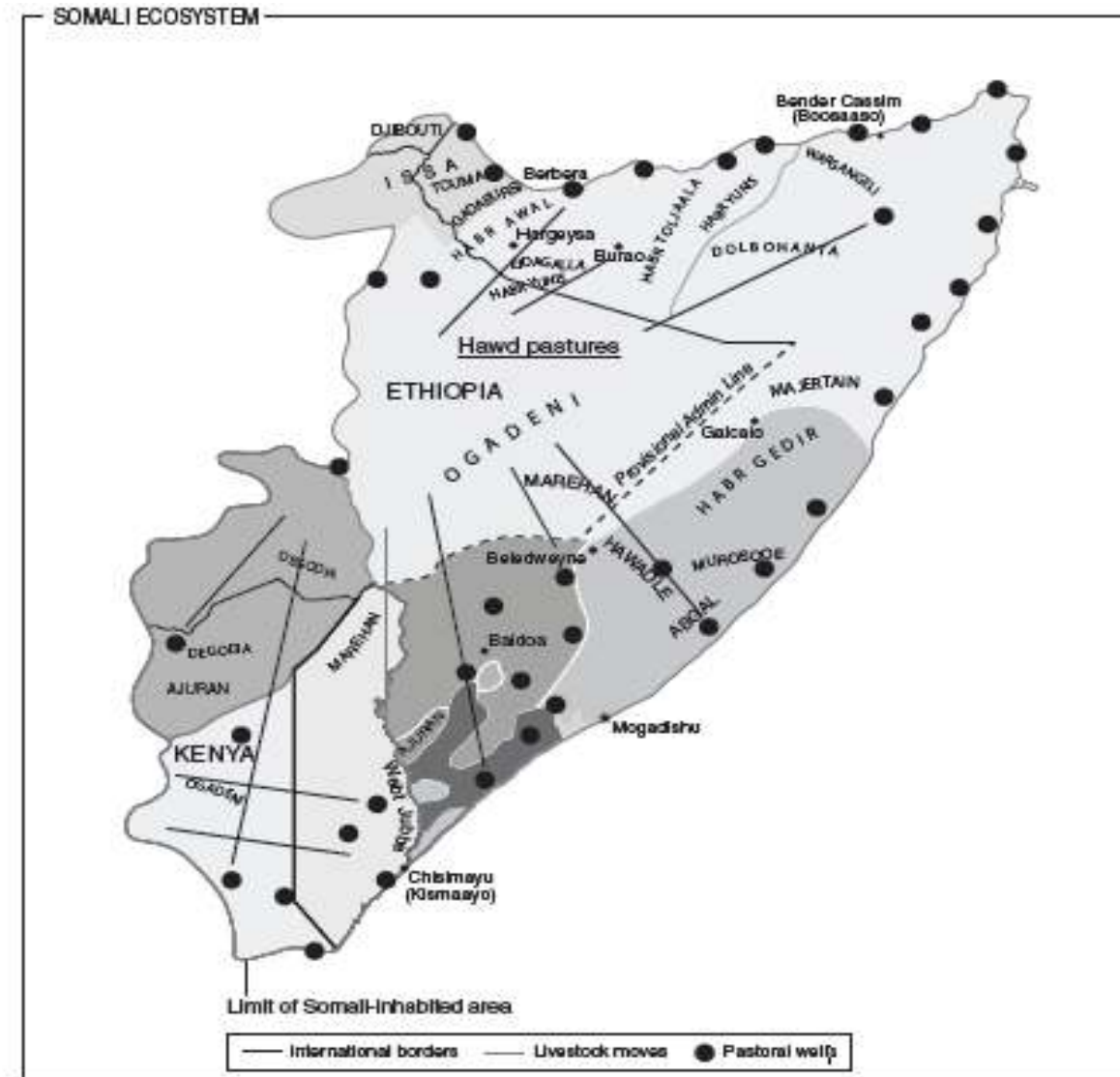
Terms of trade between price of lamb and barley in the West Bank, Palestine (ICRC, 2008)



Policy uncertainties

- Land grabbing
- Regional communities
- Conflict and insurgency
- State marginalisation
- Cross-border tensions and traffics
- Statelessness - the dryland belt

The Somali ecosystem



Shifting property rights regimes in China

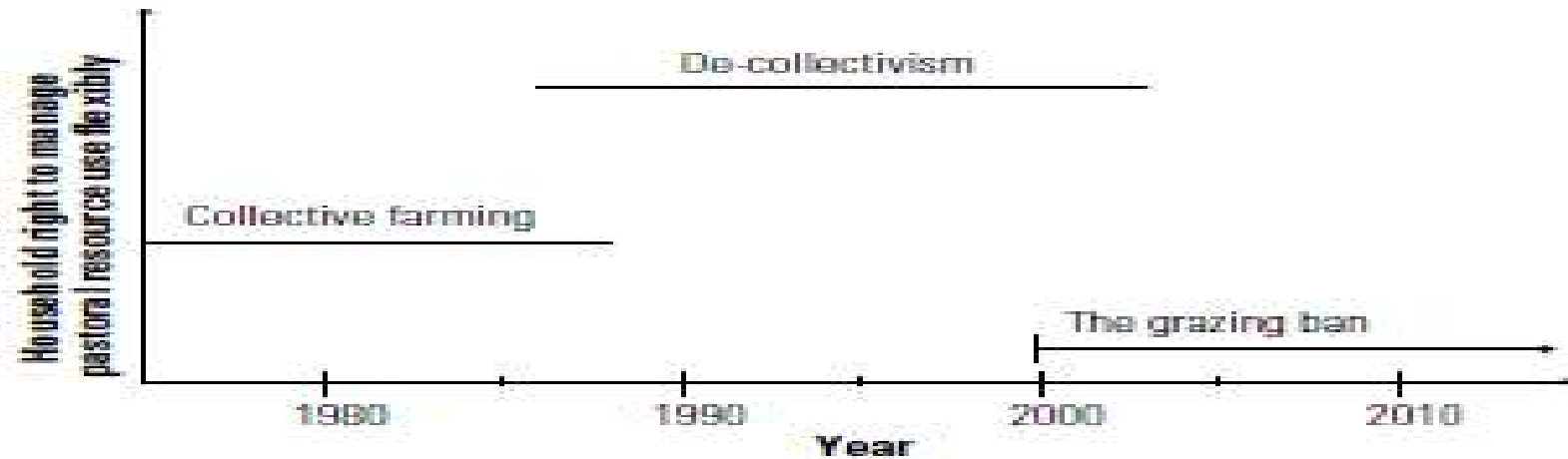


Fig. 1

The shift in pastureland use rights from the community to individual households, in the context of institutional change

The de-collectivisation of pastureland took place mainly during the late 1980s to the early 1990s, but the specific period of these reforms varied widely among different communities

How are pastoralists responding to shifting uncertainties: Practices, strategies, Principles.



WWW.PASTRES.ORG

The evolving interface between pastoralism and uncertainty: reflecting on cases from three continents.

Herding through uncertainties – regional perspectives, analysing the drivers of uncertainty for herders in six pastoral regions in the globe

Herding through uncertainties – principles and practices, analysing pastoralists' strategies to cope with and adapt to the uncertainties embedding their livelihoods

patterns of pastoralists' coping and adaptation strategies

LIVESTOCK CENTRALITY	1.1 Centrality of livestock 2 1.2 Adaptive herd management 5 1.3 Restructure herd composition 6 1.4 Integration with farming 8	
LIVELIHOODS	2.1 Mosaics of livelihood strategies 10 2.2. Reconfiguring households 12 2.3 Engage with markets 15	
MOBILITY	3.1 Pastoral mobility patterns 16 3.2 Technological innovations 18	
TERRITORIES	4.1 Reticular territories 20 4.2 Global exposure 23	
SOCIO POLITICS	5.1 Institutions grounded on rangelands 25 5.2 From land to globe 26	

- Thank you for your attention
- All questions and suggestions welcome

[Data, info and materials on
WWW.PASTRES.ORG](http://WWW.PASTRES.ORG)



michele.nori@eui.eu

