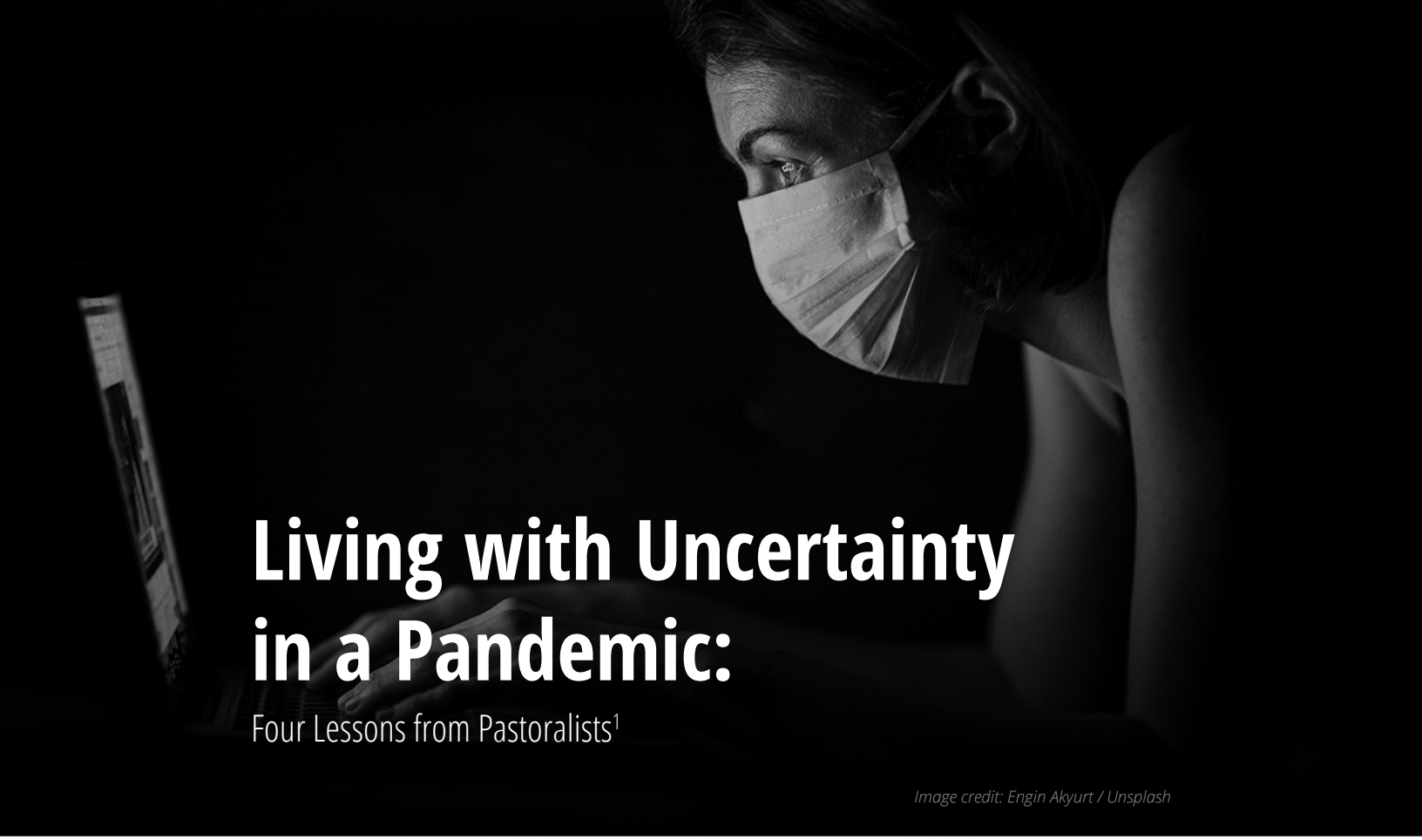

Living with Uncertainty in a Pandemic:

Four Lessons from Pastoralists[1]

Image credit: Engin Akyurt / Unsplash

Ian Scoones, Ph.D.
PASTRES Programme,
Institute of Development Studies, University of Sussex, UK

Michele Nori, Ph.D.
PASTRES Programme,
European University Institute, Florence, Italy

Moments of surprise can expose deep uncertainties and even ignorance. They also uncover issues of contested politics, unequal social relations and the capacities of states and citizens. The coronavirus (COVID-19) pandemic is one such moment.

In times when our normal ways of doing things are massively disrupted, when we don't know what will happen where and when, and uncertainties are everywhere,

[1] This article first appeared on the PASTRES blog (www.pastres.org) and emerges from the PASTRES programme, supported through an Advanced Grant from the European Research Council. It draws on work under the STEPS Centre on the uncertainties of and the responses to epidemic disease.

we must learn to adapt rapidly and radically. This has been life and living with the coronavirus. For those of us accustomed to predictability and stability, with systems that function continuously and reliably, this sort of uncertainty — now being experienced the world over — is unsettling; it provokes anxiety, stress, dislocation and sometimes panic.

But for many people living in highly variable environments, where shocks of drought, flood, snowfall, locust swarms or human and animal disease are regular occurrences, uncertainties are always part of everyday life. Indeed, uncertainties are not only lived with, but lived off,[2] as variability, mobility, flexibility are central parts of livelihood systems in pastoral settings, as we have learned during the pandemic.[3]

A question we have been asking in our European Research Council-funded PASTRES[4] programme (Pastoralism, Uncertainty, Resilience: Lessons from the Margins) is: Can we learn how to address uncertainties within wider society — including around disease pandemics — from pastoralists who live with and from uncertainty? What are the logics, practices, strategies and social and political arrangements that allow for adaptive, flexible responses in the face of uncertainty, generating reliability in turbulent times? And, does this result in a new politics of uncertainty — and so accountability and responsibility?[5]

Of course, the spread of a global pandemic virus of massively lethal potential is very different from the more traditional problems faced by pastoralists — whether in mountainous Tibet, lowland Ethiopia or the hills of Sardinia.[6] There are, however,

[2] Krätli, Saverio, and Nikolaus Schareika. "Living Off Uncertainty: The Intelligent Animal Production of Dryland Pastoralists." *The European Journal of Development Research* 22. 1 Dec. 2010. 605-22.

[3] Simula, Giulia, et al. "Covid-19 and Pastoralism: Reflections from Three Continents." PASTRES. 27 Nov. 2020. https://pastres.org/2020/11/27/new-paper-Covid-19-and-pastoralism-reflections-from-three-continents/.

[4] PASTRES (*Pastoralism, Uncertainty and Resilience: Global Lessons from the Margins*) is a research programme that aims to learn from pastoralists about responding to uncertainty and resilience, with lessons for global challenges. The project is hosted by the ESRC STEPS Centre at the Institute of Development Studies, University of Sussex and the European University Institute in Florence. It is led by Prof Ian Scoones (STEPS/IDS) and Dr Michele Nori (EUI), with supervision support from Dr Jeremy Lind (IDS).

[5] Scoones, Ian, and Andy Stirling. "Politics of Uncertainty: Challenges of Transformation." Taylor and Francis. 2020. doi:10.4324/9781003023845.

[6] "Cases." PASTRES. PASTRES, 16 June 2020. https://pastres.org/cases-and-themes/cases/.

some themes that emerge from our research that offer pointers. Here, we outline four of them.

1. Multiple knowledges

In navigating uncertainties, pastoralists must engage with multiple sources of knowledge, triangulating among them.

In navigating uncertainties, pastoralists must engage with multiple sources of knowledge, triangulating among them. This may involve engaging with expert or scientific knowledge derived from, say, weather reports; or it may involve informed advice on pasture condition or animal disease. It may involve reference to or consideration of local, embedded traditional knowledge; it could include consulting local experts — traditional healers, prophets and soothsayers — to gain, for example, to understand the seasons from signs in nature or messages from the spirit world. And, it may involve informally-shared updates and locally-rooted practical knowledge from friends, neighbours, relatives and others — these days often via mobile phone through Facebook or WhatsApp groups.[7] For example, these may include information on the state of grazing, the availability of water in a well or the source and quality of forage.

All these sources — formal, informal, real-time, predictive — are combined and reflected upon and, in turn, feed into action. No single source is relied upon solely on its own. This sometimes frustrates development experts who spend huge amounts of money providing sophisticated forecasting or satellite monitoring systems, complete with user-friendly online mobile interfaces such as those used in climate/weather forecasting, drought early warning or market information systems.

It is the same with disease response systems: Again, huge efforts are made to predict and prepare, and to communicate meaningful expert advice. But, this information must be incorporated into and complement locally embedded

[7] Tasker, Alexander John. "Processes of Hybrid Knowledge Creation in Pastoralist Development [Ph.D. Dissertation]." Brighton, United Kingdom: University of Sussex/ProQuest Dissertations Publishing. Accessible from http://sro.sussex.ac.uk/id/eprint/80671/, 2018.

knowledge. This, then, must become part of regular practice. Yes, we know that hand-washing and "social-distancing" are important, but such practices — these changes to our normal routine — only happen when other sources of knowledge and advice combine. Just relying on formal models and accredited expertise — "the science"[8] — is not enough in the context of deep uncertainties. Reducing everything to directive risk management is insufficient, and is in fact misleading, as uncertainty, ambiguity and ignorance must be embraced.[9]

Pastoralists know this when they hear a climate forecast and an early warning message from the government. Local experience and assessment is an essential complement to the official message. Only when such a message is fully trusted will it be accepted. Today, publics everywhere are grappling with how to respond to public health messages about the risks of Covid-19, along with orders to isolate and quarantine. In these situations, people's personal, experienced, embodied uncertainties must also be addressed. Accepting the existence of plural knowledges, even some that may be regarded as "unscientific," is essential when navigating uncertainty and ignorance.

2. How time is experienced

Very often external interventions — whether around disease or drought — are constructed around the notion of an "event" and a timeline around which a staged series of risk management measures are deployed.

Forecasts that assess the probabilities of something happening assume that, based on past experience or modelled futures, we can predict and manage people and things. So, whether it is the varying levels of "early-warning" alerts around a drought, or the stages of a response in an unfolding epidemic, the planning system imagines time in a linear, ordered, managed way. The result is the sequential deployment of interventions, managed by "emergency" teams and "rapid response" facilities.

[8] Scoones, Ian. "Science, Uncertainty and the Covid-19 Response." STEPS Centre. The ESRC STEPS (Social, Technological and Environmental Pathways to Sustainability) Centre, 15 Mar. 2021. https://steps-centre.org/blog/science-uncertainty-and-the-Covid-19-response/.

[9] Stirling, Andy. "Keep It Complex." Nature 468 (12/01 2010): 1029-31.

But this isn't the way most people experience time. The ordered, hierarchical administrative time of crisis and emergency management has to articulate with the more complex flows of lived-with time in everyday life. Whether this is people responding to a pandemic disease in their family or neighbourhood, or a group of pastoralists managing highly variable grazing across far-flung territories with mobile herds, the experience of time may be quite different to those of preparedness planners and early-warning system administrators.

How the present, the future and the past are experienced may vary dramatically. Memories of past droughts or disease outbreaks loom large, while expectations of the future are affected by current conditions, as well as deeper cosmologies. Futures are not simply a linear extension of the present, as in the liberal modernist view, but are deeply intertwined with memories, experiences and histories. These will differ across class, gender, age and race, affecting how different people anticipate and respond. Everyday, unfolding time is therefore a flow, not an event.

Image credit: Sanjoy Karmakar / Shutterstock

For people responding to a disease, or managing mobility and seeking out pasture, time may therefore not be so obviously punctuated with distinct events, and responses may not appear in neat sequences. Instead, a host of other considerations apply — people's lives, livelihoods, spiritual needs or mental states. All of these can affect what is done when, and by whom.

3. Reliable systems

Uncertainties provide major challenges to standardised systems that assume stability. Following policy analyst and risk management expert Emery Roe, we

can understand pastoral systems as "critical infrastructures,"[10] with the objective of reliably delivering desired outputs (milk, meat, hides, services and overall well-being) in the context of multiple uncertainties. Just as an energy supply system aims to keep the lights on, and a health system aims to provide effective healthcare, pastoralists also must generate reliability through a range of practices. And they seem to be quite good at it.

What are the features of this? Reliability emerges from an understanding of the wider system and its vulnerabilities, as well as insights into local contexts. Horizon scanning must combine with the day-to-day practices that allow rapid, adaptive responses. Herders and market traders must do this all the time, regularly checking on grass, water, prices and so on, while having a good sense of the overall system. They will not rely on an "expert decision system" from outside, but they must build reliability through their own networks, among individuals, kin, age-groups and communities. Communication and deliberation is central, facilitated these days by mobile communications. When a disaster strikes, knowledge, resources and labour can be mobilised rapidly, and animals can be moved, fodder purchased or water supplied.

Most standard, engineered systems designed for stable conditions are poor at generating reliability under such variable conditions. A health system relies on a regular flow of patients with a standard set of ailments requiring a prescribed array of treatments. This is fine under "normal" conditions, but when a disease outbreak occurs, such systems quickly become overwhelmed, and there is a need to think differently.[11]

Part of this is basic capacity, particularly in systems that are underfunded, but it also relates to the capacities of the professionals involved. Very often it is the frontline workers — doctors, nurses, pharmacists — who are left to innovate, to create reliability on the move. Managing an intensive care unit in a hospital may be more similar than we think to the embedded skills, aptitudes and practices

[10] Roe, Emery. "A New Policy Narrative for Pastoralism? Pastoralists as Reliability Professionals and Pastoralist Systems as Infrastructure." STEPS Centre. The ESRC STEPS (Social, Technological and Environmental Pathways to Sustainability) Centre. 15 Jan. 2020. https://steps-centre.org/publication/a-new-policy-narrative-for-pastoralism/.

[11] Chapman, J. "System Failure: Why Governments Must Learn to Think Differently, 2 ed." London: Demos. 2004.

of pastoralists, who must make agile, sometimes difficult, choices when facing variability.

4. Collective solidarities

If states cannot provide, businesses struggle and experts are overwhelmed, what, then, can we turn to?

If states cannot provide, businesses struggle and experts are overwhelmed, what, then, can we turn to?

Because externally defined, top-down risk management based on predictive science is always insufficient under radical uncertainty and ignorance, we must also rely on ourselves — on community action and forms of solidarity and mutuality. Such initiatives are emerging during the coronavirus pandemic, including the explosion of locally-organised "mutual aid" groups[12] helping those in self-isolation and quarantine. Across Europe, a new, rediscovered moral economy is confronting the crisis.

How such arrangements work will, of course, depends on the setting and the challenge, but in pastoral areas, collective approaches to herd and flock management have always been vital in responding to variability. For example, a common tactic is to split a herd between young and vulnerable calves and milk cows who remain at home with additional fodder, and those that must migrate to distant pastures for the dry season. Mobility, flexibility and modular approaches to managing livestock and territory are the watchwords. These responses only work if they can mobilise labour, and this requires reciprocal relationships across kin and age groups and across communities.

In the past, east African pastoralism was characterised by extensive redistributive practices, as livestock were shared, loaned and redistributed across multiple ownership arrangements, facilitated by segmentary lineage structures and age groups with specific responsibilities. This allowed for horizontal redistribution, friendship alliances across territories and marriage contracts that allocated stock. While such arrangements have declined due to the individualisation and

[12] Booth, Robert. "Community Aid Groups Set up across UK amid Coronavirus Crisis." *The Guardian.* Guardian News and Media. 16 Mar. 2020. https://www.theguardian.comsociety/2020/mar/16/community-aid-groups-set-up-across-uk-amid-coronavirus-crisis.

commoditisation of pastoral production, the cultural values and embedded practices still remain, and are often remobilised in times of severe crisis.

The revival of community and neighbourhood solidarities around Covid-19 is an example of how such social relationships are crucial in responding to uncertainty. Even in the commercialised, individualised West, they can still re-emerge around a redefined sense of collective responsibility. In tackling a pandemic and working across nations, individual and collective actions must combine, public and private interests must converge, and centralised and local decision making must interact.

Covid-19 has changed everything: how we live, how we relate, how we engage with expertise and how states and citizens interact. Deep uncertainties[13] and extensive ignorance, as well as contested ambiguities, necessarily reshape society and politics, suggesting that a simple resort to old-style modernising control and stability is futile. We have learned to adapt fast, but with uneven consequences as contrasting social groups, regions and countries have been differentially affected. In the future — for this will not be the first or last time such a shock emerges — we must rethink our approaches to disease preparedness,[14] accepting and even embracing uncertainty, and we have to reconsider the basic parameters of what is effective development,[15] recasting our ideas of progress and modernisation for a turbulent world. In doing so, perhaps we can learn from others, including pastoralists, who have long embraced uncertainty as part of life.

Covid-19 has changed everything: how we live, how we relate, how we engage with expertise and how states and citizens interact.

[13] Scoones, Ian. "What Is Uncertainty and Why Does It Matter?" In *STEPS Working Paper 105*. Brighton, UK: The ESRC STEPS Centre. Accessible from https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/14470, 2019.

[14] Leach, Melissa, et al. "Rethinking Disease Preparedness: Incertitude and the Politics of Knowledge." *Critical Public Health*. 2021. 1-15.

[15] Leach, Melissa, et al. "Post-Pandemic Transformations: How and Why Covid-19 Requires Us to Rethink Development." *World Development* 138. 1 Feb. 2021. 105233.

About the authors

Ian Scoones, Ph.D.

Ian Scoones is a Professorial Fellow at the Institute of Development Studies at the University of Sussex, and a co-director of the ESRC (Economic and Social Research Council) STEPS (Social, Technological and Environmental Pathways to Sustainability) Centre. He is the principal investigator of PASTRES (Pastoralism, Uncertainty and Resilience: Global Lessons from the Margins). An agricultural ecologist by original training, he has worked on dryland agrarian change, livelihoods and the politics of sustainability for more than 30 years, including on pastoralism.

As a result of a 15-year study conducted by Professor Scoones and a team of rural livelihoods researchers, the understanding of the impact of the 2000 Zimbabwe land reform has been transformed, leading to policy shifts within the region and internationally. The groundbreaking work has changed the terms of land reform debate in Zimbabwe and elsewhere in Africa, and it has sparked new discovery in other parts of the country by Zimbabwean researchers supported by program grants. The work done by Scoones and his team has led to new government policy initiatives and a reappraisal of approaches to food security assessments and livelihood resilience-building for smallholder farmers.

Scoones' books include "Living with Uncertainty: New directions in pastoral development in Africa" (1995), "Dynamic Sustainabilities: Technology, Environment, Social Justice" (2010) and "Sustainable Livelihoods and Rural Development" (2015).

Michele Nori, Ph.D.

Michele Nori is based at the Global Governance Programme of the European University Institute (EUI), Firenze. A tropical agronomist by original training, with a Ph.D. in rural sociology (Wageningen), he has worked extensively in pastoral areas in Africa, Qinghai-Tibet, China and the Mediterranean region. He has recently completed a Marie Curie Fellowship with EUI, focused on migration and pastoralism in the Mediterranean region.

Nori has some 20 years of field experience on the technical as well as socio-economic aspects of natural resource management in different regions of the world (mostly Africa, but also Asia and Latin America), where he has mainly dealt with the livelihood systems of pastoral communities.

His current concern is to adequately inform policy decisionmaking on aspects of rural development, food security and natural resource management in the Mediterranean region — a domain where migrations plays an increasingly important role.