The Jameel Observatory for Food Security Early Action aims to catalyse change so that vulnerable pastoral and agro-pastoral communities in target regions of East Africa are more prepared for and resilient to the effects of evolving environmental shocks and stresses on their food security and nutrition.

In its second year the Observatory has moved from establishing its Directorate and Community of Practice (CoP) to starting a series of research for action initiatives through engagement of young scholars (both PhD students and post-doctoral scientists), launching an Impact Collaboration on data for early action, commissioning short-life consultancy projects e.g. on anticipatory action during a protracted crisis, co-funding a project on improving seasonal estimates of childhood nutrition metrics, appointing a Senior Research Fellow, refining a Theory of Change, fostering key partnerships, bidding for further research funding, communicating our work at various levels including in high profile publications, and exploring synergies with the wider Jameel Observatory through engagement with the Jameel Observatory-CREWSnet programme.

All our activities have been informed and guided by our CoP and specifically the five Challenge Questions agreed at our inaugural meeting at the end of Year 1.

In Year 3, our emphasis will be on research implementation, building our funding base and continuing to raise the profile of the Jameel Observatory.

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Background
The Jameel Observatory for Food Security Early Action was established in June 2021 with the vision that vulnerable pastoral and agro-pastoral communities in target regions of East Africa are more prepared for and resilient to the effects of evolving environmental shocks and stresses on their food security and nutrition. Community Jameel and the University of Edinburgh along with ILRI, Save the Children and J-PAL, have since worked on a programme to address periodic food and nutritional security shocks and crises facing pastoralist communities in East Africa.

The Observatory is centred around a CoP involving key food security actors in East Africa. At its first meeting in 2022, the Community distilled five Challenge Questions that frame our activities. These questions revolve around data, coordination, financing, trust and local anticipatory action. These Challenge Questions also helped us develop our Theory of Change that defines paths to impact with clear benefits to vulnerable pastoral and agro-pastoral communities.

The first year of the Observatory was mainly occupied with establishing the governance structure and getting staff in position. In its second year the Observatory has begun to develop a portfolio of research for action activities around its five Challenge Questions. These activities include work on better understanding local perspectives on drought early action, exploring the economics of forecast based action, examining triggers to early action, exploring links between emergency action and long-term resilience building and seeking to understand what anticipatory action looks like during a protracted crisis. Our research for action agenda is driven by our evolving Theory of Change (see below).

Directorate and staff
Initial leadership of the Observatory was provided by Professor Alan Duncan as Project Lead. From April 2022, Dr Guyo Malicha Roba took up the position of Head of Jameel Observatory as an ILRI member of staff located at ILRI in Nairobi (details here). The Directorate also includes Dr Darren Watt as Senior Operations Lead and Emma Durie as Administrative Assistant.

Professor Geoff Simm has provided high level oversight of the development of the Jameel Observatory. Chloe Kippen provides senior leadership on philanthropy, resource mobilization and internal partnerships. Peter Ballantyne is Senior Partnerships and Communications Lead for the Observatory. Dr Nathan Jensen has just been recruited as Senior Research Fellow at the University of Edinburgh. Cynthia Mugo has taken up a role as senior policy engagement officer at ILRI Nairobi (20%) supporting engagement with decision makers in the region.

An initial cohort of academic staff and students have been aligned with the Observatory: Dr Gary Watmough (Affiliate), Dr Simon Fraval (Fellow), John Mutua (PhD student), George Tsitati (PhD student), Puff Mukwaya (PhD student), Michael Renfrew (PhD student). Three further PhD students have been appointed to commence later in the year.

Two new post-doctoral fellows, Dr Tahira Mohamed and Dr Samuel Derbyshire have been recruited as ILRI staff based in the region with co-funding from the SPARC programme.
Operational framework – progress

Community of Practice
As set out in the original plan, the CoP is the core of our operational framework and is now well established as a driver of our research for action agenda. During the reporting period, the CoP met for a second time in person in Nairobi on 9-10 May 2023.

The meeting brought together 65 participants from 31 organizations and built on the foundations laid at the first CoP meeting in April 2022. At the end of June 2023, the online space for the CoP comprised 150 people from 40 organizations, an increase of 100 from the end of June 2022.

The inaugural CoP meeting in Nairobi defined the five Challenge Questions related to our early warning/early action agenda. These Challenge Questions have helped to define the scope of our work and have become an important organizational principle. For example, we used them in our PhD recruitment process by asking applicants to develop project ideas based on one or more Challenge Questions.

In May, we launched a call for Expressions of Interest to join an Impact Collaboration Project aligned to our Challenge Question on data.

During the second CoP meeting in May 2023, we shared progress in our ongoing research for action activities including allowing students to present their work and receive feedback from Community members. Our new post-doctoral fellows were also able to share early plans on their research projects and refine their ideas based on feedback.

Governance and coordination
The main working groups remain unchanged and have met regularly over the course of the reporting period as follows:

1. Steering Group - Chaired by Dr Guyo Roba (Head of Jameel Observatory) and including representatives of all five Consortium Partners. This group meets monthly to guide the operation of the Observatory including providing oversight on communications, research, partnerships and fund-raising. Minutes are recorded and shared.

Five challenge questions frame our action research agenda
2. Communications Working Group – chaired by Prof Alan Duncan. Meets every two months with a remit to lead on communication strategy, planning and execution for Jameel Observatory including messages, narratives, press releases, media interview and op-eds. Includes representatives from each Consortium partner. Minutes are recorded and shared.

3. Partnerships and Sustainability Working Group – chaired by Prof Alan Duncan. Meets every two months and leads on partnerships strategy and fundraising. Includes representatives from each Consortium partner. Minutes are recorded and shared.

4. External Advisory Group – chaired by Dr Guyo Roba. Meets twice a year to provide advice on strategic direction, to connect the Jameel Observatory to other ongoing initiatives in the sector and to raise the visibility of the Jameel Observatory among the development community in East Africa and globally. Minutes are recorded and shared.

In May this year, the Jameel Observatory for Food Security Early Action became a founding partner in a larger ‘Jameel Observatory’ architecture that also includes the Jameel Observatory Climate Resilience Early Warning System Network. Our website and branding have been adjusted to accommodate these developments and, in late May, we hosted a visit from MIT team members to discuss approaches, synergies and other opportunities to collaborate.

To facilitate these interactions, a coordinating committee has been established and a multi-party MoU sets out operational principles for the larger Jameel Observatory family of programmes.

**Theory of Change**

Because of our strong aspiration to catalyse meaningful change in the early warning/early action area, we place much emphasis on our impact and how to achieve it. For this purpose, we embraced a Theory of Change (ToC) approach to help us identify what we want to achieve, and which activities and partners will help us move in the right directions.
A preliminary ToC was developed in May 2021 virtual meetings. We organized a further ToC and Strategy Day in September 2022 during which we further developed our thinking. Peter Ballantyne worked with Dr Guyo Roba and Dr Isabelle Baltenweck in February 2023 to further refine the ToC. Finally, members of the Steering Group provided written comments.

Theories of Change are by their nature fluid, and we anticipate further refinement as the Observatory evolves. However, we now have a good working document which sets out our vision statement and the various outcome pathways leading to impact (see figure below). The latest version of the ToC is [here](#).

The Theory of Change (working right to left) sets out our vision on how our work will benefit pastoral communities in East Africa. It then sets out the various stakeholder groups that we need to work with to achieve our vision and describes the types of behavioural change that are needed (outcomes). These outcomes build strongly on our Challenge Questions.

The ToC indicates the types of interventions we need to engage in to achieve our stated outcomes. These include facilitating dialogue, generating evidence, building collaboration, enhancing capacities and engaging in policy formulation. Finally, the ToC emphasizes the central role of the CoP in driving change.

**Partnerships**

We have engaged heavily in fostering partnerships during our second year and this has been greatly facilitated by Guyo Roba’s presence in East Africa and his extensive networks and influence in the pastoral sector. We see partnerships as key to our success in achieving impact and this is reflected in our Theory of Change in which many of our interventions focus on partnership, for example through dialogue, collaboration and engagement.

There are several layers of partnership. Our core consortium is an important characteristic of the Observatory and we maintain the health of this partnership through regular meetings of the Steering Group, Communications Group, and Sustainability and Partnerships Group.

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**Delivering our theory of change**

Local communities in drylands are empowered to contribute their local knowledge and voice to influence the decisions of other actors and to co-create solutions to environmental shocks. Data provides evidence and harnesses data and decision-support systems to generate user-friendly, trusted and timely products to facilitate effective early action.

Policy and decision-makers base on existing systems to better understand and finance their efforts to prevent, predict and respond to environmental shocks according to pre-agreed triggers and thresholds in a timely way.

Decision-makers, practitioners, and other water actors are able to identify, analyse and implement policies and solutions that balance the needs for anti-poverty and emergency responses with longer-term resilience building.

Specialised knowledge brokers and providers are designing and providing inclusive and sustainable solutions to address evolving shocks in more context and coordinated ways.

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The Observatory, for food security and nutrition

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The Observatory for food security and nutrition
Our CoP is also an important forum to build relationships, implement our research for action agenda and extend our influence.

We also fostered various ad hoc relationships with sister projects, NGO’s, regional bodies and government departments, convening and joining bilateral meetings on to explore potential for collaboration. These included:

- In June 2023, we joined a Community Jameel visit to the UK Met Office to discuss collaboration linked to the WISER programme in the Middle East North Africa region.
- **The Center for Research and Development in Drylands** has submitted a proposal to the Australian Centre for International Agricultural Research, with the title 'Exploring Local constructs of Resilience in the face of chronic uncertainty in the Drylands'. There are possibilities to collaborate around the interfaces of humanitarian relief and resilience programming where we both share strong interests.
- The **University of Texas** reached out to explore collaboration around a project to link together existing meteorological, crop, trade and price, and food security outcome models. Depending on the country focus, we may join in the process to convene stakeholders and researchers to develop a possible proof of concept.
- In May 2023, we joined discussions with **UK Agrifood KTN - Africa Connect** on potential collaboration linked to their Earth Observation theme.
- We initiated dialogue with **Building Resilient Communities in Somalia (BRCiS)** at the end of May 2023 to explore ways to work around a learning agenda.
- **Tufts University** runs a project on ‘Humanitarian Response in Pastoral Areas of the Sudano-Sahel and Greater Horn of Africa’. In May 2023, we agreed plans for collaborate around complementary work on early warning systems.

*Participants review action research at our May 2023 meeting [photo credit: Chloe Kippen]*
We are particularly pleased that discussions at our 2022 CoP meeting with the Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC) programme evolved into a concrete collaboration.

Together, we are co-funding 2 post-doctoral positions that commenced their research in June 2023. One is working on humanitarian relief and resilience programming while the second is looking at triggers for anticipatory action. We regularly engaged with SPARC colleagues over the course of the year.

We also fostered relationships with official bodies e.g.:

- **Somali Disaster Management Agency.** We met with SoDMA in March 2023 to discuss potential capacity building activities and to facilitate their participation in our CoP meeting.
- **IGAD Climate Prediction and Applications Centre.** We had several discussions with ICPAC, including visits to their office, attending their regional meeting in May 2023, their participation in our CoP meeting in Nairobi and exploration how their interests could be linked to the work of our post-doctoral fellows in Nairobi.
- **Kenya’s National Drought Management Authority.** We worked hard to build strong relationship with NDMA through their participation in our Advisory Committee, their participation in our UK Met Office WISER bid and their involvement in our meetings in May 2023.
Communications, engagement and outreach

During the past year, we continued to evolve our communications and engagement activities, mainly from Edinburgh and increasingly benefitting from Guyo Roba’s position and networks, as well as his outreach and media activities, supported by Community Jameel.

During 2022, we ran a series of virtual ‘mini-dialogues’ to catalyse conversations on key issues in the early warning/early action discourse. Each was championed by an expert who made a short framing presentation. This was followed by group work to tease out the main issues and propose research gaps. The mini-dialogues have been a fruitful way to build partnerships, increase our visibility and inform our action research.

The website was regularly updated; it was re-organized in May 2023 to reflect changes in the wider Jameel Observatory ‘family’ of activities. To mid-June, the site attracted 3667 visitors and 9000 views of pages. Alongside the website, we maintain a Twitter channel. To mid-June 2023, 490 accounts follow the Observatory (241 more than the same time last year). Reports and documents of the Observatory are published in the University of Edinburgh’s open access repository. To May 2023, the 5 items were collectively downloaded 885 times (from 400 downloads to June 2022).

Our staff contributed to three podcasts in the past year: Guyo Roba in IFAD’s monthly podcast in August 2022; Alan Duncan, Guyo Malicha Roba and Gary Watmough contributed to a DDI podcast in September 2022; and Guyo Roba, Gary Watmough, and Stephen Mutiso contributed to an episode of ILRI’s Boma podcast in December 2022.

Outreach and media activities included:

2. Aug 2022: Drought: We know what to do, why don’t we do it? Opinion piece by Guyo Roba in New Humanitarian


6. Jun 2023: Guyo Roba chaired a session at the KIPRA annual regional conference on ASALs.

7. Jun 2023: Guyo Roba participated in a session on ‘Anticipatory action to avert future crises’ at the 8th annual Agriculture, Nutrition and Health Academy Week.

8. Guyo Roba was interviewed by Times Radio and CNN.

Alongside these, we held a networking event in February 2023 to engage Edinburgh-based colleagues from across the University as well as external partners such as Marcy Corps. A similar workshop with university staff was held in May to explore linkages with the JO-CREWSnet programme.

*Discussing policy challenges at the CoP meeting (photo credit: Chloe Kippen)*
Technical programme

Activities delivering during the reporting period included:

**PhD programme**
A cluster of talented PhD students is now in place – many from East Africa, contributing significantly to our capacity building activity.

John Mutua is employing earth observation approaches to build a better understanding of livestock feed availability, a crucial metric in pastoral areas (detail here).

George Tsitati is researching local responses to crisis events in East Africa and how these can be better linked to international efforts (detail here).

Puff Mukwaya is looking at the economics of forecast-based action (detail here).

Michael Renfrew is investigating opportunities to estimate livestock population numbers from space (detail here).

Three further PhD students have been appointed to begin in October 2023.

**Post-doctoral fellows**
We have recruited two post-doctoral fellows based in the region. Both are employed by ILRI and co-funded with the SPARC programme.

Samuel Derbyshire will assess the triggers applied in drought early warning systems in Kenya and Somalia to evaluate the linkages between the trigger design, targeted actions, and the planning processes in response to drought risks (detail here).

Tahira Mohamed will focus on understanding the relationship and the synergies between humanitarian relief and resilience programming in the Horn of Africa through empirical cases. The overall aim is to address the disconnects between short-term humanitarian responses and long-term resilience programming within the Horn of Africa (detail here).

**Grounding our analysis**
To set our work in local realities and to build partnerships, we convened a set of meetings in the run-up to our second in-person CoP meeting. In early May 2023, a group of county-level actors involved in 'local' drought and emergency management met in Isiolo, Northern Kenya to distil lessons and insights from local drought and food security responses during the recent drought (read more).

This local dialogue was complemented by key insights shared during a parallel dialogue with pastoralist elders who shared their first-hand experiences in responding to recent drought (read more). They also discussed what worked and what did not work in drought responses, while exploring the future of drought responses.

A third conversation explored ways that available data on drought and food security impacts could be better managed and put to use (see next page and read more). The outcomes of these dialogues are being distilled to continue to shape our research agenda/outlook.
The datathon process explored data use cases from partners then worked on potential ideas that could be taken forward.

Participants mapped different available data sources that could be brought together to facilitate decisions.

The project teams created example visualizations to illustrate proof of concept approaches.
Impact collaboration on ‘Seasonal effects on nutrition surveys in East Africa’

We formed a partnership with the University of Edinburgh/UNICEF Data for Children Collaborative on a co-funded project looking at improving data integrity for child nutrition surveys that can be compromised by seasonal effects.

The project is a collaboration between Southampton University, University of Edinburgh, iLab-Nairobi (Strathmore University) and the Environmental Protection Agency in Ghana. The project is progressing well having identified 4 countries with time series data on child nutrition (Bangladesh, Ethiopia, Burkina Faso, Nigeria), conducted a rapid review looking at drivers of child wasting, created a database using demographic health survey data on children, women and household characteristics related to child nutrition, reviewed several geospatial datasets that could provide proxy indicators for drivers of child wasting and developed a prototype multi-level model on childhood wasting and seasonality. Read an update on the project.

Impact collaboration on data

Since the early stages of the Observatory, we have worked closely with the Data for Children Collaborative, which is a partnership between UNICEF and the University of Edinburgh. UNDCC has developed a project co-creation process which aligns well with our ethos.

As well as a co-sponsored project on improving seasonal nutrition estimates (see above), we just launched a second ‘Impact Collaboration’ which takes our Challenge Question on data for anticipatory action as its starting point. We have gathered expressions of interest for involvement in this project and will soon be contracting the research team to implement the project.

Project on “What does anticipatory action look like during a protracted crisis”?

We have been working with Save the Children UK to implement a small project on this topic. The research question arose out of our Mini-Dialogue series and the work will help to inform the Foundational Project at Save the Children.

Save the Children’s Michael Ocircan discusses anticipatory action in a crisis [photo credit: Chloe Kippen]

Capacity building

As set out in the Project Plan, our capacity building activities lie in two areas:

- Developing a cohort of professionals in the region with skills in use of data for rural development through doctoral and post-doctoral programmes
- Developing short courses for regional professionals drawing on skills within the partnership and capitalizing on University of Edinburgh digital learning capacity

Most of our effort to date has been in the first area and we have assembled an excellent community of high calibre scholars who we anticipate will go on to be influential professionals in the food security early action space in East Africa.
Most of our recruits are East Africa nationals in line with our aspiration to build local capacity.

Our attention is now turning to the second area and we convened a capacity building needs session at our recent CoP meeting in Nairobi.

As well as collecting ideas from participants (see box), Dr Fiona Borthwick presented some initial ideas on potential teaching/training themes, such as:

- Lessons from pastoralism
- Co-creation in a pastoral context
- Anticipatory action for food security

In common with our research for action agenda we need to reflect on existing offerings in this space to ensure complementarity and synergies. For example, IIED recently launched a MOOC on pastoralism and duplication would be inadvisable. The feedback from CoP meeting participants is being synthesized to help guide our thinking in this area.

In addition to this work, and at the suggestion of Community Jameel, we developed proposals on how the university and Observatory could contribute to the evolving Jameel Fellowships concept.

This could include at least 5 areas of activity:

(i) interaction with staff associated with the Observatory to learn of its work and its current and potential future policy relevance;
(ii) access to current or bespoke Postgraduate Professional Development courses and programmes;
(iii) access to current or bespoke Continuing Professional Development or Executive Education courses;

(iv) organising programmes of informal meetings and visits relevant to Fellows’ interests;
(v) organising/supporting mentoring programmes for Fellows.

### Capacity building needs identified by CoP meeting participants

**Capacities to appreciate the potentials of pastoralism:**
- Learning to listen to pastoralist communities.
- Learning what to do with what you hear – how practitioners best incorporate community feedback.
- Strengthening methods for participatory planning.

**Enhance capacities to:**
- act on early warning information to action.
- interpret data, take actions, convene stakeholders.
- interpret data and make decisions.
- model scenarios – visualise; interpret.
- synthesize forecast information by different early warning actors.
- integrate indigenous/community knowledge with scientific knowledge / early warning/AA and food security.
- identify the most effective and actionable evidence.

**Enhance capacities of:**
- local governments in data handling and interpretation, including incorporating ‘indigenous’ knowledge and data.
  o Data literacy workshops.
  o Training on use of geo-spatial data for government.
- national met services in impact-based forecasting.
- end users to interpret forecasts.
Outlook

Our major focus for year two was to validate and enrich our assessments of needs and demands while engaging key actors – to be sure we focus on the right issues in the right ways. This included work to finalize our Challenge Question narratives and use these to seed a series of research/action projects using a range of delivery models (external grants, short term consortium projects, PhD and post-doctoral projects).

With a growing portfolio of research for action activities and an excellent community of researchers, our focus in year three will be on (1) research for action implementation, (2) building the funding base for expansion of our activities, (3) through targeted engagement and outreach, focus attention on the key issues in the interlocking climate-food-humanitarian and drylands spaces that frame our work and (4) raising the profile of the Jameel Observatory as a trusted and reliable partner in brokering science, knowledge, real-world action and inclusive solutions to environmental shocks and stresses facing dryland communities.

Discussing data [photo credit: Chloe Kippen]
Acknowledgements

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The Jameel Observatory for Food Security Early Action is an international partnership led by the University of Edinburgh collaborating with the International Livestock Research Institute (ILRI), Save the Children, the Abdul Latif Jameel Poverty Action Lab (J-PAL) and Community Jameel. Based at ILRI in Nairobi, Kenya, we combine the local knowledge and concerns of communities facing on-the-ground threats of hunger with innovations in data science and humanitarian action; teaming up to devise solutions that can predict, prepare for, and overcome climate-related food security and malnutrition challenges in dryland areas.

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