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Growing transformational future livestock sector professionals - emerging Impacts of the ILRI CapDev Grand Challenge

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Abstract

A new capacity development initiative, the CapDev Grand Challenge, aiming at producing a new cadre of livestock sector professionals was launched in 2019 by the International Livestock Research Institute. The initiative intentionally focusses on building soft skills and systems thinking capability among early career researchers. After 18 months of implementation, it is emerging that the Challenge process has strong potential to create systems thinkers, and effective communicators able to contribute, not just new research evidence, but also to development outcomes by deploying scientific evidence to influence decision makers. The process catalyzes strategic outreach for impact, thus fostering synergies and sustainability in complex livestock food systems, and creating an enabling environment for scaling up ILRI's research for development.

Introduction

In 2019, the International Livestock Research Institute (ILRI) launched a new initiative, the 'CapDev Grand Challenge', an approach to grow cohorts of transformational future livestock sector professionals. The target group is graduate students, postdoctoral scientists and early career researchers from national organizations in low-and-middle-income countries (LMICs) where ILRI works. Annually ILRI hosts about 100 graduate students embedded within its research programs and co-supervised by professors from degree-awarding universities where the students are registered. Additionally, about 70 early career researchers are hosted through research partnerships with national research organizations. Most of these next-generation professionals eventually return to their home countries and organizations, remaining engaged in livestock research for development and scaling out activities in partnership with ILRI. Designed to complement the technical/scientific training provided by ILRI research programs, the Challenge process aims at boosting the soft skills and systems thinking capability. The skill set is key to the transformation of livestock food systems in LMICs.

Material and methods

The CapDev Grand Challenge spreads over a 16-to-18-month period, starting with a 3-minute research pitching contest. The contest is followed by soft skills training involving a series of 10 courses in 10 months, and a deepening phase when participants apply their acquired skills in the workplace, while they are virtually mentored and supported to attend international events. The final activity is a comprehensive impact tracking survey. Figure 1 below summarizes the key pieces of the Challenge process.

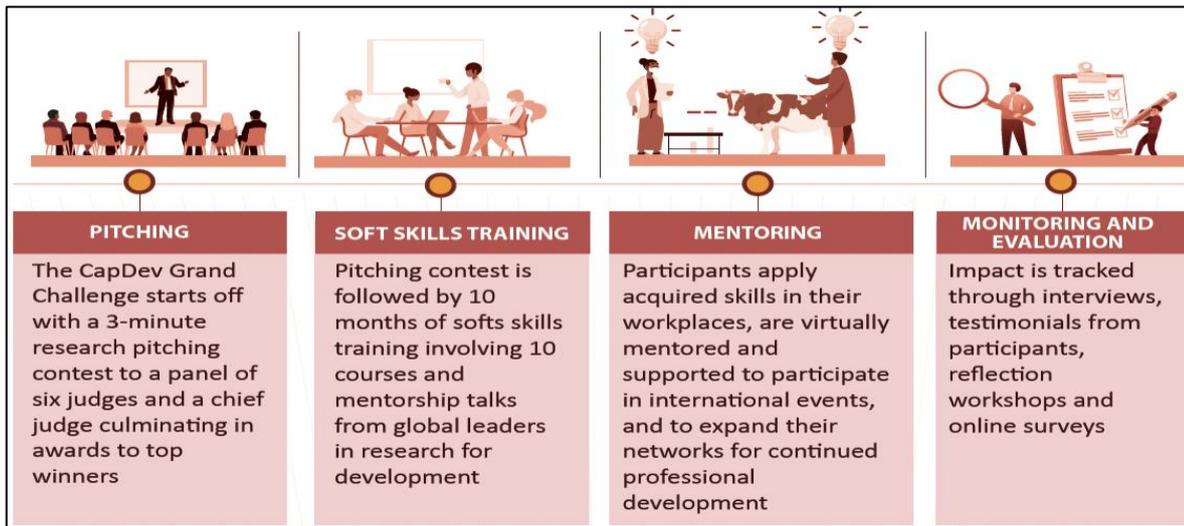


Fig. 1: Pictorial summary of the CapDev Grand Challenge process

Three-minute pitching contest: During the pitch contest participants present their research project to a panel of judges in a maximum of three minutes based on a standard set of pitching guidelines. The panel of judges is made up a Chief Judge who is a world-renowned personality in international development, a donor, a science communication expert, a journalist, a project management professional, a development policy expert and a senior scientist from ILRI. They are all well-informed of ILRI’s mission and scope of research. Contestants are expected to concisely present their research problem and why it matters, intervention and who they are working with, key results and what they mean, expected impact, plans for scaling and study limitations. The judges select and award the 15 to 20 contestants with the most successful pitches in different categories, which include livestock biosciences, integrated sciences, women in livestock research, junior scientist (MSc) category, and overall top in ‘partner’ category.

10-in10 training: Following the pitching contest, participants go through a virtual 10-month training journey, taking 10 soft skills training courses (**Box 1**). The ‘10-in-10’ training aims at strengthening capabilities of participants in systems thinking, building diverse relationships across disciplines, stakeholders and institutions, science communication, negotiation, ethics, and leadership. Additionally, participants receive mentorship talks from renowned global leaders in diverse fields, regions and expertise.

- Box 1: 10-in-10 training courses**
- *Project impact pathways*
 - *Oral and poster presentation*
 - *Principles of effective negotiation*
 - *Integrating gender into livestock research*
 - *Communicating science to non-technical audiences*
 - *Ethics in research and the workplace*
 - *Effectively creating and managing partnerships*
 - *Art of public engagement*
 - *Blogging for impact*
 - *Creating policy messages from research findings*

Deployment and multiplier phase: Armed with the experience, knowledge and skills gained from the research pitching contest, mentorship and 10-in-10 training, the CapDev Grand Challenge participants settle back at their home institutes to continue with their national responsibilities. During

this phase they deploy the knowledge gained and strengthened soft skills in their professional daily life, while remaining connected with the contest Judges, ILRI scientists, 10-in-10 trainers and the ILRI capacity development team via social media platforms. Through the virtual learning platforms, the Challenge participants share experiences, are remotely supported and strategically connected to diverse opportunities for continued professional development. International exposure, through virtual conferences, networking events and contests is a key component of the Challenge process. It provides the much needed but rare opportunity to meet, mingle and engage global leaders, renowned researchers, and to experience dialogue at international level, thus expanding their networks for connecting their local interests to the global agenda. For this purpose, Challenge participants participate in the [World Food Prize Borlaug dialogue](#), [World One Health Congress](#), [Green Talents](#) program, [Science Slam](#) at the Global Forum for Food and Agriculture, and the [Tropentag](#) conference.

Impact tracking and communication: Emerging impacts of the CapDev Grand Challenge are tracked through a multi-pronged approach. First, there is continuous engagement of participants through the virtual learning platform to capture experiences, success stories and inspiring personal testimonies. Second, through virtual personal reflection and experience sharing workshops held four times in a year, and thirdly, through a comprehensive online survey that is conducted one year after the research pitching and 10-in-10 training. Emerging impacts are communicated widely by ILRI, partners and participants through social media (e.g. #CapDevChallenge), institutional websites (e.g. www.ilri.org), monthly and annual reports. Below are some recent blogs about the challenge:

- <https://www.ilri.org/news/capdev-poster-named-best-class>
- <https://www.ilri.org/news/capdev-grand-challenge-boosts-capacity-next-generation-livestock-researchers-influence-decision>
- <https://www.ilri.org/news/four-ilri-fellows-attend-world-food-prize-symposium-virtually>
- <https://www.ilri.org/news/three-ilri-fellows-attend-world-one-health-congress-virtually>

Results and discussion

This paper presents results from the first impact tracking exercise conducted in April 2021 on the inaugural CapDev Grand Challenge process involving 71 participants from 24 LMIC countries (Fig. 2). The participants comprised PhD students, MSc students, early career researchers from NARS and postdoctoral scientists from ILRI and international and regional partners who participated by invitation - International Foundation for Science, Afrique One ASPIRE, Regional Universities Forum for Capacity Building in Agriculture, Feed the Future Innovation Lab for Livestock Systems and the PASET Regional Scholarship and Innovation Fund program.



Fig. 2: Results of the first CapDev Grand Challenge impact tracking survey

Over 80% of participants STRONGLY AGREED that the CapDev Grand Challenge process broadened their thinking and boosted their confidence and effectiveness in communicating science to non-technical audiences; strengthened their confidence and ability to engage with intention to influence decision makers; increased their confidence and effectiveness in engaging and working with researchers outside their own discipline; boosted their motivation and confidence to take up leadership roles; made them more knowledgeable, confident and effective in designing and discussing project impact pathways, and increased their confidence and effectiveness in mapping out actors in a project, and explaining their roles.

Daniel Korir, a Kenya PhD student at ILRI and registered at University of Melbourne, Australia completed the entire Challenge cycle in 2019/2020 and had this to say regarding how the Challenge has impacted on him: *“Apart from equipping me with new skills, I now realize I really needed this experience for my science and technical skills to be effective in creating change. The experience has given me a totally fresh way of looking at research and how we ought to think in a systems perspective if our research findings are to create real change, and faster”*.

Conclusions and outlook

These impact tracking results demonstrate a strong potential of the Challenge to create systems thinkers, and effective communicators and engagers able to contribute, not just new research evidence, but also to development outcomes by deploying scientific evidence to influence decision makers. The process catalyzes strategic outreach for impact, thus fostering synergies and sustainability in complex livestock food systems through strengthening systems thinking and science storytelling, fostering leadership in science and building science advocates. The process makes a strong contribution in creating an enabling environment for ILRI’s research to be understood, adopted and implemented. From a food systems transformation perspective, the Challenge process strengthens interconnectivity and collaboration among young researchers from diverse disciplines and NARS in countries where livestock is an integral and important component of livelihoods. The process ultimately acts as a multiplier of gains and accelerator of pathways to scale.