

# Monitoring, Evaluation and Learning (MEL) Developers Retreat

**Nairobi**  
**3-6 December 2019**

**Concept note**

Sponsored by:



RESEARCH  
PROGRAM ON  
Fish



RESEARCH  
PROGRAM ON  
Livestock

In Partnership with:



RESEARCH  
PROGRAM ON  
Roots, Tubers  
and Bananas



RESEARCH  
PROGRAM ON  
Grain Legumes and  
Dryland Cereals



RESEARCH  
PROGRAM ON  
Fish



RESEARCH  
PROGRAM ON  
Livestock

## Introduction

Monitoring, Evaluation and Learning (MEL) is multi-center and multi-CRP online platform for integrated management, monitoring, and reporting of projects, from planning to budgeting, risks' assessment, knowledge sharing and more. It creates synergy between research and development partners, bridging competences in a results-oriented platform.

The Platform is maintained and enhanced by 9 developers based in Jordan, Peru, Nigeria, Kenya and Malaysia. During this collaboration MEL developers engaged with other teams to produce other applications (e.g. AReS - <https://cgspace.cgiar.org/explorer> developed in partnership with ILRI). In 2019 thanks to the support of two CGIAR Research Programs and the physical presence of some team members in Kenya it was decided to organized the 1<sup>st</sup> technical retreat.

## Objectives

The main objective of the Developers Retreat is to strengthen the team building and discuss current and future activities.

The **expected outputs** are:

### Item 1: Building the Team and Tools

- Coordination and communication processes and tools clarified and agreed
- MEL Coding standards updated
- List of standards to be further described has been identified and responsibilities defined

### Item 2: Documenting MEL

- Tools to generate and store DB dictionary agreed and timeline/responsibilities to document the main tables defined
- Standards for commenting controllers and their function have been agreed
- Need for commenting controllers already developed has been assessed and a plan to address this need has been defined
- Agree on good practices to maintain the code as clean as possible from now on
- Actions needed and responsibilities to clean the existing code agreed
- Main issues to be implemented to improve MEL from dev's perspective identified
- Process and tool to create a backlog of devs' issues agreed
- Structure for MEL Wiki page agreed including a section on common errors

### Item 3 & 4: MEL Loading Performance

- Actions that can improve MEL loading time agreed and responsibilities for their implementation defined

#### Item 5: Compliance

- Data Protection Environment understood and included in tools development.

#### Item 6: Security

- Security measurements are identified and strengthened.

#### Item 7: Introduction to MEL and its API

- Standards for views and open pages reviewed and improved.

#### Item 8: MEL Interface and Prototyping

- MEL interface is revised and 2020 actions are defined.

#### Item 9: Live Coding

- Joint coding is organized and common products are development.

## Venues and Logistics

#### Location:

Day 1, 2 and 4: Tamarid Tree Hotel (+254 709 240 000 or +254 709 240 240)<sup>1</sup>

Day 3: ILRI<sup>2</sup>

#### Virtual Location:

<https://meet.lync.com/cgiar/e.bonaiuti/Q5AJSRCN>

#### Logistics (internet, Room and Projector check):

1. Jacqueline Muliro: [j.muliro@cgiar.org](mailto:j.muliro@cgiar.org) (WorldFish: Malaysia)
2. Jones Baraza: [Jones.baraza@cgmel.org](mailto:Jones.baraza@cgmel.org) (ICARDA: Kenya)
3. Erick Rutto: [e.rutto@cgiar.org](mailto:e.rutto@cgiar.org) (ILRI: Kenya)
4. Jake Carampatana: [j.carampatana@cgiar.org](mailto:j.carampatana@cgiar.org) (ICARDA: India)

#### Video Interview:

Mr. Rufus will interview participants during presentations, live coding and individual recording. Setting will be Hotel Tamarid (Day 1,2, and 4), ILRI Campus (Day 2) and Nairobi National Park (Day 4). Video interview are focusing on introduction on the participant (institution, location, role and history), how he/she is working with colleagues remotely and how the team is moving forward. A special focus will be on “Women in Development” that will feature LJ, Muthoni, Patricia, Jane and Jacqueline (Day 2 @ ILRI Campus) and will ask again as group interaction the same questions from the perspective of a women group.

## Participants

1. Li Jui Lee: [L.Lee@cgiar.org](mailto:L.Lee@cgiar.org) (WorldFish: Malaysia)
2. Jacqueline Muliro: [j.muliro@cgiar.org](mailto:j.muliro@cgiar.org) (WorldFish: Malaysia)
3. Patricia Bravo: [P.Bravo@cgiar.org](mailto:P.Bravo@cgiar.org) (CIP: Peru)
4. Kenneth Oraegbunam: [K.ORAEGBUNAM@CGIAR.ORG](mailto:K.ORAEGBUNAM@CGIAR.ORG) (IITA: Nigeria)
5. Mohammad Salem: [mohammad.salem@codeobia.com](mailto:mohammad.salem@codeobia.com) (ICARDA/Codeobia: Jordan)
6. Haretha Ali Jawdat Alsouqi: [haretha@codeobia.com](mailto:haretha@codeobia.com) (ICARDA/Codeobia: Jordan)
7. Jones Baraza: [Jones.baraza@cgmel.org](mailto:Jones.baraza@cgmel.org) (ICARDA: Kenya)

<sup>1</sup> Contact person: Peter Waiyaki ([peter.waiyaki@tamarind.co.ke](mailto:peter.waiyaki@tamarind.co.ke)) / 723 921226 – Cameraman Mr. Rufus 722710917

<sup>2</sup>Erick Rutto to take care about booking room and food/coffee at ILRI

8. Muthoni Nguthi: [m.nguthi@cgiar.org](mailto:m.nguthi@cgiar.org) (ICARDA: Kenya)
9. Jake Carampatana: [j.carampatana@cgiar.org](mailto:j.carampatana@cgiar.org) (ICARDA: India) – Day 1 & 2
10. Jane Poole: [j.poole@cgiar.org](mailto:j.poole@cgiar.org) (ILRI: Kenya) – Day 3
11. Erick Rutto: [e.rutto@cgiar.org](mailto:e.rutto@cgiar.org) (ILRI: Kenya) – Day 2 & 3
12. Harrison Njamba [h.njamba@cgiar.org](mailto:h.njamba@cgiar.org) (ILRI: Kenya) – Day 3
13. Okoyo Gabriel [okoyogabriel@gmail.com](mailto:okoyogabriel@gmail.com) (Law Firm: Mauwa & Co. Advocates / Founder & President - African Young Lawyers for Tech) – Day 2

#### Remotely Connected/Presenting

14. Alan Orth: [a.orth@cgiar.org](mailto:a.orth@cgiar.org) (ILRI: Jordan) – Remote Day 3
15. Abenet Yabowork [A.Yabowork@cgiar.org](mailto:A.Yabowork@cgiar.org) (ILRI: Ethiopia) – Remote Day 3
16. Enrico Bonaiuti [e.bonaiuti@cgiar.org](mailto:e.bonaiuti@cgiar.org) (ICARDA: Uzbekistan) – Remote
17. Cristiano Rossignoli [c.rossignoli@cgiar.org](mailto:c.rossignoli@cgiar.org) (WorldFish: Malaysia) – Remote
18. Claudio Proietti [c.proietti@cgiar.org](mailto:c.proietti@cgiar.org) (CIP: Peru) – Remote
19. Diego Paredes [d.paredes@cgiar.org](mailto:d.paredes@cgiar.org) (CIP: Peru) – Remote
20. Innocent Bikara [i.bikara@cgiar.org](mailto:i.bikara@cgiar.org) (WorldFish/ICARDA: Egypt) – Remote
21. Patric Lim [P.Lim@cgiar.org](mailto:P.Lim@cgiar.org) (WorldFish: Malaysia) – Remote Day 3

## Agenda

Day / Time	Subject	Presenters
<b>Day 1: Tuesday 3<sup>rd</sup> December 2019: Origin / Team / Tools and Documentation</b>		
<b>Minutes Coordinator: Jake Carampatana</b>		
8.15 – 8.30	Introduction to the Developers Retreat Participants Intro: Who we are and Expectation	Cristiano Rossignoli  Note taker: Jacqueline Muliro
8.30 – 9.00	MEL History (Background)	Mohammad Salem  Note taker: Jones Baraza
9.00 – 11.00	Item 1: Building the Team and Tools <ul style="list-style-type: none"> <li>How we collaborate among us (<u>shall we resume Jira and Slack? What about weekly sprint and at what time/day?</u>)</li> <li>Review of different tools than can be used: MIRO, Balsamiq, Netbeans, PHP Storm, use of GIT client, HEIDI, PHPMysqladmin, Notepad ++, Github, Chrome extensions...etc..</li> <li>Review and enrichment of the coding standards* (Each developer should come to the meeting with a list of standards that s/he has in mind and that could be included in the MEL coding standards document)</li> </ul>	Muthoni Nguthi  Note taker: Lee Li Juan (LJ)
11.00 – 11.30	Coffee Break and Group Photo	Jacqueline Muliro
11.30- 13.00	Item 2: Documenting MEL <ul style="list-style-type: none"> <li>DB dictionary</li> <li>Adding comments in source files and generate documentation with these definitions (controllers)</li> <li>Cleaning lines into MEL source files, deleting functions, views, html that are unused</li> <li>Creating a backlog of possible issues to be implemented from dev's perspective</li> <li>Improvements into MEL Wiki page (define a structure)</li> <li>Documenting common errors and publish the solution</li> </ul>	Mohammad Salem  Note taker: Patricia Bravo
13.00- 14.00	Lunch	
14.00- 16.00	Item 2: Continuation...	Patricia Bravo  Note taker: Mohammad Salem

16.00-17.30	Users Feedbacks and Closure	Jake Carampatana / Innocent Bikara  Note taker: Muthoni Nguthi
-------------	-----------------------------	--

Day / Time	Subject	Facilitator/Presenter
<b>Day 2: Wednesday 4<sup>th</sup> December 2019 – Risks, Data Protection and Security and Data Sharing</b>		
<b>Minutes Coordinator: Jake Carampatana / Jacqueline Muliro</b>		
<b>A cameraman will film the full day and interview each participant separately.</b>		
8.15 – 8.30	Re-cap from Previous Day and Objective of the day	Cristiano Rossignoli Note taker: Jacqueline Muliro
8.30 – 9.30	Item 3: MEL Loading Performance Actions that can improve MEL loading time. Ajax calls, saving CRP codes, Status in some elements, define generic variables, save audits, create global functions.	Patricia Bravo  Note taker: Jones Baraza
9.30-10.30	Item 4: MEL Loading Performance Review & open discussion on the MEL Database with team on: <ul style="list-style-type: none"> <li>Possible risks that caused the slowness or downtime of MEL.</li> <li>Clean-up &amp; remove inadequate tables</li> <li>Sharing tips of Do's &amp; Don't to increase database performance.</li> </ul> Should each table keep track of last_modified_datetime & last_modified_by?	Lee Li Juan (LJ)  Note taker: Mohammad Salem
10.30 – 11.00	Coffee Break	
11.00 – 11.30	Item 5: Compliance General Data Protection Regulation Kenya implement GDPR as European Union. What does it means for Research Organizations. Ref. <a href="https://techweez.com/2018/04/27/gdpr-need-care/">https://techweez.com/2018/04/27/gdpr-need-care/</a>	Gabriel Okoyo  Note taker: Jones Baraza
11.30 – 12.30	Item 6: Security <ul style="list-style-type: none"> <li>Explore the security concerns associated with MEL and/or third-party integrations.</li> </ul> Discuss how often to have security audits or whether we can integrate security in the development life cycle of MEL (DevSecOps).	Jones Baraza  Note taker: Lee Li Juan (LJ)
12.30-13.30	Lunch	
13.30-15.30	Item 7: Introduction to MEL and its API <ul style="list-style-type: none"> <li>Explain how the MEL system works and what other APIs or third parties have been integrated into the system.</li> </ul>	Mohammad Salem

	<ul style="list-style-type: none"> <li>Definition of some of the acronyms used to describe different areas and functions of MEL.</li> <li>MEL – OCS: harvest from OCS RESTful API and POST to MEL</li> </ul>	<p>Lee Li Juan (LJ) / Patric Lim</p> <p>Note taker: Patricia Bravo</p>
15.30 – 16.30	Use of API: ODK data flow to MEL. Current status and plan for 2020.	<p>Alexander Mwangi Gachihi</p> <p>Note taker: Jones Baraza</p>
16.30 – 17.30	<p>Use of API: Drupal Website and harvesting from MEL API and OCS</p> <p>MEL and MARLO API</p>	<p>Muthoni Nguthi (Drupal)</p> <p>Patricia Bravo (MEL-MARLO)</p> <p>Note taker: Mohammad Salem</p>
17.30-18.00	Meeting Closure	Claudio Proietti / Diego Paredes

Day / Time	Subject	Facilitator/Presenter
<b>Day 3: Thursday 5<sup>th</sup> December 2019 – Schemas / Repositories / Harvesting / Visualizing</b>		
<b>Minutes Coordinator: Jacqueline Muliro</b>		
<b>A cameraman will film the full day and interview each participant separately.</b>		
8.15 – 8.30	Re-cap from Previous Day and Objective of the day	<p>Cristiano Rossignoli</p> <p>Note taker: Jacqueline Muliro</p>
8.30 – 9.30	<p>Metadata Schema: Example of CGCORE</p> <p><a href="https://agriculturalsemantics.github.io/cg-core/cgcore.html">https://agriculturalsemantics.github.io/cg-core/cgcore.html</a></p>	<p>Alan Orth</p> <p>Note taker: Erick Rutto</p>
9.30 – 10.30	Introduction to Open repositories using Metadata Schema (DSPACE/DATAVERSE) and linkages to MEL	<p>Mohammad Salem</p> <p>Note taker: Jones Baraza</p>
10.30 - 11.00	Coffee Break	
11.00 – 12.00	Current user experience of the repositories-MEL integration - What works, what doesn't and why?	<p>Jacqueline Muliro</p> <p>Note taker: Muthoni Nguthi</p>



12.00 – 13.00	Exploring Knowledge: Agricultural Research e-Seeker (AREs: <a href="https://cgspace.cgiar.org/explorer/">https://cgspace.cgiar.org/explorer/</a> ) and Altmetrics: What are they and plans for 2020.	Abenet Yabowork  Note taker: Muthoni Nguthi
13.00 – 14.00	Lunch	
14.00 – 15.00	Harvesting from DSPACE(s) and Dataverse: REST-API  Altmetrics Free API: Use and Benefit	Harrison Njamba  Mohammad Salem  Note taker: Lee Li Juan (LJ)
15.00- 17.00	Item 8: MEL Interface and Prototyping <ul style="list-style-type: none"> <li>Tools for prototyping in case we needed</li> <li>Standards into views, including filters and dropdowns (by ex: project page, cap dev page, alert messages, modals, title, subtitles)</li> <li>Review of metronic library</li> </ul> Standard into maps, graphics (highcharts, google maps, PowerBI)	Patricia Bravo  Note taker: Jones Baraza
17.30- 18.00	Meeting Closure	Claudio Proietti

Day / Time	Subject	Facilitator/Presenter
<b>Day 4: Friday 6<sup>th</sup> December 2019 – Coding, Have Fun and Communicate!</b>		
<b>A cameraman will film the full day and interview each participant separately. One or more blogs story will be prepared.</b>		
<b>Minutes Coordinator: Jacqueline Muliro</b>		
6:00 – 10.30	<b>Park tour @ <a href="http://www.kws.go.ke/parks/nairobi-national-park">http://www.kws.go.ke/parks/nairobi-national-park</a></b>  <b>Participants:</b> <ol style="list-style-type: none"> <li>Li Juan Lee: <a href="mailto:L.Lee@cgiar.org">L.Lee@cgiar.org</a> (WorldFish: Malaysia)</li> <li>Patricia Bravo: <a href="mailto:P.Bravo@cgiar.org">P.Bravo@cgiar.org</a> (CIP: Peru)</li> <li>Kenneth Oraegbunam: <a href="mailto:K.ORAEGBUNAM@CGIAR.ORG">K.ORAEGBUNAM@CGIAR.ORG</a> (IITA: Nigeria)</li> <li>Mohammad Salem: <a href="mailto:mohammad.salem@codeobia.com">mohammad.salem@codeobia.com</a> (ICARDA/Codeobia: Jordan)</li> <li>Haretha Ali Jawdat Alsouqi: <a href="mailto:haretha@codeobia.com">haretha@codeobia.com</a> (ICARDA/Codeobia: Jordan)</li> <li>Muthoni Nguthi: <a href="mailto:m.nguthi@cgiar.org">m.nguthi@cgiar.org</a> (ICARDA: Kenya)</li> </ol>	
10.30-11.00	Coffee Break	
11.00 – 13.30	<b>Item 9: Live Coding</b> We will have a live coding session where we develop:	Mohammad Salem  Note taker: Patricia Bravo



	<ul style="list-style-type: none"> <li>• A MEL page displaying the developers or technical personnel and one for the non-technical team members involved in MEL (incl. a <u>map location</u>)</li> <li>• Page developed using API to be re-used in other webpage and/or usage of external ones (Linkedin)</li> <li>• Migrating the code on another Git-Hub Repository. MEL Code Open Access.</li> </ul>	
13.30-14.30	Lunch	
14.30-16.30	Item 9: Continuation...	Patricia Bravo  Note taker: Mohammad Salem
16.30-17.30	Item 10: 2020 Planning  An open discussion with team members contributing their suggestions, expectations or proposals for next year, 2020.  <i>Brainstorming about 2020 Challenge and Prize!            What potential feature we could present at a MEL or BigData Conference in 2020?</i>  Closing Remarks	Claudio Proietti  Note taker: Muthoni Nguthi