

EXTERNAL EVALUATION – SHORT REPORT

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Building up a regional metrology in the ECOWAS region



Country Region:	Economic Community of West African States (ECOWAS)
Project No.:	PN 2017.2080.4
Period:	1 May 2019 – 30 April 2023
Executing Agency:	ECOWAS Commission
Implementing Partner:	ECOWAS regional metrology organisation ECOMET
PTB Section:	Sub-Saharan Africa
PTB Project Coordinator:	Laura Haeussler (until 08-2022), Guillaume Robardet (since 09-2022)
Date:	November 2022

This is an independent evaluation. The contents represent the view of the evaluator and cannot be taken to reflect the views of PTB.

List of abbreviations

AFRIMETS	Intra-African Metrology System
BMZ	<i>Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung</i> German Federal Ministry for Economic Cooperation and Development
ECOMET	ECOWAS regional metrology organisation
ECOWAS	Economic Community of West African States
UNIDO	United Nations Industrial Development Organization
WAEMU	West African Economic and Monetary Union

1. Project Description

The project “Building up a regional metrology in the ECOWAS region” is implemented on behalf of the German Federal Ministry for Economic Cooperation and Development (*Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung*, BMZ) with a budget of 2.000.000 EUR. It was launched in May 2019. While it was initially expected to end in April 2022, an extension (without additional funding) was granted until April 2023 due to Covid-19. A follow-up project is under preparation.

The political partner of the project is the ECOWAS Commission. Other partners include the regional structure responsible for metrology, ECOMET, and its subordinate technical committees, the national metrology institutions of ECOWAS member states (or, in countries where such structure does not exist, the organisation responsible for metrology) and their laboratories.

The project pursues the following objective: “The efficiency of the sub-regional metrology system is strengthened.” It has four outputs:

Output A: Technical collaboration at intra-regional level is strengthened.

Output B: A sub-regional metrology organisation is well established in the ECOWAS region.

Output C: The visibility and positioning of the national metrology institutions is improved.

Output D: The metrology institutes enhanced their capabilities in verification and in quality management.

2. Assessment of the project

The evaluation covers the period between the start of the project (May 2019) until the time of the evaluation mission (August/September 2022), with a projection of the likely impact until the end of the implementation period. Its objective is to contribute to the project’s accountability towards BMZ as funding party and to facilitate learning from the experiences gained during project implementation. The results of the evaluation will inform the implementation of the ongoing project as well as the design of future similar projects.

The evaluation methods used were a systematic review of project-related documents followed by 33 remote interviews with a wide range of stakeholders. To complement the findings from these discussions, an online survey was carried out. Its target group were all members of ECOMET. The evaluators could gain a good insight into the project through the data collected.

2.1 Status of the change process

Six OECD/DAC criteria serve as basis for assessing the status of the change process:

- Relevance: Is the project doing the right things?
- Coherence: How well does the project fit?
- Effectiveness: Is the project achieving its objectives?
- Impact: What difference does the project make?
- Efficiency: How well are resources being used?
- Sustainability: Will the benefits last?

The following grading scheme is applied:

1	2	3	4	5	6
very successful	successful	successful to a limited extent	rather unsuccessful	mainly unsuccessful	entirely unsuccessful

Relevance

The objective of the project is well aligned with ECOWAS policies, especially with the ECOWAS quality infrastructure scheme.

In its Output A, the project strengthened five advanced laboratories with a view to encouraging the regional division of tasks and strengthening the availability of metrology services. It is not clear whether the decision to support the five relatively advanced laboratories was the best option for responding to the needs of the region as a whole. In the evaluation interviews, some less advanced countries voiced the concern that their particular needs had not been sufficiently taken into account.

By contrast, the project responded well to needs at regional level: Through its support to ECOMET, the project managed to facilitate the creation of an organisation which is of clear relevance to its members. The project contributed to increasing the region's importance within the African metrology system AFRIMETS and clarified its role vis-à-vis other sub-regional metrology networks.

The design appears rather complex and relatively rigid, with concrete intervention areas stated in each of the outputs. For a project focused predominantly on the operationalisation of ECOMET, it would have been advisable to have the flexibility to adapt its support to the evolving priorities of ECOMET.

Overall, the relevance of the project is assessed as successful (1.8).

Coherence

The project has been well aligned with other PTB projects, especially with the project "Upgrading of Quality Infrastructure in Africa" and bilateral projects in Benin and Ghana. It has had very close working relations with the United Nations Industrial Development Organization (UNIDO). The basic division of labour has consisted in PTB supporting metrology institutions and UNIDO other elements of quality infrastructure. In concrete terms, this consisted in UNIDO identifying the main bottlenecks within their value chains and discussing with PTB whether the metrology-related needs could be addressed through PTB. Moreover, PTB and UNIDO have engaged in regular exchanges, in particular among their Abuja-based staff.

Metrology institutions of some Francophone ECOWAS countries have also received support from the sub-organisation of Francophone countries, the West African Economic and Monetary Union (WAEMU). Possibilities for exchanges with representatives from the WAEMU Commission were limited. Despite these challenges, the project team seems to be generally aware of WAEMU supported interventions. While duplications were avoided, it is unclear whether potential synergies were fully harnessed.

Coherence is assessed as very successful to successful (1.5)

Effectiveness

<i>Outcome indicator</i>	<i>Justification</i>
<p>1. Verifications increased by 15% and calibrations by 10% in the region.</p> <p>Base value (2019): 468,044 verifications/ 19,539 calibrations</p> <p>Target value (2022): 538,251 verifications / 21,493 calibrations</p>	<p>According to the latest monitoring figures, 348,492 verifications and 169,443 calibrations were carried out in 2021. Hence, compared to the base value, verifications have decreased, while calibrations have very strongly increased.</p> <p>The Covid-19 pandemic had a very significant impact on these numbers. It limited the movement of persons and reduced overall economic activities (→ low value for verifications), while also creating strong demand for calibrations of thermometers. Due to this erratic trend, it is difficult to predict whether the indicator will be achieved.</p>

	However, it is assumed that values will stabilise again, with calibrations remaining above and verifications below the target value.
2. In 8 countries, metrology institutions participate in at least 2 national or sectoral consultation processes. Base value (2019): 0 Target value (2022): 8	A survey to verify the achievement of this indicator will be carried out in the coming months. It can be assumed that in most countries, metrology institutions participate in some kinds of national consultation processes, making it likely that this indicator will be achieved. Having said that, reaching the target value does not automatically imply that an improvement has occurred. For that, it would have been necessary to collect baseline data for 2019. Only with such a reference value, the extent to which the situation has improved could have been assessed.
3. Cross-border metrology services increased by 20%. Base value (2019): 1,363 Target value (2022): 1,636	Values from the project's monitoring system show that 222 cross-border calibrations were carried out in 2021. Restrictions imposed on cross-border travel in the wake of the Covid-19 pandemic have strongly impacted these numbers. Figures for 2022 are expected to normalize and possibly to increase. It is, however, difficult to say whether numbers will rise fast enough to reach the required target.

It seems that most outputs have been delivered. An important reason for the good project results has been the high quality of project steering and implementation, both from PTB and partner sides. While partner interests could not always be fully satisfied (e.g. activities in Portuguese language), the project team has been fully aware of these different lines of conflict and has generally handled them well. The fact that one PTB team member is based within the region (ECOWAS metrology officer) and that both this team member and the intermittent short-term consultant are fluent in all three ECOWAS languages has facilitated project implementation.

Effectiveness is rated successful (1.8).

Efficiency

At the time of the evaluation, the project had a relatively low disbursement rate of its funds. Delays encountered were mostly related to Covid-19. However, there were other reasons, too: The selection of some beneficiaries was done jointly with partners in an application-style process. While this ensured that the process had the buy-in of key partners, it took a significant amount of time. Also administrative bottlenecks within PTB contributed to the delay (e.g. long timeline for the provision of samples for inter-laboratory comparisons). This indicates that possibly more outputs could have been achieved, if more resources had been devoted to administration.

Considering the small budget, the results achieved seem impressive. Especially the establishment of ECOMET as (only) West African metrology organisation recognised by AFRIMETS is a big success achieved with relatively little resources.

The overall assessment for the "efficiency" criterion is successful to successful to a limited extent (2.5).

Impact

Regional cooperation has, indeed, intensified over the last three years thanks to the exchanges held within ECOMET. ECOMET has allowed most its members to get access to information or connect to colleagues, as confirmed by the survey results.

Improved product quality, another higher-level change to which the project aimed at contributing, is more difficult to prove. However, more accredited metrology services seem to be in place compared to three years ago: Benin received accreditation for its temperature lab, and a new accreditation in Ivory

Coast (pressure) is expected to materialise by the end of the project. Liberia (mass) and Benin (volume) are well advanced.

Through its support for advanced laboratories, the project's impact on metrology capacities is more visible in countries with already relatively developed metrology structures. Having said that, when selecting these laboratories, the project applied a rather inclusive approach by interpreting the term "advanced" broadly: With the Liberian laboratory, a lesser advanced metrology institution was selected due to the clear commitment it had shown in the application process.

With the successful operationalisation of ECOMET, the project has contributed to creating crucial structures. The recognition of ECOMET by AFRIMETS in 2021 and the effective voting of ECOWAS members on behalf of ECOMET in 2022 are important achievements in which the project played a crucial role.

The impact of the project is assessed as very successful (1.3).

Sustainability

PTB has put considerable efforts to adapt to the needs of each individual partner (e.g. application processes for selecting laboratories; in-depth discussion before deciding which equipment to purchase for which temperature laboratory). Moreover, individual coaching sessions have ensured that beneficiaries have the technical capacities to make use of the results achieved. However, it is not fully clear to what extent stakeholders from the weakest countries have the capacity to sustain the results, e.g. due to lack of equipment. By contrast, the more advanced countries seem to have the required resources to do so.

In the evaluation interviews, stakeholders showed a high degree of willingness and motivation to continue participating in ECOMET. Partly, they mentioned that their hierarchy explicitly supports their engagement within ECOMET. These are promising signs. At the same time, the survey shows that ECOMET members are unsure of the future of their organisation. Out of 47 respondents, 20 find it unlikely or highly unlikely that ECOMET would continue to be active, should PTB end its support at the end of this year.

This might be explained by the fact that – while ECOWAS budget is currently available – a future without PTB support would imply many uncertainties. It is unclear whether ECOWAS Commission would show the same commitment in terms of making available budget, if PTB was not present. What makes the exchanges within ECOMET particularly challenging is the fact that partners face difficulties when communicating with colleagues from outside their own language group. While such a problem is very normal for a regional network, it, however, impedes the likelihood that exchanges initiated within ECOMET could "naturally" be continued by partners.

Moreover, the ECOWAS Agency for Quality - the umbrella structure for ECOMET – has not yet been effectively set up. It remains unclear whether this will happen anytime soon. Hence, for the time being, there is no institutional structure into which ECOMET could be embedded.

A core group of (more advanced) countries might likely continue the exchange, including through organising inter-laboratory comparisons, if external support for ECOMET ended. Moreover, by being recognised by AFRIMETS, ECOMET has a link to the international level which is well appreciated by member states and is likely to be used for AFRIMETS-related exchanges in the future. At the same time, it cannot be assumed that without outside stimulation, partners would have the capacities to run ECOMET effectively and in a way which also includes less advanced countries and those of other language groups.

Sustainability is assessed as successful (2.3).

2.2 Success factors for the observed results and change processes

Strategy

The development of the project's strategy was informed by the long-term experience of PTB in the region. This in-depth understanding of the context helped the project to take into consideration the relevant stakeholders and circumstances.

Due to a delay in the exchange of notes between ECOWAS Commission and BMZ, two years passed between the design of the project and the start of its implementation. Although the overall priorities of ECOWAS remained unchanged, the extent to which stakeholders could regard the project's strategy as "their" strategy was somehow affected. The project partly reacted to this by modifying elements of indicators at the start of the project. The project strategy would, however, have benefitted from an even more pro-active approach to the adjustment of indicators.

Partners have been well informed about the overall strategy, even if they might not know the details of its (slightly complex) design. They have shared its overall direction. The project's emphasis on advanced laboratories is, however, being put into question by some less advanced countries.

Assessment of "strategy": 73%

Cooperation

The right stakeholders have been involved. ECOMET understands itself as public sector representation. For this reason, private sector involvement in the project has been limited. Likewise, project partners appear well-defined. While ECOMET had been set up shortly before the PTB project started, the finalisation of memberships and the election of chairs and vice-chairs fell into the first months of the project. From that moment on, project partners remained relatively constant and largely undisputed. This facilitated project implementation.

The division of responsibilities is well-defined. The ECOWAS metrology officer (PTB consultant) has played a crucial role in ensuring that stakeholders carried out the activities for which they were responsible.

Assessment of "cooperation": 85%

Steering structure

While the steering structure was not embedded into ECOMET meetings, it was organised back-to-back with them. There seem to have, however, been certain duplications of discussions held in the steering committee and ECOMET meetings. The complexity of the structure appears appropriate in terms of its size. Including UNIDO and WAEMU as guests has been important. By contrast, for a very technical project as the one at hand, participation of the ECOWAS Commissioner – which is comparable to the level of a minister – seems too high-level to facilitate in-depth discussions.

The project did not use impact monitoring but, instead, relied on steering the project on the basis of an operational plan (without milestones or a theory of change). A more detailed monitoring system might have resulted in better discussions about the path necessary to achieve project results.

Assessment of "steering structure": 69%

Processes

Processes established within the project have been well functioning. Cooperation within the PTB team has been close and continuous. Through the ECOWAS Metrology Officer, the project has had excellent communication channels and working relations with the ECOWAS Commission, especially during the second half of the project implementation period.

Assessment of “processes”: 80%

Learning and innovation

Learning objectives were not explicitly defined by the project. However, in its operational plan and discussions within ECOMET, learning needs were implicitly established. Weekly meetings have helped the project team to reflect upon past activities. In less regular sessions, more-in-depth learning took place, for example when jointly assessing the Capacity WORKS factors in mid-2021.

The project team has strengthened partner capacities for steering and implementing activities. Partners have also received support for drafting terms of reference for awareness-raising activities. This was particularly helpful for Lusophone partners who were assisted in such practical matters by the ECOWAS Metrology Officer and the PTB intermittent consultant, both of whom are fluent in Portuguese language.

Assessment of “learning and innovation”: 85%

3. Learning processes and learning experience

Learning processes have been at the centre of the project’s support of ECOMET. Exchanges within its Technical Committees facilitated the access to and sharing of knowledge. More in-depth trainings initiated mainly in the post-Covid period have deepened this knowledge further. Thorough virtual preparation of and follow-up to these in-person trainings have been important in ensuring the effectiveness of these trainings.

Experiences encountered relate mainly to the way in which the project reacted to the Covid-19 pandemic. Apart from that, this evaluation did not identify other major, unplanned findings from project implementation.

4. Recommendations

Recommendations to partners:

Many project activities have been delayed, among others due to Covid-19. **Use the coming months to catch up.** In combination with the extension of the project until April 2023, this is an excellent opportunity to speed up implementation, in particular the organisation of trainings.

ECOMET meetings, including those of its Technical Committees, were carried out virtually during the Covid-19 pandemic. This proved little problematic (in contrast to the use of virtual means for other, more content-related activities such as trainings). **Make use of virtual means for ECOMET meetings also in the follow-up project.** This would free resources for other types of support, especially for in-person trainings and purchase of equipment.

The recognition of ECOMET by AFRIMETS is a major success. **Profit from this new visibility and the access to AFRIMETS** by actively engaging in exchanges within its Technical Committees. Ensure that capacities gained by ECOMET representatives within AFRIMETS are carried back into the region through exchanges within ECOMET.

It is recommended that Francophone ECOWAS member states as well as the ECOWAS Commission **keep an eye on support provided from WAEMU**, for example for its reference laboratories. This is important for ensuring that synergies are harnessed and duplications avoided.

The first years of ECOMET have been promising thanks to its members' commitment. To preserve the momentum and ensure its sustained existence, **ECOWAS Commission is recommended to continue supporting ECOMET**. This would ideally include the continued provision of ECOWAS budget, preferably not (only) for in-person ECOMET meetings but also for other kinds of more content-related activities.

Recommendations to the project team:

The relatively rigid design of the project made it difficult to adapt to the evolving priorities of ECOMET. When designing the follow-up project, **ensure that its objectives and indicators allow for a certain flexibility by not being formulated too narrowly**, while at the same time not losing the focus.

Through its support for advanced laboratories, the project's impact is more visible in countries with more developed metrology structures. However, it is not clear to what extent these advanced laboratories will, in fact, be able to act as "reference laboratories" – a role which is effectively taken up by Ghana. At the same time, some less advanced countries feel that their particular needs have not been sufficiently taken into account. It is recommended that this strategy is modified in the **follow-up project which should focus on reducing the gap between the less and more advanced countries**.

There were certain duplications between the discussions held within the project steering committee and the ECOMET meetings. It should be examined whether **the steering committee of the follow-up project could be held as one agenda item of ECOMET meetings**. While this would bring some challenges (e.g. ECOWAS Commission is not an ECOMET member), it would help to streamline discussions and cater for information needs of ECOMET members.

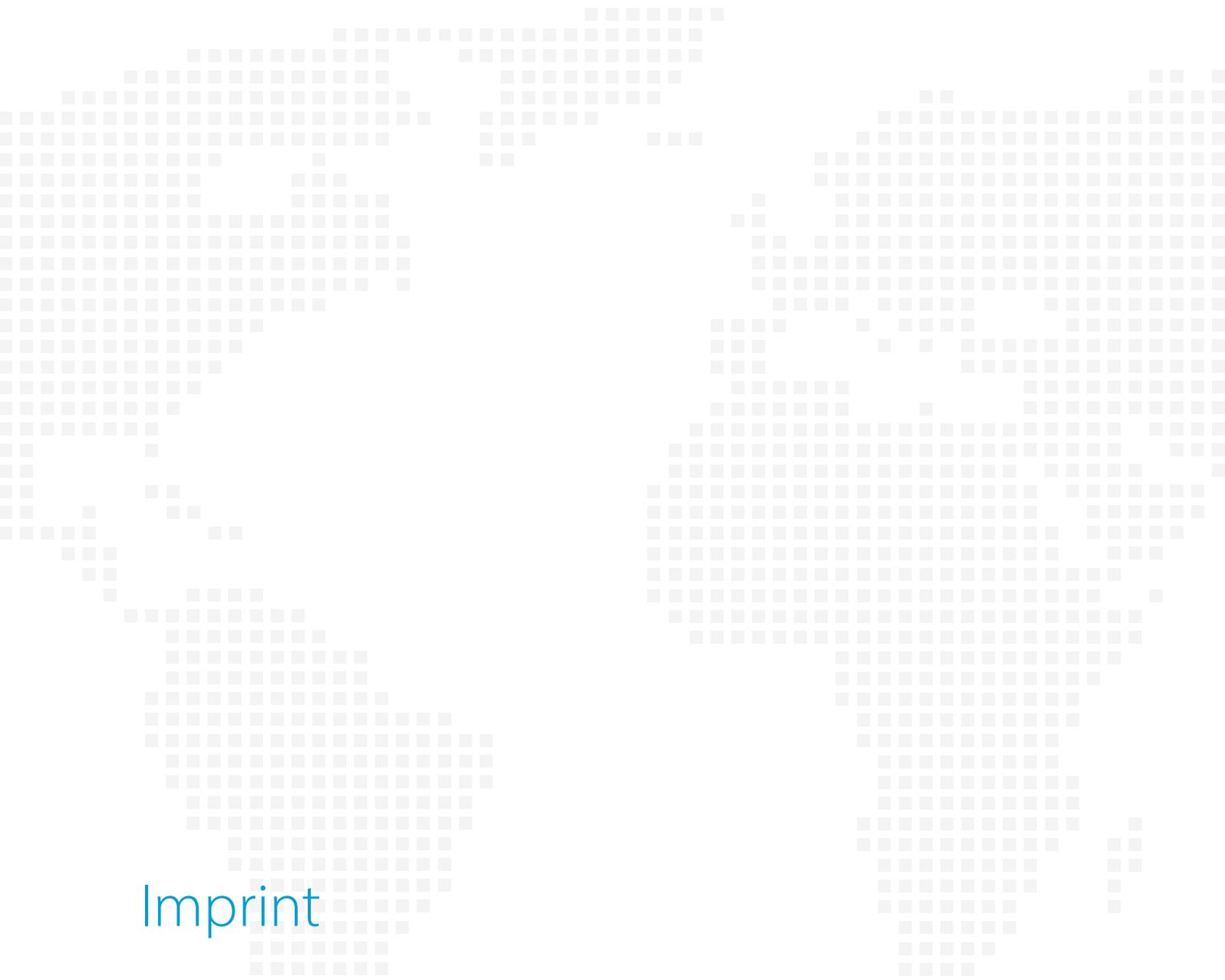
To ease communication between the different ECOMET language groups, **consider offering English-language courses to interested ECOMET members**. This would, in the long run, be important for ensuring that all ECOMET members can effectively participate in formal and informal discussions. Moreover, it would increase the likelihood that exchanges within ECOMET can "naturally" be continued without external support for interpretation and translation. English is the international working language not only of metrology but of technology and science at large. Basic knowledge would, hence, be crucial to participate in international activities, such as in AFRIMETS audits.

Recommendations to the International Cooperation Department (Group 9.3):

Administrative bottlenecks within PTB contributed to the delay in project implementation. The fluctuating intensity of activities, which were partly put on hold due to Covid-19, has made it challenging for PTB to provide just the right amount of administrative resources. However, some of the concerns voiced by partners do not only relate to the busy "post-Covid-19" period but to challenges encountered year after year. Hence, **ensure that sufficient administrative resources are made available**, both for the coming, busy months and for the follow-up project.

Recommendations to the evaluation unit of Working Group 9.01:

The survey carried out as part of this evaluation proved to be a simple and easy-to-use tool through which insightful, quantitative data on a wider stakeholder group could be collected. Due to this positive experience it is recommended to **encourage the use of surveys also in future evaluations, especially in those carried out virtually**.



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