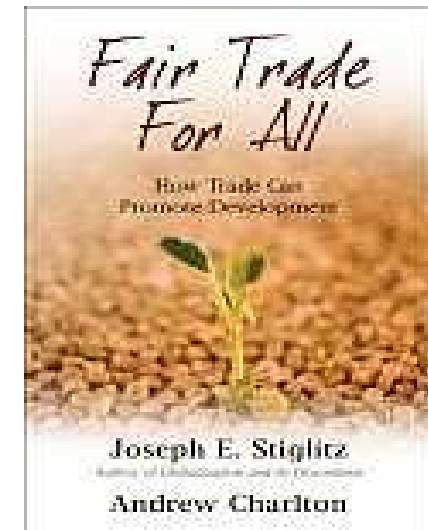


NEEDS ASSESSMENT SURVEY ON PROFICIENCY TESTING SCHEMES IN SADC MEMBER STATES



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Dr M.T. Musarurwa
SADC SQAM Consultant



Contents

- Context
- Status Quo of PTs in the region
- Identified Needs and Requirements
- Capability vs Needs Assessment/Analysis
- Models for sustainable PT Schemes
- Recommendations & Action Plan



Context

- Primary aim of proficiency testing (PT): to assess laboratories' competence to perform specific tests and measurements; thus supplementing laboratories' own internal quality control procedures by providing an additional external audit of their testing
- Participation in PT programs therefore an essential component of a laboratory's commitment to quality improvement. Its also an integral part of the conformity assessment process which is used for facilitating world trade by reducing technical barriers to trade (TBTs) – this at a time when international attention is focusing on the importance of the traceability and comparability of test results
- PT schemes do reinforce good lab performance, but they should also provide certain types of info for both participants & organisers:
- 1) Should enable lab to compare its performance at a particular time against an external standard of performance. How accurate is the data?
- 2) Must enable lab to compare its performance at a particular time with its performance in the past. Is it getting better or worse? (check against reality)
- 3) Must enable a lab to compare its performance with that of other labs at a particular time. Within its peer group, how well does it perform?
- 4) Must enable organisers to identify participants whose performance is unsatisfactory
- 5) Must enable organisers to see whether there is general improvement in performance with time. Is the scheme effective? Is it doing its job of improving the quality of measurements?
- Various types of PT schemes (open, by invitation only etc etc)



Context: Uses of PT Schemes

- Participating in a PT scheme provides a lab with an objective means of assessing and demonstrating the reliability of the data it produces. Thus supplements lab's own internal quality control procedures by providing an additional external measure of its testing capability. PT - quality assurance tool
- Assurance of the validity of a lab's analytical measurements
- Benefit not only directly to the participating labs but increasingly now of great value to accreditation bodies, regulatory authorities and customers of analytical lab services
- ***PTs now part of the overall Global Quality Infrastructure contributing towards the elimination of Technical Barriers to Trade***

Context: Availability and Selection of PT Schemes



- Internationally, ***EPTIS now has the most comprehensive information on PTs, with more than 900 PT schemes from Europe, the Americas and Australia listed on its data-base. (Any scheme listed from the participants?)***
- Other sources of information on available PT schemes include local accreditation bodies
- Important for labs to have comprehensive info on the scope and availability of PT schemes in the areas in which they work; key questions:
- 1) Does any PT scheme exist for the tests and samples that my lab usually analyses?
- 2) Is the organised PT scheme relevant for my lab? The scheme should resemble as closely as possible the lab's routine work in terms of test samples, analytes and levels
- ***Labs need to develop a good working understanding of PT, what the objectives of PT are, and how the data from PT schemes should be evaluated and used***
- ***Major area of concern, also in existing PT schemes in SADC: PT providers, even for the same parameter (eg Water) all have their own evaluation and assessment system. Calls for harmonised evaluation techniques if not for complete rationalisation of the schemes themselves.***

Status Quo of Current PT Schemes (General)



- Insufficient and inadequate data and information on the nature, the number and the effectiveness of national, regional and international PTs running in the region. Even search on EPTIS does not reveal much; suggests that they have not registered. Need for local regional data-base
- PTs: several running in the region in the water, medical and food areas, both at national and regional level; albeit with limited levels of success; a lot of duplication of effort, waste of resources, unnecessary competition, not coordinated etc .
- The little available information indicates that whilst some Member States have initiated national PT schemes in limited fields (water, food, medical, aqueous solutions), only three regional/international PT schemes are currently running, with the major focus being in the water and medical/pathology areas.
- Two regional schemes, one in water and the other in the food area (fortification) are entirely dependent on donor assistance, whilst national schemes are run more along commercial lines
- One key fundamental problem: the fact that not only is there a **quantitative gap** in terms of the required large range of PT schemes that are currently not offered in the region, but more significantly, the questionable **qualitative value or benefit** of some of the existing schemes that have been running for the past four or five years.
- Survey on PT schemes in SADC: response rate over 53% from a member state basis (8) but probably 20% in terms of actual Organisations that responded
- Type of Organisations: NSBs; NMIs; Conformity Assessment service providers (private & public);
- Range quite large spanning food, metals, pesticides, microbiology, pharmaceuticals, ores, fish, masonry units, geochemical.
- Arguments concerning competence of some of the PT providers who are not accredited.

Status Quo (PT Schemes)



- SADC MET Water PT (Developmental approach, users initiative & inputs)
- SABS Water Check (mm)
- Rand Water PT Scheme ()
- ECSA Food fortification
- Thistle (hematology, clinical chemistry) EQA
- NMISA
- EAC Foods (table salt, edible oils, wheat flour)
- National Health Services Laboratory, SA (microbiology, HIV, Hepatitis) EQA
- ZINQAP
- Medicines Control Authority
- NHL (Bots) EQA
- Bots MoH
- Basis for development of regional data-base

Status Quo (Benefits/Impact)

- Proof of competence
- Assists towards meeting accreditation requirements
- Recognition by clients
- Confidence building
- Assists with trouble shooting
- National & International recognition
- Regular, external and independent check on data quality for the lab
- Compare performance with that of peers
- PT samples later used as RMs
- PT results used to market lab analytical services
- Savings on cost and time by reducing repeat measurements
- Continuous improvement
- Lab performance improved
- Testing competence enhanced
- New methods validation
- Improvement in lab's knowledge and skills in measurements
- SABS scheme enough samples as they provide concentrations but there is no forum for discussion of results and capacity building (training)
- SADC MET scheme: sample volume inadequate since using wet chemistry (titrations). Forum for discussion of results very useful as well as opportunity for capacity development through the training opportunities (matrices, method validation, MU).

Identified Needs



Identified PT needs	Rating (1-10)	Degree of current capability (1-10)
Microbiology	8	3
Pesticides	9	6
Drug analysis (HPLC)	10	3
Mineral analysis (rocks, ores)	10	4
Water (additional elements)	9	5
Foods	9	5
Feeds	10	6
Metals	7	4
Statistical eval. of PT data	9	5
Sample preparation	8	6

Current Capabilities



- Generally ltd across the board
- Sampling handling/receiving & dispatch
- Data compilation and analysis
- General testing & analysis (heavy metals, hydrocarbons, etc)

Challenges



- Samples provided not adequate for repeat if one makes mistake
- Inadequate equipment & storage facilities (equip support)
- No. of participating labs small
- Cost of running and participating in PTs
- Slow response from participating labs in submitting results for report compilation
- Lack of understanding of importance of PT by majority of labs (hence awareness raising)
- Import/Export restrictions for certain elements
- Lack of funding
- Ltd scope – PT currently focuses on one matrix – water
- Sample preparation skills gap (PG)
- Lab scientists awareness of importance of PT
- Method to improve QA through PT
- Technical skills do not match the demand

Issues to be addressed



- Gaps:
- Needs vs capability for that need (typically 10 : 5) Requirement for first of all providing capability say in the area of pesticides (training, equip etc) before putting in place mechanisms for meeting the actual need (pesticide PT scheme).
- Generally capability seems to be adequate in terms of training as opposed to competence, equipment and environmental conditions. Capacity building through training courses simply needs to be enhanced but more work is required to prove competence (sample preparation).
- Prioritisation of capabilities vs needs to be addressed: Use the broad sector approach categorisation into food chemistry, water, pathology, engineering, microbiology
- Link prioritisation with the major traded goods within SADC and between SADC and other regions/countries (meat, fish, ores, metals, general foods, pharmaceuticals/medical, water[?]).
- Prioritised list can then be used as a basis for new PTs
- Develop model(s) to address the needs, capability issues and identified challenges within a long-term, holistic and sustainable framework.

Towards Sustainable Framework Approaches/Model(s)



- Lessons from other regions: Europe: Regional cooperation bodies such as EUROLAB, Eurachem active in the PT arena. Now even more specialized working groups [EA, EUROLAB, EUROMET]. Imperative for SADC to consider establishment of similar umbrella bodies in CA area (SADCLab, Association of SADC Laboratories etc) as in SQAM.
- Issues to be addressed would include the identified needs, guidance on proper selection and use of PT schemes, capability issues,, advisory services.
- Rationalisation of existing schemes where there is overlap, duplication etc such as in the water matrix. Harmonisation examples from Germany as examples
- It would be prudent to look into the feasibility of setting-up collaborative arrangements with other regions or local regional PT agencies for addressing provision of PT schemes across the broad spectrum of needs Already examples to build on from both the public and private sector (SABS, NMISA, Thistle, ZINQAP, BOBS)
- Affordability issue; Collaborative arrangements or Agencies would also identify possible ways to promote the dissemination of information on available PTs, eg through the IPTIS data-base or regional data-base of their own.
- Agencies/CEs would also assume responsibility for awareness raising activities in the region on PTs

Summary Recommendations & Action Plan



- PT survey has revealed the following:
- Imperative that SADC establishes a collaborative body in the general area of CA (SADCLab, Association of SADC Laboratories), with specific working groups on such areas as PTs. (Policy, advisory, monitoring, competence etc)
- Rationalisation and harmonisation of existing PT schemes where there is overlap, duplication and wastage of resources (Water). Interesting examples from Germany.
- It is further critical that SADC sets-up PT Agencies or Centres of Excellence with specific responsibilities for the provision of affordable PT schemes.
- Detailed regional data-base on PTs. Ensure access to international ones (EPTIS)
- Arrange workshop involving all stakeholders in the region on PTs, to agree on the recommendations and map out way forward. This can be held in conjunction with or back-to-back with the SADC TBT Stakeholders Committee General Assembly.

