Network of reference laboratories and related organisations for monitoring and bio-monitoring of emerging environmental pollutants

NORMAN support for validation of methods at the European level

David Schwesig
- IWW Water Centre, Germany -

Contributors:
Biosense, Cemagref, Ineris, ITM,
IVM, NPL, RIVO, VUVH,
CSIC, UBA, UK-EA

Sixth Framework Programme

NORMAN-CMA Joint Meeting, Paris
21 Oct 2008

IWW

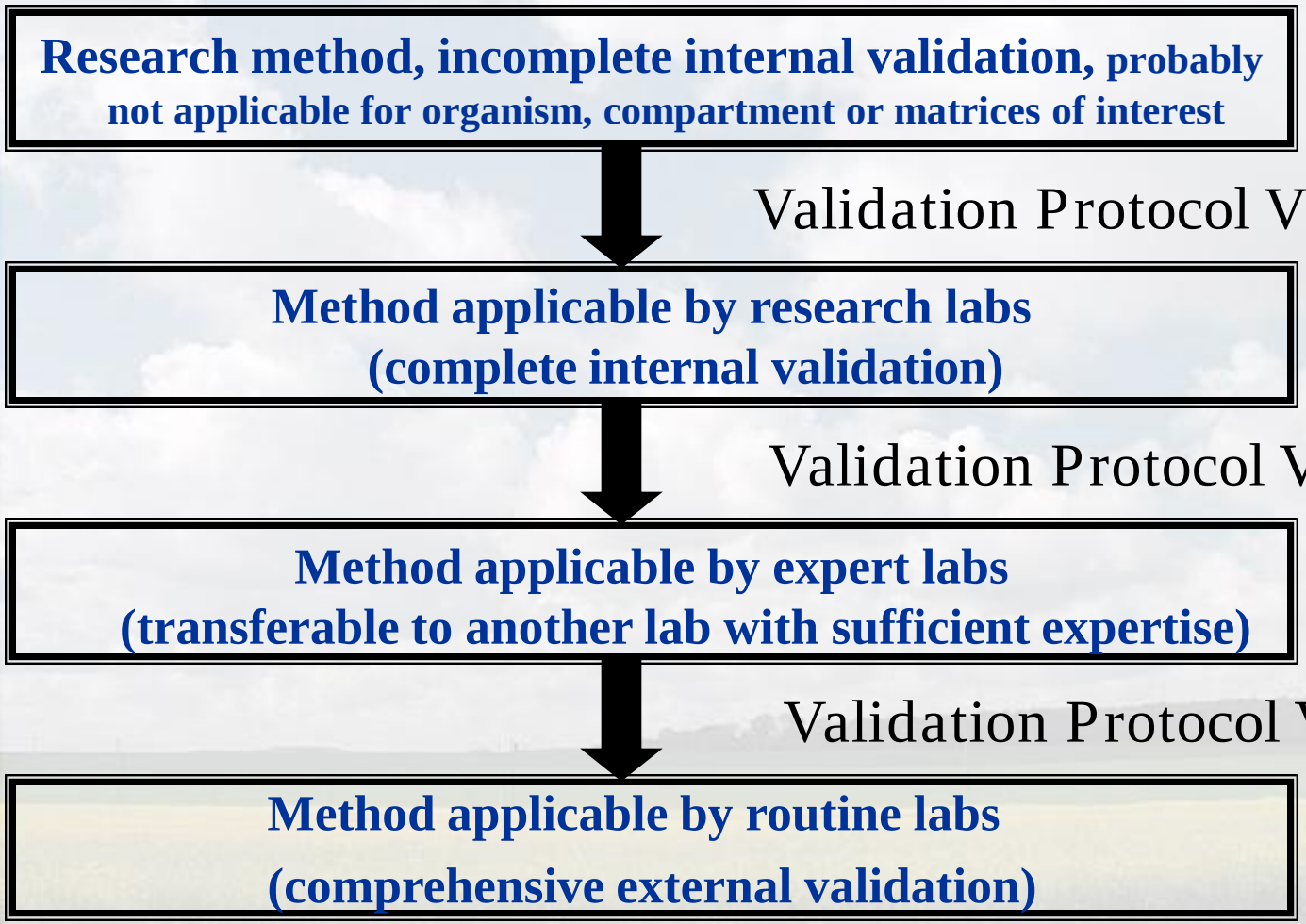
NORMAN Project objectives

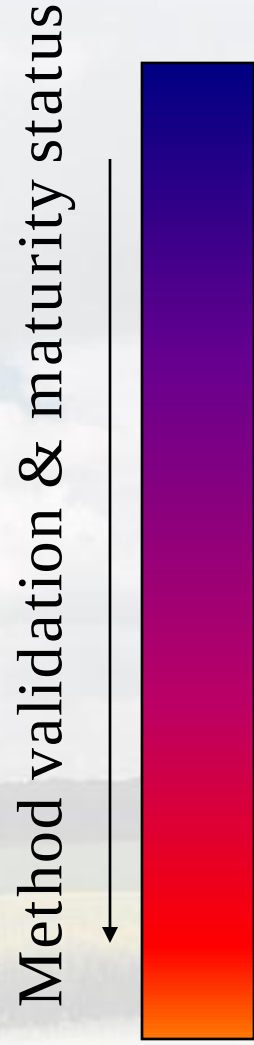
- Creation of a network among European reference laboratories dealing with emerging pollutants
- The approach will foster:
  - co-operation and data transfer of environmental analysis between monitoring institutes, risk assessors and regulatory bodies
  - validation and harmonisation of monitoring tools
  - accelerate the availability of reliable & comparable data on emerging pollutants

A harmonised approach to validation

- has been developed within NORMAN by biological and chemical experts
- is suitable for the validation of methods for monitoring of pollutants (and/or their effects) in water, air, soil, **sediment, biota…**
- is not restricted to emerging pollutants
- has taken into account existing european and international standards and guidelines wherever possible
  - E.g. on sampling, terminology, statistics, organisation and evaluation of interlabs/PTs, performance criteria, **uncertainty…**
- download for review: **www.norman-network.net**

Validation Procedure & Protocols





Why 3 Levels of Validation?

- European-wide monitoring is usually not needed in the initial phase of an emerging issue/pollutant

  → First reports from research, based on internal validation (Level 1)

- A potential "emerging issue" may turn out to be either
  - no problem at all
  - or only of local importance

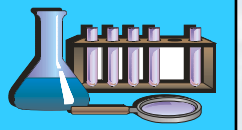
  → Method applicable by a few expert labs sufficient (Level 2)

- Large-scale monitoring needed at the European level

  → Method applicable by routine laboratories and suitable for standardisation (Level 3)

Scope of the validation protocols

Chemical methods

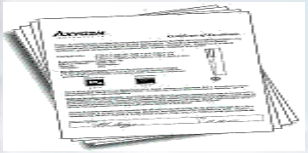


Biological methods

Air	Soil & Sediment	Wate r	Marine systems	Biota

! Protocols applicable to a wide range of monitoring & biomonitoring methods (chemical & biological) and environmental matrices.

Development & implementation



Development of protocols for method validation

Case studies **(„Road-Test“ of the 3 validation protocols)**

- Oestrogens in wastewaters (level V1)
- Non-steroidal anti-inflammatory drugs in waters (level V2)
- DecaBDE in dust (level V3)

Improvement & Implementation of the Validation Protocols

- **„Lobbying“ at CEN level** for implementation in standardisation (TC 230)
- Implementation at CMA?

Implementation - Standardisation

- Initiate the implementation of the protocols in the field of European Standardisation
  - A new work item for a technical guidance document will be proposed to CEN TC 230 (Water Analysis)
  - This procedure will soon be initiated by a proposal from the project co-ordinator to CEN
- If implementation at CEN is sucessful ISO?
- Work under Mandate M424 from DG ENTR to CEN will make use of the NORMAN validation protocols where possible

Implementation - CMA

- Propose the incorporation of the protocols in guidelines for European monitoring activities
  - presented to CMA group (14 May 2008)
  - Reference to the validation protocols integrated in the Guidance Document on Surface Water Monitoring
  - …

Future use of the protocols

- Dissemination of the approach by placing a publication in an international (analytical) journal
- NORMAN will carry out method validation trials for emerging substances of interest
- These studies will follow the NORMAN validation protocols
- Interlaboratory studies for method validation on e.g.,
  - pharmaceuticals & hormones
  - PFC in samples from sewage treatment
  - Pesticides and their metabolites
  - Organic phosphorous flame retardants
  - Siloxanes

 For detailed information see Joint Programme of Activities for 2009 / 2010

Summary

- Harmonised protocols for method validation have been developed and tested
- Protocols will (hopefully) be implemented in the field of European standardisation, and widely accepted
- Norman network will work according to these protocols and foster the dissemination of the approach
- Step towards a common EU approach for method validation (comparable & reliable data)

Appendix

- The following slides were not presented at the CMA meeting
- They are taken from previous presentations of the Validation framework developed within NORMAN and provide some additional information