

M9 Stakeholder Meeting

21GRD09 MetroPOEM

Metrology for the harmonisation of measurements of environmental pollutants in Europe

Dirk Arnold
PTB

Welcome and Introductions

➤ Stakeholders invited for the M9 Meeting:

- ✓ Laboratories measuring environmental pollutants
- ✓ International and national regulators responsible for environmental pollution monitoring networks
- ✓ Manufactures of mass spectrometry systems
- ✓ Users of non-SI-traceable isotope reference materials

Welcome and Introductions

➤ Aim of the M9 stakeholder Meeting:

- ✓ To inform the stakeholder community about the work in progress and the planned work in the project
- ✓ To receive feedback from the stakeholder community about their needs
- ✓ To continue the two-way information flow between the stakeholders and the project participants

Stakeholder Meeting Schedule, 29 June 2023

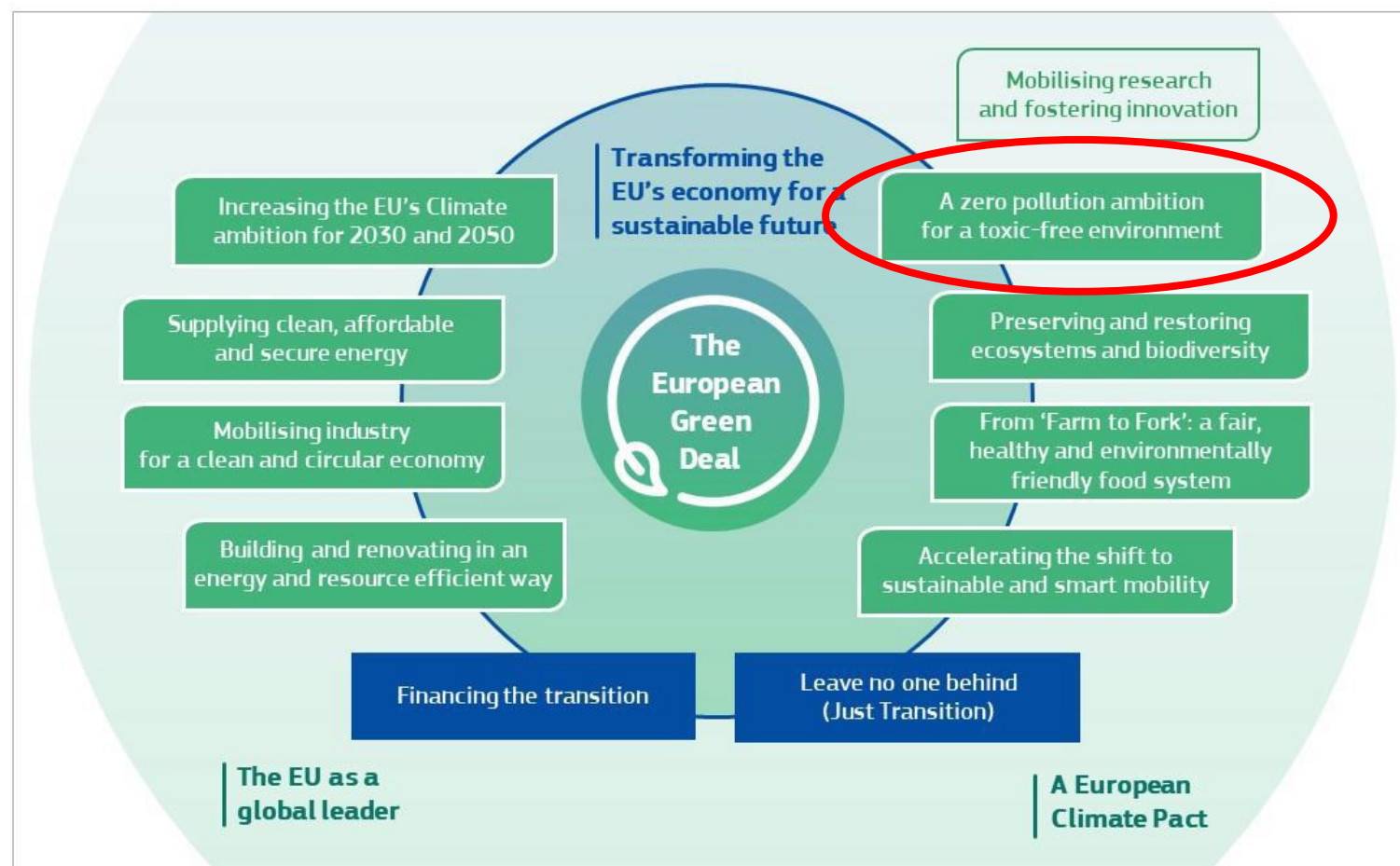
09:00 - 09:15	Opening and welcome	
09:15 - 09:40	General project information and changes including WP 6	Dirk Arnold, PTB
09:40 - 10:05	WP 1 – Information and progress	Ben Russell, NPL
10:05 - 10:30	WP 2 – Information and progress	Tea Zuliani, IJS
10:30 - 10:45	Coffee break	
10:45 - 11:10	WP 3 – Information and progress	Valérie Lourenço, CEA
11:10 - 11:35	WP 4 – Information and progress	Betül Ari, TÜBİTAK
11:35 - 12:00	WP 5 – Information and progress	Simon Jerome, NMBU
12:00 - 12:30	Lunch break	
12:30 - 14:00	Open discussion (Details to follow)	Anders Lund Eide, DSA
14:00	Close	Simon Jerome, NMBU

Introduction of MetroPOEM

➤ Key facts:

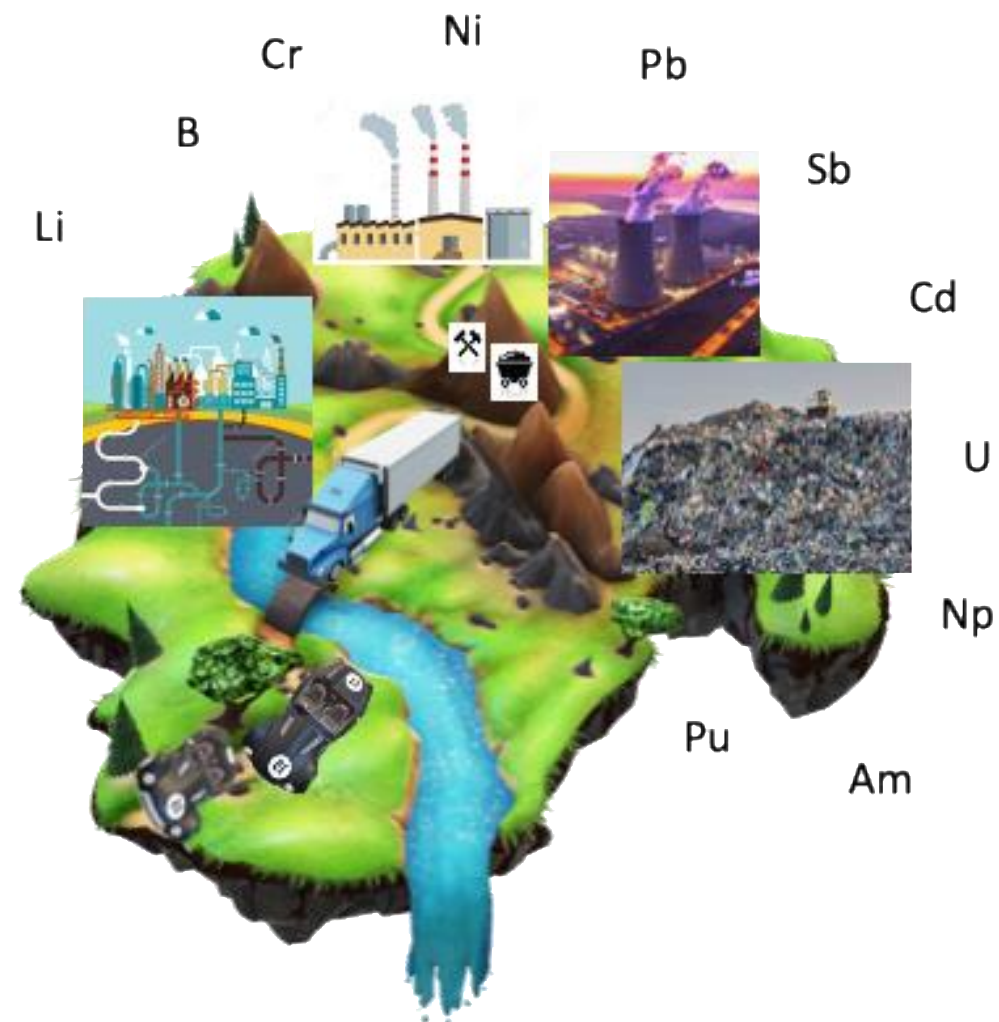
- ✓ Start date: 01 October 2022
- ✓ Duration: 36 months
- ✓ 22 (23 in the near future) partners will contribute with in total 320 months of work!
- ✓ Websites:
 - <https://www.npl.co.uk/euramet/metropoem>
 - <https://www.euramet.org/research-innovation/search-research-projects/details/project/metrology-for-the-harmonisation-of-measurements-of-environmental-pollutants-in-europe>
- ✓ This project was selected for funding from the Green Deal Call 2021 of the European Partnership on Metrology research funding program: <https://www.metpart.eu/>

The European Green Deal, Document: “COM/2019/640 final”



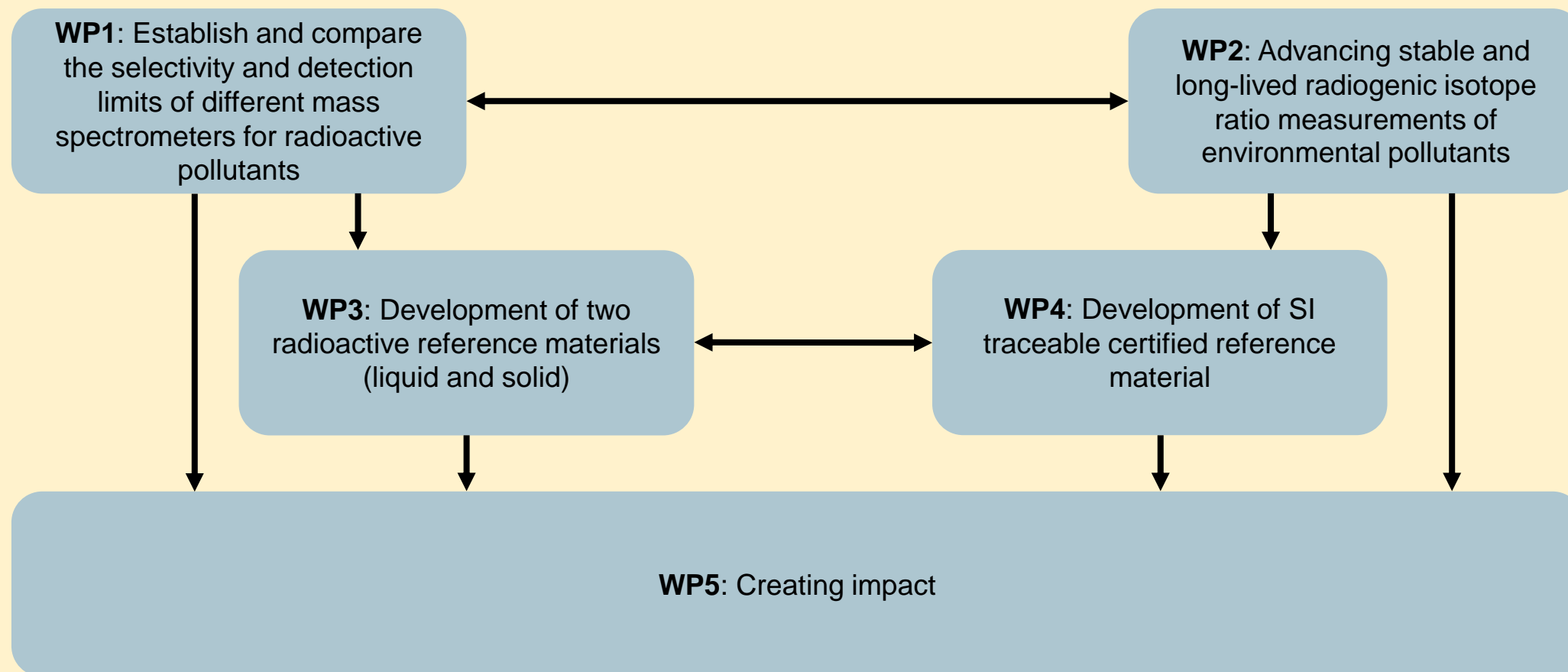
Introduction of MetroPOEM

- **Key Aspects:**
- **The zero-pollution ambition promoted by the European Green Deal**, requires highly sensitive and state-of-the-art detection techniques for the measurement of ultra-low amounts of pollutants.
- **Mass spectrometry** is a key method,
 - ✓ with high potential for reducing measurement uncertainties and detection limits,
 - ✓ but there is no existing traceability chain for **radioactive elements**,
 - ✓ and there is a lack of SI-traceable isotope reference materials for **stable isotopes**.



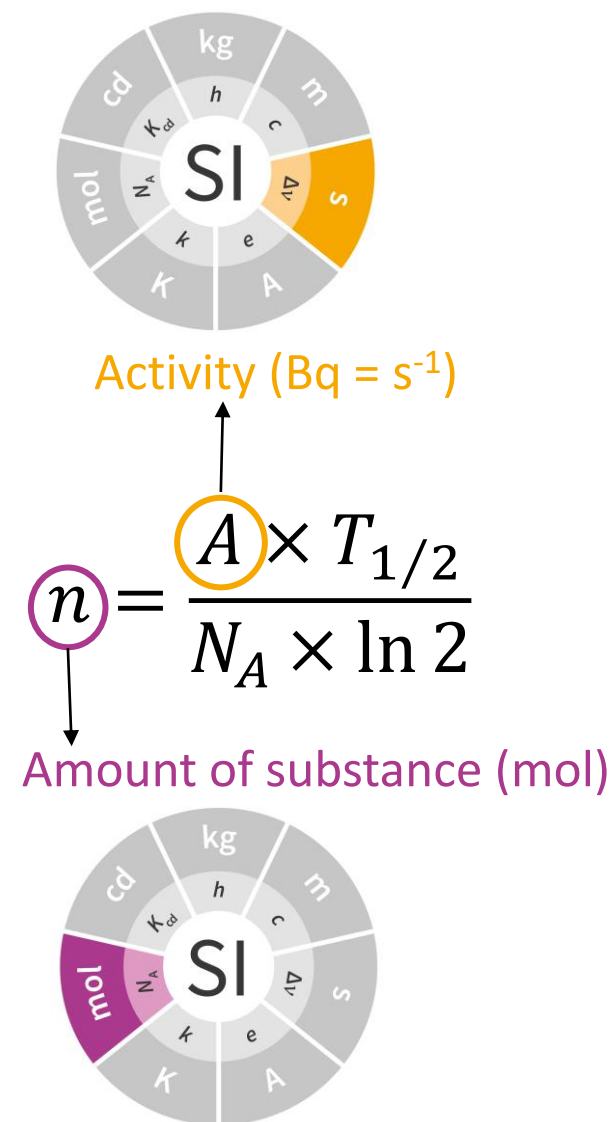
Work packages

WP6: Management and coordination



Impact of MetroPOEM

- **Establish link** between radiometric techniques and mass spectrometry, bridging the gap between the activity (Bq) and the amount of substance (mol) of an isotope
- Close the **traceability gap** for isotope ratio measurement resulting from isotopic fractionation (mass bias)
- Guide on the use of mass spectrometry for **low level radionuclide detection**
- Report of different instrument's **advantages and limitations**
- Three Si-traceable **reference materials**
- Establish Si-traceable **calibration chain** for single collector ICP-MS
- **Harmonized methods** for measurement of polluting elements using mass spectrometric techniques



MetroPOEM @ BIPM

- **CCRI Webinar on “Mass spectrometry in Radionuclide Metrology” (17 February 2022)**
 - ✓ Website:
<https://www.bipm.org/en/committees/cc/ccri/wg/ccri-webinar/2022-02-17>
- **CCRI-CCQM Workshop on “The Use of Mass Spectrometry in Radionuclide Metrology” (14-16 February 2023)**
 - ✓ Website:
<https://www.bipm.org/en/committees/cc/ccri/wg/ccri-ccqm-ws/2023-02-14>
- **CCRI(II) Task Group on Mass Spectrometry (CCRI(II)-MS-TG)**
 - ✓ Website:
<https://www.bipm.org/en/committees/cc/ccri/wg/ccri-ii-ms-tg>



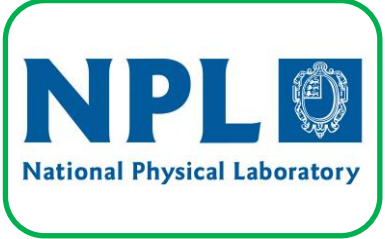
WP6



WP3



WP2



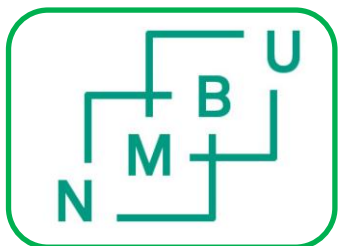
WP1



WP4



Consortium



WP5



Funding Acknowledgement

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- Funder ID: 10.13039/100019599
- Grant number: 21GRD09 MetroPOEM