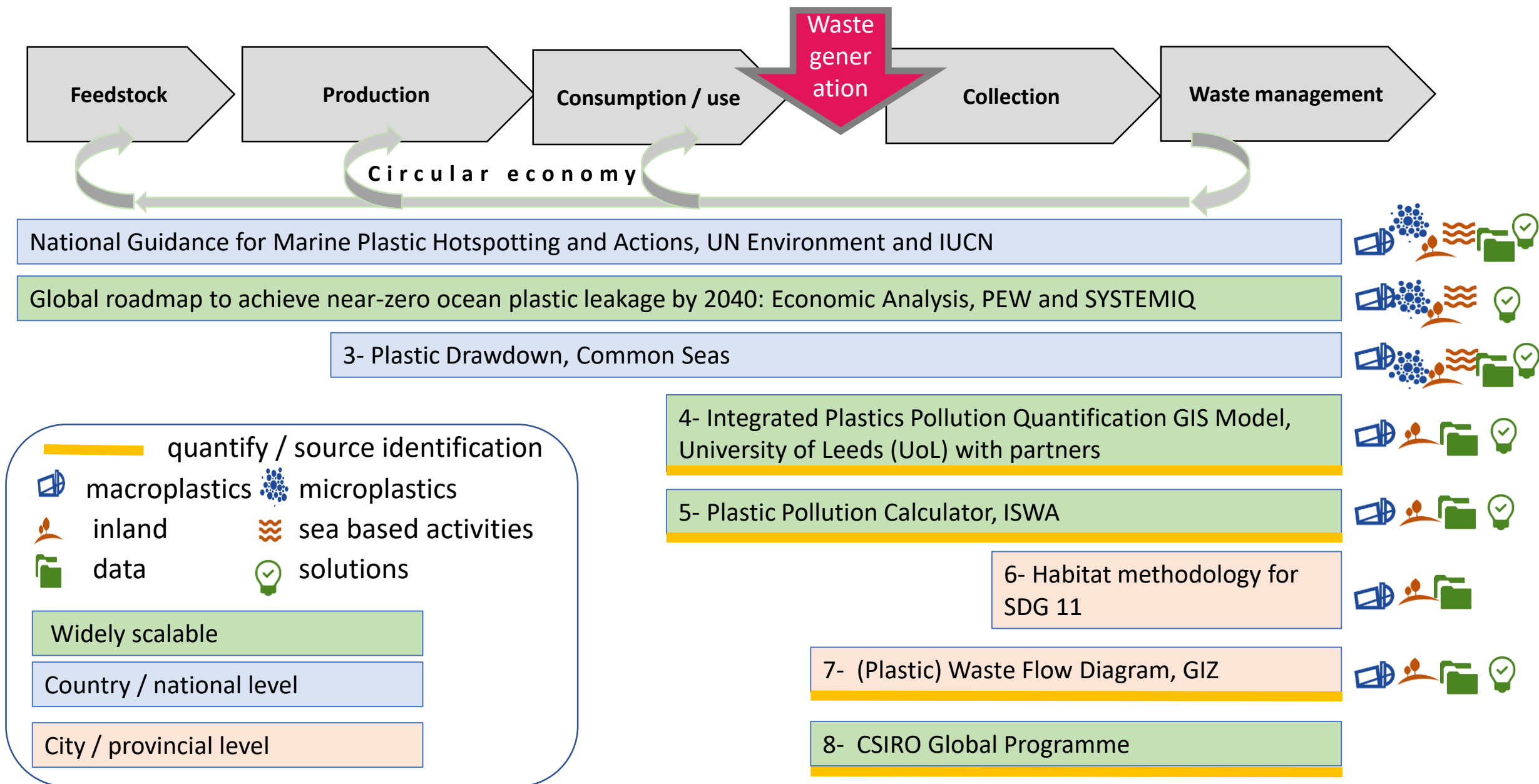


Plastics methodologies along the value chain – for governments



IUCN Plastic Footprint Inventory

- Challenge of metrics on extent of problem, leakages, impacts | UNEA-3
- Cooperation on common definitions, standards and methodologies
- Partnership with Quantis and EA:
 - More than a dozen tools and methodologies reviewed (FM, IOA, LFIA)
 - First level of analysis: Typology framework
 - ACCOUNTABILITY: Plastic used or wasted, loss and release, impacts
 - ACTIONABILITY: Generic, material specific, regionalized
 - Second level of analysis: Simplicity vs LFA
- Findings:
 - Simplicity vs complex
 - Data on plastic waste management
 - Pathway models for macro and microplastics
 - Environmental fate models
 - Impact assessment accounting for negative impacts

National Guidance for Marine Plastic Hotspotting and Actions

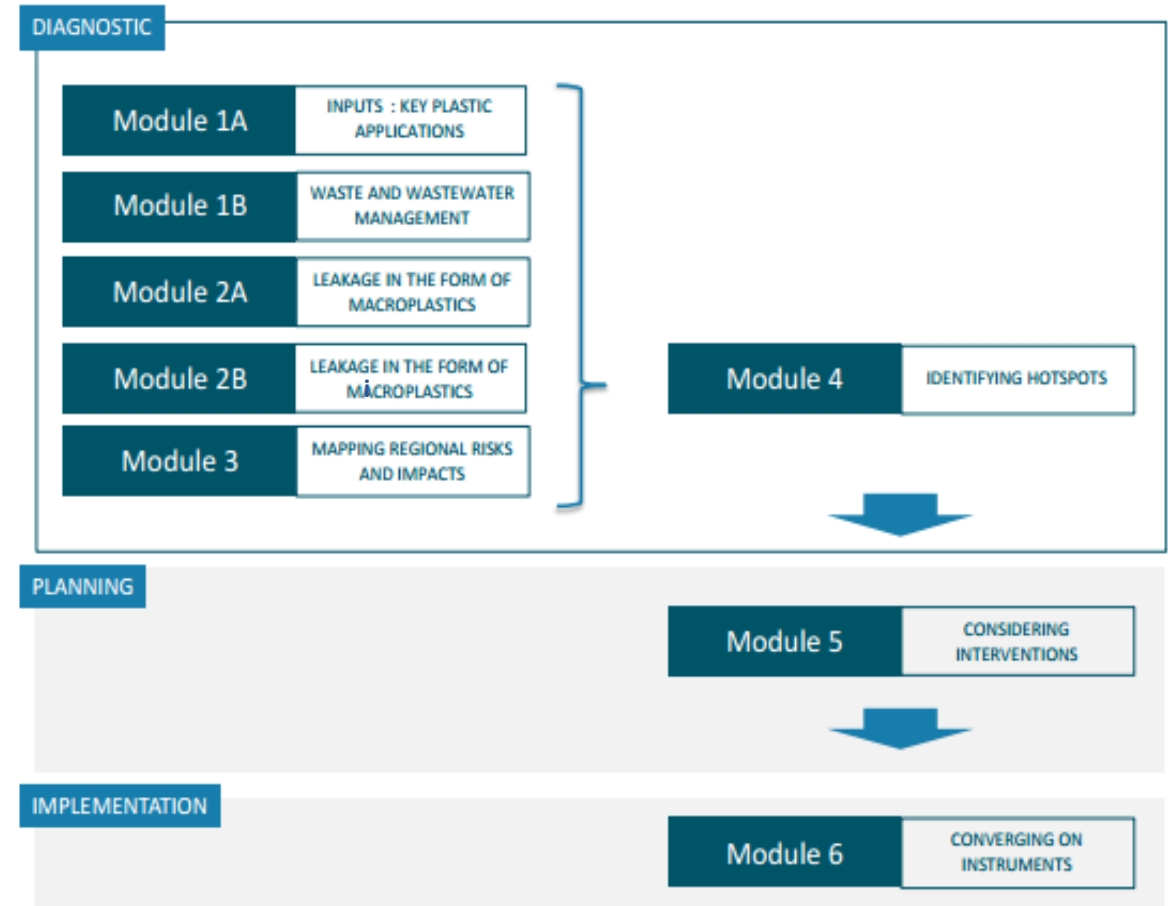
A methodological framework and guidance for countries to :

1. **Identify key hotspots** towards the most relevant plastic polymers, products, and pathways leaking into the marine environment, as well as associated impacts
2. **Prioritize key areas of intervention** relevant for the country, with key stakeholders along the plastics value chain

Nov. 2019: Guidance published

2019-2020: Pilot test in 16 countries

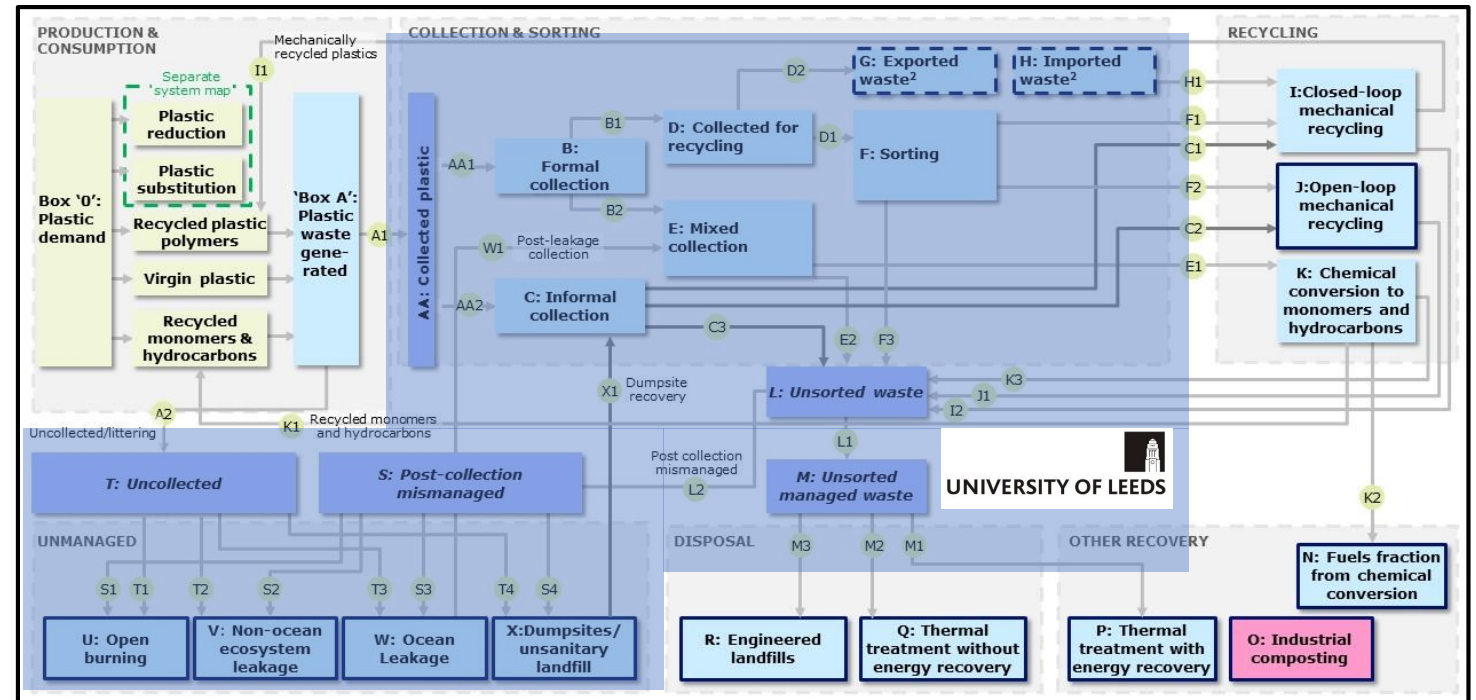
2020: Online platform (guidance, tool, data, case studies)



Global Roadmap to Achieve Near-Zero Ocean Plastic Leakage by 2040: Economic Analysis

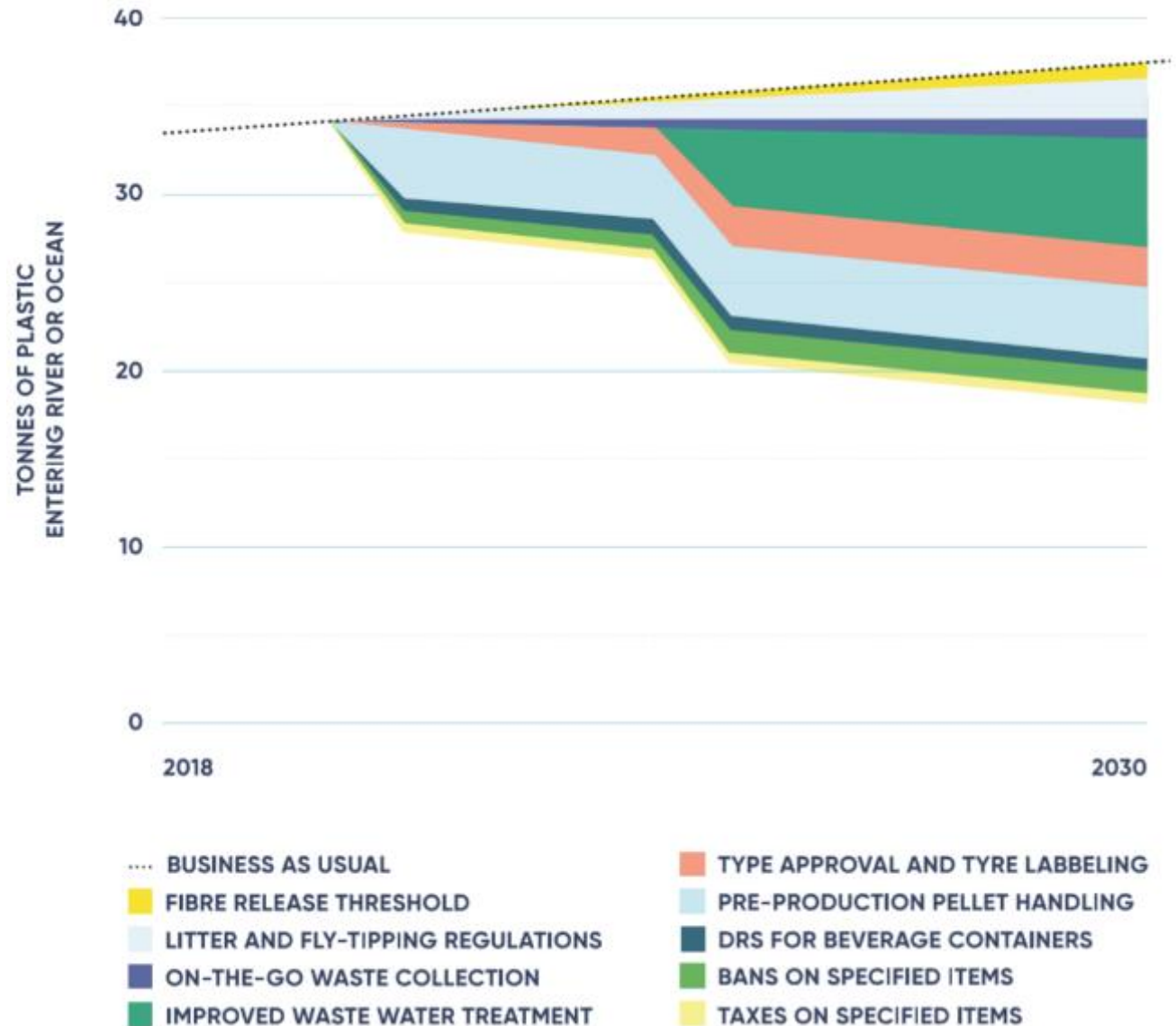
Key Question:

What is the estimated mass of plastic leaking into the ocean on an annual basis through 2040 under alternative scenarios, and what are the associated economic costs, changes in greenhouse gas emissions, and impacts on jobs for each scenario?



Plastic Drawdown

- The most comprehensive approach today for governments to understand their waste flows & optimise policies to tackle ocean plastic pollution:
1. Models a country's plastic waste mass and composition, and projects how this will change -2030.
 2. Maps plastic waste pathways to quantify leakage into rivers and seas.
 3. Analyses the impact of 18 key policies.
 4. Enables governments to convene key actors and chart a pathway towards dramatically reduced ocean plastics.



Ben Jack, Director or Programme Delivery: ben@commonseas.com

Summary report available at: commonseas.com/plasticdrawdown

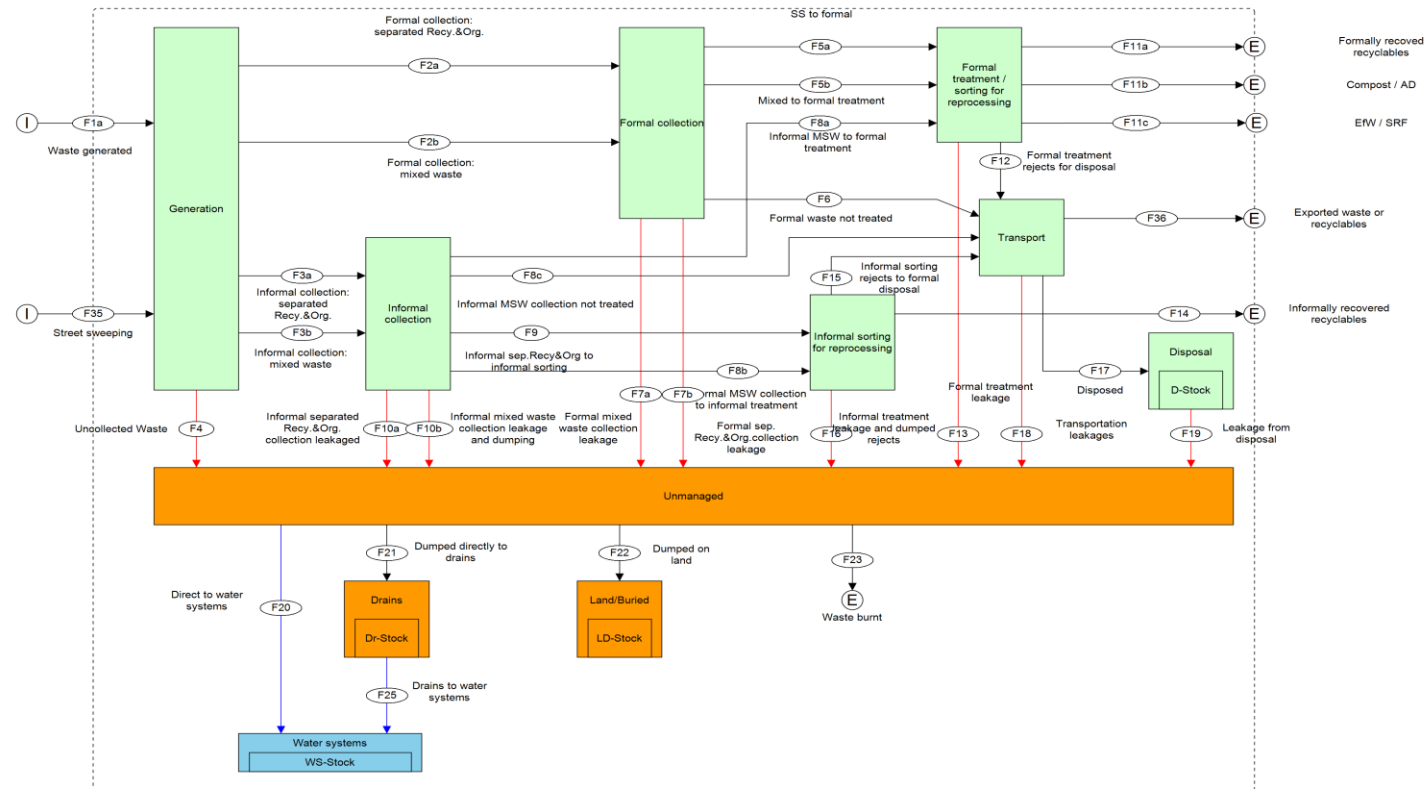
CSIRO – Global land-based plastic to ocean project

CSIRO Marine Debris Research Program

Approach



(Plastic) Waste Flow Diagram



giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH



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eawag
aquatic research

wasteaware

Contact: Dr Costas Velis
University of Leeds

Tool refinement & 5 case studies



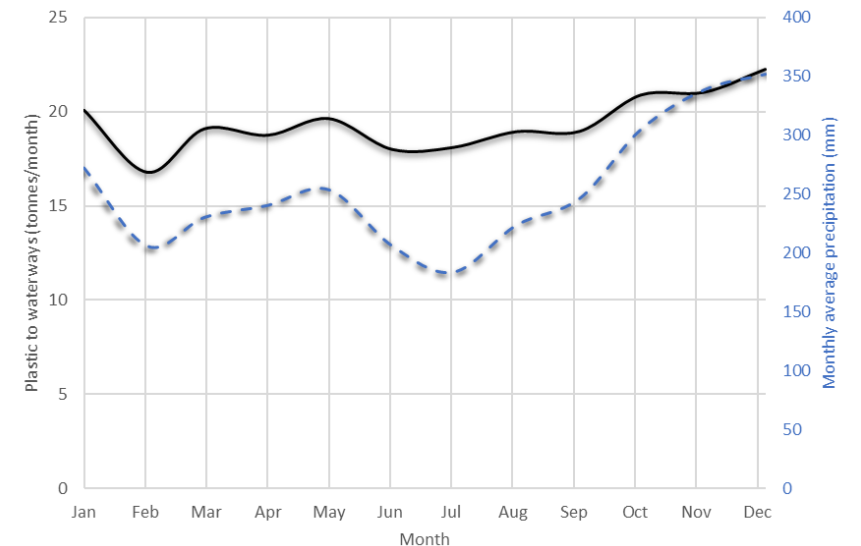
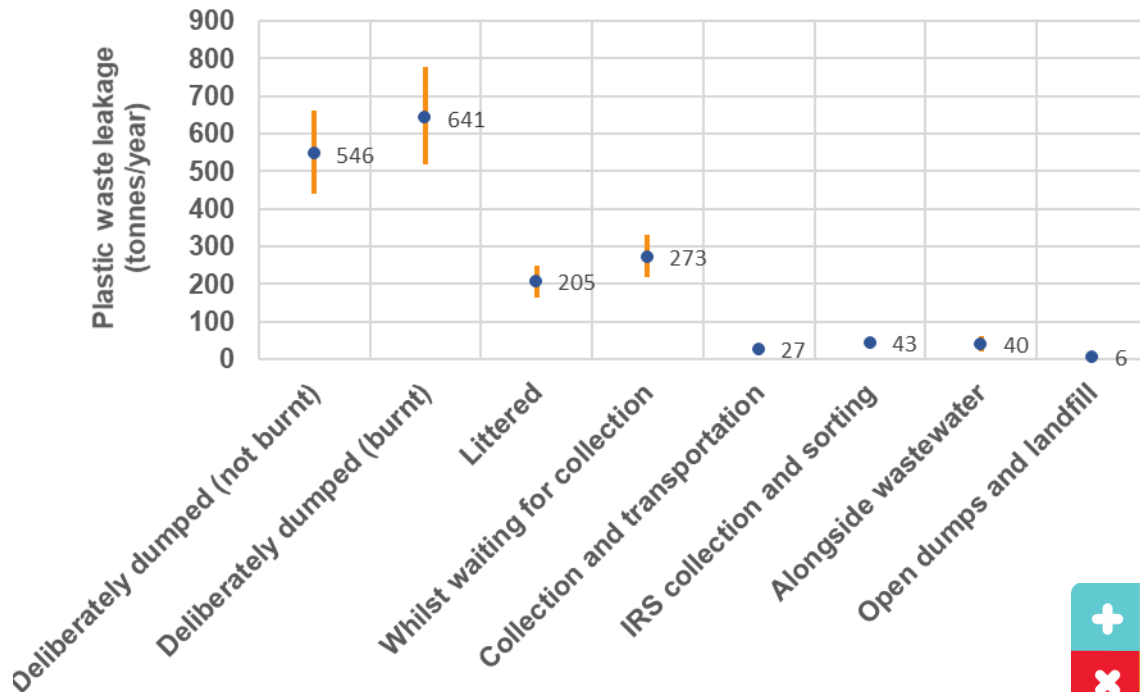
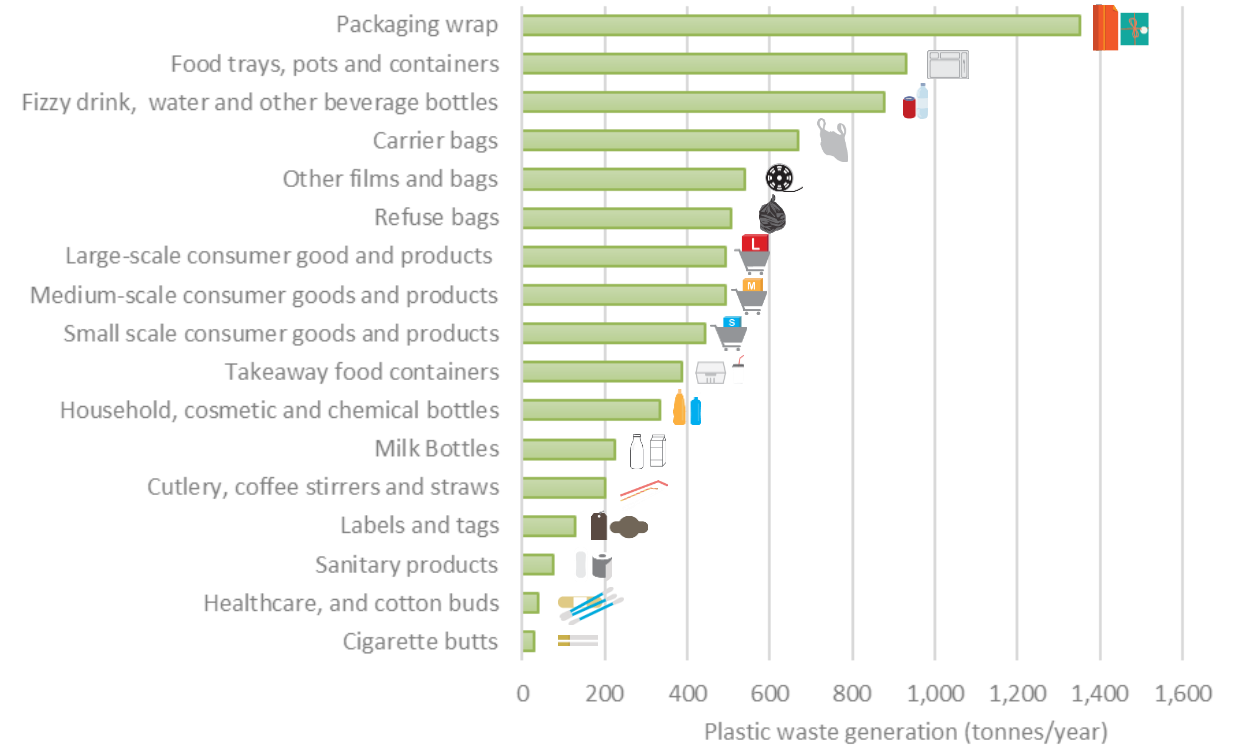
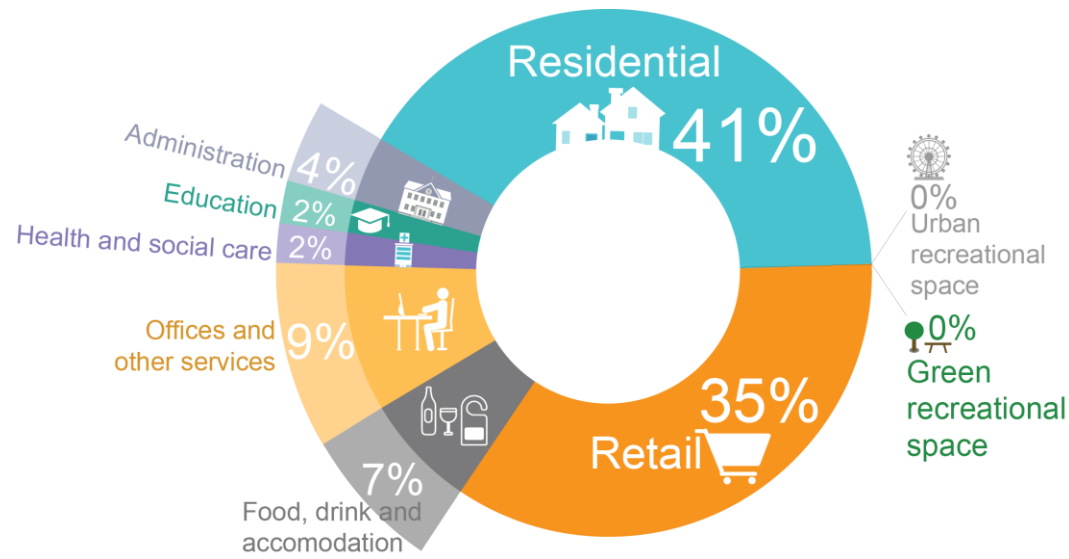
PLASTIC WASTE POLLUTION CALCULATOR



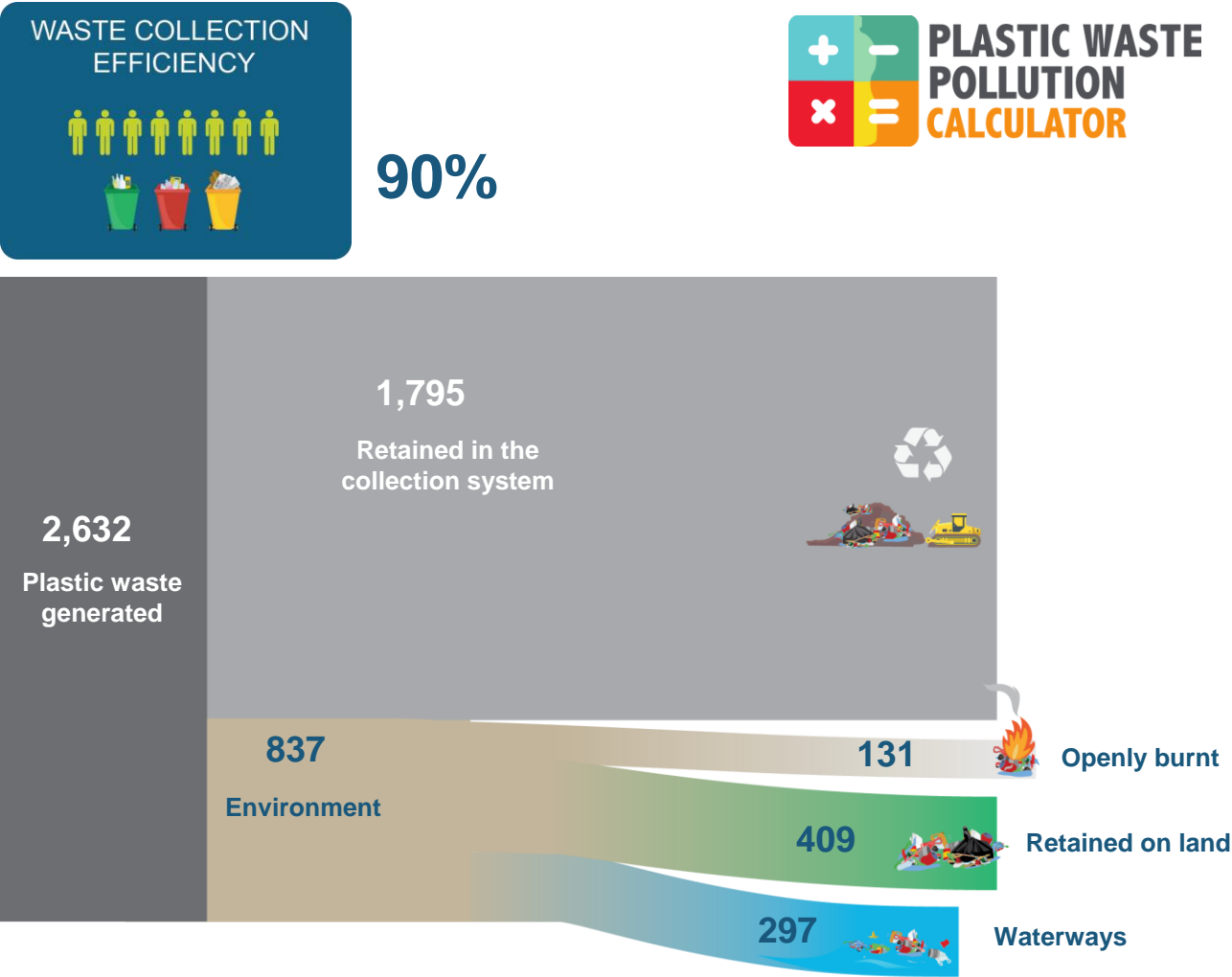
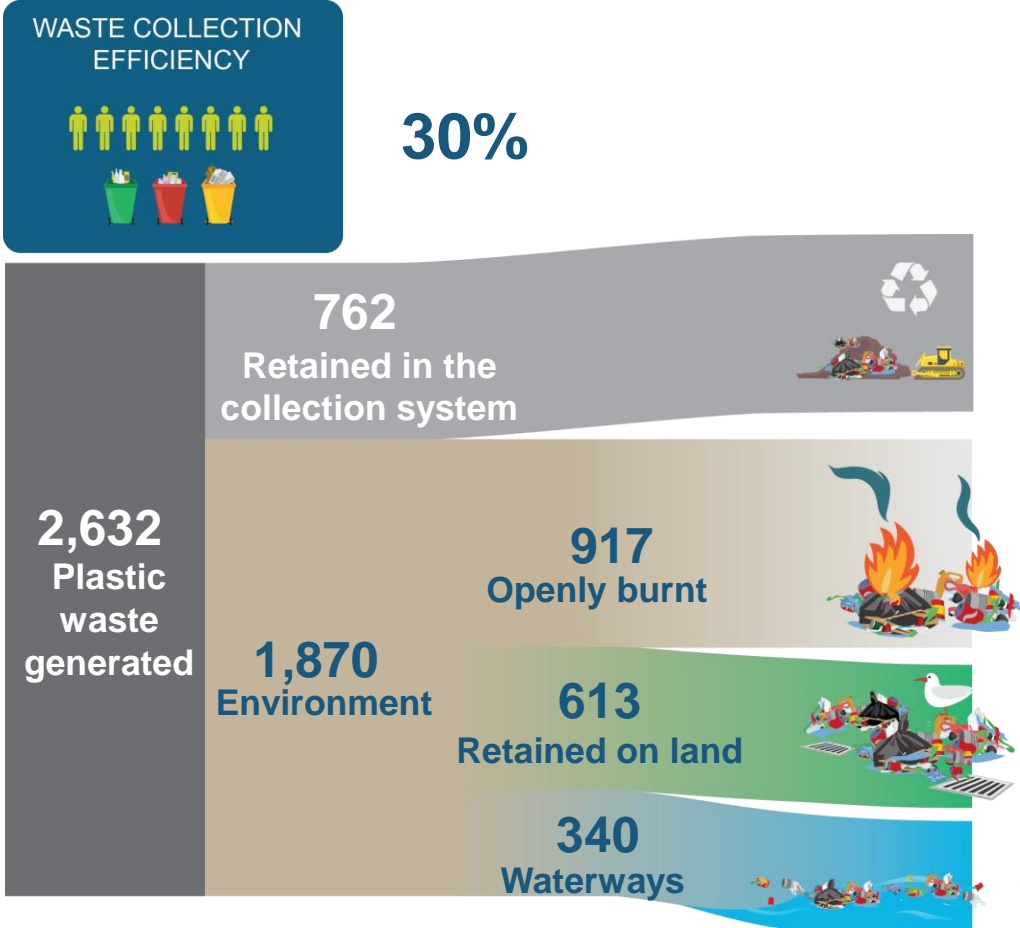
ISWA
MARINE
TASK FORCE



 **ISWA**
International Solid Waste Association



Effect of improving collection infrastructure / service



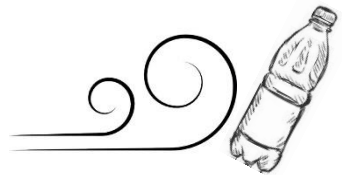
Integrated Plastics Pollution Quantification GIS model (IPPPQ)



GIS: Scalability from the local to global level.



Leakages: Dynamic detailed leakages based on probabilistic modelling.



Transportation: Physics based model on the transportation of plastic items.

- Wide partnership: UoL and major stakeholders
- Compatibility with **ISWA Pollution Calculator**, **WFD** and **CSIRO** methodologies.

Contact: Dr Costas Velis

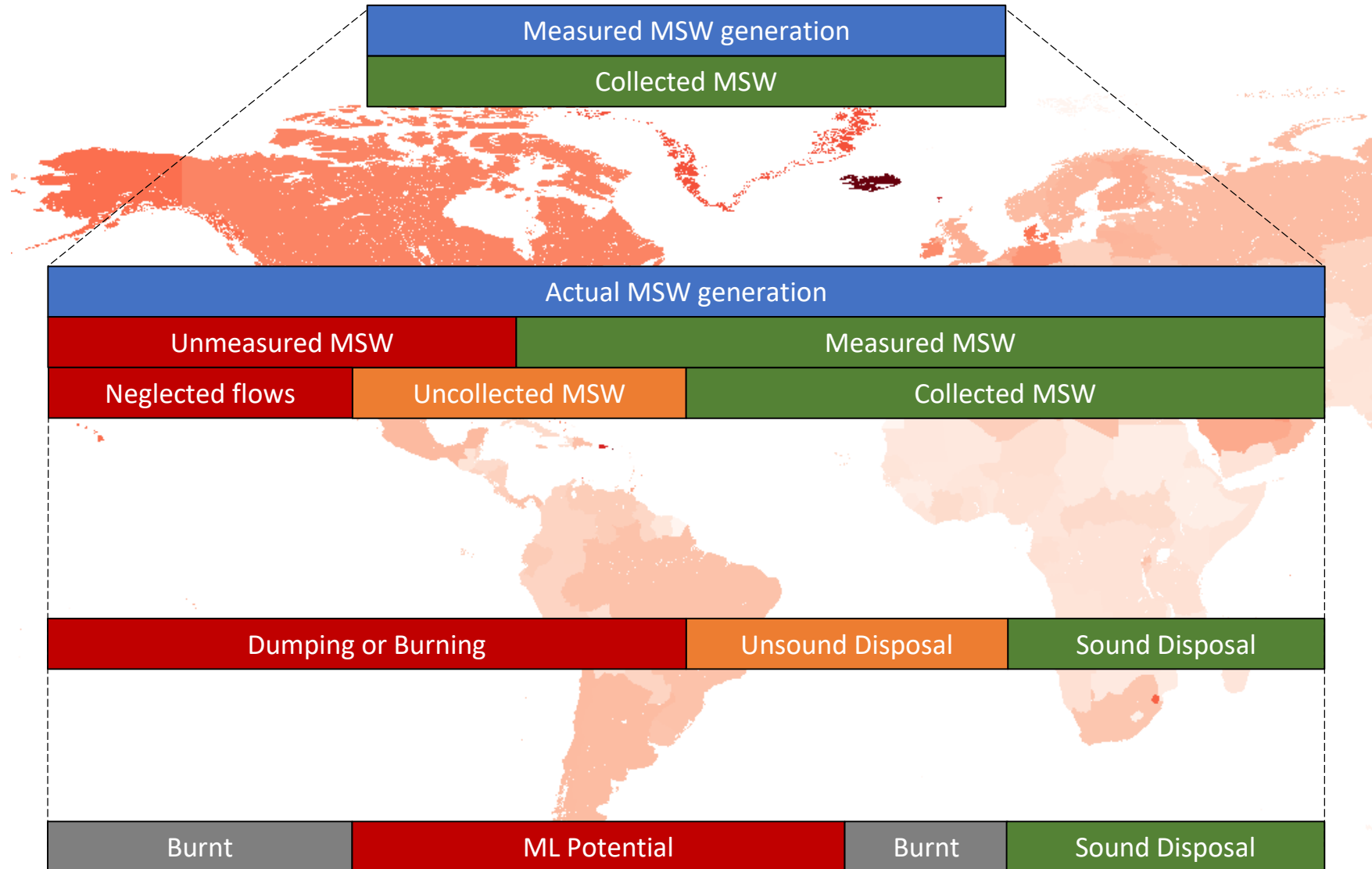
c.velis@leeds.ac.uk



Waste generation methodologies comparative

Measurement method	Description
Point of generation (households only)	Waste is measured using questionnaires or studies at a household generator level, but neglecting any other sources of MSW. The houses sampled are then extrapolated to the total number of houses / population.
Point of generation (all activities)	Waste is measured using questionnaires or studies at a generator level, and includes all sources of MSW. The buildings sampled are then extrapolated to the total number in that district.
Point of collection (non-corrected)	MSW is measured at the point of collection (i.e. either at transfer stations or at point of loading onto collection truck (note: some waste may have leaked or been collected by the informal sector whilst waiting for collection and therefore not included in this value). This tonnage is divided by the population to get the waste generation rate without correcting for the waste produced in any areas without waste collection coverage.
Point of collection (corrected)	MSW is measured at the point of collection (i.e. either at transfer stations or at point of loading onto collection truck (note: some waste may have leaked or been collected by the informal sector whilst waiting for collection and therefore not included in this value). This tonnage is divided by the collection coverage (%) to estimate the waste generation for all of the district regardless of if the waste is collected, before then dividing by the population to get the waste generation rate.
Point of disposal (non-corrected)	MSW is measured at the point of disposal including any formal recycling, incineration etc. This tonnage is divided by the population to get the waste generation rate without correcting for the waste produced in any areas without waste collection coverage.
Point of disposal (corrected)	MSW is measured at the point of disposal including any formal recycling, incineration etc. This tonnage is divided by the collection coverage (%) to estimate the waste generation for all of the district regardless of if the waste is collected, before then dividing by the population to get the waste generation rate.

Integrated Plastics Pollution Quantification GIS model (IPPPQ)



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