Background data collection and life cycle assessment for construction and demolition (CDW) waste

Project Seminar

26 May 2021

JRC, DTU, DTI, Metabolics

Policy scope

- **Article 11(6) of revised WFD:**

  By 31 December 2024, the Commission shall consider the **setting of preparing for re-use and recycling targets** for construction and demolition waste and its **material-specific fractions** *(…)*.
  To that end, the Commission shall submit a report to the European Parliament and to the Council, accompanied, if appropriate, by a legislative proposal.

- **Strategy for Sustainable Built Environment (Circular Economy Action Plan):**

  To exploit the potential for increasing material efficiency and reducing climate impacts, the Commission will launch a new comprehensive **Strategy for a Sustainable Built Environment (SSBE)**. This Strategy *(……)* will promote circularity principles throughout the lifecycle of buildings by: *(…)* **considering a revision of material recovery targets set in EU legislation for construction and demolition waste and its material-specific fractions**.

https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L0851&from=en;
https://eur-lex.europa.eu/resource.html?uri=cellar:9903b325-6388-11ea-b735-01aa75ed71a1.0017.02/DOC_1&format=PDF

Project goal

Provide **environmental and techno-economic assessments** in support of policy making for CDW. In particular, the assessment will inform the Commission work in **considering measures**, including the **setting of specific targets for preparing for re-use and recycling** for construction and demolition waste and its **material-specific fractions** in accordance with Article 11(6) of the Waste Framework Directive.

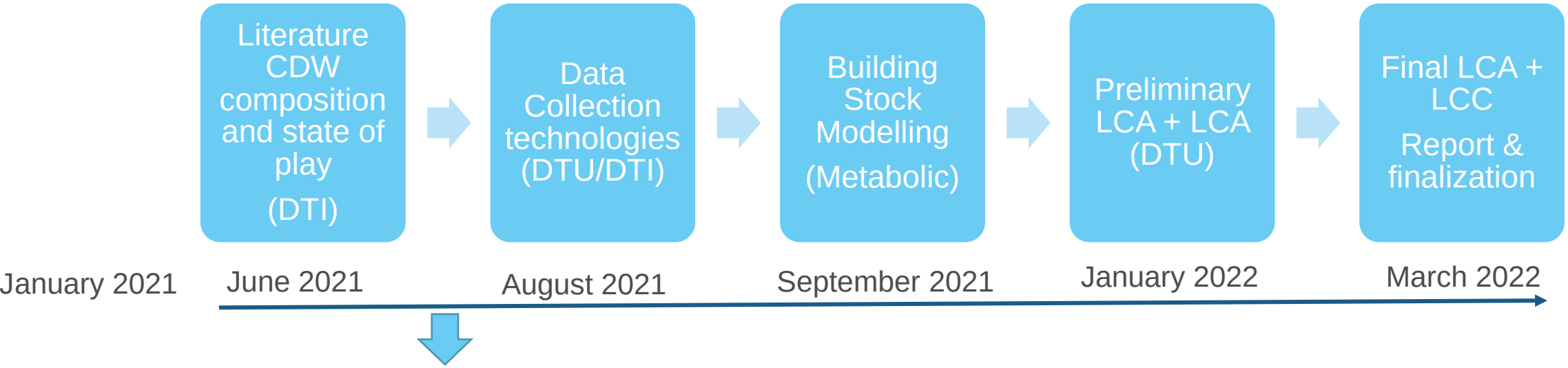
Project Start: January 2021

Project End: March 2022

Key research questions

- What is the **composition** of CDW for typical EU regions? Present and Future.
- What are **current practices** in MS in respect to recycling/recovery (e.g. is backfilling reported correctly)?
- What are the **drivers and the barriers of the different management and treatment options** for CDW individual material fractions?
- Are there **best practices** worth sharing among CDW recyclers, local/regional authorities?
- Can the management of CDW be improved if preparing for re-use and recycling targets are set for **individual materials** contained in CDW? (especially for lighter fractions with limited influence on an *overall* target)
- **Which materials should be** prioritised ?
- What is the **environmental improvement potential** (climate change mitigation)?
- How could such individual material fraction **targets** be set?

Project development



Selection of 2-3 relevant material fractions based on:

- Quantity
- CO2 savings
- Recyclability
- Available studies and/or recyclability

European Commission

What data are we looking for?

- **Material composition** of buildings in different parts of EU (2020-2050)
- **Life Cycle Dataset** for Recycling technology for individual fractions (e.g. recycling of insulation, of wood, of gypsum, etc.)
- **Quality** of material recycled (functionality in comparison to virgin)
- **Costs** (e.g. recycling, selective demolition practices vs. conventional)

How to contribute ?

We sent out a survey to stakeholders that showed their interest in the project.

Refer to adam@env.dtu.dk for information exchange on technology, waste data, etc.

Refer to JRC-WASTE-RESEARCH@ec.europa.eu for general information about the project

European Commission

Thank you !

JRC team

Davide Tonini, Elena Garbarino, Ioannis Antonopoulos

JRC-WASTE-RESEARCH@ec.europa.eu

https://ec.europa.eu/jrc/en/research-topic/waste-and-recycling

European Commission