



LCA4Regions

Interreg Europe



European Union
European Regional
Development Fund

Roundtable 2: LCA in Action

focus on sustainable built environment

Jolanta Dvarionienė

Project manager

PP3 - Kaunas University of Technology
Lithuania

Panelists

Josefina Lindblom, DG ENV

Works at the European Commission, in DG Environment. Since 2011, she is working on Sustainable Buildings, and have managed the development of Level(s), the European framework for assessment and reporting of sustainable performance of buildings. Her main focus now is to introduce the minimisation of whole life carbon emissions into policy and market initiatives.

Adam Szymanski, Lodzkie Region

From the International Projects Unit of the Promotion Department Lodzkie Region, Poland. Enthusiast of science, innovative technologies and pro-environmental solutions. He works at the interface of public administration, academia, SMEs, EU funds, projects dedicated to circular economy and LCA issues and related tools.

Giorgio Bonvicini, RINA

Senior Energy Engineer at consulting company RINA and co-chair of the working group on Districts at the European Technology and Innovation Platform on Renewable Heating and Cooling. He has experience in energy transition topics and specifically in resource efficiency analyses and Life Cycle Assessments in buildings and industrial processes. He is also lecturer of Carbon Footprinting at the Master in Climate Change of Politecnico di Torino.

Introduction

Good Practices Guide

Promoting life-cycle based approach in policy instruments through the introduction of the Life Cycle Assessment methodology

JANUARY 2022



LCA for resource efficiency

LCA in waste and material flows

LCA in public procurements

Training and capacity building in LCA

LCA in monitoring and evaluation

A map of selected Good Practices

LCA for resource efficiency

- 1 LCA for evaluation of construction works
- 2 Environmental Impact Assessment of Renovated Multi-apartment Building Using LCA
- 3 Environmental Product Declaration as an example of LCA application in construction
- 4 Calculation of Carbon Footprint in services of the Commonwealth of the Region of Pamplona
- 5 Resource efficient land use to promote sustainable land design and development

LCA in waste and material flows

- 6 Optimization of the regional management of Construction & Demolition Waste through the LCT approach
- 7 GERLA project: Waste management in Lombardy – Life cycle assessment
- 8 URSA - Alqueva by-products circulation units
- 9 Application of Life-cycle assessment in optimization of municipal waste management systems

LCA in public procurements

- 10 Green public procurement in Slovenia
- 11 Manuals of the Public Procurement Office on the use of green procurement and the life cycle.
- 12 Active support of the contracting authority by the Public Procurement Office through LCC calculators
- 13 Green public procurement and LCC in practice – Green vehicles

Training and capacity building in LCA

- 14 Training and capacity building on circular economy and LCA in Slovenia
- 15 Course "Business Models in the Circular Economy"
- 16 Capacity building in life cycle assessment - Lodz University of Technology
- 17 KEINO Academy for sustainable procurement management

LCA in monitoring and evaluation

- 18 National Registry of Carbon Footprint (CF), CO2 compensation, and CO2 absorption projects
- 19 Wines of Alentejo Sustainability programme - WASP
- 20 Regional Green House Gas (GHG) emissions Inventory
- 21 Doing good: carbon handprints as assessing positive impacts of companies and the public sector



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Good Practice n° 1

LCA for evaluation of construction works



Life cycle assessment LCA* (materials, energy)



Life cycle Costing (LCC)



Helsinki-Uusimaa

Multi-storied buildings were constructed by concrete or wood materials. LCA and LCC were used to obtain comparable data for the time span of 100 years.

THE HOUSING FINANCE AND DEVELOPMENT CENTRE OF FINLAND (ARA)
Helsinki-Uusimaa, Finland (Suomi)

Date: February 2018 - Ongoing



Industrial ecology



Life cycle assessment LCA* (materials, energy)



Materials flow assessment (MFA)



Input-Output tables



Sustainability reporting (e.g. GRI)

Good Practice n° 6

Optimization of the regional management of Construction & Demolition Waste through the LCT approach



Lombardia

The AWARE Group adopted the life cycle thinking approach (LCA and LCC) to maximize the resource-efficiency of the regional CDW management.

LOMBARDY REGION
Lombardia, Italy (Italia)

Date: April 2016 - Ongoing



Life cycle assessment LCA* (materials, energy)



Life cycle Costing (LCC)

Good Practice n° 18

National Registry of Carbon Footprint (CF), CO2 compensation, and CO2 absorption projects



Madrid

Registry to promote the calculation and reduction of CF of organizations, and encourage projects to improve sink capacity and become a tool to tackle climate change.

MINISTRY FOR ECOLOGICAL TRANSITION AND DEMOGRAPHIC CHALLENGE
Comunidad de Madrid, Spain (España)

Date: March 2014 - Ongoing



Carbon Footprint (CF)



Materials flow assessment

Good Practice n° 3

Environmental Product Declaration as an example of LCA application in construction



Life cycle assessment LCA* (materials, energy)



Materials flow assessment (MFA)



Eco-labels*



Environmental Product Declarations (EPDs)



Product environmental footprint (PEF)



Circular/Sustainable materials management



Lodzkie

Development of Environmental Product Declaration using LCA analysis for thermal insulation systems in the construction industry.

ATLAS Sp. z o.o.
Łódzkie, Poland (Polska)

Date: March 2014 - Ongoing

Good Practice n° 10

Green public procurement in Slovenia



Zahodna

This practice describes the implementation and use of green public procurement legislation in Slovenia. The latter also considers the use of LCA methodologies.

NATIONAL INSTITUTE OF CHEMISTRY
Zahodna Slovenija, Slovenia (Slovenija)

Date: January 2011 - Ongoing



Life cycle Costing (LCC)



Sustainable and/or circular public procurement (SSP, CPP)



Green purchasing (GP)

Discussions

- Why there should we focus on the built environment? And why is sustainability key (including also social and economical aspects)?



- How from your point of view do you see sustainability in built environment solved? What are the challenges or issues to it?

SUSTAINABLE DEVELOPMENT GOALS



- What is, in your opinion, the way forward, how do you see the future of the sector?





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Thank you!

Questions welcome

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LCA from policy planning to implementation | 12 May 2022