

## MINEA WG 1

# "Resource potential of construction & demolition waste"

### Workshop theme:

## Towards a knowledge base for material reserves and resources in buildings & infrastructures

Gang Liu

Professor WSR, SDU Life Cycle Engineering

29-30, Oct, 2018





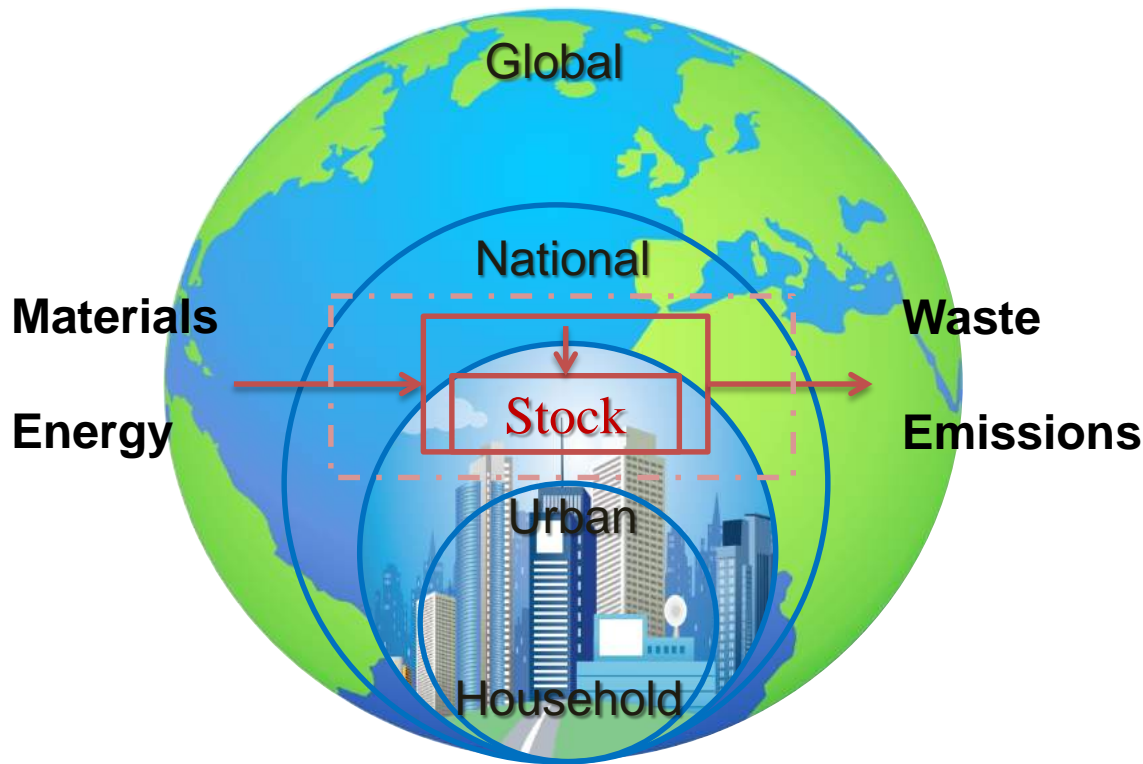
Hans Christian Andersen



**This is my childhood house, and I know it is a building stock!**



We **SMILE** (Societal Metabolism and Industrial Ecology)  
- and strive to **map and inform** sustainable socio-metabolic transition



**to Nourish    to Clean    to Trans & Commu    to Reside & Work**

**Case studies:** metal cycles, agrifood chains, urban systems, low-carbon technologies...

SDU   
Building  
Passport



# MINEA Network

## Management Committee

COST Countries:	28 Countries, 46 MC Members
COST Near Neighbour Countries:	2 (Russia, Georgia); 2 Members
COST International Partner Countries:	2 (ROC, ROC-Taiwan), 3 Members
Specific Organisations:	ISWA, CEWEP, UNECE-EGRC, Eurogypsum

## Management Committee and Working Group Members





# MINEA Working Groups

**Buildings**



**WG1**

**Tailing deposits**



**WG2.1**

**Landfills**



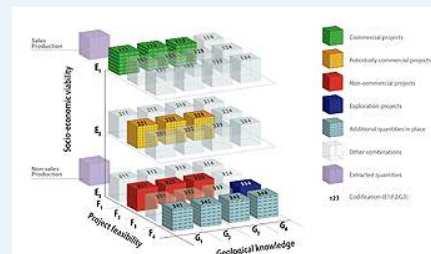
**WG2.2**

**Waste incineration residues**



**WG3**

## Integrating WG 1-3 Classification and reporting of material resources/reserves



**WG4**

# MINEA WG1 Objectives

- Development of a common understanding and definitions regarding **material resources/reserves in buildings** (commercial, residential and industrial buildings) **and infrastructures** (e.g. for traffic, gas, water, electricity)
- Coordinating the establishment of **a knowledge base**, including existing **technologies for material recovery** from C&D waste and **data sources** on materials in buildings and infrastructures.
- **Input to policy makers** on the resource potential in C&D wastes.

[http://www.minea-network.eu/working\\_groups.php?g=1](http://www.minea-network.eu/working_groups.php?g=1)

Contact: Mohamed Osmani (Loughborough University, UK) and Gang Liu (SDU, DK)



# We were here in 2016...

17 participants from 10 countries



# ...and in Vienna in 2017

29 participants from 12 countries

First name	Family name	Institution	Country
Katerina	Donevska	University Ss Cyril and Methodius, Faculty of Civil Engineering	Macedonia
Antonino	Marvuglia	Luxembourg Institute of Science and Technology	Luxemburg
Satu	Huuhka	Tampere University of Technology	Finland
Sabina	Kramar	ZAG-Slovenian National Building and Civil Engineering Institute	Slovenia
Huabo	Duan	Shenzhen University	China
Emilija	Fidanchevski	Faculty of TEchnology and Metallurgy, UKIM	Macedonia
Vincent	Augiseau	University Paris 1	France
Gang	Liu	University of Southern Denmark	Denmark
Alessio	Mastrucci	IIASA	Austria
Nađa	Džubur	Vrije Universiteit Amsterdam	Netherlands
Matthias	Heinrich	Technische Universität München	Germany
Ruichang	Mao	University of Southern Denmark	Denmark
Maud	Lanau	University of Souther Denmark - SDU Center for Life Cycle Engineering	Denmark
Dominik	Wiedenhofer	Alpen-Adria University Klagenfurt	Austria
Erwan	Hamard	IFSTTAR	France
Dominik	Neu	Institut für Soziale Ökologie	Austria
Adélaïde	Mailhac	CSTB	France
Rolf André	Bohne	NTNU	Norway
Nikolai	Jacobi	Institute of Social Ecology, University of Klagenfurt	Austria
Christina	Ehlert	Luxembourg Institute of Science and Technology	Luxemburg
Aristide	Athanassiadis	Université Libre de Bruxelles	Belgium
Ferdinand	Reimer	TU Vienna	Austria
Oliver	Heidrich	Newcastle University	UK
Ibrahim	Motawa	University of Strathclyde	UK
Georg	Schiller	Leibniz Institute of Ecological Urban and Regional Development	Germany
Jacco	Verstraeten-Jochems	TNO Innovation for life	Netherlands
Mohamed	Osmani	Loughborough University	UK
Ulrich	Kral	TU Vienna	Austria
Alejandro	Romero Perez De Tudela	UCL	UK

It is supposed to be a photo here 😊





# Now we meet again 😊

30 participants from 10 countries

**... Thank you all for making it here!**



# Programme today

12:00-12:30	<b>Registration</b> <b>Light lunch and welcome</b> - Welcome address: Henrik Wenzel, Head of SDU Life Cycle Engineering (5') - Introduction to the workshop: Gang Liu, host of the workshop (10')	
<b>Session I: Building passport</b> (Moderator: Gang Liu)		
12:30-12:50	Rob Oomen	Enabling circularity by giving materials an identity
12:50-13:10	Georg Schiller	Transferability of Material Composition Indicators – a conceptual approach based on a German-Japanese Comparison
13:10-13:30	Paul Gontia	Material composition of buildings and material stock in Swedish cities
13:30-13:50	Willemijn Vanderwerf	Building material stock models: general approach and practical implementation
13:50-14:00	General discussion and Q&A on Session I (e.g., lifetime, material intensity data, transferability, the use of new types of data such as BIMs)	
14:00-14:20	Break (20 mins)	
<b>Session II: Material Stocks and Flows in the Built Environment</b> (Moderator: Georg Schiller)		
14:20-14:40	Ulrich Kral	The Viennese building stock from 1920 to 2018
14:40-15:00	Daniella Densley Tingley	Multi-scale, circular economic potential of a nation's building stock
15:00-15:20	Christian Dierks	Construction & demolition waste flows in a metropolitan area: outline of a current research project
15:20-15:30	Discussion and Q&A on session II (e.g., stock modeling, C&D waste generation forecasting, comparability of results)	
<b>Session III-a: Circular economy in the construction industry – Danish experience</b> (Moderator: Morten Birkved)		
15:30-15:50	Ebbe Naamansen	Addressing challenges construction and demolition waste and recycling at RGS Nordic
15:50-16:10	Sasha Beckmann	From waste to architecture
16:10-16:30	Leonora Eberhardt	Implementation of circular economy in the construction sector
<b>Breakout session: Towards a knowledge base in Europe – Scope, comparability and drivers</b> (Moderator: Tamara Bimesmeier & Maud Lanau)		
16:30-17:30	5' Introduction to the session 40' Break out in 4 groups (group formation and reporter t.b.a on the day) 15' Summary from each group and plenary discussion	
17:30	End of day 1	

**14:00 Let's take a group photo @ the TEK stairs.**



08:45	Registration and welcome	
Session III-b: Circular economy in the construction industry – international experience (Moderator: Diane Bastien)		
09:00-09:20	Jeroen Vrijders	The Brussels Building Stock, Source of new Materials
09:20-09:40	Rick Lupton	End uses of cement in the United Kingdom
09:40-10:00	Božidar Manić & Boško Josimović	(No) Circular Economy in the Construction Industry in Serbia
10:00-10:20	Serena Giorgi	Towards a sustainable circular economy in the built environment: policies improvements, strategic partnership and life cycle assessment tools for supporting decision
10:20-10:40	Vincent Augiseau	Construction materials flows and stocks studies in Paris region: from research to policies and projects
10:40-11:00	Break (20 mins)	
Breakout session: Linking the knowledge base to circular economy in the construction industry (Moderator: Zhi Cao & Maud Lanau)		
11:00-12:00	5’ Introduction to the session 40’ Break out in 3 groups (group formation and reporter t.b.a on the day) 15’ Summary from each group and plenary discussion	
12:00-13:00	Lunch (60 mins)	
Plenary session and next steps: deliverables/knowledge base, joint article, joint projects (Moderator: Ulrich Kral)		
13:00-14:30	13:00-13:30 Review of CDW generation forecasting approaches and results <ul style="list-style-type: none"><li>- 15’ Presentation (Ulrich Kral)</li><li>- 15’ Discussion</li></ul> 13:30 – 14:30 Next steps <ul style="list-style-type: none"><li>- WG1 work plan and deliverables: what, when, and how (Gang Liu)</li><li>- White paper/joint statement/vision/review articles?</li><li>- Brainstorming, ideation, discussion on other ways of collaboration</li><li>- Wrapping-up and goodbye</li></ul>	
14:30	End of day 2	



# Get together dinner



**18:30 @ Hotel Plaza**

100 m from the train station

Address: Østre Stationsvej 24, 5000 Odense C

Meals have been ordered based on your reply.  
On your own cost.

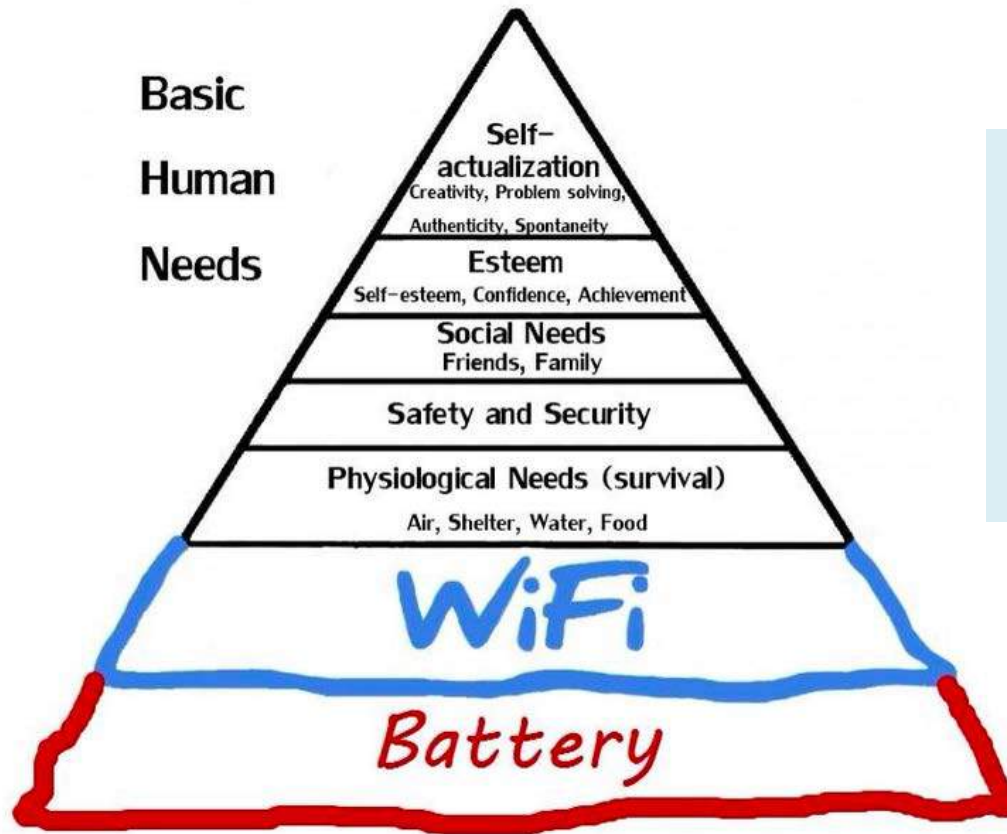
**Contact persons if you have any questions during the workshop:**

- Maud LANAU ([maul@kbm.sdu.dk](mailto:maul@kbm.sdu.dk)), +45 22561441
- Zhi CAO ([zca@kbm.sdu.dk](mailto:zca@kbm.sdu.dk)), +45 52713748





# The last (most important?) info



WiFi

sduguest  
eduroam

