

Europass Curriculum Vitae



Personal information

First names / Surname

Gian Andrea BLENGINI

Address

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Nationality

Italian

Date of birth

November 28th, 1969

Gender

Male

Present occupational field

Presently an **Associate Professor** at the **Politecnico di Torino (TU Turin, Italy)**.

Work experience

Dates

2001 – on

Occupation or position held

Associate Professor (2014on) – Assistant Professor (2001-14)

Main activities and responsibilities

Head of the Life Cycle Assessment (LCA) research lab. Main scientific and academic interests in the Sustainable production and use of mineral Resources, Critical Raw Materials and Circular Economy, with emphasis on the application of the LCA-based tools to production systems, waste management and recycling. Professor of Life Cycle Assessment and Resources and Environmental Sustainability. Author of 100+ scientific papers. **Scopus**: H=27, 3134 citations (as of 31MAR2022). **Google scholar**: H=33, 5200 citations. **Web of Science**: 3 Highly cited papers and 1 Hot paper.

Name and address of employer

Politecnico di Torino, Corso Duca degli Abruzzi 24, 10120 TORINO, Italy (www.polito.it). Department of Environment, Land and Infrastructures Engineering (2011-onward), Department of Production Systems and Business Economics (DISPEA) from 2008 to 2011. Department of Land, Environment and Geo-Engineering (DITAG) from 2001 to 2008.

Type of business or sector

University, research

Dates

October 2013 – September 2021 (8y)

Occupation or position held

Senior researcher and team leader (Contract Agent) in the Land Resources Unit (D3), Sustainable Resources Directorate, European Commission DG Joint Research Centre (JRC).

Main activities and responsibilities
(see **Annex 1** for details)

Team coordinator in projects and activities (1) in support of EC raw materials policies, with focus on critical raw materials and monitoring of Circular Economy, and (2) targeted to the EU Raw Materials Knowledge Base, including Life Cycle Inventory data availability, coherence and quality.

Main contributions / outcomes:

- Revision of the Methodology for establishing the [List of CRITICAL RAW MATERIALS](#) for the EU
- Monitoring Framework for the Circular Economy, [COM\(2018\) 29 final](#) and [SWD\(2018\) 17 final](#)
- Launch of the Life Cycle Data Network, <https://eplca.jrc.ec.europa.eu/LCDN>
- US-Japan-EU trilateral dialogue on Critical Raw Materials
- The International Round Table on Materials Criticality, IRTC, <https://irtc.info>
- Revision of the List of CRITICAL RAW MATERIALS for the EU ([2020 list](#)).

Name and address of employer

European Commission DG JRC, Via Enrico Fermi, 21027 Ispra/Italy (<https://ec.europa.eu/jrc/>)

Type of business or sector

European institution, research

Dates

February 1998 - October 2001

Occupation or position held

Assistant Professor

Main activities and responsibilities

Research sector: Excavation and Mining Engineering. Main scientific and academic activities focused on Mining, Quarries and Environmental Reclamation, Excavation Engineering, Mining Equipment. Responsible for the rock mechanics, blast vibrations and geo-resources laboratories.

Name and address of employer

University of Bologna, Viale Risorgimento 2, 40135 BOLOGNA, Italy (www.unibo.it). Faculty of Engineering, Department of Chemical and Mining Engineering (DICMA).

Type of business or sector

University, research

Dates **October 1997 - February 1998**
Occupation or position held **Responsible for Quality, Research and Development.**
Main activities and responsibilities Production of industrial minerals for the ceramic and glass industries; blast furnace slag recycling.
Name and address of employer GRUPPO MINERALI SpA, P.za Martiri della Libertà 4, 28100 Novara, Italy (www.gruppominerali.com)
Type of business or sector Industry, Industrial minerals production

Dates **January 1997 – October 1997**
Occupation or position held **Tunnelling Engineer**
Main activities and responsibilities Excavation of the Bolu Tunnel (Istanbul-Ankara motorway) in **Turkey**. Coordinator of Geotechnical Monitoring, Topographical survey, Geological survey, Rock & Soil laboratory.
Name and address of employer ASTALDI SpA, Via Giulio Vincenzo Bona 65, 00156 Rome, Italy (www.astaldi.com).
Type of business or sector Construction of road infrastructure

Dates **September 1994 – December 1996**
Occupation or position held **Drilling Expert and Project Manager**
Main activities and responsibilities Water well drilling and water supply projects in **Ethiopia** framed within international co-operation activities financed by the European Union and the Italian Ministry of Foreign Affairs
Name and address of employer Italian NGOs: COOPI, Via De Lemene 50, 20151 Milan, Italy (www.coopi.org) and LVIA, corso IV Novembre 28, 12100 Cuneo, Italy (www.lvia.it).
Type of business or sector International co-operation with developing countries

Education and training

Dates **2002-2006**
Title of qualification awarded **PhD in Mining Engineering**
Principal subjects/occupational skills covered Final dissertation: "Life Cycle Assessment tools for Sustainable Development: case studies for the mining and construction industries in Italy and Portugal".
Doctoral fellowship awarded by FCT (Portuguese Ministry of Science and Technology).
Name and type of organisation providing education and training IST-Technical University of Lisbon, Lisboa, Portugal (www.ist.utl.pt)

Dates **1988-94**
Title of qualification awarded **MSc in Mining Engineering** (1st class honours degree, mark 110/110)ode)
Principal subjects/occupational skills covered Thesis: "Evolution of controlled blasting in the mining and civil sectors".
G. Axerio Foundation fellowship awarded for academic excellence in 1991-92-93.
Name and type of organisation providing education and training Politecnico di Torino (Technical University of Turin), Torino, Italy (www.polito.it).
(*Ecole Nationale Supérieure des Mines de Paris, Paris, France - Six months Erasmus Exchange in 1992*)

Personal skills and competences

Mother tongue **Italian**

Other languages

Self-assessment

European level (*)

English

French

Portuguese

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C1	proficient user	C1	proficient user	C1	proficient user	C1	proficient user	C1	proficient user
B2	independent user	B2	independent user	B2	independent user	B2	independent user	A2	basic user
B2	independent user	B2	independent user	B1	independent user	B1	independent user	A2	basic user

(*) [Common European Framework of Reference for Languages](http://www.cerl.eu)

Social skills and competences	<p>Excellent abilities in communication and teamwork, including in stressful or multicultural environments. These social skills were highly developed during studies, training, and work abroad, starting with the Erasmus exchange programme (1992), the subsequent periods of work in international co-operation projects in Ethiopia (1994-1996), in civil infrastructure projects in Turkey (1997) and during visiting research / teaching experiences in Portugal (2002-2006) and Burkina Faso (2011-12).</p> <p>Positive experience of living abroad for long periods in Ethiopia, Turkey and Portugal.</p>
Organisational skills and competences	<p>Organisational skills gained as the lead of the LCA research group of the Politecnico di Torino and as team coordinator at the JRC of the European Commission.</p> <p>Additional organisational skills were gained in medium to large scale international research projects where I have extensively applied Life Cycle Assessment in quite different fields, ranging from sustainable supply of natural resources to recycling and waste management, including agri-food chain management, low energy buildings and development of nanotechnologies, always using a cross-cutting approach in order to facilitate the work of multidisciplinary research teams, with the objective of obtaining effective engineering solutions to sustainable development challenges that can be applied in different countries and areas of the world (see Annexes).</p>
Other Appointments	
European Innovation Partnership on Raw Materials (2012-2016)	<p>Appointed by the European Commission - DG Enterprise and Industry - Unit Raw Materials, Metals, Minerals, and Forest-based industries - as a member of the Expert Operational Group 4 of the European Innovation Partnership on Raw Materials - http://ec.europa.eu/enterprise/policies/raw-materials/innovation-partnership/index_en.htm</p>
EIT Raw Materials (2021on)	<p>Appointed by Politecnico di Torino as scientific responsible and contact person with the European Institute of Innovation and Technology on Raw Materials.</p>
Memberships	
<p>SOMP: Society of Mining Professors. Member since 2006 GEAM: Geo-resources and Environment Association. Member since 1989</p>	
Editorial board membership	<p>Editorial board member of:</p> <ul style="list-style-type: none"> • International Journal of Mining Science and Technology (Elsevier) - ISSN: 2095-2686 - http://www.journals.elsevier.com/international-journal-of-mining-science-and-technology/editorial-board/ • International Journal of Sustainable Society (IJSSoc) - ISSN: 1756-2546 - http://www.inderscience.com/browse/index.php?journalCODE=ijssoc • Resources (MDPI) ISSN: 2079-9276, https://www.mdpi.com/journal/resources/editors
Referee for peer reviewed journals	<p>Regularly reviewing for (selection):</p> <ul style="list-style-type: none"> • Resources Policy (Elsevier) • International Journal of Life Cycle Assessment (Springer) • Environmental Science & Technology (ACS) • Journal of Environmental Management (Elsevier) • Journal of Cleaner Production (Elsevier) • Journal of Industrial Ecology (Springer) • Resources, Conservation and recycling (Elsevier) • Waste Management (Elsevier) • Building and Environment (Elsevier) • Resources (MDPI) • International Journal of Sustainable Society (Inderscience Pub)
Annexes	
<p>Annex 1: Main activities at the JRC on Critical Raw Materials and Circular Economy Annex 2: Research interests and cross-disciplinary scientific approach Annex 3: Research Projects in the field of Resources, Circular Economy, Recycling and LCA Annex 4: Publication list, Awards and Citations Annex 5: Visiting professor and international teaching network Annex 6: Teaching appointments at the Politecnico di Torino (selection)</p>	



Annex 1 Main activities at the JRC on Critical Raw Materials and Circular Economy

A few months after my arrival at the Joint Research Centre (DG-JRC) of the European Commission in late 2013, I have launched a new raw materials project and created a new research group in support of the EU raw materials policy. Thanks to my expertise in the area, my initial contacts and negotiation skills I started and substantially contributed to consolidate a long-term partnership between DG-JRC and the Directorate General in charge of the EU raw materials policy in Brussels (DG-GROW), which progressively grew in terms of mutual trust, policy relevance and **budgetary size (5.4 M€)**.

For several years I have been the front man in the dialogue between JRC and GROW, as well as with international partners. My role, as below described, has been openly and publicly recognized several times by GROW and JRC. As my best achievement, I believe to have contributed to building mutual trust with several colleagues, creating and empowering a strong, efficient and motivated team.

The following are major contributions to the JRC activities in support of Critical Raw Materials (CRMs) and monitoring of Circular Economy policy dossiers:

Activity (1): Support to DG-GROW in the context of the **Revision of the METHODOLOGY to identify the List of CRITICAL RAW MATERIALS for the EU**, in order to meet policy needs. A JRC team (15+ staff) revised the EC methodology to calculate the supply risk and the economic importance. A number of scientific approaches and methodologies have been considered and tested, including the search for suitable data and methods for filling data gaps. Outcomes are summarized in:

Blengini, G., Blagoeva, D., Dewulf, J., Torres de Matos, C., Nita, V., Vidal-Legaz, B., Latunussa, C., Kayam, Y., Talens Peirò, L., Baranzelli, C., Manfredi, S., Mancini, L., Nuss, P., Marmier, A., Alves-Dias, P., Pavel, C., Tzimas, E., Mathieux, F., Pennington, D., Ciupagea, C., 2017. Assessment of the Methodology for Establishing the EU List of Critical Raw Materials-Background report. Publications Office of the European Union, Luxembourg.

Blengini, G.A., Nuss, P., Dewulf, J., Nita, V., Peirò, L.T., Vidal-Legaz, B., Latunussa, C., Mancini, L., Blagoeva, D., Pennington, D., Pellegrini, M., Van Maercke, A., Solar, S., Grohol, M., Ciupagea, C., 2017. EU methodology for critical raw materials assessment: Policy needs and proposed solutions for incremental improvements. Resour. Policy 53. <https://doi.org/10.1016/j.resourpol.2017.05.008>

Role: principal scientist and team leader. Interactions with policy DGs. Presentation of the results to ad-hoc working group and stakeholder engagement. Liaising with the international scientific community.

Activity (2): Support to DG-GROW, ENV and ESTAT for the **Monitoring Framework of the Circular Economy**. JRC output: Materials Flow Diagram shown in the COM(2018) 29 final; indicator 1 on self-sufficiency; indicator 7 Contribution of recycled materials to raw materials demand (EOL-RIR).

Role: design and development of the indicators, including finding the data and filling the data gaps. Scientific coordinator, scientific adviser to GROW and ESTAT.

Activity (3): Support to DG-GROW for the **Revision of the List of CRMs for the EU (2017 list)**.

Role: Task leader, scientific support in view of the publication of the 2017 list: COM/2017/0490 final.

Activity (4): Sector-Dialogue project between EU and Brazil (MCTIC-JRC Work Programme 2018–2020) on: **Circular economy threats and opportunities for critical materials: the case of niobium**. Environmental, social and economic aspects of supply chains where niobium is produced and used.

Role: JRC lead.

Activity (5): Support to DG-GROW within **US-Japan-EU trilateral dialogue on CRMs** (in 6 annual meetings: 2013 Brussels; 2014 Ames, Iowa; 2015 Tokyo, 2016 Brussels, 2017 Pittsburgh, US; 2018 Tokyo).

Role: scientific adviser to GROW (Director C), representing JRC in EU and extra-EU annual meetings in front of the international scientific community

Activity (6): Support to DG-GROW for the Report **“Recovery of critical and other raw materials from mining waste and landfills”**. Specific EC commitment of the Circular Economy Action Plan COM(2015) 614 final.

Role: principal scientist and technical coordinator. Coordination with policy DG and stakeholder engagement.

Activity (7): Support to DG-GROW for the **Revision of the List of CRITICAL RAW MATERIALS for the EU (2020 list)**. A JRC team (8 staff + 6 external experts) carried out the criticality assessment starting in Q1 2019 until the 4th revised list Of CRMs was published in Sept 2020.

Role: principal scientist and JRC team leader. Interactions with policy DG. Presentation of the results to ad-hoc working group and stakeholder engagement.

Activity (8): IRTC - **The International Round Table on Materials Criticality**, IRTC (www.irtc.info), is an internationalization project funded by EIT Raw Materials, from April 2018 to March 2020. The project aims at advancing criticality assessment on a global level. It brings together the best world-level experts on criticality.

Role: JRC representative.

Annex 2 Research interests and cross-disciplinary scientific approach

Since graduating at the Politecnico di Torino in 1994, my research activity has addressed different but complementary aspects of *Resources and Environmental Engineering*.

Following a Master Degree thesis on blast vibration control, the four years of professional experience in the sectors of water drilling (Ethiopia), tunnel excavation (Turkey) and production of industrial minerals (Italy) provided sound practical field experience and the opportunity to deepen and extensively apply the engineering background obtained at the Politecnico di Torino.

This professional experience provided foundation for the subsequent research activities at Bologna University (1998-2001), through extensive laboratory investigations on various aspects of blast vibrations, rock mechanics and geo-resource characterisation, as well as field activities related to tunnelling and excavation worksites (mining, quarrying, and civil works).

At the end of the year 2001, I joined the research group focused on *Economics of Earth Resources and the Environment* chaired by Professor Vanni Badino at the Politecnico di Torino. Since then, my research interests have progressively integrated purely Engineering aspects with Economic and Management aspects of Resources and Environmental Engineering.

The above research interests were consolidated during a visiting research period at the IST Technical University of Lisbon from 2002 to 2006, where I was extensively involved in a research programme focused on the Life Cycle Assessment of minerals and construction materials, under the supervision of Prof. Carlos Dinis da Gama, Director of the CEGEO Geotechnical Centre.

Bearing in mind my engineering background, my past and current research is focused on *Engineering and Management of Resources and the Environment*, encompassing the technological aspects, as well as the economic and policy implications of production systems on man-made and natural ecosystems. My past and current main efforts and objectives are devoted to developing and strengthening international collaborative research relationships with the aim of creating interdisciplinary projects involving a mix of science-based investigation, technology transfer, and management or policy recommendations.

As a result, I've been involved in medium to large scale international research projects, in several of which Life Cycle Thinking and Assessment are extensively applied in quite different fields, ranging from sustainable supply of mineral resources to recycling and waste management, including agri-food chain management, low energy buildings and development of nanotechnologies. I've always used a cross-cutting approach to facilitate the work of multidisciplinary research teams, with the objective of obtaining effective engineering solutions to sustainable development challenges and help in the transition towards a more circular and resource-efficient economy.

The 8-year experience at the Joint Research Centre confirmed that working for a European institution provides an extraordinary international and cross-cultural context and is an excellent test field to deepen and improve skills, as well as making use of them. The JRC has therefore been for me a great opportunity to participate in interesting and innovative work and expand my experience. Again, it has been an extraordinary opportunity to know better European institutions from inside, including working in close co-operation with several Directorate-Generals (GROW, ENV, ESTAT, DEVCO, TRADE).

Altogether, my publications and research projects show the results of this cross-sector approach and my capacity to cover different topics such as:

- LCA (Life Cycle Assessment)
- Sustainable engineering
- Recycling and waste management
- Responsible production and use of mineral resources
- Critical Raw Materials
- Monitoring of Circular Economy
- Recovery of CRMs from mining waste

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Annex 3 Research Projects in the fields of Resources, Circular economy, Recycling and LCA

I have actively taken part in the following research projects, funded by (left) and with the role, responsibilities and budget (right):

EUROPEAN COMMISSION (2022-25)	“METALLICO: Demonstration of battery metals recovery from primary and secondary resources through a sustainable processing methodology”. Project <u>submitted</u> to the call <i>Innovative solutions for efficient use and enhanced recovery of mineral and metal by-products from processing of raw materials - HORIZON-CL4-2022-RESILIENCE-01-07</i> . Project coordinator IDENER (Spain), 23 partners. Project budget 13 M€, PoliTO budget 640 k€. PoliTO in charge of developing and test the concept of Net-Zero-Carbon as applied to innovative mineral processing.
Role:	PoliTO project partner leader.
EUROPEAN COMMISSION (2022-24)	2BoSS: Toward sustainable batteries based on silicon, sulfur and bio-mass derived carbon. Project funded (1002 k€, PoliTO budget 170 k€) under the call ERA-MIN2. Project partners: Fundacio Institut De Recerca De L'energia De Catalunya (IREC), Spain; Commissariat à l'énergie atomique et aux énergies alternatives (CEA), France; Cleopa GmbH (CLEOPA), Germany.
Role:	PoliTO project partner leader. LCA and sLCA scientific lead.
Italian Ministry of University and Research (2022-25)	“GeoSciences: the Italian network for geosciences, a new research infrastructure for the Italian network of regional geological surveys” (2022-25) Research project (17 M€, PoliTO 805 k€) funded by the Italian Ministry of University and Research under the call <i>“Rafforzamento e creazione di Infrastrutture di Ricerca” da finanziare nell’ambito del PNRR</i> (28/12/2021). Project coordinated by the Italian Geological Survey (ISPRA) and run with 16 partners (3 research institutes and 13 universities). Main goal: using a highly technological cloud infrastructure, GeoSciences will facilitate access to a huge amount of data, services, tools, specifically implemented by project partners, made available to target users to fulfil with their institutional mandate. PoliTO to develop Capacity building activities targeted to public bodies in charge of planning, authorizing and monitoring extractive activities throughout the mine life cycle, from exploration to post-mining closure and land recovery, with emphasis on critical raw materials and their use in a more circular economy.
Role:	PoliTO project partner leader.
IMI-FABI (2022) (industry)	LCA and carbon footprint of talc. Development of metrics and measuring instruments to quantify the carbon footprint of talc marketed as various IMI Fabi (https://www.imifabi.com/) products and with various modes of transport and packaging systems and routes. Industry funds 20 k€.
Role:	Project leader.
ENI (2022) (industry)	“Life Cycle Assessment (LCA) of batteries for HEAVY DUTY electric vehicles” and “Key raw materials for traction batteries and fuel cells”: current situation and future trends in the EU and globally”. Research funded by ENI (https://www.eni.com/en-IT/home.html). Industry funds 63.5 k€.
Role:	Project leader
Manteco (2022) (industry)	LCA of recycled wool. Development of metrics to quantify the carbon footprint of recycled wool used in high-standard textile products by Manteco (https://manteco.com/mwool/). Industry funds 45 k€.
Role:	Project leader.
EUROPEAN COMMISSION (2020-24)	GAIN4CROPS: Rewiring photorespiration using natural and synthetic pathways to sustainably increase crop yield, Project Number 862087. Project budget 3.7 M€, PoliTO budget 50 k€. G4C aims to increase the productivity of plants by using new techniques to minimize the inefficiencies of photorespiration. PoliTO will be responsible for quantifying the environmental and social impacts of the processes identified by the project partners.
Role:	LCA and sLCA scientific lead.

<p>PNA / Confindustria Marmomacchine (2022) (industry)</p>	<p>LCA of ornamental stones. Development of metrics and environmental communication strategies to be used at sector level by ornamental stone producers. Project funded by PNA (Pietra Naturale Autentica) https://www.assomarmomacchine.com/en/pietra-naturale-autentica/. The Pietra Naturale Autentica network is an innovative organization based on a voluntary network to create projects and communication work promoting the use of authentically natural stone materials. Project budget (industry funds) 55 k€ of which 16.5 k€ for LCA activities.</p>
<p>Role:</p>	<p>PoliTO project partner leader.</p>
<p>EUROPEAN COMMISSION (2021)</p>	<p>HYENA. JRC project in support of the Fuel Cells and Hydrogen 2 Joint Undertaking (FCH 2 JU). The project (internal European Commission budget, 12 person-month, 110 k€) consists in providing scientific support to three H2020-funded projects, with emphasis on Life Cycle Assessment, ecodesign and Critical Raw Materials. BEST4HY: Sustainable Solutions for Recycling of EoL Hydrogen Technologies. eGHOST: Establishing Eco-design Guidelines for Hydrogen Systems and Technologies. SH2E: Sustainability Assessment of Harmonised Hydrogen Energy Systems: Guidelines for Life Cycle Sustainability Assessment and Prospective Benchmarking.</p>
<p>Role:</p>	<p>JRC scientific lead and contact person for BEST4HY.</p>
<p>EUROPEAN COMMISSION (2021)</p>	<p>MEErP (Methodology for Ecodesign of Energy-related Products). JRC to critically discuss the current assessment of Critical Raw Materials (CRMs) within the MEErP and propose a new approach, including some preliminary elements to assess the CRMs contained in product groups in Ecodesign Preparatory Studies. Internal European Commission budget, 24 person-month, 220 k€.</p>
<p>Role:</p>	<p>JRC scientific lead</p>
<p>EcoTyre (2020) (industry)</p>	<p>“Life Cycle Assessment (LCA) of recycled tyres”. End-of-Life tyres recycled into tyres (closed loop recycling). Research funded by EcoTyre Srl (https://www.ecotyre.it/). Industry funds 25 k€.</p>
<p>Role:</p>	<p>Project leader</p>
<p>Regione Piemonte (2019-21)</p>	<p>INTREC: Innovative technologies for the use of aggregates from construction and demolition waste in road construction: construction techniques, field performance, life cycle assessment and environmental monitoring. Budget 300 k€ funded by Regione Piemonte through F.E.S.R. 2014/2020.</p>
<p>Role:</p>	<p>LCA scientific lead.</p>
<p>EUROPEAN COMMISSION (2019)</p>	<p>“Recovery of critical and other raw materials from mining waste and landfills”. JRC report as a specific EC commitment of the Circular Economy Action Plan COM(2015) 614 final. Internal European Commission budget, 6 person-month, 55 k€.</p>
<p>Role:</p>	<p>principal scientist and technical coordinator. Coordination with policy DG and stakeholder engagement.</p>
<p>EUROPEAN COMMISSION (2018-20)</p>	<p>The International Round Table on Materials Criticality, IRTC (www.irtc.info). Internationalization collaborative project funded by EIT Raw Materials (860 k€), from April 2018 to March 2020. The project aims at advancing criticality assessment on a global level. It brings together the best world-level experts on criticality.</p>
<p>Role:</p>	<p>JRC representative</p>
<p>EUROPEAN COMMISSION (2018-20)</p>	<p>4th list CRMs for the EU. Revision of the List of CRITICAL RAW MATERIALS for the EU (2020 list). A JRC team (8 staff + 6 external experts) carried out the criticality assessment from Q1 2019 until the 4th revised list Of CRMs was published in Sept 2020. Budget 500 k€ (part of a larger contract 5.4 M€).</p>
<p>Role:</p>	<p>principal scientist and JRC team leader. Interactions with policy DG. Presentation of the results to ad-hoc working group and stakeholder engagement.</p>
<p>EUROPEAN COMMISSION (2018-20)</p>	<p>Sector-Dialogue project between EU and Brazil (MCTIC-JRC Work Programme 2018–2020) on: Circular economy threats and opportunities for critical materials: the case of niobium. Environmental, social and economic aspects of supply chains where niobium is produced and used, in collaboration with CETEM Rio de Janeiro. Budget 200k€ (to the Brazilian partners) + Internal European Commission budget, 6 person-month, 55 k€.</p>
<p>Role:</p>	<p>JRC lead.</p>
<p>EUROPEAN COMMISSION (2018-20)</p>	<p>SCRREEN: Solutions for CRITICAL Raw materials - a European Expert Network. Project funded by the European Commission under the H2020 funding program. Project budget 2 M€ (JRC budget 150 k€). 30 partners from 15 countries, coordinator Stephane Bourg (French Alternative Energies and Atomic Energy Commission - CEA). Project objective: Establish an EU expert network covering the entire value chain for present and future critical raw materials.</p>
<p>Role:</p>	<p>JRC representative.</p>

EUROPEAN COMMISSION (2016-19)	GREENFACTORY4COMPO - Green Factory for Composites. Budget 13 MEuro, of which 5.7 MEuro from Regione Piemonte via “Piattaforma Fabbrica Intelligente”. Project aimed at finding innovative manufacturing solutions to increase the use of high-performance composite polymeric materials in an environmentally friendly manner, managing to combine technical benefits with costs / investments, with sustainable environmental and energy impact. PoliTO partner (budget ~400 k€, of which 50 k€ for LCA activities), lead-partner CRF.
Role:	LCA scientific lead.
ENI (2018) (industry)	“ Life Cycle Assessment (LCA) studies on batteries for electric vehicles: overview and recent developments” and “ Key raw materials for electric vehicles batteries: current situation and future trends in the EU and globally”. Research funded by ENI. Industry funds 17.5 k€.
Role:	Project leader
ENI (2017) (industry)	“ Life Cycle Assessment (LCA) of bio-lubricants ”. Research funded by ENI. Industry funds 125 k€.
Role:	LCA scientific lead
EUROPEAN COMMISSION (2015-17)	Revision of the METHODOLOGY to identify the List of CRITICAL RAW MATERIALS for the EU . A JRC team (15+ staff) revised the EC methodology to calculate the supply risk and the economic importance. A number of scientific approaches and methodologies have been considered and tested, including the search for suitable data and putting forward methodologies for filling data gaps, in order to meet policy needs. Budget 376 k€.
Role:	Principal scientist and team leader
EUROPEAN COMMISSION (2015-16)	Raw Materials Scoreboard (2016). “Technical assistance, analysis and support for the implementation of the Monitoring and Evaluation Scheme of the European Innovation Partnership (EIP) on Raw Materials”. Output: 24 indicators. Policy contest: Monitoring of policies; Identifying criteria and indicators for monitoring policy impact; Identifying and assessing data sources and limitations for monitoring and evaluation. Budget 250 k€.
Role:	JRC scientific responsible and team leader, liaising with the policy DG, presenting the results in meeting with stakeholders
EUROPEAN COMMISSION (2013-14)	“ Launch of the Life Cycle Data Network LCDN ” (6th of February 2014). “LC Data dossier” – projects and related activities targeted to enhance Life Cycle data availability, coherence and quality through the LCDN (Life Cycle Data Network) and the ELCD (European reference Life Cycle Database). Improving data availability for EU policies, Greening the Single Market. Internal European Commission budget, 36 person-month, 330 k€.
Role:	JRC scientific responsible and team leader
EUROPEAN COMMISSION (2012-14)	“ SNAP-SEE - Sustainable Aggregates Planning in South East Europe ”. Collaborative project financed by the European Commission (1.7 M€) under the Programme “South East Europe SEE”, contract SEE/D/0167/2.4/X, run in co-operation with 27 European partners (Project leader: Univ of Leoben, Austria – Dr. Guenther Tiess). http://www.snapsee.eu/ . Sub-contractor (45 k€) of the ERDF partner Provincia Autonoma di Trento (Dr. Alessandro Moltrtr). Scientific support on developing and disseminating tools for aggregates management planning in Southeast Europe (SEE).
Role:	LCA task leader. Coordination and linkage with the steering committee. Member of the quality board.
ESA-ESTEC (2012-13)	“ LCA4space - Life Cycle Assessment of Space Projects ” (2012). Tender of the European Space Agency (AO/1-6862/11/F/MOS). Consortium co-ordinated by D’Appolonia Spa in co-operation with Politecnico di Torino, EMPA (Swiss Federal Laboratories for Materials Science and Technology), GreenDeltaTC Berlin and The Institute of Environment and Sustainability (IES) of the Joint Research Centre of the European Commission. Tender budget 170 k€.
Role:	Scientific lead for the methodological aspects in the implementation of LCA in aerospace projects.
Italian Ministry of Environment (2012-14)	“ Biofuels from Algae for Sustainable Mobility in Urban Areas BIOALMA ” (2012-14) Research project (700 k€) funded by the Italian Ministry of Environment under the call “ <i>Bando per il finanziamento di progetti di ricerca finalizzati ad interventi di efficienza energetica e all'utilizzo delle fonti di energia rinnovabile in aree urbane</i> ” (GU 297 del 22/12/2009). Project run in partnership with Politecnico di Torino, University of Catania and Sea Marconi Spa under the coordination of Dr Gian Andrea Blengini (Politecnico di Torino).
Role:	Consortium co-ordinator.

<p>EUROPEAN COMMISSION (2010-13)</p>	<p>“AddNano: The Development and scale-up of innovative nanotechnology-based processes into the value chain of the lubricants market” (2009-12). EU/FP7 Project (11 M€) funded under the call FP7-NMP-2008-LARGE-2 - Project No 229284- and run by 15 partners under the coordination of Dr Martin Dare-Edwards (Infineum UK Ltd.) and Dr Gül Özcan-Taşkın (BHR Group). Use of the LCA methodology (budget for LCA 55 k€) to conduct a detailed environmental evaluation of nanolubricants investigated in the project, covering the whole lifecycle of the additive concentrates and lube oils.</p> <p>Role: Scientific lead for LCA and Task leader.</p>
<p>EUROPEAN COMMISSION (2010-13)</p>	<p>“BioLear: Full scale use of liquid injection, for innovative control of waste moisture to enhance biogas production in pre treated waste landfill”. EU Project (2.4 M€) funded under the call LIFE+ 2009 - ENV/IT/000101 - and run by GAIA SpA and Politecnico di Torino. Use of the LCA methodology to understand and lower the carbon footprint of biogas produced from a pre-treated municipal solid waste landfill.</p> <p>Role: Scientific lead for LCA and Activity leader (2010-11).</p>
<p>Regione Piemonte (2010-13)</p>	<p>“SAFE FOOD CONTROL: Development of new technologies to enhance energetic and environmental sustainability of agri-food chains in Piedmont”. Large scale Research Project (6.4 M€) funded by Regione Piemonte under the funding scheme FESR/FEASR and run by 13 partners under the coordination of Prof. Maria Lodovica Gullino, Director of AGROINNOVA, the Centre of Competence for the innovation in the agro-environmental field of the University of Turin. Use of the LCA methodology to improve the energetic and environmental sustainability of agri-food industries with emphasis on fruit and vegetables.</p> <p>Role: Scientific lead for LCA and Task leader.</p>
<p>Italcementi Group (2010) (industry)</p>	<p>“LCA of MISAPOR BETON”. Research contract financed by CTG SpA (Italcementi Group) and run in cooperation between CTG SpA, SASIL SpA and Politecnico di Torino as follow-up of the NOVEDI Project (see “LCA of the MISAPOR foam glass” below). Industry funds 20 k€. Use of the LCA methodology to support the development of new high energy efficiency building products manufactured from waste glass.</p> <p>Role: Scientific lead for LCA.</p>
<p>EUROPEAN COMMISSION (2009-11)</p>	<p>“SARMa - Sustainable Aggregates Resource Management”. Collaborative project financed by the European Commission (2 M€) under the call “South East Europe SEE Programme 2007–2013”, contract SEE Eol/A/151/2.4/X, run in co-operation with 14 European partners (Project leader: Geological Survey of Slovenia – Dr. Slavko Šolar). http://www.sarmaproject.eu/. Use of the LCA methodology to promote recycling and energy and resources efficiency of the sustainable supply mix (SSM) of aggregates in EU countries.</p> <p>Role: Scientific lead for LCA and Activity leader.</p>
<p>Provincia di Cuneo (2009)</p>	<p>“Life Cycle Assessment (LCA) of the integrated municipal solid waste management system of the Cuneo District”. Research financed by ATO-Rifiuti Provincia di Cuneo, run in co-operation between DITAG and DISPEA of the Politecnico di Torino. Budget 25 k€. Research programme focused on the implementation of a LCA model of the Integrated Waste Management System (WMS) as a decision supporting tool for future waste management planning and optimisation issues.</p> <p>Role: Project coordinator.</p>
<p>SASIL SpA / EUROPEAN COMMISSION (2008-9)</p>	<p>“LCA of the MISAPOR foam glass”. Research framed within the EU Project NOVEDI “No Vetro in Discarica: demonstrating innovative technologies for integral recovery of glass rejects”, funded under the call LIFE+ 2007-ENV/IT/00361 - and run by SASIL SpA and Politecnico di Torino (sub-contractor, budget for LCA 25 k€). Use of the LCA methodology to analyse the life cycle of a recycled foam glass (Misapor) and address eco-design of a low energy office building.</p> <p>Role: Scientific lead for LCA.</p>
<p>Regione Piemonte (2008-9)</p>	<p>“Sustainable recycled aggregate chain management”. Research funded (15 k€) by Regione Piemonte under the call “Voucher 2007”, in partnership with Politecnico di TO, Provincia di TO and CMA Srl. Use of the LCA methodology to understand environmental burdens of the whole construction & demolition waste (C&DW) recycling chain and set up a pilot recycling plant.</p> <p>Role: Project coordinator.</p>
<p>Provincia di Torino (2008)</p>	<p>“Life Cycle Assessment (LCA) of the integrated municipal solid waste management system of the Turin District”. Research financed by Provincia di Torino, run in co-operation between DITAG and DISPEA of the Politecnico di Torino. Budget 19 k€. Research programme focused on the implementation of a LCA model of the Integrated Waste Management System (WMS) as a decision supporting tool for future waste management planning and optimisation issues.</p> <p>Role: Project coordinator.</p>

Regione Piemonte (2007-8)	<p>“Development of an industrial process for quarrying and finishing an ornamental stone of historical interest (Pietra di Vico)”. Research programme funded by the Regione Piemonte (LR 598/94), run in co-operation between DITAG of the Politecnico di Torino and Rivarossa Srl. Budget 15 k€. Industrial research and technological transfer project aimed at optimising the diamond wire cutting technology at a small-scale quarrying activity for the valorisation of a high added value natural resource.</p>
Role:	Project coordinator.
Regione Piemonte (2007)	<p>“Life Cycle Assessment (LCA) of a low energy house”. Research run in co-operation between DITAG of the Politecnico di Torino and Studio Roatta Architetti – Mondovi’. Collaborative project funded in-house. Detailed life cycle assessment of a residential passive house located in southern Piedmont (Italy). The main objective of the research was evaluating energy saving and greenhouse emissions of a very low energy building in comparison with a standard house.</p>
Role:	LCA scientific lead.
Fondazione CRT (2006-7) (bank)	<p>“Life Cycle Assessment (LCA) of the integrated municipal solid waste management system of the Asti District”. Research financed by Lagrange– C.R.T. Foundation, run in co-operation between DITAG of the Politecnico di Torino and GAIA. SpA. Budget 25 k€. Research programme focused on the implementation of a LCA model of the Integrated Waste Management System (WMS) as a decision supporting tool for future waste management planning and optimisation issues.</p>
Role:	LCA scientific lead.
SANPAOLO-IMI (2006) (bank)	<p>“Life Cycle Assessment (LCA) of the San Paolo-IMI tower in Turin”. Research run in co-operation between DITAG and DENER of the Politecnico di Torino, Estudio Lamela Arquitectos - Madrid and SiTi (Istituto Superiore sui Sistemi Territoriali per l’Innovazione). Collaborative project funded in-house. LCA application to the preliminary design of the San Paolo Tower in Turin as a supporting tool in order to address the overall building sustainability.</p>
Role:	LCA expert.
Consorzio ECOVORBAT (2006) (industry)	<p>“Eco-balance of an exhausted lead-acid batteries recycling plant”. Research contract funded (15 k€) by Consorzio Ecovorbato –Euroconsorzio Ambiente, Rivoli TO. Research focused on the environmental life cycle assessment of spent lead-acid battery recycling and subsequent recovery of secondary raw materials (lead, plastic, acid).</p>
Role:	Project coordinator.
Italian Ministry of University and Research (2004-6)	<p>“Economic and environmental constraints to improve cultural sustainability of ornamental stones”. National Research Project financed by MIUR (Italian Ministry of University and Research) within the Call PRIN2004. PoliTO budget 40 k€. Objective of the Research Unit of the Politecnico di Torino was to investigate on the sustainability of active and historical ornamental stone quarries located in southern Piedmont.</p>

Annex 4 Publication list, Awards and Citations

**Peer reviewed papers in
indexed journals**

- 2021 J DEWULF, S HELLWEG, S PFISTER, MFG LEÓN, T SONDEREGGER, CT DE MATOS, GA BLENGINI, F MATHIEUX. Towards sustainable resource management: identification and quantification of human actions that compromise the accessibility of metal resources. *Resources, Conservation and Recycling* 167, 105403
- 2021 MFG LEÓN, GA BLENGINI, J DEWULF. Analysis of long-term statistical data of cobalt flows in the EU. *Resources, Conservation and Recycling* 173, 105690
- 2021 I BIANCO, F THIÉBAT, C CARBONARO, S PAGLIOLICO, GA BLENGINI, E COMINO. Life Cycle Assessment (LCA)-based tools for the eco-design of wooden furniture. *Journal of Cleaner Production* 324, 129249
- 2021 B RUFFINO, A FARINA, D DALMAZZO, G BLENGINI, M ZANETTI, E SANTAGATA. Cost analysis and environmental assessment of recycling paint sludge in asphalt pavements. *Environmental Science and Pollution Research* 28 (19), 24628-24638
- 2020 MFG LEÓN, GA BLENGINI, J DEWULF. Cobalt in end-of-life products in the EU, where does it end up?-The MaTrace approach. *Resources, Conservation and Recycling* 158, 104842
- 2020 RH ARDUIN, F MATHIEUX, J HUISMAN, GA BLENGINI, C CHARBUILLET, M WAGNER, ... Novel indicators to better monitor the collection and recovery of (critical) raw materials in WEEE: Focus on screens. *Resources, Conservation and Recycling* 157, 104772
- 2020 D SCHRIJVERS, A HOOL, GA BLENGINI, WQ CHEN, J DEWULF, R EGGERT, ... A review of methods and data to determine raw material criticality. *Resources, conservation and recycling* 155, 104617
- 2020 C DI NOI, A CIROTH, L MANCINI, U EYNARD, D PENNINGTON, GA BLENGINI. Can S-LCA methodology support responsible sourcing of raw materials in EU policy context? *The International Journal of Life Cycle Assessment* 25 (2), 332-349
- 2020 S BOBBA, I BIANCO, U EYNARD, S CARRARA, F MATHIEUX, GA BLENGINI. Bridging tools to better understand environmental performances and raw materials supply of traction batteries in the future EU fleet. *Energies* 13 (10), 2513
- 2020 I BIANCO, D PANEPINTO, GA BLENGINI, M ONOFRIO, M ZANETTI. Inventory and life cycle assessment of an Italian automotive painting process. *Clean Technologies and Environmental Policy* 22 (1), 247-258
- 2019 G MORAGA, S HUYSVELD, F MATHIEUX, GA BLENGINI, L ALAERTS, K VAN ACKER, ... Circular economy indicators: What do they measure? *Resources, Conservation and Recycling* 146, 452-461
- 2019 I BIANCO, GA BLENGINI. Life Cycle Inventory of technologies for stone quarrying, cutting and finishing: Contribution to fill data gaps. *Journal of Cleaner Production* 231, 419-427
- 2019 I BIANCO, GA BLENGINI. Life Cycle Inventory of techniques for stone quarrying, cutting and finishing: Contribution to fill data gaps. *Journal of Cleaner Production* 225, 684-696
- 2019 S BOBBA, F MATHIEUX, GA BLENGINI. How will second-use of batteries affect stocks and flows in the EU? A model for traction Li-ion batteries. *Resources, Conservation and Recycling* 145, 279-291
- 2019 F ARDENTE, CEL LATUNUSSA, GA BLENGINI. Resource efficient recovery of critical and precious metals from waste silicon PV panel recycling. *Waste Management* 91, 156-167
- 2019 A MAYER, W HAAS, D WIEDENHOFER, F KRAUSMANN, P NUSS, GA BLENGINI. Measuring progress towards a circular economy: a monitoring framework for economy-wide material loop closing in the EU28. *Journal of industrial ecology* 23 (1), 62-76
- 2019 C DI NOI, A CIROTH, L MANCINI, U EYNARD, D PENNINGTON, GA BLENGINI. Can S-LCA methodology support responsible sourcing of raw materials in EU policy context? *The International Journal of Life Cycle Assessment*, 1-18

- 2019 M GANDIGLIO, F DE SARIO, A LANZINI, S BOBBA, M SANTARELLI, GA BLENGINI Life Cycle Assessment of a Biogas-Fed Solid Oxide Fuel Cell (SOFC) Integrated in a Wastewater Treatment Plant. *Energies* 12 (9), 1611
- 2018 S BOBBA, F MATHIEUX, F ARDENTE, GA BLENGINI, MA CUSENZA, A PODIAS, ... Life Cycle Assessment of repurposed electric vehicle batteries: an adapted method based on modelling energy flows. *Journal of Energy Storage* 19, 213-225
- 2018 P NUSS, GA BLENGINI Towards better monitoring of technology critical elements in Europe: Coupling of natural and anthropogenic cycles. *Science of the Total Environment* 613, 569-578
- 2017 GA BLENGINI, P NUSS, J DEWULF, V NITA, LT PEIRÒ, B VIDAL-LEGAZ, ... EU methodology for critical raw materials assessment: Policy needs and proposed solutions for incremental improvements. *Resources Policy* 53, 12-19
- 2017 E RILLO, M GANDIGLIO, A LANZINI, S BOBBA, M SANTARELLI, G BLENGINI Life cycle assessment (LCA) of biogas-fed solid oxide fuel cell (SOFC) plant. *Energy* 126, 585-602
- 2017 A FARINA, MC ZANETTI, E SANTAGATA, GA BLENGINI Life cycle assessment applied to bituminous mixtures containing recycled materials: Crumb rubber and reclaimed asphalt pavement. *Resources, Conservation and Recycling* 117, 204-212
- 2017 GA BLENGINI, E GARBARINO, P BEVILACQUA Sustainability and integration between mineral resources and C&DW management: overview of key issues towards a resource-efficient europe. *Environmental Engineering & Management Journal (EEMJ)* 16 (2)
- 2016 S BOBBA, FA DEORSOLA, GA BLENGINI, D FINO LCA of tungsten disulphide (WS₂) nanoparticles synthesis: state of art and from-cradle-to-gate LCA. *Journal of Cleaner Production* 139, 1478-1484
- 2016 J DEWULF, GA BLENGINI, D PENNINGTON, P NUSS, NT NASSAR Criticality on the international scene: Quo vadis? *Resources Policy* 50, 169-176
- 2016 CEL LATUNUSSA, F ARDENTE, GA BLENGINI, L MANCINI Life Cycle Assessment of an innovative recycling process for crystalline silicon photovoltaic panels. *Solar energy materials and solar cells* 156, 101-111
- 2015 DEWULF J., MANCINI L., BLENGINI G.A., SALA S., LATUNUSSA C., PENNINGTON D., Towards an overall analytical framework for the integrated Sustainability Assessment of the Production and Supply of Raw Materials and Primary Energy Carriers, *JOURNAL OF INDUSTRIAL ECOLOGY* 19 (6), 963-977
- 2015 M RECCHIONI, GA BLENGINI, S FAZIO, F MATHIEUX, D PENNINGTON Challenges and opportunities for web-shared publication of quality-assured life cycle data: the contributions of the Life Cycle Data Network. *The International Journal of Life Cycle Assessment* 20 (7), 895-902
- 2015 J DEWULF, L BENINI, L MANCINI, S SALA, GA BLENGINI, F ARDENTE, ... Rethinking the area of protection "natural resources" in life cycle assessment. *Environmental science & technology* 49 (9), 5310-5317
- 2015 D PANEPINTO, GA BLENGINI, G GENON Economic and environmental comparison between two scenarios of waste management: MBT vs thermal treatment. *Resources, Conservation and Recycling* 97, 16-23
- 2014 SHIELDS D., VERGA F., BLENGINI G.A., Incorporating Sustainability in Engineering Education: Adapting current practices to mining and petroleum engineering education, *INTERNATIONAL JOURNAL OF SUSTAINABILITY IN HIGHER EDUCATION*, vol. 15 n. 4, pp. 390-403
- 2014 BENSALD S., BLENGINI G.A., FINO D., RUSSO N., Diesel soot combustion with A1-xAxB1-yB'yO3±δ perovskite catalysts, *CHEMICAL ENGINEERING COMMUNICATIONS*, vol. 201 n. 10, pp. 1327-1339
- 2012 BLENGINI G.A., FANTONI M., BUSTO M., GENON G., ZANETTI M.C., Participatory approach, acceptability and transparency of waste management LCAs: case studies of Torino and Cuneo, *WASTE MANAGEMENT*, vol. 32(9), pp. 1712-1721
- 2012 RAIMONDI A., GIROTTI G., BLENGINI G.A., FINO D., LCA of petroleum-based lubricants: state of art and inclusion of additives, *INTERNATIONAL JOURNAL OF LIFE CYCLE ASSESSMENT*, vol. 17(8), pp. 987-996
- 2012 DEORSOLA F.A., RUSSO N., BLENGINI G.A., FINO D., Synthesis, characterization and environmental assessment of nanosized MoS₂ particles for lubricants applications, *CHEMICAL ENGINEERING JOURNAL*, Vol. 195-196, pp. 1-6
- 2012 HERNANDEZ S., BLENGINI G.A., FINO D., RUSSO N., Kinetic study of diesel soot combustion with perovskite catalysts, *INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH*, ACS

Publications, Vol. 51, pp. 7584-7589

2012 BLENGINI G.A., GARBARINO E., SOLAR S., SHIELDS D.J., HÁMOR T., VINAI R., AGIOUTANTIS Z. Life Cycle Assessment Guidelines for the Sustainable Production and Recycling of Aggregates: The Sustainable Aggregates Resource Management Project (SARMa). JOURNAL OF CLEANER PRODUCTION, vol. 27, pp. 177-181.

2012 BLENGINI G.A., BUSTO M., FANTONI M., FINO D. Eco-efficient waste glass recycling: integrated waste management and green product development through LCA, WASTE MANAGEMENT, vol. 32(5), pp. 1000-1008

2011 BLENGINI G.A., BRIZIO E., CIBRARIO M., LCA of bioenergy chains in Piedmont (Italy): a case study to support public decision makers towards sustainability, RESOURCES CONSERVATION AND RECYCLING, Vol. 57, pp. 36-47

2011 SHIELDS D.J., BLENGINI G.A., SOLAR S.V. Integrating Life Cycle Assessment and Other Tools for Ex Ante Integrated Sustainability Assessment in the Minerals Industry , AMERICAN JOURNAL OF APPLIED SCIENCES, Science Publications, Vol. 8(11), pp. 1214-1227

2011 GIROTTI G., RAIMONDI A., BLENGINI G.A., FINO D. The Contribution of Lube Additives to the Life Cycle Impacts of Fully Formulated Petroleum-Based Lubricants, AMERICAN JOURNAL OF APPLIED SCIENCES, Science Publications, Vol. 8(11), pp. 1232 a 1240

2011 BLENGINI G.A., GARBARINO E. Integrated life cycle management of aggregates quarrying, processing and recycling: definition of a common LCA methodology in the SARMa project. INTERNATIONAL JOURNAL OF SUSTAINABLE SOCIETY, Vol. 3(3), pp. 327-344

2010 BLENGINI G.A., GARBARINO E. Resources and Waste Management in Turin (Italy): the role of recycled aggregates in the sustainable supply mix. JOURNAL OF CLEANER PRODUCTION, Vol. 18(10-11), pp. 1021-1030

2010 BLENGINI G.A., DI CARLO T. Energy saving policies and low energy residential buildings: a LCA case study to support decision-makers in Piedmont (Italy). INTERNATIONAL JOURNAL OF LIFE CYCLE ASSESSMENT, Vol. 15(7), pp. 652-665

2010 STRAZZA C, DEL BORGHI A, BLENGINI G.A., GALLO M. Definition of the methodology for a Sector EPD (Environmental Product Declaration): case-study of the average Italian cement. INTERNATIONAL JOURNAL OF LIFE CYCLE ASSESSMENT, vol. 15(6), pp. 540-548

2010 BLENGINI G.A., SHIELDS D.J. Green labels and sustainability reporting: overview of the building products supply chain in Italy. MANAGEMENT OF ENVIRONMENTAL QUALITY, Vol. 21(4), pp. 477-493

2010 BLENGINI G.A.; DI CARLO T., The changing role of life cycle phases, subsystems and materials in the LCA of low energy buildings, ENERGY AND BUILDINGS, Vol. 42(6), pp. 869-880

2009 BLENGINI G.A.; BUSTO M.V., The life cycle of rice: LCA of alternative agri-food chain management systems in Vercelli (Italy), JOURNAL OF ENVIRONMENTAL MANAGEMENT, Vol. 90(3), pp. 1512-1522

2009 BLENGINI G.A., Life cycle of buildings, demolition and recycling potential: a case study in Turin-Italy, BUILDING AND ENVIRONMENT, Vol. 44(2), pp. 319-330

2008 BLENGINI G.A., Using LCA to evaluate impacts and resources conservation potential of composting: a case study of the Asti District in Italy, RESOURCES CONSERVATION AND RECYCLING, Vol. 52(12), pp. 1373-1381

2008 BLENGINI G.A., Applying LCA to organic waste management in Piedmont-Italy, MANAGEMENT OF ENVIRONMENTAL QUALITY, Vol. 19(5), pp. 533-549

Peer reviewed papers in national journals

2007 BLENGINI G.A.; ZAVAGLIA K, Applicazione della metodologia Life Cycle Assessment (LCA) al settore delle costruzioni, GEAM. GEOINGEGNERIA AMBIENTALE E MINERARIA, pp. 49-54, Vol. 121

2006 BADINO V; BLENGINI G.A.; GARBARINO E, Analisi tecnico-economico-ambientale degli aggregati per l'industria delle costruzioni in Italia. Parte 3a – Valutazione del contributo degli aggregati riciclati, GEAM. GEOINGEGNERIA AMBIENTALE E MINERARIA, Vol.119

2006 BADINO V; BLENGINI G.A.; ZAVAGLIA K, Analisi tecnico-economico-ambientale degli aggregati per l'industria delle costruzioni in Italia. Parte 2a – La stima dei fabbisogni, GEAM. GEOINGEGNERIA AMBIENTALE E MINERARIA, pp. 5-16, Vol. 118

2006 BADINO V; BLENGINI G.A.; ZAVAGLIA K, Analisi tecnico-economico-ambientale degli aggregati per l'industria delle costruzioni in Italia. Parte 1a – I prodotti e l'offerta di mercato, GEAM. GEOINGEGNERIA AMBIENTALE E MINERARIA, pp. 5-14, Vol. 117

2004 BADINO V.; BLENGINI G.A.; DINIS DA GAMA C., The role of LCA to assess environmental

performances of mineral construction materials production in Portugal and in Italy, GEAM. GEOINGEGNERIA AMBIENTALE E MINERARIA, pp. 51-55, Vol. 112

2004 BADINO V.; BLENGINI G.A.; NOCCO S., Economia ed efficienza ambientale dei materiali naturali per la bio-edilizia: il sughero e la terra cruda, GEAM. GEOINGEGNERIA AMBIENTALE E MINERARIA, pp. 57-66, 2004, Vol. 111

2003 BADINO V.; BLENGINI G.A.; CAROSSO G.C.; ZAVAGLIA K., La Contabilità Ambientale d'Impresa: un contributo alla definizione degli attuali strumenti contabili, GEAM. GEOINGEGNERIA AMBIENTALE E MINERARIA, pp. 21-28, Vol. 109

2002 BADINO V.; BLENGINI G.A.; BOTTINO G., Le argille industriali e i loro impieghi. Situazione e prospettive di impiego delle argille piemontesi, GEAM. GEOINGEGNERIA AMBIENTALE E MINERARIA, pp. 7-16, Vol.107

2000 BADINO V.; BLENGINI G.A.; MARANZANA F., The economic significance of industrial minerals in the Italian economy, GEAM. GEOINGEGNERIA AMBIENTALE E MINERARIA, pp. 171-176, Vol.101

2000 BERRY P.; BLENGINI G.A.; DE CASA G.; FABBRI S., Proposta di un criterio di sicurezza per il trasporto e lo stoccaggio dei Big Bag, CERAMICA INFORMAZIONE, pp. 387-393, Vol. 397

2000 BAGALA' S.; BLENGINI G.A., The importance of geotechnical monitoring during tunnel excavation in adverse geological conditions: the case of Bolu Tunnel, GALLERIE E GRANDI OPERE SOTTERRANEE, pp. 41-56, 2000, Vol.62

Papers in national journals
(not updated)

2009 GARBARINO E, BLENGINI G.A., PIACENZA A. Pianificazione e gestione dei rifiuti da C&D nella Provincia di Torino. RECYCLING, vol. maggio 2009; p. 31-44

2008 BLENGINI G.A.; BUSTO M.V., Dalla semina alla tavola, quale impatto ambientale. Gli strumenti per valutare il profilo ecologico della filiera. Il caso del riso vercellese, TERRA E VITA, pp. 36-37, 2008, Vol. 49(7)

2007 BLENGINI G.A.; GARBARINO E, Il ciclo di vita degli aggregati da costruzione, RECYCLING, pp. 33-39, 2007, Vol. 11(5)

2003 BADINO V.; BLENGINI G.A., Le materie prime minerarie. L'importanza della disponibilità di materie prime minerarie per lo sviluppo dell'industria manifatturiera italiana, L'INDUSTRIA MINERARIA, pp. 17-20, 2003, Vol. 1

2003 DINIS DA GAMA C; BLENGINI G.A., Aínda a polémica do ambientalista céptico, INGENIUM, pp. 46-49, 2003, Vol. N. 77, Outubro 2003

2001 BALLESTRAZZI P.; BERRY P.; BLENGINI G.A.; FABBRI S.; MARTELLI F., La legislazione regionale sui rifiuti da Costruzioni & Demolizioni, RECYCLING, pp. 99-110, 2001, Vol. N.5 Sept 2001

1999 BERRY P; BLENGINI G.A.; FABBRI S, Problemi di sicurezza connessi al flusso di minerali granulari attraverso aperture di forma irregolare, QUARRY AND CONSTRUCTION, pp. 41-49, Vol. N.7 Luglio 99

1999 BALLESTRAZZI P; BERRY P; BLENGINI G.A.; FABBRI S; ROCCA BONINI D; VENEROSO C, Proposte per una normativa sul riciclaggio dei rifiuti speciali, QUARRY AND CONSTRUCTION, pp. 83-94, 1999, Vol. N.8 Agosto 99

1999 MANCINI R; CARDU M; ZOPPO G; BLENGINI G.A., Indagine sui limiti di applicabilità della tecnica D&B nello scavo di gallerie in ambiente urbano, QUARRY AND CONSTRUCTION, pp. 64-74, Vol..9 Sept 99

1999 BALLESTRAZZI P; BERRY P; BLENGINI G.A.; FABBRI S; RAVAGLIA B, Metodi di coltivazione e tecnologie di taglio nelle cave, QUARRY AND CONSTRUCTION, pp. 7-13, 1999, Vol. N.11 Novembre 99

Book Chapters

2013 GARBARINO E., BLENGINI G.A., The economics of construction and demolition waste (C&DW) management facilities. In: Handbook of Recycled Concrete and Demolition Waste / Pacheco-Torgal F., Tam V., W. Y. Labrincha J. A., Ding Y., Brito J. de. Woodhead Publishing - ELSEVIER, pp. 108-138. ISBN 9780857096821

2012 BLENGINI G.A., DI CARLO T., Strumenti per l'analisi di ciclo di vita degli edifici. In: L'analisi di ciclo di vita degli edifici Metodi - Strumenti - Casi di studio / Francesco Asdrubali, Giorgio Beccali, Maurizio Cellura, Fabrizio Cumo, Umberto Di Matteo, Franco Gugliermetti. Celid, Torino, pp. 117-141. ISBN 9788876619786

2011 BADINO V., BLENGINI G.A., FORNARO M., GIULIANI A., I fabbisogni di materie prime minerali per la produzione sostenibile nel quadro internazionale. In: Rocce e Minerali industriali / Giuliani A. ARACNE Editrice s.r.l, Roma, pp. 107-118. ISBN 9788854837454

**Peer reviewed international
conference papers
(not updated)**

- 2010 BLENGINI G.A.; FANTONI M; GENON G., "LCA del sistema di gestione degli RSU" in E. Ranieri, P. Sirini (Eds.), Trattamenti e smaltimento dei rifiuti urbani e dei fanghi di depurazione, Milano: McGraw-Hill, 2010, p. 95-111. - ISBN: 9788838662454. - URL: www.mcgraw-hill.it . - cap. 7
- 2009 BLENGINI G.A.; FANTONI M, Analisi LCA di alcuni scenari di trattamento della FORSU, In: Compost ed energia da biorifiuti, VISMARA R.; GROSSO M.; CENTEMERO M., Dario Flaccovio Editore (ITA), pp. 433-456, 2009, ISBN: 978-88-7758-861-6
- 2009 BLENGINI G.A., Esempio di analisi energetica ed ambientale LCA: gli impatti nascosti in 1kg di riso, In: Risparmiare energia. Per un futuro sostenibile, VARVELLI R, ETAS RCS LIBRI, pp. 10, 2009, pagine da 63 a 72, ISBN: 9788845315220
- 2005 BLENGINI G.A.; GIULIANI A, Gestione dell'attività estrattiva a livello comunale: il caso di Garesio., In: Marmi e pietre del Cebano-Monregalese. Litotipi del territorio del G.A.L. Mongioie., BADINO V., GAL MONGIOIE (ITA), pp. 107-125, 2005, Vol. 1, ISBN: 88-902410-0-4
- 2014 DEWULF J., BLENGINI G.A., MANCINI L., SALA S., PENNINGTON D., Towards an overall framework to assess the sustainability of the use of natural resources, In Proc. [AvniR] Conference: Life cycle in practice, 5th and 6th of November 2014, Lille, France
- 2014 FARINA A., ZANETTI M.C., SANTAGATA E., BLENGINI G.A., LANOTTE M.A., Life Cycle Assessment of road pavements containing crumb rubber from end-of-life tires. In: International Symposium on Pavement Life Cycle Assessment, PAVEMENT LCA 2014, Davis, California, USA, October 14-16, 2014
- 2013 BLENGINI G.A., MOLTRER A., VALBUSA M., KOMNITSAS K., AGIOUTANTIS Z., GARBARINO E., Data and methodologies for a resource-efficient planning of primary and secondary aggregates in South East Europe (SEE) countries. In: SDIMI 2013, Milos island, Greece, 30 June – 3 July 2013. pp. 282-288
- 2013 GENON G., BLENGINI G.A., PANEPINTO D., Economic and environmental comparison between two different scenarios of waste management: MBT vs thermal treatment. In: SARDINIA (14th Internat. Waste Management and Landfill Symposium), Santa Margherita di Pula, 30 Sept. 2013
- 2013 SANTAGATA E., BLENGINI G.A., FARINA A., ZANETTI M.C., CHIAPPINELLI G., Life cycle assessment of road pavement base and foundation courses containing reclaimed asphalt pavement (RAP). In: Sardinia 2013, Fourteenth International Waste Management and Landfill Symposium, S. Margherita di Pula, Cagliari, Italy, 30 September – 4 October 2013.
- 2013 KOMNITSAS K., AGIOUTANTIS Z., SHIELDS D., BLENGINI G.A., TZEFERIS P.G., Stakeholder identification in the planning phase of aggregate and quarrying projects. In: SDIMI 2013, Milos island, Greece, 30 June – 3 July 2013. pp. 294-301
- 2013 SHIELDS D., VERGA F., BLENGINI G.A., Sustainability versus Sustainable Development: The Case of Shale Gas. In: 75th EAGE Conference & Exhibition incorporating SPE EUROPEC 2013, London (UK), 10–13 June 2013.
- 2012 AGIOUTANTIS Z., SOLAR S., SHIELDS D.J., BLENGINI G.A., Experiences and Recommendations from the SARMa Project. In: Proceedings SOMP 2012, Wroclaw, Poland, July 12-16, 2012. pp. 183-189
- 2012 SHIELDS D.J., BLENGINI G.A., Incorporating Sustainability in Engineering Education: a Review of Current Practices. In: Proceedings SOMP 2012, Wroclaw, Poland, July 12-16, 2012. pp. 65-73
- 2011 BLENGINI G.A., FANTONI M., GENON G., LCA of integrated municipal solid waste management systems: case studies of Torino and Cuneo (Italy), Cisa Publisher (ITA), Sardinia 2011 XIII International Waste Management and Landfilling Symposium, S. Margherita di Pula (CA) 3-7 October, pp. 383-384, Vol. 1, ISBN: 9788862650007
- 2011 BLENGINI G.A., GARBARINO E., The Life Cycle Assessment Guidelines in the SARMa Project: definition of a common methodology to boost use of LCA tools in sustainable production and recycling of aggregates, Geological Survey of Slovenia (SVN), Sustainable Aggregates Resource Management - International Conference, Ljubljana (Slovenia) 20-22 September, pp. 35-41, Vol. 1, ISBN: 9789616498289, DOI: 10.5474/9789616498289
- 2010 BLENGINI G.A., FANTONI M., LCA of integrated municipal solid waste management, Sebastião Roberto Soares Publisher (BR) (BRA), II Congresso Brasileiro em Gestão do Ciclo de Vida de Produtos e Serviços, Florianópolis (Brazil) 24-26 November, pp. 198 a 204, Vol. 1
- 2010 BLENGINI G.A.; GARBARINO E, Integration of the three inter-dependent life cycles in the mining/quarrying industry: proposed LCA methodology within the EU SARMa Project, In: Mineral Resources and Mine Development, Martens P.N., Pateiro Fernández J.B. (DEU), AIMS 2010, Aachen May 26-27 2010, pp. 457-471, 2010, Vol. 1, ISBN: 978-3-86797-100-3

- 2010 BLENGINI G.A.; BUSTO M.V., Development of a new high energy efficiency building product through life cycle management of the waste glass recycling chain, In: SEEP2010 Conference Proceedings, June 29th – July 2nd, Bari, ITALY, <http://seep2010.poliba.it/>
- 2009 BLENGINI G.A.; GARBARINO E; BADINO V; MOLINA P, A hybrid LCA-GIS model for sustainable recycled aggregate chain management in Turin (Italy), Prof. D. Brereton (Editor), Proc. Conf. Sustainable Development Indicators in the Mining Industry (SDIMI 2009), Queensland's Gold Coast (AUS) 6-8 July
- 2009 SHIELDS D.J; BLENGINI G.A.; SOLAR S.V, Using LCA-MCDA Models for Ex Ante Sustainability Assessment, Prof. D. Brereton (Editor), Proc. Conf. Sustainable Development Indicators in the Mining Industry (SDIMI 2009), Queensland's Gold Coast (AUS) 6-8 July
- 2008 BLENGINI G.A.; DI CARLO T, Evaluation of the environmental sustainability of a low energy residential building with the LCA methodology, Proc. Conf. 2nd International Seminar on Society & Materials, SAM2, Nantes 24-25 April 2008, pp. 1-10, 2008
- 2008 BLENGINI G.A.; DI CARLO T; GARBARINO E; SHIELDS D.J; SOLAR S.V, Sustainability indicators and green labels in the dimension stone market: present situation and future perspectives (ITA), 2nd International Congress Dimension Stones, Carrara 29-31 May 2008, pp. 419-426, 2008
- 2007 BADINO V; BLENGINI G.A.; ZAVAGLIA K, Measuring sustainability of building aggregates by means of LCA tools, Prof. Z. Agioutantis (Editor), Sustainable Development Indicators in the Mining Industry (SDIMI 2007), Milos 18-20 June, pp. 145-150, 2007, ISBN: 978-960-6746-00-0
- 2007 BADINO V; BLENGINI G.A.; GARBARINO E; ZAVAGLIA K, Economic and environmental constraints relevant to building aggregates beneficiation plants, 20th International Mining Congress of Turkey (IMCET 2007), Ankara, Turkey 6-8 June, pp. 197-208, 2007, ISBN: 978-9944-89-288-9
- 2007 BADINO V; BLENGINI G.A.; FANTONI M; FISCHETTI M, Integrated MSW management in the Asti district (Piedmont): application of LCA to energetic and environmental issues, Raffaello Cossu (ITA), Sardinia 2007, S. Margherita di Pula, Cagliari, Italy 1-5 October, pp. 735, 2007, Vol. 1, ISBN: 978-88-6265-003-8
- 2007 BADINO V; BLENGINI G.A.; MONDINI G; ZAVAGLIA K, Life Cycle Assessment and sustainable constructions: eco-design issues relevant to the San Paolo tower in Torino, Proc. SB07 Internat. Conf. on Sustainable Building in South Europe, Turin, Italy 7-8 June 2007, pp. 17-24, ISBN: 13-978-88-766
- 2007 BLENGINI G.A.; GARBARINO E; ZAVAGLIA K, Sustainability evaluation of natural and recycled aggregates through Life Cycle Assessment, Proc. SB07 International Conference on Sustainable Building in South Europe, Turin, Italy 7-8 June 2007, pp. 299-306, 2007, ISBN: 13-978-88-766
- 2006 BADINO V; BLENGINI G.A.; ZAVAGLIA K, The contribution of the extractive activity to the life cycle impacts of buildings (ITA), Proc. Conf. Mine Planning and Equipment Selection - MPES2006, Torino, Italy 20-22 September 2006, pp. 759-764, 2006, Vol. 2, ISBN: 88-901342-4-0
- 2006 BLENGINI G.A.; GARBARINO E, Sustainable constructions: ecoprofiles of primary and recycled building materials (ITA), Proc. Conf. Mine Planning and Equipment Selection - MPES2006, Torino, Italy 20-22 September 2006, pp. 765-770, 2006, Vol. 2, ISBN: 88-901342-4-0
- 2005 BADINO V; BLENGINI G.A.; ZAVAGLIA K, Demolition and rubble recycling as a new source of building materials, MPES 2005 1-3 November 2005, pp. 64-82, 2005, Vol. 1
- 2004 BADINO V; BLENGINI G.A.; NOCCO S; ZAVAGLIA K, LCA of clay tiles and bricks for assessing sustainability of Bio-Architecture materials, Conf. Advances in Mineral Resources Management & Environmental Geotechnology, Chania, Crete, Greece. 9 June 2004, pp. 305-312, ISBN: 960-88153-0-4
- 2003 BADINO V; BLENGINI G.A.; DINIS DA GAMA C, Sustainable Development Indicators as a tool for monitoring unfair international market competition of mineral commodities, Proc. Conf. SDIMI 2003, Milos Greece May 21-23 2003, pp. 211-216, 2003, ISBN: 960-87054-2-8
- 2003 BADINO V; BLENGINI G.A., The importance of marble in cultural sustainability, Proc. Conf. SDIMI 2003, Milos Greece May 21-23 2003, pp. 237-242, 2003, ISBN: 960-87054-2-8
- 2001 BERRY P.; BLENGINI G.A.; TAFARO V.A. FABBRI S., Factors affecting safety in diamond wire cutting technology, Proc. Conf. MPES 2001, New Delhi India November 19-21 2001, pp. 311-316
- 2001 BERRY P.; BLENGINI G.A.; FABBRI S.; MARTELLI F., Tunnelling by TBM: an analysis of parameters that condition excavation rates, Proc. Conf. AITES-ITA 2001 World Tunnel Congress, Milan June 10-13th, pp. 33-40, 2001
- 2000 BERRY P; BLENGINI G.A.; TAFARO V.A. FABBRI S, Safety in quarrying ornamental stones by using diamond wire, Proc. Conf. MPES 2000, Athens Greece November 6-9th 2000, pp. 521-526
- 1994 MANCINI R.; CARDU M.; BLENGINI G.A., Factors affecting blasting accuracy: an analysis of cases of mine drift excavation by drilling and blasting, Proc. Conf. EXPLOSIVES 94, Leeds U.K., 37-47.

Awards received for publications

During the 13th International Waste Management and Landfill Symposium - Sardinia 2011, the paper:

2011 BLENGINI G.A., FANTONI M., GENON G., *LCA of integrated municipal solid waste management systems: case studies of Torino and Cuneo (Italy)*, Cisa Publisher (ITA), Sardinia 2011 XIII International Waste Management and Landfilling Symposium, S. Margherita di Pula (CA) 3-7 October, pp. 383-384

was selected by an international committee and given the Giovanni Bozzini Award for the best paper

Awards received for publications

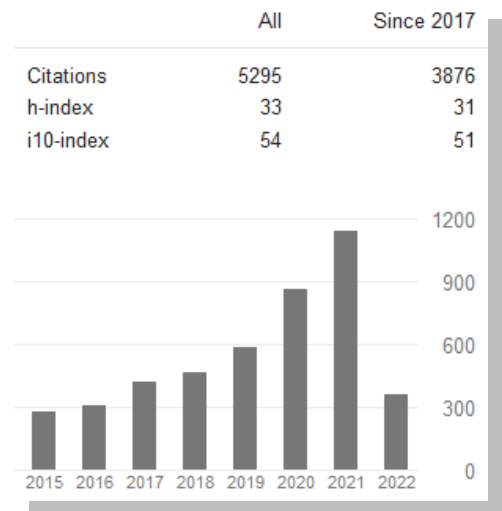
The paper:

2019 A MAYER, W HAAS, D WIEDENHOFER, F KRAUSMANN, P NUSS, GA BLENGINI *Measuring progress towards a circular economy: a monitoring framework for economy-wide material loop closing in the EU28*. *Journal of industrial ecology* 23 (1), 62-76

is winner of the 2019 Senior Author Graedel Best Paper Prize, awarded by Journal of Industrial Ecology

Citations received for papers (from google scholar)

According to the database Google Scholar, as of March 2022 Gian Andrea's publications have received **more than 5000 citations**. The two most cited articles have together received more than 1000 citations.



Highly cited / Hot papers

(from WOS)

The following 3 papers are classified "Highly cited papers in WOS":

2019 A MAYER, W HAAS, D WIEDENHOFER, F KRAUSMANN, P NUSS, GA BLENGINI *Measuring progress towards a circular economy: a monitoring framework for economy-wide material loop closing in the EU28*. *Journal of industrial ecology* 23 (1), 62-76

2010 BLENGINI G.A.; DI CARLO T., *The changing role of life cycle phases, subsystems and materials in the LCA of low energy buildings*, *ENERGY AND BUILDINGS*, Vol. 42(6), pp. 869-880

2009 BLENGINI G.A., *Life cycle of buildings, demolition and recycling potential: a case study in Turin-Italy*, *BUILDING AND ENVIRONMENT*, Vol. 44(2), pp. 319-330

As of January/February 2020, this **highly cited paper** received enough citations to place it in the top 1% of the academic field of Environment/Ecology based on a highly cited threshold for the field and publication year.

Data from [Essential Science Indicators](#)

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The following paper is classified "Hot paper in WOS":

2019 G MORAGA, S HUYSVELD, F MATHIEUX, GA BLENGINI, L ALAERTS, K VAN ACKER, ... *Circular economy indicators: What do they measure? Resources, Conservation and Recycling* 146, 452-461

This **hot paper** was published in the past two years and received enough citations in January/February 2021 to place it in the top 0.1% of papers in the academic field of Environment/Ecology.

Data from [Essential Science Indicators](#)

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Europass Curriculum Vitae

Annex 5 Visiting professor and international teaching network

EIT Raw Materials Academy Online (2021)	Online PhD Summer School Going circular with Critical Raw Materials . Organised by Politecnico di Milano School of Management and School of PhD Studies, with the support of the Lake Como School of Advanced Studies, SustCritMat project and EIT Raw Materials. Lecture on: EU Policy and Critical Raw Materials.
European Commission DG Research & Innovation Online (2020)	EMP-E 2020 – Modelling Climate Neutrality for the European Green Deal session: Circularity, use of raw material . Lecture on: 2020 list of CRMs for the EU and JRC foresight study on CRMs in strategic sectors.
European Commission Ispra (VA), Italy (2018)	JRC TRAINING: EC METHODOLOGY of CRITICALITY ASSESSMENT (19 Sep 2018, full day). Overarching goal of the training: the list of Critical Raw Materials (CRMs) for the EU and the role of JRC as the EC in-house scientific service in (1) keeping the EC methodology up to date and (2) providing scientific and technical support to DG GROW in view of the next list of CRMs for the EU (2020 list). Target audience: European Commission scientific staff and policy officers.
2iE Foundation Ouagadougou, Burkina Faso (2011-14)	Four years contract professor (2011-2014) at the 2iE Foundation - International Institute for Water and Environmental Engineering (http://www.2ie-edu.org) - Ouagadougou (Burkina Faso) . Co-operation with the local and international staff to postgraduate teaching activities in the fields of minerals resources and sustainability. Master in Sustainable Mining / Master Spécialisé en Gestion Durable des Mines. Subjects taught: Minerals Economics; industrial Ecology; Life Cycle Assessment.
Aalto University TU of Helsinki, Finland (2012)	Post-graduate seminar on HVAC - Environmental and Energy Aspects of Low-Energy Buildings. The Department of Energy Technology of Aalto University organised a four-days post-graduate seminar (4-7.6.2012) on Environmental and Energy Aspects of Low-Energy Buildings. Invited international scientists from UK, Italy and India and national experts lectured in the seminar. Target audience: post-graduate students (Doctoral and Licentiate) in the fields of energy, HVAC, buildings, architecture, as well as consultants and researchers in a broader field of energy and buildings. Organisers: Prof Kai Siren kai.siren@aalto.fi and Dr. Ala Hasan ala.hasan@aalto.fi Topics covered: Life Cycle Assessment for Buildings, theoretical and policy aspects and case studies.
Venice International University, AGROINNOVA, Ministry of Science and Technology of China (2009-11)	Lecturer in the following advanced training programmes organised by the Italian Ministry for the Environment Land and Sea in cooperation with Venice International University, AGROINNOVA-University of Turin, the Ministry of Science and Technology of China, the Chinese Academy of Social Science and the Shanghai Environmental Protection Bureau. Target audience: professors and experts of different organizations of the People's Republic of China. 2009 (February): Advanced Training on Environmental Management and Sustainable Development with focus on Solid Waste Management. Subject: Life Cycle Assessment of Municipal Solid Waste. 2009 (June): Advanced Training Program on Environmental Management and Sustainable Development with focus on Environmental Friendly cities. Subjects: (1) Life Cycle Assessment (LCA); (2) Life Cycle of Buildings, Demolition and Recycling Potential. 2009 (October): Advanced Training Program on Environmental Management and Sustainable Development with focus on Capacity Building on Sustainable Development. Subjects: (1) Life Cycle Assessment (LCA) a comprehensive methodology to evaluate environmental sustainability; (2) Life Cycle of built structures and building materials.

2009 (November): Advanced Training Program on Environmental Management and Sustainable Development with focus on Environmental Friendly cities. Subjects: (1) Life Cycle Assessment (LCA) a comprehensive methodology to evaluate environmental sustainability; (2) Life Cycle of built structures and building materials.

2010 (July): Advanced Training Program on Environmental Management and Sustainable Development with focus on New and Renewable Energy. Subject: Carbon Balance and Environmental Comparison of Four Bio-energy Chains.

2010 (November): Advanced Training Program on Environmental Management and Sustainable Development with focus on New and Renewable Energy. Subjects: (1) Life Cycle Assessment (LCA) a comprehensive methodology to evaluate environmental sustainability; (2) Carbon Balance and Environmental Comparison of Four Bio-energy Chains.

2011 (November): Advanced Training Program on Environmental Management and Sustainable Development with focus on New and Renewable Energy. Subjects: (1) Life Cycle Assessment (LCA) a comprehensive methodology to evaluate environmental sustainability; (2) Carbon Balance and Environmental Comparison of Four Bio-energy Chains.

ACR+
(2009-10)

Lecturer in the following advanced training programmes organised by **ACR+**, the **Association of Cities and Regions for Recycling and Sustainable Resource Management** (www.acrplus.org), in co-operation with **Holcim Group** (www.holcim.com).

2009: Experts Seminar on the «Optimal recovery of material and energy resources in the context of waste management». Subject: “Life Cycle Assessment of Integrated Waste Management Systems: Carbon and energy balance of different scenarios for Torino and Cuneo Districts”.

2010: Optimal recovery of material and energy resources: the cases of the rest fraction of municipal waste and sewage sludge. Subject: “LCA of Integrated Waste Management Systems”.

FORGEA-TWAS
(2008-12)

Lecturer on “Life Cycle Assessment as applied to building materials, construction technologies, recycling of construction and demolition waste and treatment of excavated soils” in the 2007, 2008 and 2012 editions of the following FORGEA-TWAS courses.

FORGEA-TWAS is the Training and cooperation centre in the field of geo-mining and environment of the **Third World Academy of Sciences (TWAS)** which was officially launched in 1985 by the then-secretary general of the United Nations, Javier Perez de Cuellar as an autonomous international scientific organization dedicated to promoting scientific capacity and excellence for sustainable development in the South of the world. <http://www.twas.org>

2007 and 2008. Title of the training course: “Capacity Building in Environment-related Issues: Materials Recovery and Recycling”. Topics of the lecture: Life-Cycle-Assessment (LCA) a comprehensive methodology to evaluate environmental sustainability (I) approach & framework (II) theory and practice.

2012. Title of the training course: “Polluted Site Management. Theory and case studies”. Topics of the lecture: Management of excavated soils. Part II: Environmental issues.

2013 (Tunisia). Title of the training course: “Waste Management and Treatment – Theory and Practice”. Topics of the lectures: (1) Debris beneficiation plants for aggregate production: treatment technologies; (2) Life Cycle Assessment (LCA) applications to the construction sector

IST Lisbon
(2000-2006)

Visiting scientist and lecturer on the following topics at the IST Instituto Superior Tecnico of the Technical University of Lisbon as part of the programme of studies on Earth Resources Engineering, Civil Engineering and Management Engineering.

- The Italian mineral industry (2000);
- Production of ornamental stones in Italy (2002);
- Life Cycle Assessment (2006).

Annex 6 Teaching approach and appointments at the Politecnico di Torino

I am currently a member of the board of professors of the **Doctoral School in Civil and Environmental Engineering** of the Politecnico di Torino, in the board of professors of the BSc. in **Environmental Engineering** and MSc. in **Environmental Engineering** and **Geo-resources and Geo-energy Engineering** (former Petroleum and Mining Engineering).

From 2001 to 2008 I actively co-operated with Professor Vanni Badino in teaching activities at undergraduate, master and postgraduate levels. Since 2004, I have been appointed as **principal professor in official courses** in various Bachelor, Master Degree, Doctoral and postgraduate programmes as summarised below.

I have been principal advisor or co-advisor of more than 50 Bachelor, Master Degree and PhD theses.

In my 20+ years teaching experience, and taking into account students' feedback, I have been successful in teaching, supervising and mentoring undergraduate to postgraduate students. The feedback and evaluations that I receive from students are encouraging and indicate that the courses I teach are technically sound, well-structured, well taught and exciting. The diverse nature of my audience has helped me shape an approach to teaching that influences and inspires students to learn, responding to the individual student's needs. I have been teaching and supervising students over 50+ different nationalities, having different cultures, experiences and learning styles.

2007-2021 (14 editions)	Life Cycle Assessment (26 hrs – 5 CFU)	<i>PhD in Civil and Environmental Engineering (50+ participants per year)</i>
2012-2021 (9 editions)	Resources and Environmental Sustainability (90 hrs – 8 CFU in English)	<i>Master Degree in: Environmental Engineering; Petroleum and Mining Engineering; Chemical Engineering; Energy and Nuclear Engineering</i>
2008-2012 (5 editions)	Principles of Business Economics (30 hrs)	<i>Postgraduate Master in Petroleum Engineering</i>
2008-2012 (5 editions)	Resources and Environmental Economics (90 hrs – 8 CFU in English)	<i>Master Degree in Environmental Engineering and Master Degree in Petroleum Engineering</i>
2008/2010 (2 editions)	Applied Economics (56 hrs – 5 CFU)	<i>Bachelor in Environmental Engineering</i>