Call for Papers
Global Cleaner Production and Sustainable Consumption Conference,
Barcelona, Spain, Nov. 1–4, 2015.

**Workshop on**


*Special session organised by SARI and IGSNRR, CAS, strategic pilot science and technology projects funded by CAS, at:*

*“The Global Cleaner Production and Sustainable Consumption Conference: Accelerating the Transition to Equitable, Sustainable, Post Fossil Carbon Societies”*

Nov. 1 – 4, 2015 | Sitges, Barcelona, Spain

Session chairs:

Prof. Wei Wei, Shanghai Advanced Research Institute (SARI), CAS

Prof. Lei Shen, Institute of Geographic Sciences and Natural Resources Research, CAS

This is a call for **abstracts for submission by May 29th, 2015.**
Introduction

It is widely accepted that energy use and industrial production contribute the majority proportion of global greenhouse gas emissions. Industry is generally the largest consumer of energy and the highest in energy-related CO$_2$ emissions among the major sectors of energy use in any economy (Liu and Ang, 2007). With the increasingly serious resource and environmental problems, many scholars are making great efforts to achieve energy conservation and emissions reduction in all industrial sectors, such as the steel industry (Worrell et al. 1997; Guo and Fu, 2010; Johansson and Söderström, 2011), the electrical power industry (Sun et al., 2015; Zhou et al., 2015) and the cement industry (Shen et al., 2014; Xu et al., 2012; Ke et al., 2012; and Benhelal et al., 2013).

It is essential for us to more fully understand the current quantities of energy used in each sector and to determine how to effectively reduce the fossil carbon footprint in each of them in order to make societal reductions in climate change causing CO$_2$ emissions. Numerous scientists and environmental groups are attempting to set industrial sectoral targets for CO$_2$ reductions and to work on approaches to influence international policies to address global climate change. Many countries, including the United States, the European Union, Canada, and China, have developed and are implementing energy strategies to secure energy resources and to reduce greenhouse gas emissions.

China is both the largest user of primary energy and the largest producer of cement in the world. As a result of this and of its emissions from other sectors as well, it has become the biggest emitter of CO$_2$ emissions in the world in the last decade. In recent years, the Chinese governments and the academic communities have been investing increasingly more attention to energy saving and to fossil carbon reduction in every societal sector. Based upon recent investigations, solid scientific estimations of the GHGs emissions from many industrial sectors have been made. These data are being used in theoretical and practical work in China to improve energy use efficiency and to work to use more renewable energy sources, so as to reduce the overall fossil carbon footprint per unit of product produced.

In this context, the Chinese Academy of Sciences (CAS) recently launched the Strategic Pilot Scientific Plan on ‘the Carbon Budget for Coping with Climate Change and Related Issues’, in which the CAS has done the project on ‘Emission Estimations from Energy Use in Cement Production,’ since 2011. Additionally, during the last five years, extensive in-situ sampling and investigative work was done throughout China. Consequently, valuable progress was made in the fields of coal, oil, natural gas, and cement production sectors in China. To illustrate the achievements in China and in comparison with what has been done and is being done in other countries of the world, this workshop will be held at the conference, led jointly by Professor Wei Wei from the Shanghai Advanced Research Institute (SARI) and Professor Lei Shen from the Institute of Geographic Sciences and Natural Resources Research (IGSNRR), CAS.

In this context, we invite authors to prepare and submit abstracts via the Global Conference website: http://www.cleanerproductionconference.com/. During the conference, we look
forward to having excellent firms to exhibit at the Global Exhibition, titled, "Sustainable Futures in Practice."

As part of the Global Cleaner Production and Sustainable Consumption Conference, the workshop leaders invite authors to submit extended abstracts of 500 words designed to help to answer the following and other relevant questions:

a. What is the nature of the interconnected causality relationships among economic development, technological improvements, energy consumption and CO₂ emissions?

b. What targets need to be established for CO₂ emissions reduction per sector in order to reduce the global warming impacts of each sector and of each country in the short and long-term future?

c. In comparison with current emissions, based upon different estimation methodologies, and their shortcomings, what will be the key driving factors for industrial CO₂ emissions reductions? What are the policy implications for decision-makers to make the needed mitigation policies towards societal sustainable development?

d. Based upon identification and quantification of the pollutants from each industrial sector and an assessment of each sector’s impacts, approaches must be used for making environmental improvements within each industrial sector. In this context what technologies/policies/management approaches can be used to realize the potential towards low fossil carbon societal development?

We invite papers on initiatives associated with the following themes. The themes and questions are only provisional and are designed to guide the authors for the aspects that could be addressed in the Global Conference:

1. Case Studies of National Emissions from Energy Use

- What are the emission factors from energy use for specific countries and from the World?
- What are the emissions from coal, oil and natural gas usage for each country?
- How can specific countries estimate their own national emissions from energy use?
- How can this information help each country to set its fossil-carbon usage reduction targets and what can they do to monitor and to achieve those reduction targets?
- How can that help them to establish policies and enforceable regulations to help to ensure achievement of those targets?

2. Case Studies in Emissions Reductions from Diverse Industrial Sectors Production

- What are the specific emissions from each industrial sector’s production?
- What can be done in each industrial sector to reduce its fossil carbon footprint per unit of product or per unit of service?
- What policies, regulations and net technologies are needed to achieve the needed reductions in carbon footprints?
3. Low Fossil Carbon Development and Innovation of Energy Use and Industry Transition

- How can industrial firms effectively reduce their fossil energy footprints as they work to transition to efficient use of renewable energy sources? How can they improve their energy and material’s efficiency by better product design, process optimization, improved management, remanufacturing, reuse and recycling as they participate in industrial ecology and circular economy systems?
- How can governments, industries and university researchers creatively co-innovate and co-catalyze production of new more efficient products and services that will help producers and consumers make the transitions to equitable, post fossil carbon societies? What roles will clearer production and corporate social responsibility play in making the necessary changes?

4. Energy and Material Flow in Energy Use and Industrial Production

- What is the energy and carbon flow in energy use and industrial production?
- How can/must industrial firms change the energy use/flow and improve their environmental sustainability through energy efficiency improvements, remanufacturing, reuse, recycling and other circular economy approaches?

5. Energy Alternatives and Renewable Energy Development

- How can renewable energy resources contribute to developing and implementing low/no fossil energy systems? What energy efficiency improvement approaches can be used in each industrial sector to accelerate the transition to low/no fossil carbon societies?
- What are the roles of alternative sources of materials and energy can be used to reduce the fossil carbon footprint of cement production? Of steel production? Of leather production? Of textiles Production? Of electronics production? Of agricultural production? Of transportation system’s design and usage?
- The same types of questions need to be asked and answered for all industrial sectors.

(Many relevant articles in most industrial sectors have already been published in the Journal of Cleaner Production during its 23 years of publication.)

Format and Procedures for Submission of Responses to this Call for Papers:
We invite authors to prepare abstracts of 500 words in response this Call-for-Abstracts. The abstracts are to be prepared in English.
Please submit your abstract(s) via the conference website:  
http://www.cleanerproductionconference.com/ 

After the Global Conference, scientific teams of the Global Conference will select the articles to be developed for peer review, for potential publication within one of four or five Special Volumes of the JCLP (The Journal of Cleaner Production) that will be developed based upon inputs to the Global Conference.

For more information about this workshop, please contact:  
Lei Shen, Professor  
Director of Key Lab for Resources Use & Environmental remediation(RUER)  
Institute of Geographic Sciences & Natural Resources Research (IGSNRR)  
Chinese Academy of Sciences (CAS)  
Deputy President & Secretary-General of China Society of Natural Resources(CSNR)  
11A, Datun Road, Chaoyang District, Beijing 100101, China  
Tel: +86 (0)10 6488 9005 (available for fax)  
Email: shenl@igsnrr.ac.cn, bileishen@gmail.com  
http://people.ucas.ac.cn/~shenl

Further information regarding the Global Cleaner Production and Sustainable Consumption Conference can be found in the following link: http://www.cleanerproductionconference.com/

References: