

## Info and registration

www [www www.labcoopint.polimi.it/wsint-peri-urban-areas-few-nexus/](http://www.labcoopint.polimi.it/wsint-peri-urban-areas-few-nexus/)

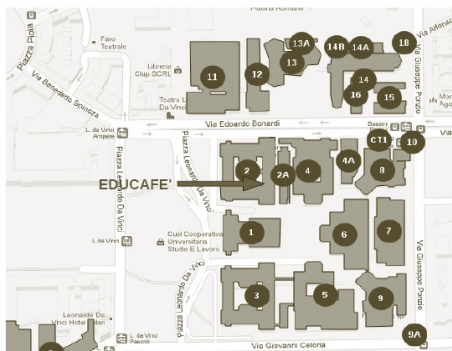
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For registration, please send an e-mail before 24th March 2014 to [cooperazione.internazionale.dastu@polimi.it](mailto:cooperazione.internazionale.dastu@polimi.it)

The presentations will be spoken in English or in Italian.

## Educafé | Politecnico di Milano

Via Bonardi, 2 – MM2 Piola  
Building 2 (padiglione Nord), Central cloister



POLITECNICO DI MILANO  
DEPARTMENT OF ARCHITECTURE AND URBAN STUDIES | DASTU  
LABORATORY OF INTERNATIONAL COOPERATION



LE UNIVERSITÀ  
PER EXPO 2015  
COMITATO SCIENTIFICO  
DEL COMUNE DI MILANO



# International Workshop Peri-urban areas and Food-Energy-Water Nexus Sustainability and Resilience Strategies in the Age of Climate Change

Milano, 28<sup>th</sup> and 29<sup>th</sup> March 2014

organized by  
LABORATORY OF INTERNATIONAL COOPERATION | DASTU

in collaboration with  
REsilienceLAB  
LABORATORIO DI SIMULAZIONE URBANA | DASTU

## Scientific Committee

Marcello Magoni, Angela Colucci, Scira Menoni,  
Cristina Rulli, Giulia Pesaro e Rachele Radaelli

## Nexus

The current scenario on food, energy and water security and the forecast on the future population growth, changes in diet of eastern population and the internal urban migration have highlighted the importance of the intertwined relationship between food, energy and water. This section will explore the role of each resource in the context of the Nexus, the interconnections among them, the different approaches in evaluating their role and the effects associated to the global changes on the Nexus.

## Food

The session focuses on governance instruments promoting urban-rural partnerships and services offered by peri-urban areas to urban system. The urban-rural partnerships include governance proposals, operative and best practices (INTEERG IV URMA). The debate aims at investigating links and possible solutions among governance instruments, research proposals and operative strategies/actions towards a sustainable and resilient development of peri-urban food chains and services (ecosystem services, cultural and educational).

## Energy

Peri-urban areas can give an important contribution in meeting the energy demand of cities. The possibilities in the use of energy resources can promote the transition to energy systems able to guarantee high levels of sustainability and resilience. In order to seize the opportunities that peri-urban area can offer, it is necessary to consider the reciprocal relationships they have with the city, and the relationships that link the production and consumption of the different resources involved.

## Water

In this section the application of the nexus concept to extreme conditions, and in particular to water related hazards, will be discussed. The nexus approach seems very promising as it suggests that an enhanced systemic methodology should be adopted in considering urban and regional sustainability. The main question that will be debated therefore is to what extent the nexus approach can innovate the way risk management and mitigation are usually considered.



The relationship between agricultural and urban areas is a factor that affects the sustainability and resilience of a city. Rethinking those territories and setting prerequisites to interconnect the peri-urban and rural open spaces favours the performance of functions of local interest and some important services.

Any strategy aimed at achieving the conditions of sustainability and resilience has to take into account the climate change, which is making the weather patterns more and more extreme, with negative effects on the welfare of people and with an increased risk of flooding, landslides and droughts.

The development of these services requires an integrated management of the major resources that characterize the metabolism of a city and a strong coordination between ordinary strategies and actions with the measures to prevent and manage the territorial risks.

This workshop focuses on two aspects that characterize the integrated policies in general as well as the food-energy-water Nexus more specifically. The first one is the integration of approaches, methods and tools specific to different disciplines that deal with food-energy-water. The second represents a deeper study of the criteria, methods and tools specific to each of these resources. This second theme explores the adoption of systemic approaches which take into account not only the articulation of the evaluation and decision-making factors that affect a single resource, but also the possible interrelations between the factors that characterize the other two resources.



# Nexus

Friday Morning, 28<sup>th</sup> March 2014

*Chair:* Cristina Rulli

- 9.30 Workshop Presentation**  
*Marcello Magoni | DASTU, Politecnico di Milano*
- Welcome by the Director of Department of Architecture and Urban Studies**  
*Gabriele Pasqui | DASTU, Politecnico di Milano*
- 10.00 Climate Change Scenarios in Europe and Northern Italy**  
*Alessio Bellucci | Centro Euro-Mediterraneo sui Cambiamenti Climatici*
- 10.40 Session presentation. The water-food-energy Nexus**  
*Cristina Rulli | DiCA, Politecnico di Milano*
- 11.00 The World Water Development Report 2015 "Water and Energy": facts, figures and main messages**  
*Richard Connor | UNESCO World Water Assessment Programme (UN-WWAP)*
- 11.20 Coffe Break** ☕
- 11.40 Virtual water interactions in transboundary water basins: food, water, trade**  
*Francesca Greco | UNESCO World Water Assessment Programme (UN-WWAP)*
- 12.00 Exploring the trade off between water use and crop production under climate change: a case study in the Po Valley of Italy**  
*Daniele Bocchiola | DiCA, Politecnico di Milano*
- 12.20 The NEXUS services from a territorial perspective: interactions and trade offs**  
*Giulia Pesaro | DASTU, Politecnico di Milano*
- 12.40 Debate**

# Food

Saturday Morning, 29<sup>th</sup> March 2014

*Chair:* Angela Colucci

- 9.30 Session Presentation. Peri-urban/peri-rural areas: identities, values and strategies**  
*Angela Colucci | DASTU, Politecnico di Milano*
- 9.40 Urban-rural partnerships and governance of peri-urban areas in European perspective**  
*Jörg Knieling | HafenCity University Hamburg, DE*
- 10.10 European urban-rural partnerships: strategies and actions**  
*Rolf Oldejans | Enschede / Twente, NL*
- 10.40 Supporting initiatives of urban-rural partnerships**  
*Elena Jachia | Fondazione Cariplo*
- 11.10 Functions and values of peri-urban areas: a multifunctional landscape perspective**  
*Luisa Pedrazzini | Regione Lombardia*
- 11.30 Coffe Break** ☕
- 11.40 Beyond rural urban divide: the role of agro-urban systems in Rome**  
*Davide Marino, Aurora Cavallo, Benedetta Di Donato | CURSA, Università del Molise*
- 12.00 Peri-urban areas and European structural funds 2014/2020 in Lombardy Region**  
*Mara Cossu, Silvia Pezzoli | IEIT CNR, Poliedra, Politecnico di Milano e Viola Dosi | Studio Gioia Gibelli*
- 12.10 Services, values and functions of peri-urban areas**  
*Gioia Gibelli | SIEP, Luca Bisogni | NQA, Angela Colucci | DASTU/RESilienceLAB*
- 12.30 Debate with**  
*Regione Lombardia, CIA Milano-Monza Brianza, Parco delle Risaie Association, BuonMercato/DESR Association, Corsico Municipality*

# Water

Friday Afternoon, 28<sup>th</sup> March 2014

*Chair:* Scira Menoni

- 14.30 Session Presentation. The Nexus between the flood and drought extremes**  
*Scira Menoni, Guido Minucci | DASTU, Politecnico di Milano*
- 14.50 Nexus and disaster prevention: what can we learn from Geneva urban area?**  
*Patrick Pigeon | Université de Savoie, FRA*
- 15.30 Droughts and water crises: results achieved within the Drought R&SPI project comparing four European cases**  
*Antonio Massarutto | Università di Udine*
- 16.10 Coffe Break** ☕
- 16.30 Floods effects and food security**  
*Enrica Caporali | Dipartimento di Ingegneria Civile e Ambientale, Università degli Studi di Firenze*
- 17.10 Water ecosystems, ecosystems services and risk mitigation measures. Criteria and Strategies**  
*Alessandro de Carli | CERTeT - Università Bocconi*
- 17.30 Debate**

# Energy

Saturday Afternoon, 29<sup>th</sup> March 2014

*Chair:* Marcello Magoni

- 14.30 Session Presentation. Energy as a flow of life**  
*Marcello Magoni | DASTU, Politecnico di Milano*
- 14.40 Resilience and ReciproCities in Energy Cascading and Closing Cycles. A dynamic equilibrium**  
*Arjan Van Timmeren | TU-Delft, NL*
- 15.30 European strategies for the reduction of the greenhouse gases emissions and the adaptation to the climate change**  
*Stefano Caserini | DiCA, Politecnico di Milano*
- 16.00 Tools for Eco-Efficient Local Food Supply**  
*Gianni Scudo, Matteo Clementi | DASTU, Politecnico di Milano*
- 16.30 Coffe Break** ☕
- 16.45 From food to energy: toward integrated production chains**  
*Fabrizio Adani | Università degli Studi di Milano*
- 17.15 Criteria of efficient solar energy use in peri-urban areas**  
*Eugenio Morello | DASTU, Politecnico di Milano*
- 17.40 Debate with**  
*Monica Lavagna | ABC, Politecnico di Milano*