

# FUSE

FUSE: Food-water-energy for Urban Sustainable Environments

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|---------------------------------|---|------------------------|---------------|
| <b>Programm / Ausschreibung</b> | ENERGIE DER ZUKUNFT, JPI Urban Europe, ERANET Co-fund Smart Cities/Urban Futures 2016 | <b>Status</b>          | abgeschlossen |
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| <b>Keywords</b>                 | political economy, multi-agent models, Living Labs, Pune (India), Amman (Jordan)      |                        |               |

## Abstract

The FUSE consortium will help create implementable solutions to meet the urban-FWE challenge with a development path that is sustainable and adapted to local needs. Pune (India, monsoonal) and Amman (Jordan, semi-arid) were selected as representative of different archetypal expressions of urban FWE challenges. Our transdisciplinary team adopts a systems approach to human-biophysical-engineered interactions. For the first time, we will construct multi-agent urban-FWE system models for each region to capture connections and feedbacks among users, producers, distribution mechanisms, and resources. Under narratives of future changes in climate, demographics, land use, and economic development, together with a wide range of actors in these cities we will develop and evaluate policy interventions and innovative governance forms to identify implementable sustainability options. Through 2-Stage Sustainability Living Labs in these cities, we will engage in stakeholder participatory model building to construct (Stage 1) user-inspired and user-oriented future narratives and propose potential solutions. We will use simulated policy-evaluation results (Stage 2) as the basis for discussion with stakeholders of the benefits of those solutions. With stakeholders, we will identify means to overcome impediments to sustainability and resource equity. The FUSE framework is flexible, transferrable, and broadly applicable to the urban-FWE challenge.

## Projektkoordinator

- "Internationales Institut für angewandte Systemanalyse"- "International Institute for Applied Systems Analysis"

## Projektpartner

- Österreichische Forschungsförderung für Internationale Entwicklung - ÖFSE