Workshop

General introduction

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Source: Fraunhofer ISI / Pudlik

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Fraunhofer
ISI

BUSINESS UNIT: CLIMATE POLICY

- Questions regarding climate policy developments (part. gas markets, hydrogen) and innovation support policies (EU Innovation Fund, CCfDs)

- Questions related to emission trading systems (EU and other ETS)

- <u>Climate change mitigation strategies</u> and their assessment

- **Johannes Eckstein** is senior researcher in the business unit Climate Policy in the Competence Center Energy Policy and Energy Markets

- Work focus:

  - energy and climate policy development and evaluation

  - focus on industrial applications and policies

  - scenario-based energy system modelling

# BUSINESS UNIT: GLOBAL SUSTAINABLE ENERGY TRANSITIONS

- **Support of planning and implementation of sustainable energy and development strategies in emerging and developing countries.**

    - assessment of potentials and possible diffusion pathways for renewable energy technologies

    - model-based analyses of energy systems

    - evaluation of local value creation potentials for energy technologies

    - development of policy instruments and strategies supporting sustainable energy transitions.

- **Viktor Müller** is junior researcher in the business unit Global Sustainable Energy Transitions in the Competence Center Energy Policy and Energy Markets

- Work focus:

    - promotion strategies for renewables energies

    - hydrogen technologies and synthetic fuels

    - modelling of energy systems
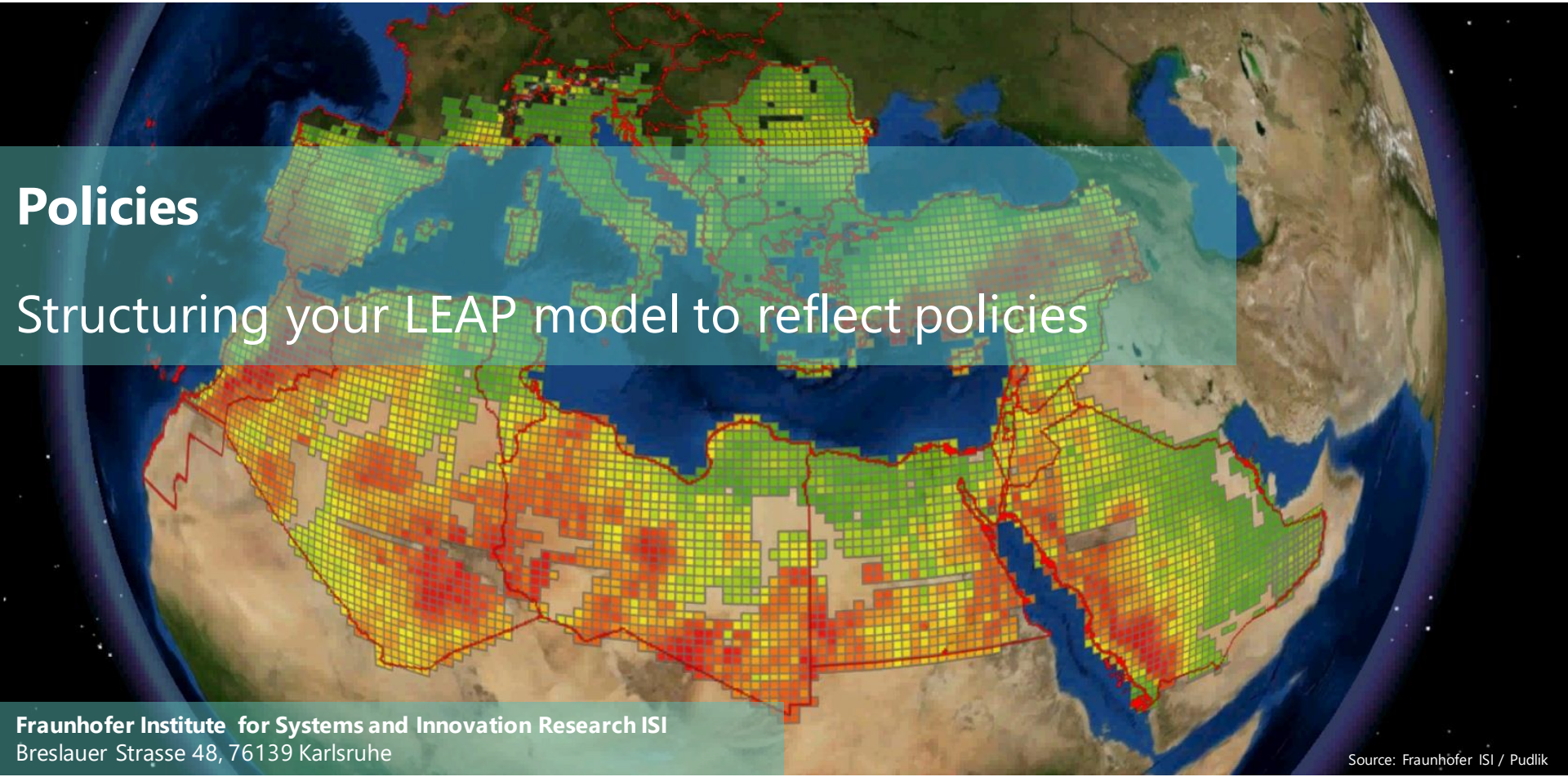
Policies

Structuring your LEAP model to reflect policies

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STRUCTURING YOUR LEAP MODEL TO REFLECT POLICIES

- How are separate policies reflected in your model currently?

- How to use the functionalities of LEAP to set up policy specific scenarios

- Towards a readable and clearly programmed model!

POLICIES AND SCENARIOS

- An "easy option" is to implement all policies in one scenario

    - But what is the effect of single policy?

    - Effect in terms of emissions, energy use, etc

        - LEAP provides a functionality to disaggregate policies

- And there are very good technical reasons to do so!

    - improves readability of the code

    - improves maintenance

    - helps during model development

POLICIES AND SCENARIOS

■ Good practice:

■ put each policy into one scenario

■ set up a meaningful inheritance in the scenario view

■ only tick those you are interested in for results

■ each scenario <u>ticked for results</u> increases calculation time
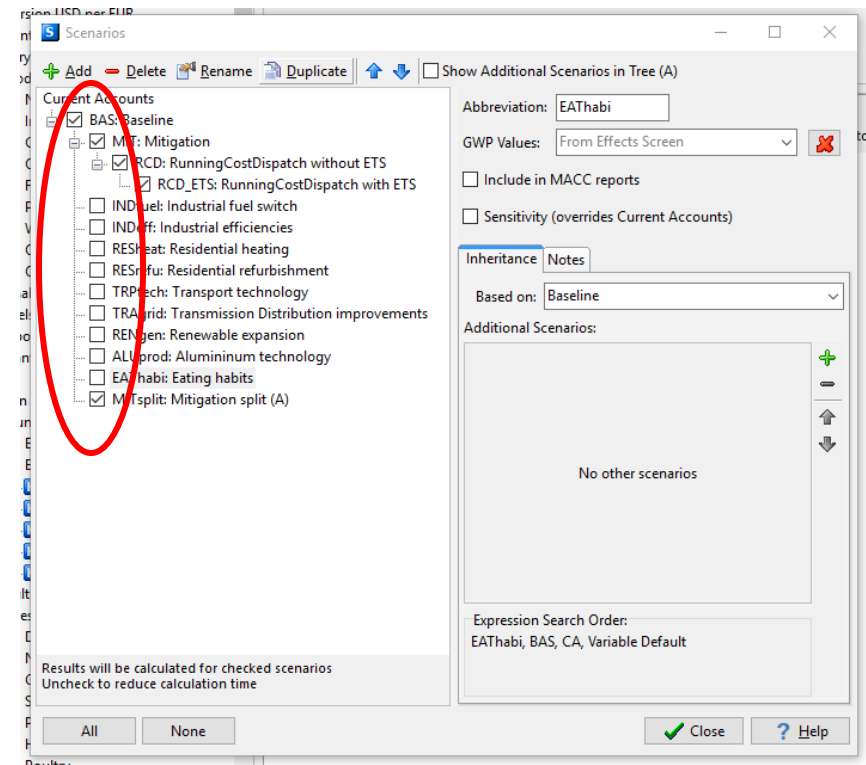
POLICIES AND SCENARIOS

■ Watch out

   ■ check the expression search order to double check

   ■ LEAP reads the inheritance list from top to bottom to find expressions in each branch

■ If two scenarios act on the same variable, you need to manually create a combination!
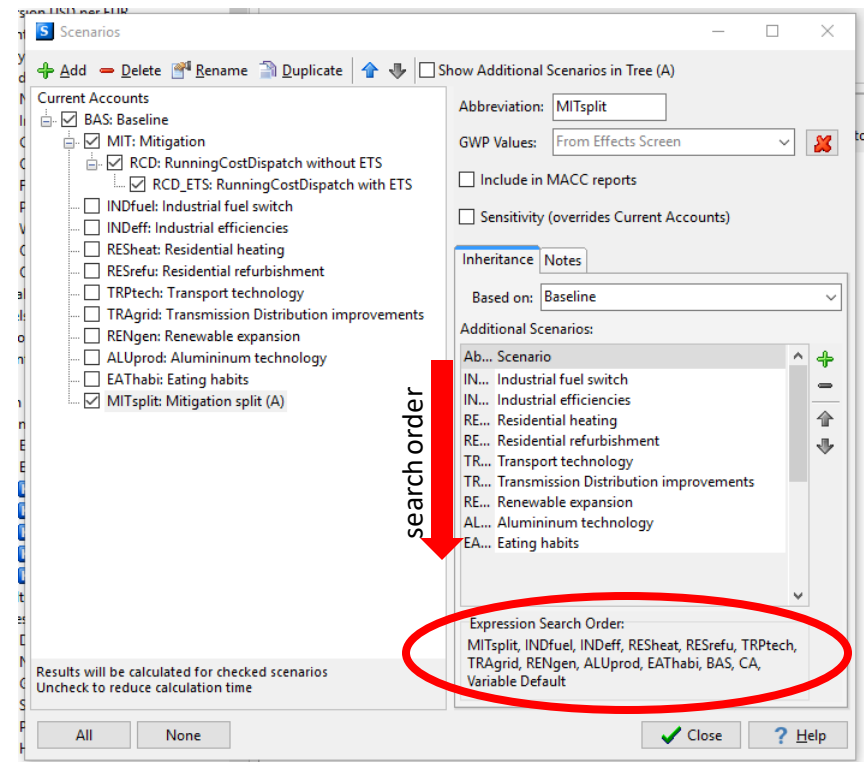
POLICIES AND SCENARIOS

- Scenario expressions

  - Provides an overview of all expressions associated with the scenario

  - Mitght get confusing if too many expressions are bundled in one scenario

- Put different policies in different scenarios
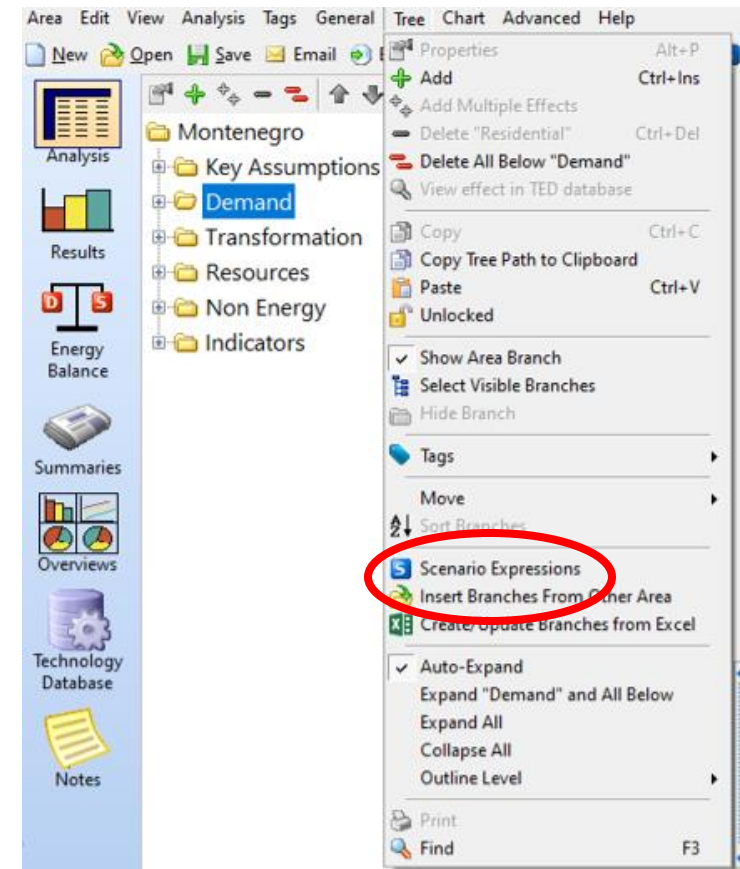
POLICIES AND SCENARIOS

> All policies in one scenario

> Many expressions and rather bad readability

> Policies clustered by topic and bundled in one meaningfully named scenario

> Less expressions and better readability
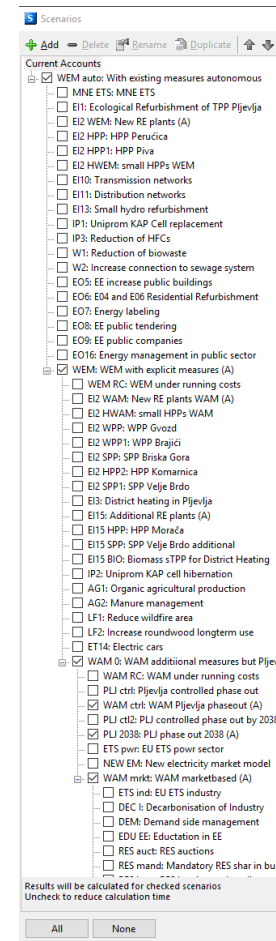
LEAP

LET'S GO TO LEAP

Source: LEAP Handbook

POLICIES AND SCENARIOS
LET'S TAKE A LOOK INTO THE NECP MODEL!

- The NECP model uses many scenarios

- Grouped to build WEM and WAM scenarios

POLICIES AND SCENARIOS

Questions, comments?

Your own experience?

How to make use of the fact you are all
- *working with the same tool*
  - *in similar projects ?*

➡ *Does everything need to be developed again and again in each CP?*