Unfolding Policy Goals and Interactions through an Informative Policy Analysis of the Nexus Water-Energy-Land-Food-Climate

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*Sustainable Integrated Management for the NEXUS of water-land-food-energy-climate for a resource efficient Europe
The Concept

✓ **Sustainable management** of natural resources - Social welfare
  - Economic prosperity
✓ **Nexus**: Water-Land-Food-Energy-Climate
✓ **Pressures**: Population – Urbanization – Abandonment of agricultural land – New consumption patterns
✓ Agricultural sector
✓ Tourist sector
✓ **Climate change**
Approach

- Policy Inventory
- Policy Goals
- Policy Means

- Nexus components
- Agricultural sector
- Tourist sector

Stakeholder Analysis
Policy inventory

- **Climate**: GHG emissions, climate change impacts, resilience against climate change
- **Water**: sustainable management of water resources, river basin management plans, quality of water resources
- **Food**: security, public health
- **Energy**: RES, cogeneration, national energy goals (2020, 2030), energy saving, national energy mix
- **Land**: integrated spatial development, national strategic options for spatial and urban planning, special frameworks
- **Agricultural sector**: livestock, pesticides, pastures, farmers’ register, agricultural entrepreneurship
- **Tourist sector**: Tourist entrepreneurship, tourist training, sustainable development of tourism
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<thead>
<tr>
<th>Policy area</th>
<th>Policy goals</th>
<th>Policy means</th>
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</table>
| Climate     |  Limitation and reduction of emissions  
 Actions / stimuli for the adaptation of economic sectors  
 Increase climate change adaptation ability |  Energy efficiency  
 Use of technologies that capture CO₂  
 Cogeneration and energy saving  
 Promotion of R&D in the field of RES |
| Water       |  Protection and management of surface water and groundwater  
 Sustainable use of water resources |  River basin management plans  
 Monitoring water resources status  
 Administrative bodies responsible for water resources management |
| Food        |  Food security |  Monitoring food industry  
 Constraints in the food market |
## Policy goals and means per sector (2)

<table>
<thead>
<tr>
<th>Policy area</th>
<th>Policy goals</th>
<th>Policy means</th>
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| **Energy**  | ❖ Sustainable management of RES  
❖ Electricity production from RES – RES sharing  
❖ Cogeneration of electricity and heat  
❖ National energy goals (2020, 2030)  
❖ Energy efficiency and energy saving | ❖ Installation of RES power plants  
❖ Special criteria for the installation of wind parks, P/Vs  
❖ Promotion of biomass and biofuels  
❖ Promotion of natural gas market  
❖ Promotion of RES use in buildings – Energy efficiency in buildings |
| **Land**    | ❖ Development of a national strategy for spatial and urban planning  
❖ Development of a balanced and competitive economy | ❖ Regulation of land uses  
❖ Promotion of entrepreneurship  
❖ Complementarity between urban and rural regions  
❖ Complementarity among productive sectors |
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<tr>
<th>Policy area</th>
<th>Policy goals</th>
<th>Policy means</th>
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</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>❖ Sustainable development of the agricultural sector</td>
<td>❖ Special measures for the sustainable management of plant genetic resources</td>
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<td>❖ Preservation of plant genetic resources</td>
<td>❖ Training on pesticide use</td>
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<td></td>
<td>❖ Sustainable use of pesticides</td>
<td>❖ Mapping of pastures</td>
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<td>❖ Identification of pastures and grazing land in Greece</td>
<td>❖ Enhancement of agricultural training</td>
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<td>❖ National database / register of farmers and plots</td>
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<td>Tourism</td>
<td>❖ Sustainable development of the tourist sector</td>
<td>❖ Supporting tourist investments</td>
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<td>❖ Development of tourist entrepreneurship</td>
<td>❖ Differentiation of tourist activities and tourist product</td>
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<td>❖ Promotion of the Greek tourist ‘product’</td>
<td>❖ Tourist training</td>
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<td>❖ Strengthening R&amp;D in the tourist sector</td>
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Policy (indicative) examples (1)

- Reduction of methane emissions
- Exploitation and promotion of natural gas for heating and cooling
- Climate change impacts on agriculture - Database
- National monitoring network for water quality and water quantity
- River basin management plans
- Differentiated crop patterns – Locally adapted crops
- Certification of pesticides
- Mapping of pastures
Policy (indicative) examples (2)

- Food and fodder security
- Criteria for the installation of wind parks, P/Vs, biomass processing units, geothermal and hydropower plants
- Definition of ‘Wind Priority Areas’ and ‘Wind Suitability Areas’
- Connection of RES power plants to the electricity distribution system
- Land use regulations
- Limitation of urbanization – Development of rural regions
- Differentiation of tourist activities – Locally adapted
Stakeholder analysis

- Role of stakeholders during the policy design process
- Influence on policies
- Interest on policies
- Power and means to affect the implementation of a policy
- Stakeholders’ future plans with respect to the policy framework
- Stakeholders’ experience and expertise
- Clarification of misunderstandings
- Enriching knowledge stock
**Key stakeholders**

- Ministry of Environment and Energy
- Ministry of Tourism
- Ministry of Foreign Affairs
- Hellenic Public Power Corporation S.A.
Conclusions

✓ Identification of the **policy framework** regulating the management of the **nexus components** – Decoding

✓ **Terms** and **conditions** for the establishment of relative activities

✓ Investigation of **policy priorities** and future strategic directions

✓ Clarification of **policy goals** and **means**

✓ Engagement of **stakeholders** – **Participatory** dimension

✓ Fruitful **information exchange**

✓ Limitation of **knowledge gaps**

✓ Deeper **insight** in the policy issues explored
Thanks for your attention!

For further information please consult www.sim4nexus.eu, follow us at @SIM4NEXUS

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