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*5th International Conference on
Sustainable Solid Waste Management*

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



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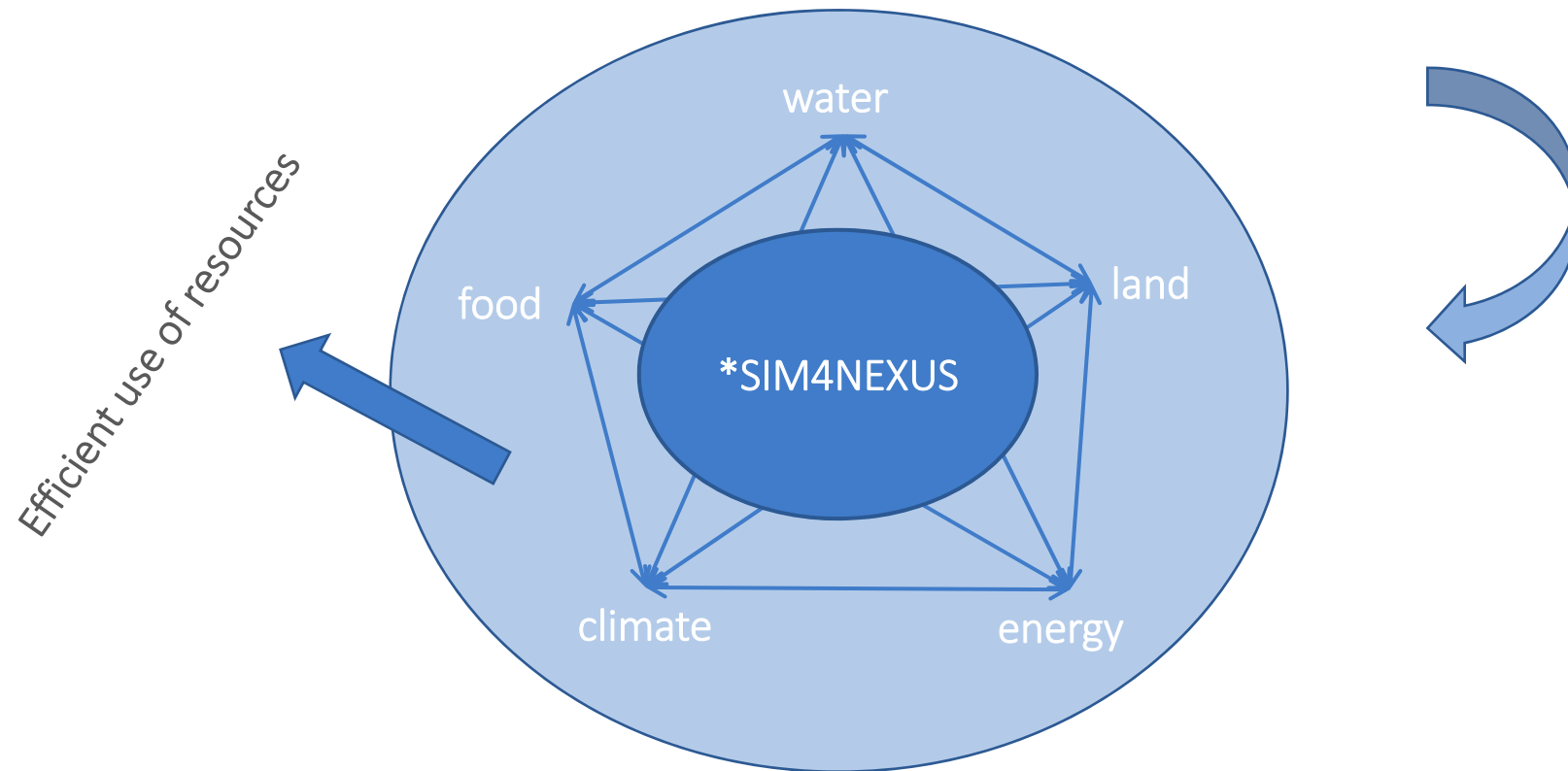
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Policy Analysis



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

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The Concept

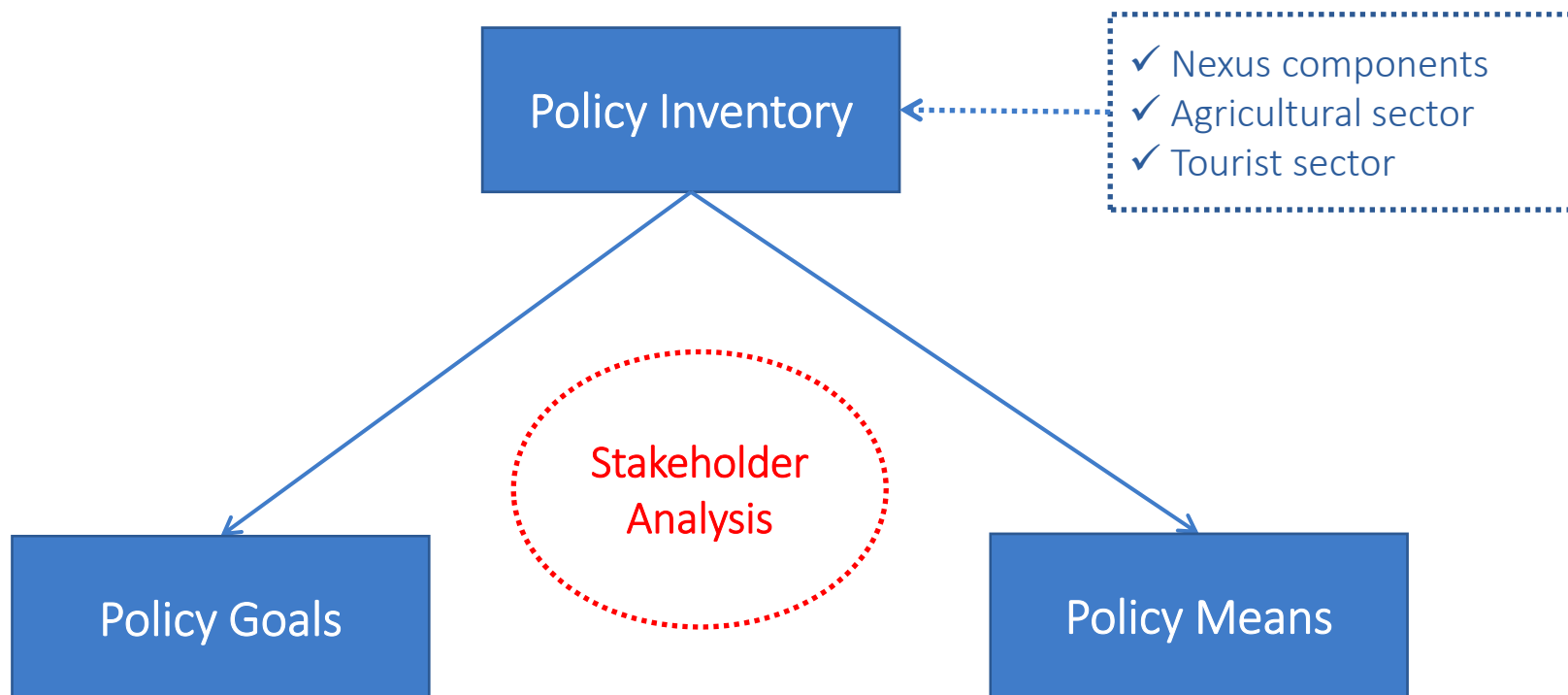
- ✓ **Sustainable management** of natural resources - Social welfare
 - Economic prosperity
- ✓ **Nexus**: Water-Land-Food-Energy-Climate
- ✓ **Pressures**: Population – Urbanization – Abandonment of agricultural land – New consumption patterns
- ✓ Agricultural sector
- ✓ Tourist sector
- ✓ **Climate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

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Approach



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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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Policy goals and means per sector (1)

Policy area	Policy goals	Policy means
Climate	<ul style="list-style-type: none"> ❖ Limitation and reduction of emissions ❖ Actions / stimuli for the adaptation of economic sectors ❖ Increase climate change adaptation ability 	<ul style="list-style-type: none"> ❖ Energy efficiency ❖ Use of technologies that capture CO₂ ❖ Cogeneration and energy saving ❖ Promotion of R&D in the field of RES
Water	<ul style="list-style-type: none"> ❖ Protection and management of surface water and groundwater ❖ Sustainable use of water resources 	<ul style="list-style-type: none"> ❖ River basin management plans ❖ Monitoring water resources status ❖ Administrative bodies responsible for water resources management
Food	<ul style="list-style-type: none"> ❖ Food security 	<ul style="list-style-type: none"> ❖ Monitoring food industry ❖ Constraints in the food market

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Policy goals and means per sector (2)

Policy area	Policy goals	Policy means
Energy	<ul style="list-style-type: none"> ❖ 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 	<ul style="list-style-type: none"> ❖ 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	<ul style="list-style-type: none"> ❖ Development of a national strategy for spatial and urban planning ❖ Development of a balanced and competitive economy 	<ul style="list-style-type: none"> ❖ Regulation of land uses ❖ Promotion of entrepreneurship ❖ Complementarity between urban and rural regions ❖ Complementarity among productive sectors

Policy goals and means per sector (3)

Policy area	Policy goals	Policy means
Agriculture	<ul style="list-style-type: none"> ❖ Sustainable development of the agricultural sector ❖ Preservation of plant genetic resources ❖ Sustainable use of pesticides ❖ Identification of pastures and grazing land in Greece 	<ul style="list-style-type: none"> ❖ Special measures for the sustainable management of plant genetic resources ❖ Training on pesticide use ❖ Mapping of pastures ❖ Enhancement of agricultural training ❖ National database / register of farmers and plots
Tourism	<ul style="list-style-type: none"> ❖ Sustainable development of the tourist sector ❖ Development of tourist entrepreneurship ❖ Promotion of the Greek tourist 'product' 	<ul style="list-style-type: none"> ❖ Supporting tourist investments ❖ Differentiation of tourist activities and tourist product ❖ Tourist training ❖ Strengthening R&D in the tourist sector

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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**

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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

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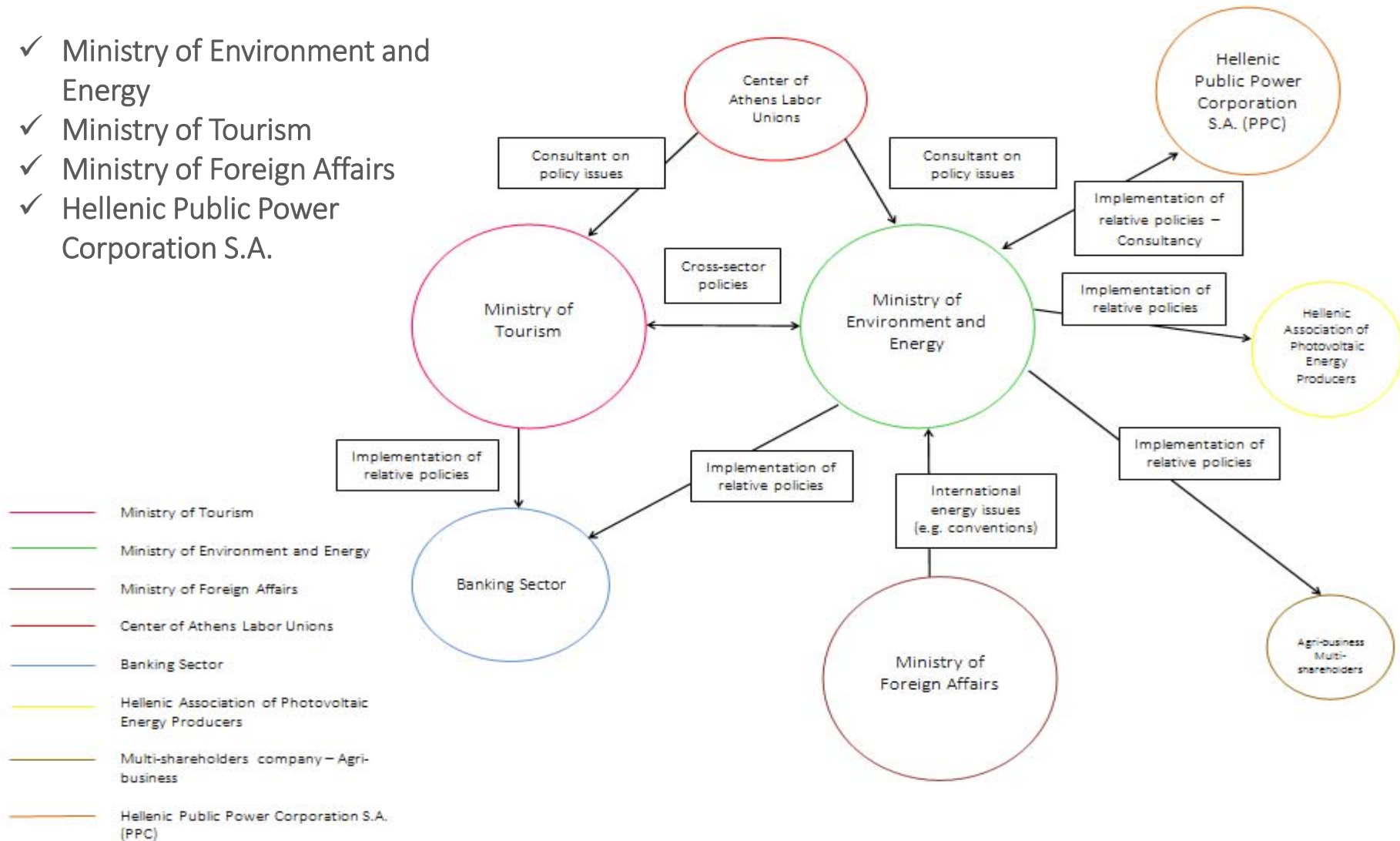


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Mapping of stakeholders

Key stakeholders

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



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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

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Thanks for your attention!

For further information please consult
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