TERRITORIAL IMPACT ASSESSMENT: AN APPROACH TO IMPROVE THE VERTICAL AND HORIZONTAL INTEGRATION OF EU POLICIES

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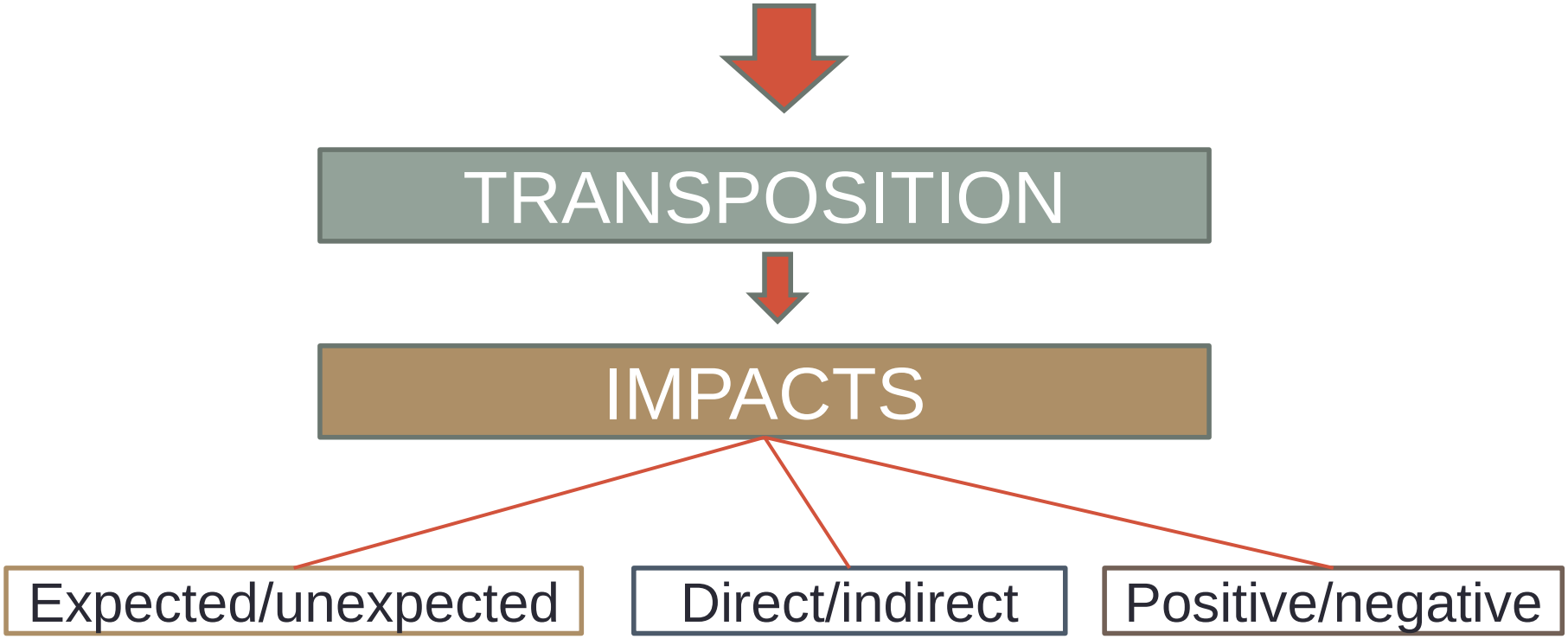
Content

- Introduction
- ESPON EATIA project
  - TIA approach
  - Governance aspect
- Reflection on the governance issues and implementation of TIA
- Future prospects

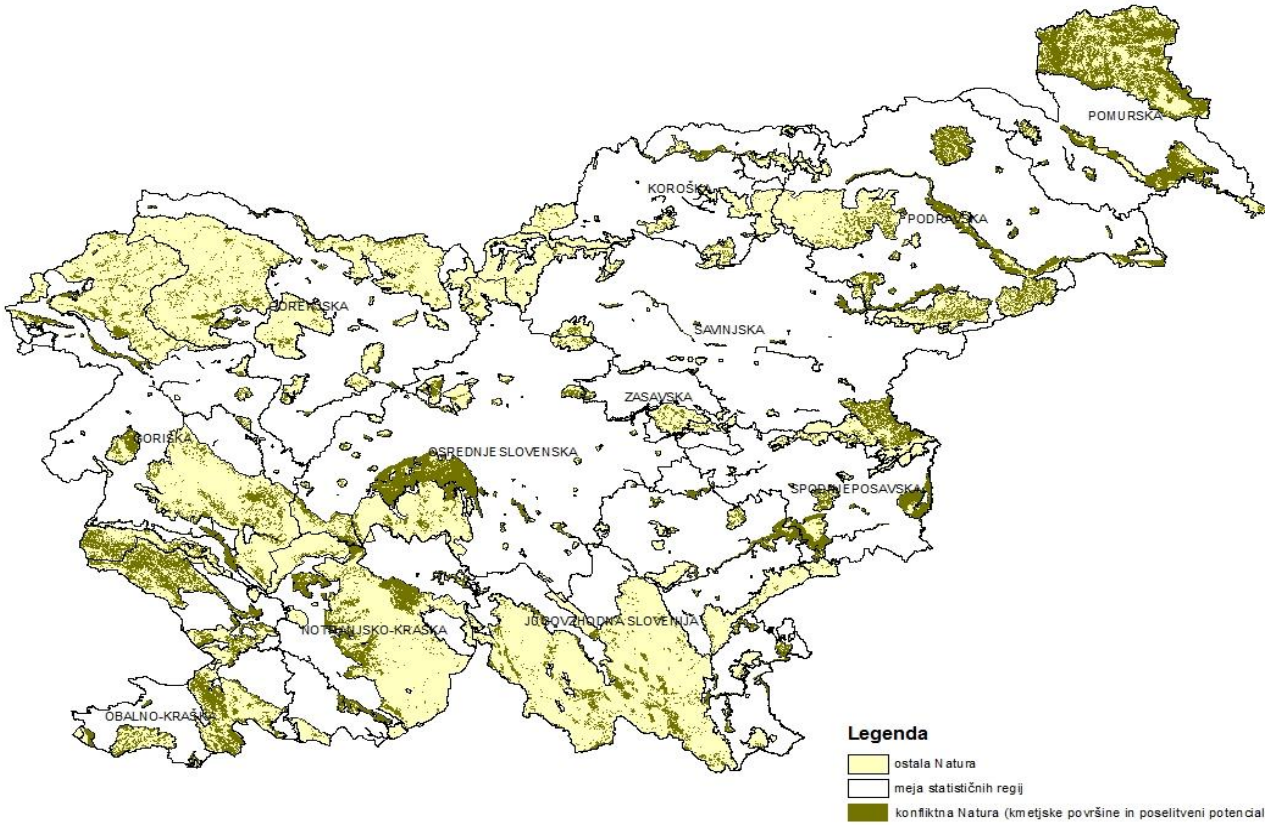
EU policies


TRANSPOSITION
IMPACTS
Expected/unexpected
Direct/indirect
Positive/negative

Habitat directive (directive 92/43)

Restriction of development opportunities in **CERTAIN AREAS:**

- Negative impacts on agriculture (France, Ireland)
- Conflicts in local land-use plan making procedures (Slovenia)



Energy Services directive (2006/32/EC)

Opposite effect in **regions across EU:**

- More populous countries: falling prices dominated by few providers
- Less populous countries: increase in prices – market too small to sustain several smaller providers

Ec.europa.eu

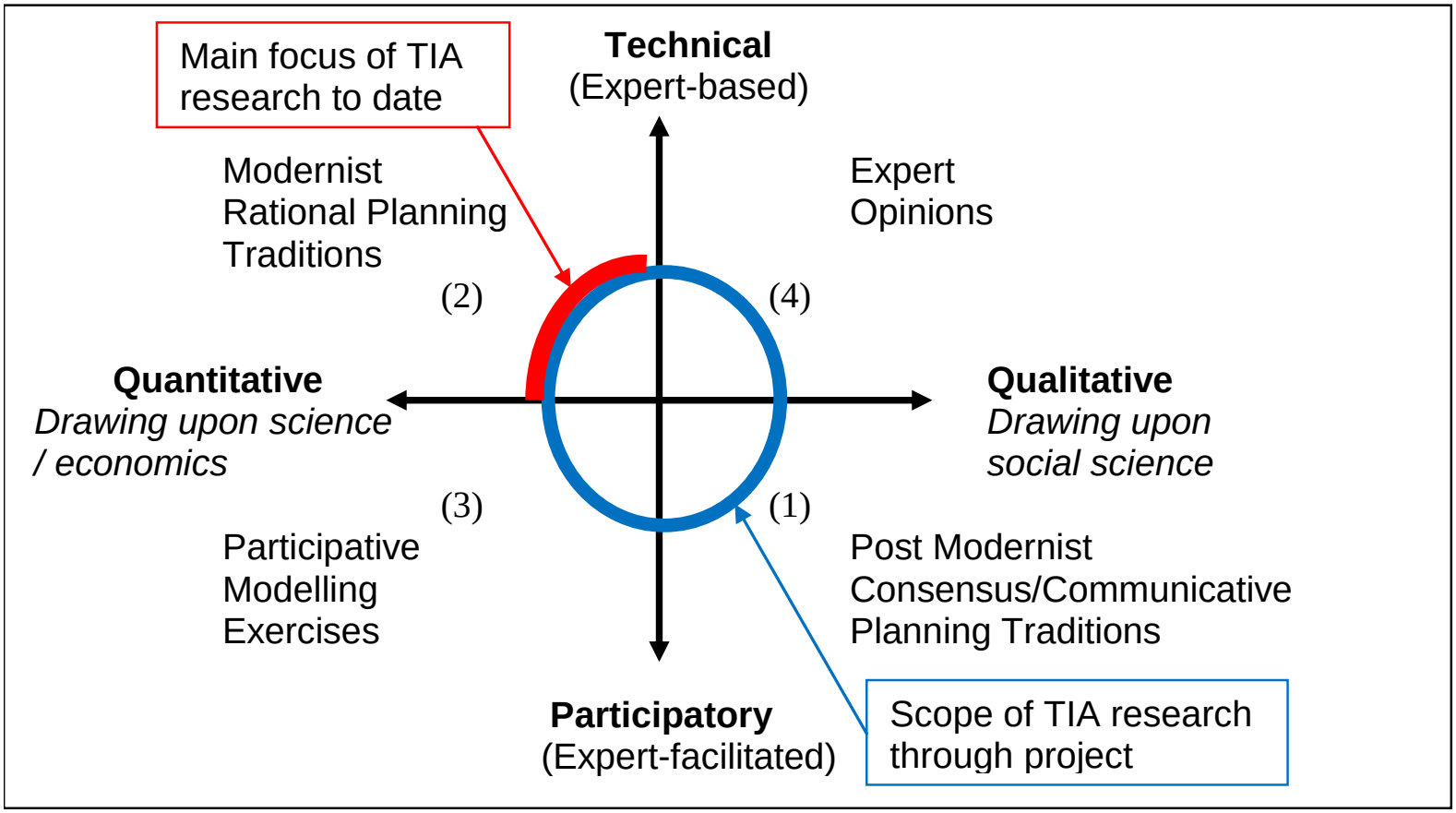
TIA background

- ESDP (1999): TIA for large infrastructure projects
- Tradition of obligatory spatial IA (AT, DE, BE)
- 5th Cohesion report (2010):

  "Both policies with and without an explicit spatial dimension could benefit from an **assessment of territorial impact**."
- Territorial Agenda of the EU (2011):

  "Territorial coordination should be supported by instruments such as **assessment of territorial impacts**…"
- ESPON:
  - Ex-post assessments: quantitative, computer modelling approaches
  - Ex-ante assessments: quantitative, later qualitative

Scope of integrated assess. methodologies



Source: adapted from Kidd and Fischer, 2007

Territorial impact

= any impact on a given geographically defined territory whether on spatial usage, governance, or on wide economic, social and environmental aspects which result from the introduction or transposition of the EU policy.

- TERRITORIAL IMPACT ASSESSMENT = ex-ante mechanism that can be used to identify territorial impacts at national, regional and local level in MS to help identify potential policy conflicts or inconsistencies.

Differentiation of impacts between different places

Administrative aspects of terr. impact

EU Policy	Regulative/Action Framework	Spatial Behaviour of Actors	Territorial Impacts
	• Legislation and other regulation • Procedures and administrative arrangements • Financial Instruments • Information and Publicity	• Planning, project ideas and land use plans • Functionality of solutions • Land Management • Impact Assessment • Applied to all categories of land use (built area, agriculture, housing, infrastructure and others)	• Change in morphology of territory (form, area, dimension) • Distribution of objects and land use, other land characteristics • Environmental and other impacts • Distribution of measures regarding regions, states and Europe

Tennekes and Hornis, 2008, p. 18

ESPON EATIA project

- 2010-2012: University of Liverpool, University of Porto, Technical University of Delft, University of Ljubljana
- Bottom-up approach to TIA
- Qualitative methods
- Stakeholders' participation, input and networking
- Testing of four directives in each country

Three main elements:

1. Process.
2. Techniques.
3. Governance.

both:

istics of the region).

trators

(3) Flexible - fits in existing administrative frameworks.

TIA approach

TIA process

Screening

↓

Scoping

↓

Assessment

↓

Evaluation and synthesis

TIA methods/techniques

Stakeholder workshops (learning networks)

Policy analysis (logical chains)
Teritorial typologies and clustering

Impact analysis (assessment and evaluation matrices)

Expert evaluations

POLICY BACKGROUND

RECTIVE ON THE PROMOTION OF THE USE OF ENERGY FROM RENEWABLE SOURCES 2009/
/ES

GISLATIVE FRAMEWORK

egulations:
INFCCC (Kyoto Protocol)
Decision on the effort of Member States to reduce their greenhouse gas emissions to
eet the Community's greenhouse gas emission reduction commitments up to 2020 (406/
009/ES)
Renewable Energy Roadmap — Renewable energies in the 21st century: building a more
stainable future (The Commission communication, 10.01.2007)
Resolution on the Road Map for Renewable Energy in Europe (25.09.2007)
Directive on the energy performance of buildings (2002/91/ES and its recast 2010/31/EU)
Directive establishing a framework for the setting of ecodesign requirements for energy-
sing products (2005/32/ES)
Directive on energy end-use efficiency and energy services (2006/32/ES)

General objectives of the EU: Strategy EU 2020
To reduce the energy dependency of the EU and GHG emmissions
- energy savings and 20% improvement of energy efficiency by 2020
- GHG emission reduction beyond 2012
- 20% target for the overall share of energy from RES and a 10% target for energy from RES in transport

The control of energy consumption and the increased use of energy from RES and increased energy efficiency, constitute important parts of the package of measures needed to reduce GHG emissions. With the use of energy from RES in transport the Com transport

Establishing a common framework for the promotion of energy fro renewable sources.
Setting mandatory national targets for all MS by 2020:
- to provide certainty for investors and to encourage constant technolog

Directive on the promotion of the use of e sources and amending and subsequently re 77/EC and 2003/30/EC

EASURES

DIRECTIVE'S MEASURES

SUPPORT SHEMES
meaning all instruments, programs ali mechanisms, applied by
Member States, to promote the use of energy from RES by
consumption of electricity, energy for heating/cooling and in
transport
- National renewable energy action plan for Slovenia 2010-2020
- Operational Programme of Environmental and Transport
infrastructure Development 2007-2013
- Operational Programme for the Use of Wood Biomass as an
Energy Source

M2 Support schemes to promote the use of energy from RS in electricity
overhauled scheme of support for qualified producers of
lectricity from RES, started in 2002 (guaranteed purchase of
lectricity, financial aid for current operations)
stepped up preperation of spatial plans for wind power plants
increased efficiency of public administration in all fields that
ffect development of RES

M3 Support schemes to promote the use of energy from renewable sources in heating and cooling
- promotion of use of solar collectors and wood biomass fired boilers in households / district heating systems
- replacement of heating oil for heating with wood biomass and other RES

M4 Measures for the promotion of the use of energy from biomass
promoting greater mobilisation of use of existing timber reserves
- development of new forestry systems
- use of wood biomass in wood processing industry and other sectors
- setting up a system to insure wood biomass quality

M5 Financial incentive
- green taxes / tax exemptions (exemptions of excise duty for biofuels)
- investment aid (co-financial programmes for building district heating systems, projects for promotion and improvement of awareness)
- tax refunds (motor vehicle tax due to CO_2 emissions)
- feed-in tariffs

M1 MECHANISMS OF COOPERATION
- Cooperation between national, regional and local authorities
- Cooperation between Member States and with third countries
- Facilitation of the consumption in Member States of energy produced from renewable sources in other Member States

- facilitation of decentralized energy production
- joint projects (energy production, heating and cooling systems)
- statistical transfers
- joint support schemes
- exchanges of information and best practices
- possibility of cooperation for private operators
- notifying the Commission of joint projects and their effects
- creating opportunities for reducing the cost of achieving the targets laid down in this Directive

M6 Administrative procedures and spatial planning
ensuring of streamlined procedures conserning the authorisation for planning,
esigning, building and operation of instalations and grid infrastructure
spatial planning guidance criteria for better use of RES
compatibility of objectives of this Directive and other environmental legislation

M7 Measures for the use of the RES in construction
introduction of mesaures for encouragement of RES in construction laws
guidance for designing, building and renovating industrial and residential areas
o enable the best use of RES – highly efficient technologies
introductin of nearly zero-energy buildings and encouragement of RES in
uildings (public buildings / residential sector) / energy remediaton of buildings

M8 Information, informing and training
removement of information and training gaps in the heating and cooling sector
providing information on support measures
information on the net benefits, cost and energy efficiency of equipment and
ystems for the use of heating, cooling and electricity from RES are made
vailable
certification schemes for installers available by 31 December 2012
list of qualified installers is made available
awareness-raising programmes to inform citizens of the benefits and
racticalities of developing and using the energy from RES
issuing certificates of electricity origin

M9 Assurance of access to and operation of transmission and distribution grids
- development of transmission and distribution grid infrastructure and enabling further accomodations (electroenergy infrastructure, district heating and cooling systems, gas grid)
- guaranteed transmission and distribution of electricity produced from RES and priority access to the grid-system (for power producers and grid managers)
- reduction of market-related distribution limitations of energy from RES
- integration of new producers feeding electricity produced from RES into
crite
- no
prod

M10 Reduction of total consumption of energy in transport and increase in energy efficiency in transport
- energy from RES used in transport
- informing public about availability and environmental benefits of the use of RES in transport
- transport planning
- support for public transport
- increase in the share of smaller (both in size and in engine capacity), more energy efficient and electric cars in production
- diversification of the mix of energy from renewable sources in all transport sectors

M11 Research and development on RES
- development of industrial production of RES and EUE technologies
- encouragement of research on RES

M12 Pursuance of sustainibility criteria for biofules and bioliquids
- fulfilling and encouragement of sustainability criteria (measures for soil, water and air protection, land remediation, sustainable water use...)

accordance with the minimum requirements for good agricultural and environmental condition (Regulation No. 73/2009 (11.01.2009))
- monitoring of the impact of biomass cultivation on biodiversity, and effects on food production and local prosperity
- use of degraded land, unsuitable for agriculture
- pursuance of sustainability criteria by the use of land rich in carbon (possibility of reverse effect)
- conservation of areas of high biodiversity value
- pursuance of sustainabilty criteria by production of biofuels in third countries (treaty arrangements)
- evidence of compliance with the sustainability criteria

ENVIRONMENTAL AND TERRITORIAL IMPACTS

Environmental and territor
- emission reduction
- dispersion of point source p
- decrease of environmental

Air (M2, M3, M6, M7, M10,
- GHG emmission reduction
- renewable source: wind
- diminution of risks by transp

Water (M2, M3, M6, M7)
- water as a renewable sourc
  - utilization of hydroterm
  - usage for heating/cooling
  - change of watercourses and other habitats because of interventions on water courses

Soil (M2, M6, M9, M10, M12)
- soil as a renewable source:
  - utilization of geotermal energy
  - heat energy storage
  - increase of underground installations

Waste (M1, M2, M7)
- increase of (hazardous) waste by dismantling of transnation energy facilities and devices / by the use of specific type of R (e.g. photovoltaics)

Spatial planning (national, local plans) (M2, M3, M4, M6, M7, M8, M9, M10, M12)
- difficulties in delivery of new spatial interventions (M2, M4, M6, M7, M8, M9)
  - reservation of space for energy purposes (cable lines)
  - problematic interference in protected areas, that are also the source of RES (rivers, forests, meadows) and/or they are suitable for delivery of infrastructure for production of energy from RES
  - »public cooperation« and unacceptability of new interventions
- change in land use (M2, M3, M4, M6, M12)
  - restoration of degraded land (suitable for production of raw materials for biofules or the use of other RES)
  - change in land use in order to benefit the land for production of raw materials for biofules (e.g. use of agricultural land for non food purposes)
  - conflict of interests (use of agricultural land for RES : preservation of agricultural land and promotion of increased agricultural production)
- infrastructure improvement (transport and utility infrastructure) (M6, M10)

requirements in production of engine biofuels or other liquid biofuels.

Urban planning (more ecological) (M2, M3, M6, M7, M10)
- also city areas reserved for the RES
- buildings oriented towards the sun
- providing air circulation and urban (wind) ventilation
- accomodated infrastructure needs and burdens
- increased use and expansion of public transport
- lower level of sealing, increase in size of green areas
- more public buildings – increase of rebuilding (neighborhoods)

Architecture (M3, M4, M6, M7)
- »passive« energy - saving houses and favourizing particular type of buildings (thicker walls, isolation, direction towards the sun / heating in winter, shadow / cooling in summer, rooftop / greenery)
- changed proportion between multidwelling and individual housing

Regional and local development (M1, M2, M3, M4, M5, M6)
- positive impact because of investments in regional and local RES (M1, M2, M3, M4, M5)
- polycentric spatial development (M6)

Population (M2, M3, M6, M7)
- locations with accessible RES and possibility to connect to heating energy supply facilities (geotermal energy, water, woo sun)
- decreased number of new buildings according to changed demands (M6, M7)

Landscape and cultural heritage (M2, M3, M6, M7)
- changing of landscape apperance (monocultures, size of agricultural land, placement of the solar panels - photovoltaics, wind turbines)
- changed apperance and difficult placement of objects for the use of RES on buildings protected as cultural heritage

SOCIAL IMPACTS

Social impacts

Quality of life (M2,
- improvement of life
emissions, different
- improved social cohesion
- development and improved local community cohesion (cooperation in local projects)
- decreased social function of forest

- energy poverty (costs transmission from producer directly to d
life in poorly isolated buildings), larger impact on socially depriv
groups (M1, M7, M12)
- increased / decreased household costs
- possible negative effects on food supply (higher food prices du
to production of biofuels) (M12)

Health (M7, M10, M12)
- generally positive impact
- possible negative impacts in case of biofuel production effects on food market and prices
- possible negative impacts due to precarious ventilation of buildings

Public response (M6, M8)
- larger social acceptance and motivation of local residents for interventions due to higher awareness of the use of RES
- difficult location placement of facilities as a result of »public contribution« and opposition to new interventions
- improved social responsibility of companies

Labour market (M1, M2, M5, M8)
- new jobs that contribute to larger employment possibilities

Education (M2, M8, M11)
- programs for informing and training of experts, installaters, builders, architects (Intelligent Energy Europe)
- awareness raising programmes

Demographic changes (M2, M3, M4, M5, M9, M12)
- maintenance of population by providing income sources and creating local job opportunities

ECONOMIC IMPACTS

Economic impacts
positive impacts on economy
establishment of economic growth with innovation and competitive energy policy
impact on production and trade

Energy production and supply (M1, M2, M3, M4, M5, M6, M9, M12)
benefits of decentralized production of energy: higher local supply
ecurity, shorter transport paths and decreased energy loss by transmission
M1, M2, M3, M4, M5, M6)
promotion of the use of agricultural materials for biogas production and
se of biofuels (M12)
higher energy independence (M2, M4)
improved possibilities for energy export (M9)
possible impact of renewable enery production on food security (M12)
infrastructure improvement (M9)

mprovement of energy efficiency in all sectors (M7, M10, M12)
transport: use of biofules and all the other RES (M10, M12)
civil engineering: energy efficient buildings (M7)

Economic activities and services (M2, M3, M4, M5, M6, M7, M8, M11, M12)
development of economic activities: life sciences, technology,
nvironment, nature, civil engineering, architecture, planning, forestry (M11)
increased workload in construction and installaton sector (M2, M3, M4, M7)
opportunity for growth of local or regional small and medium-sized
nterprises (SMEs) and independent energy producers (M5)
increase of local supply projects (M6, M7, M8, M12)

Innovation (M5, M11, M12)
- more innovation
- investment of financial funds in research and development on RES production technologies, education, increasing competitiveness

Price fluctuation in energy and raw material costs (M1, M3, M7, M9, M10)
- higher energy cost, because the prices will include external cost, that were not calculated until now (positive on the long run), and consequently increased costs of operating and production

Real estate market (M3, M6, M7, M8, M9, M10)
- price variability in real estates (energy efficient buildings more expensive) and building land according to accessibility of RES

Investments (M2, M3, M4, M5, M6, M9, M10)
- Investments in utilization of regional and local energy sources (M2, M3, M4, M6)
- assurance of certainty for investors and encouragement of energy production development from all sorts of RES (M6, M9)
- special attention given to sectors that suffer disproportionately from the lack of technological progress (M2, M5)
- questionable economic viability of utilization of RES (SLO – wood biomass) (M3, M4)
- more expensive investments (M6, M9, M10)

Financial impacts (M5, M6, M7, M8, M9)
- increased national budget burdens
- increase in taxes
- energy certification on a regular basis

Financing (M5, M11)
- promotion of financing from EU and national structural funds, new financial incentives (eco fund)
- financial funds for research and development of technologies (EU innovation and technology institute)
- adjusting subventions according to market conditions
- new ways of organizing and financing the use of RES (e.g. co-operatives)

Company management (M2, M3, M5, M7, M8, M11)
- increase in competitiveness (branding)

ADMINISTRATIVE IMPACTS

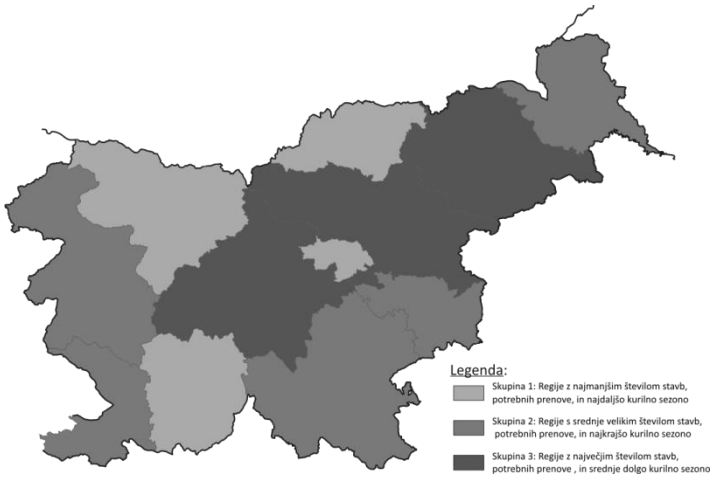
Administrative impacts

- aditional administrative burdens in spite of simplified procedures (increase of workload and administrative procedures, reporting of MS, coherence of information at the EU level)
- shortening of agreement procedures for spatial interventions (replacement of permission with simple notification of competent authotity)
- improved intersectoral action

- more important role of municipalities and regional level in achieving the targets of RES directive (motivation, regional projects)

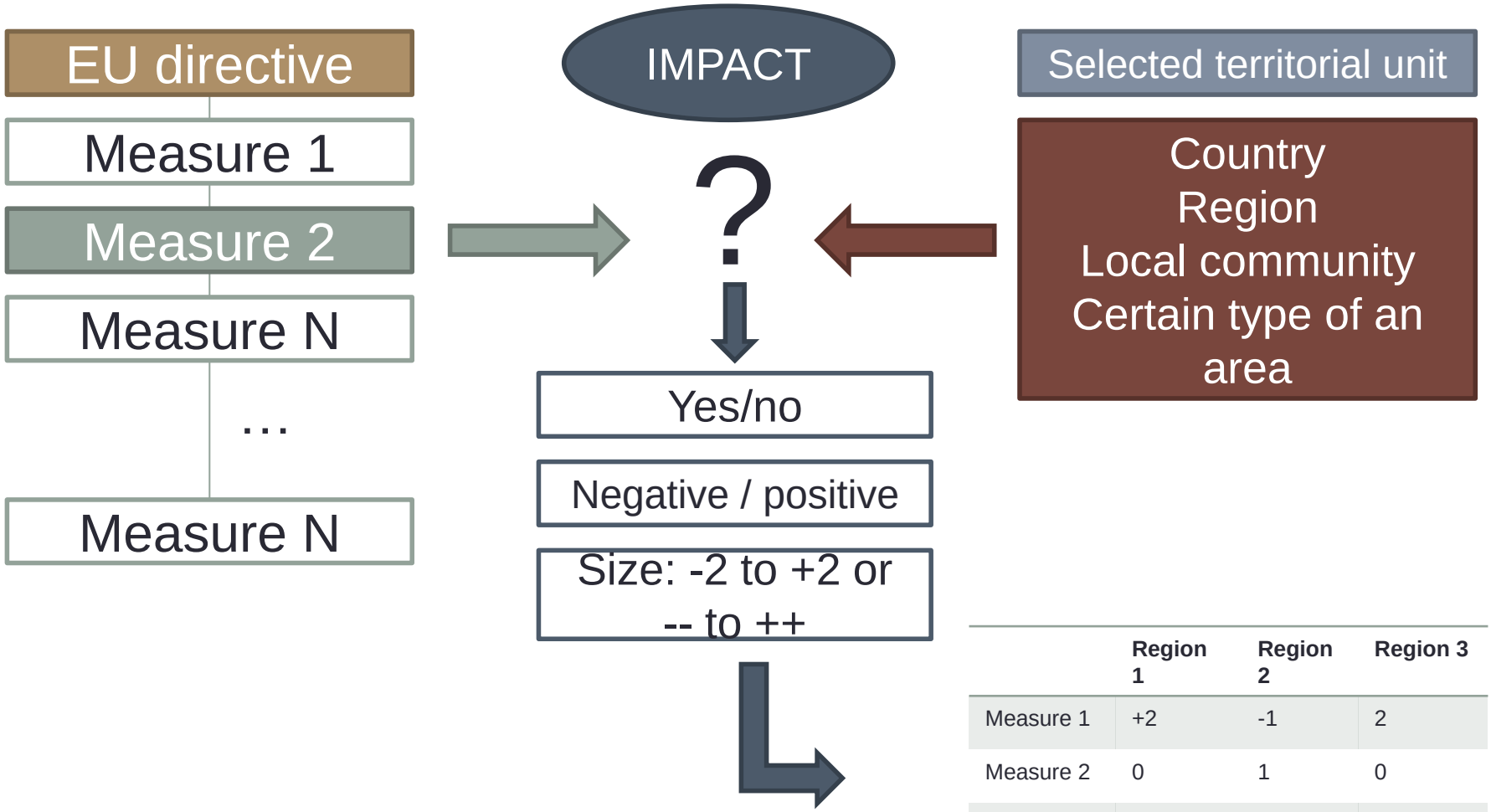
Scoping: making of typology

- Directive 2010/31 on energy efficiency of buildings
  - Length of heating season
  - Number of buildings needing renewal (age of 30years+)



- Directive 2009/28 on use of renewable resources
  - Potencial for geothermal / hydro energy / biogas / biomass

Assessment



	Region 1	Region 2	Region 3
Measure 1	+2	-1	2
Measure 2	0	1	0
Measure n	1	2	-2

DIRECTIVE ON THE ENERGY PERFORMANCE OF BUILDINGS ;
IMPACTS OF MEASURE 1 (Adoption of a methodology for calculating the energy performance of buildings) ON CRITERIA POLUTION WITH SOLID PARTICLES (environmet and territory)

LEGEND:

Regions

- R1- regions with the highest potential for geothermal energy and lower potential for hydroenergy and biogass
- R2- regions with the potential for biogass and hydroenergy and lower potential for biomass
- R3- regions with the potential for biomass

Impacts

- -2 to -1,2: very negative impact
- -1,2 to -0,4: negative impact
- -0,4 to 0,4: negligible positive or negative impact
- 0,4 to 1,2: positive impact
- 1,2 to 2: very positive impact

Evaluation

Territorial cohesion objectives	M1	M2	M3	M4	M5	M7	M9	M10	M11	M12
1 Polycentric and balanced territorial development										
EU (Promote polycentric and balanced territorial development)			+		++		++	++	++	
N (Polycentric development of the network of cities, towns and other settlements)	o+									
L (Balanced spatial development)	o+						++		+	o+
4 Integrated development of the territories										
EU (Encouraging integrated development in cities, rural and specific regions)	o+						++			+
N (Harmonious development of areas with common spatial development characteristics, Development of complementary functions of rural and urban areas, Spatial development harmonized with spatial limitations)		++	++	-	++		++	++	+	+
L (Improvement of the qualities of territory and countryside areas, landscape and built structures, creating new qualities in the land and preservation of the natural qualities)				-					+	
5 Preserving nature, landscape and cultural values										
EU (Managing and connecting ecological, landscape and cultural values of regions	+		++	+	++	++	+			+
N (Nature conservation, Environmental protection, Prudent use of natural resources, Cultural diversity as the foundation of the national spatial identity)	+	+	++	-		+				++
L (Environment protection objectives, Preservation of cultural heritage and its integration into social and economic development of municipality)		+	-	+					+	+

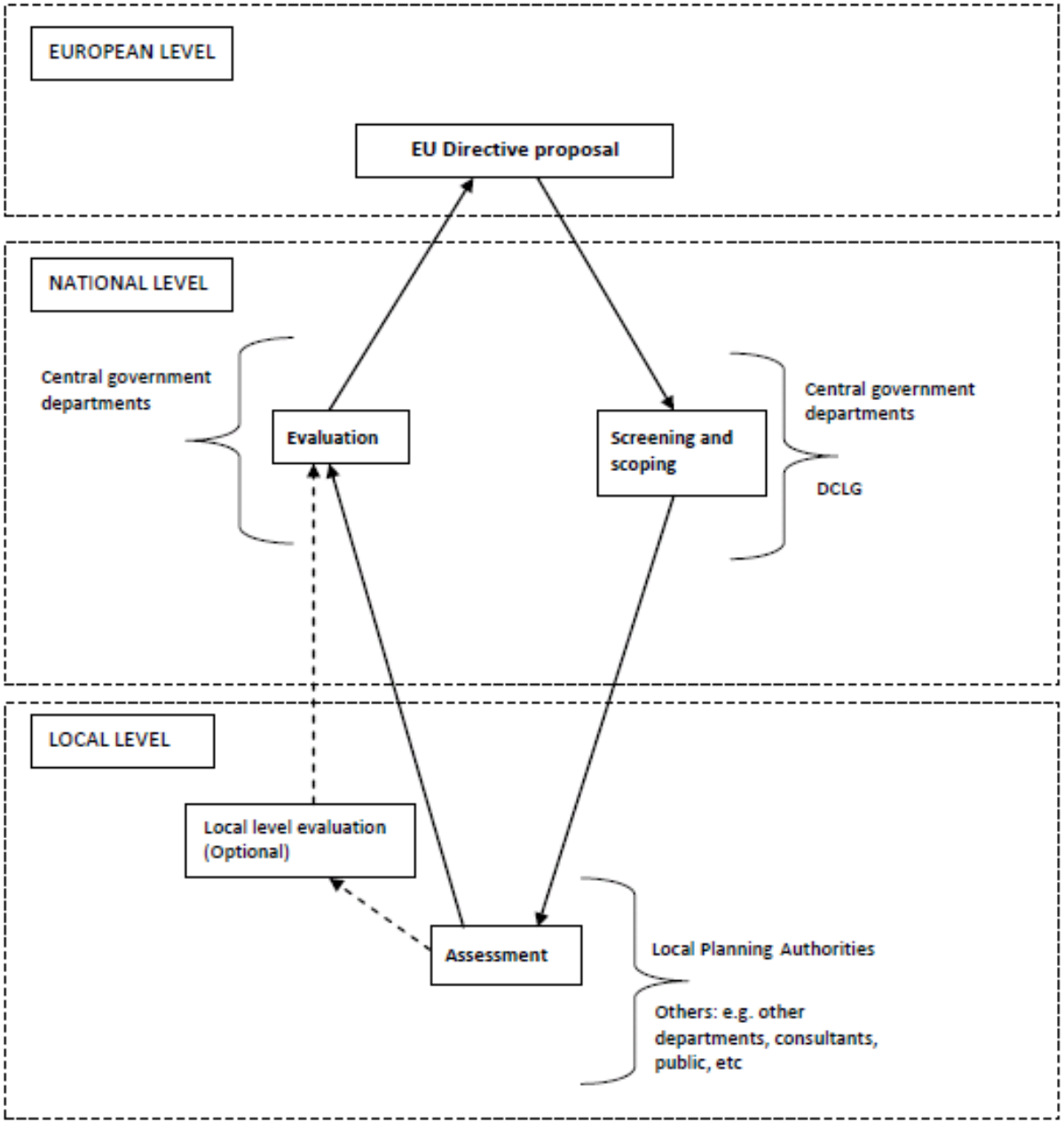
Overview of TIA (governance aspect)

Step in the process	Conducted by	Participated by
Screening, scoping	National departments/ministries responsible for a draft directive	Representatives of different departments
Assessment	Regional/local level spatial planning authorities Spatial planning/SEA teams (web-based alert system)	Voluntary engagement of regional/local authorities
Evaluation	Central government departments/ministries	Information provided by regional/local authorities

Different policy, plan making and assessment traditions and planning cultures.

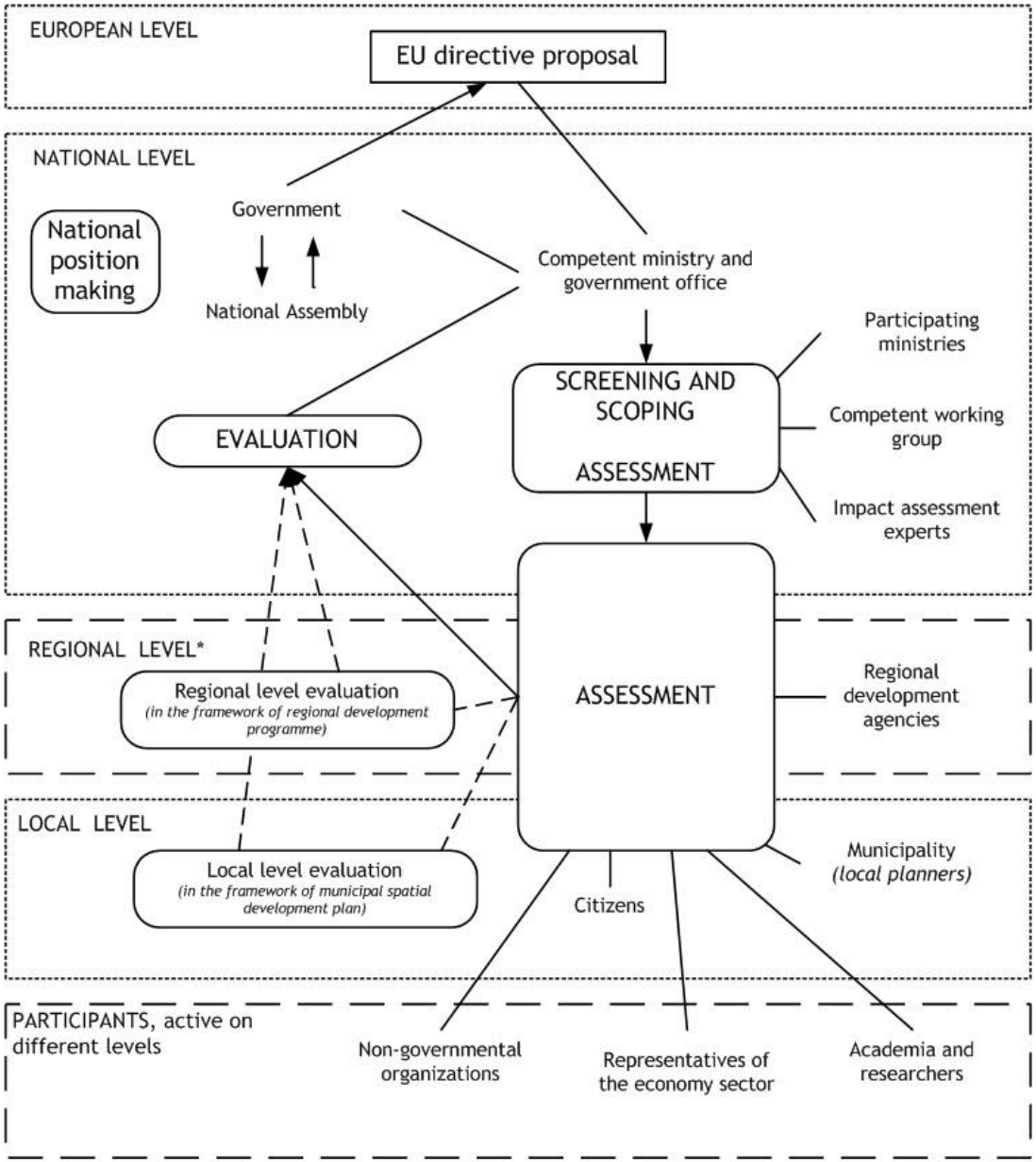
UK

- Qualitative
- Discursive



Slovenia

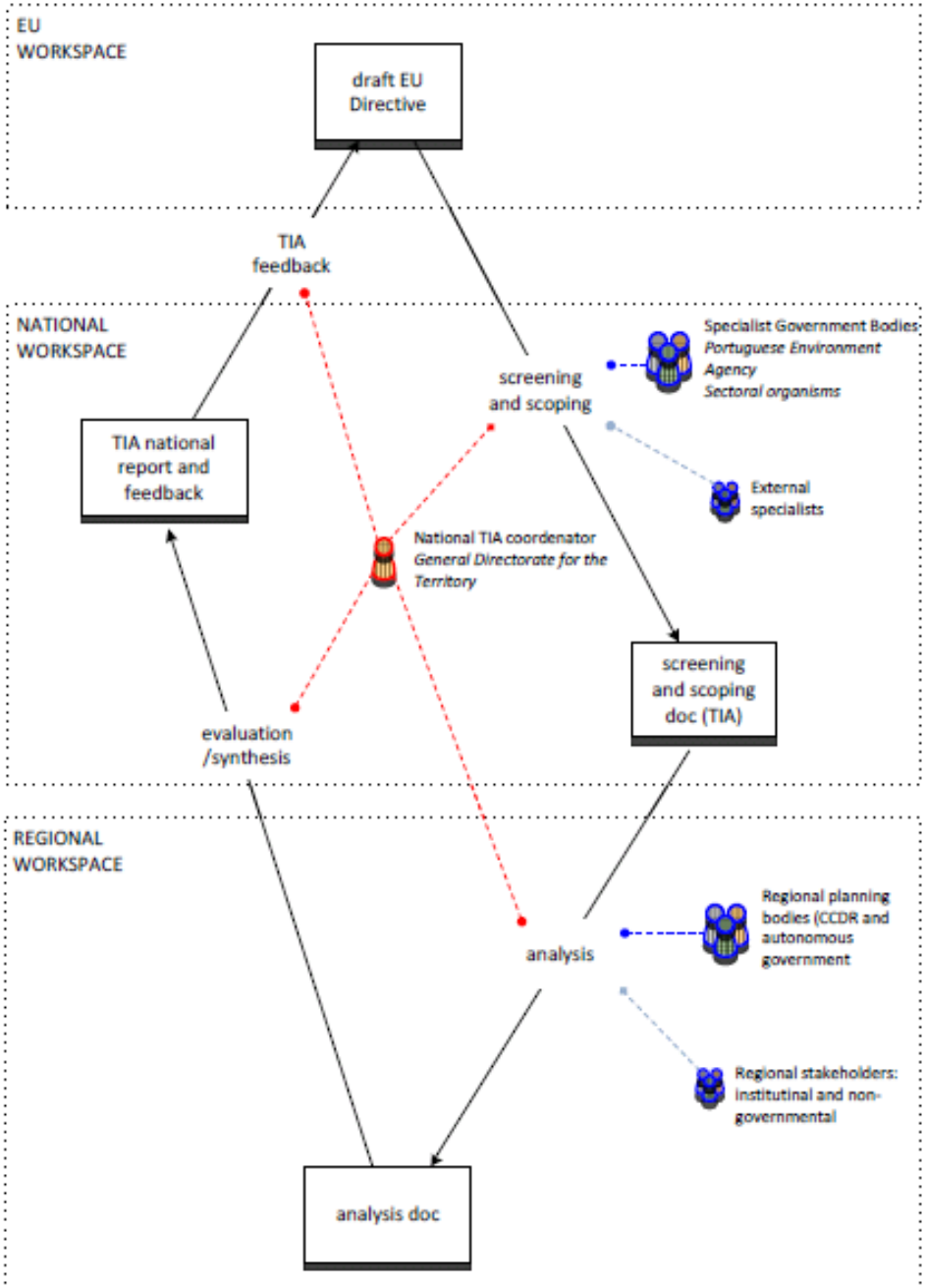
- Quantitative
- Legalistic



* There is no regional administrative level but regional development agencies' representatives are invited to participate in the assessment.

Portugal

- Qualitative/ quantitative
- Discursive



3 interactive learning workshops with national stakeholders (Lisbon)

1 interactive learning workshop with regional stakeholders (Porto - North Region)

Outcomes

(1)TIA is good in diversifying impacts between territorial units/administrative levels.

- Only to some extent (depends on territorial units; nature of the policy and impacts).
- Depends on the spatial knowledge of the assessment's participants.
- Typologies should be natural – something people can quickly familirize with.
- Policy vs. project level.
- Comprehensive vs. detailed.

Outcomes

(2) TIA can be easily learnt and used by administrators.

- One (half-)day workshop should suffice.
- Dependent on existing assessment practice.
- Modelling should be omitted.
- Clear linkage to the existing administrative framework should be provided.
- Motivation – benefits.

"I expect you all to be independent, innovative, critical thinkers who will do exactly as I say!"

ideas4sustainability_wordpress_com

Outcomes

(3) TIA fits in existing administrative frameworks.

- Depends on the impact assessment culture (regulations, departments' organisation).
- Limitations of administrative and financial capacities.
- Depends on the spatial culture and integration of the territorial matters into the policies (sectoral co-operation, set of national policies and local documents).

Knoxblogs.com

Conclusions

Benefits of TIA

- Complete information for the policy makers
- Ex-ante info on potential impacts of EU policies
- More efficient, realistic transposition
- Use of EU regional data
- Higher awareness of territorial aspects of policies
- Cross-sectoral co-operation and dialog

Potential barriers for TIA

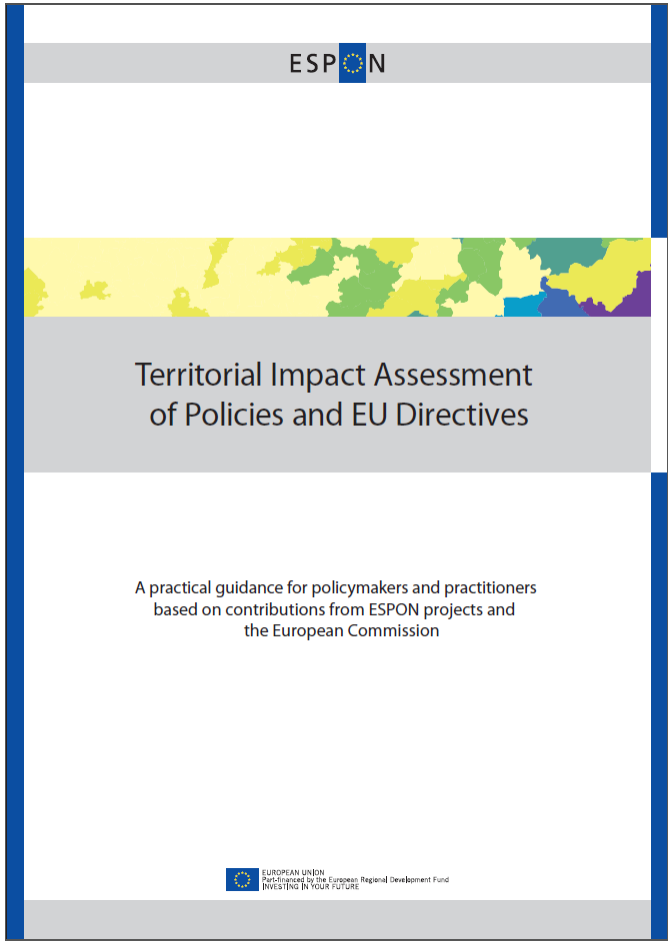
- Resistance of different departments/administrations
- Implementation in the local community (capacity)
- Misinterpretation of the data
- General scepticism about assessments
- Complexity of the method for non-evaluators
- Monitoring

Future prospects

MS (?)

- Knowledge network: awareness raising and training on TIA – exchange of information, participation in evaluation
- Handbook: Territorial impact assesment of Policies and EU Directives (ESPON 2013)
- Initiative for incorporating the territorial aspects into the IA of the EC, tool development ✓:

„essential to ensure that targeted consultations of local and regional authorities are part of the process in order to assess the potential territorial impact of EU initiatives more effectively“ (CoR, 2013)



Future prospects

MS (?)

- Applicability of the proposed TIA methodology should be looked at in other EU MS contexts
- Test and use in the real-time policy making process
- Further use in domestic policies, projects
- Web-platform (?)
- TIA mandatory in certain policy areas (transport, energy, environment, single market, agriculture and fisheries, urban and rural policies)