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1	The Sustainability Dimensions: A Territorialized Approach to
2	Sustainable Development
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## 7 Abstract

<sup>8</sup> The paper proposes the territory as the fourth dimension of sustainable development.

<sup>9</sup> Research starting from three dimensions of sustainable development - economic, social,

<sup>10</sup> environmental - highlights the difference between the spatial approach and the territorial

<sup>11</sup> approach in sustainable development practices. The paper shows that to include in the

<sup>12</sup> development approach the morphological (hilly, mountain, plain), functional (metropolitan or

<sup>13</sup> non-metropolitan city, cross border region), traditional (port city, financial city, industrial

<sup>14</sup> city), government (National strategy, special laws, etc.), governance (formal and not formal

<sup>15</sup> network, institutional / noninstitutional body) aspects, leads to different development results

than not including them. This evidence shows to distinguish development practices from

<sup>17</sup> sustainable development practices as emerged from recent Territorial Impact Assessment

<sup>18</sup> studies in which policies, through the territorialization of the results, guide planning actions:

<sup>19</sup> (local) planning actions selected on (general) policy objectives create the conditions for

20 adaptation (about planning) and mitigation (about policies) of human actions on the

<sup>21</sup> environment, thus being able to speak of sustainable development.

22

Index terms— sustainable development, territorial approach, the territorial capital, territorial diversity, sustainability.

# 25 1 Introduction

he Environment understood as a complex of natural and anthropogenic elements, is a complex and multilevel 26 system where economic, social, and ecological dimensions, assessed at local scale, produce effects at global scale. 27 Alterations of the local environmental system require global policy actions (i.e., Sustainable Development Goals 28 -Agenda 2030) to be planned at a local scale based on of territorial specificities. However, sometimes the answers 29 to the main local environmental problems appear 'out of reach' concerning to the political and programmatic 30 intervention capacities of local communities. The transcalarity that characterizes environmental problems requires 31 that environmental issues must be addressed looking a global scale, even if the impacts are measured mainly at 32 the local level (Kennet, Gale de Oliveira, Heinemann, 2010). 33

34 The question between "adaptation" and "mitigation" policies concerning the multidimensionality of environ-35 ment (from local to the global scale and vice versa). These expressions are mostly used about climate change 36 policies but can also be used to a much broader scale that encompasses the whole set of environmental policies. If it is, in fact, true that the mitigation of human impacts is the main goal to which the environment (ecological, 37 social, and economic dimension) must strive by policy choices, it is by adaptation actions a local scale that 38 this result can be achieved. Adaptation and mitigation are, therefore, not alternative or conflicting approaches. 39 Rather they represent complementary aspects of a comprehensive and more successful policy that addresses the 40 issues of the environmental system as a whole. If mitigation has a longer time to action and requires a globally 41 coordinated approach to gradually reduce and ultimately control human impacts on the environment, it is the 42

adaptation that acts primarily at the local level (from national to lower), and it can be modulated according to
the territorial context taking into account the "territorial diversity". If the adaptation measures (assessed at local
scale) are not well implemented, the mitigation costs and time-line (assessed at global scale) will be greater, and
the consequences on the entire environmental system will be more serious.

Based on these considerations, the most recent positions on sustainable development have been formed. It 47 is generally defined as development able to satisfy the needs of the current generation without compromising 48 the satisfaction of future generations (WCED, 1987). This position requires global policies for planning and 49 evaluation, capable of looking at the whole at the parts (social, ecological, and economic) of the system. 50 Closely connected to this position are intragenerational equity which implies equal access to resources (both 51 environmental, economic and social/ cultural) by all the citizens of the planet, without distinction concerning 52 to the place where they live; and intergenerational equity, which implies equal opportunities for resources for 53 current and future generations. 54

The link between environment and development is therefore based on endogenous resources (Spinelli et al., 1994), a "bottom-up" development that considers the territory as the starting point of a systemic analysis where the economy, society, ecology form a unicum that interacts with the rest.

Finding adequate and compatible solutions between environmental and development is the goal of sustainabil-58 59 ity. Strong and animated is the clash between the theorists of 'weak' sustainability (Solow, 1987), who believe 60 that to guarantee the needs of future generations, it is necessary to leave a share of natural capital/artificial 61 capital no less than the current one. It is therefore believed that the loss of natural capital can be compensated for by human made capital. The total replacement of fossil sources with renewable ones is hypothesized, but for 62 this purpose the infrastructures will have to be adapted to allow energy already produced from renewable sources 63 to compete with traditional ones (technocentrism). On the other hand, the 'strong' approach to sustainability 64 (ecocentrism) excludes the substitutability of natural capital with that produced by man. Continuing an economy 65 can be considered sustainable if the 'environment' loss is counterbalanced by an increase in the stock of material 66 infrastructure (machinery or other artificial/physical capital). Some authors such as Ekins et al. (2003) think 67 that strong sustainability is also justified based on some fundamental differences between the human made capital 68 and the natural capital in relation to the reproducibility of the former and the irreversibility of the consumption of 69 the latter. A possible balance between these two "forms" of sustainability is achieved by resorting to the concept 70 of "critical" natural capital, that is, that part of natural capital that plays an irreplaceable role compared to 71 72 other types of capital (Turner, 1993; de Groot, 2003). It is a question of identifying the critical level of natural 73 capital to be preserved and the quantity of manmade capital that can act as a substitute for natural capital, 74 called "sustainability limit". A combination of man-made capital and natural capital together with the resources (material and immaterial), 75

the production factors, skills, knowledge available on the territory constitute the so-called territorial capital 76 (Camagni, 2009). The European Commission also has defined territorial capital as the complex of elements 77 (tangible and intangible) available to the territory, which can constitute strengths or real constraints in relation 78 to the aspects taken into consideration. Therefore, each region has a specific territorial capital able to generate 79 a higher return for specific types of investment. Territorial development policies must first and foremost support 80 and preserve the territorial capital localized (European Commission, 2005). Further evolutions on the subject 81 lead to define territorial capital as a complex of elements (material and immaterial) available to the territory for 82 its development: these elements can constitute strengths or real constraints depending on the aspects taken into 83 consideration. Knowing the territorial capital of each territory helps to identify the types of investments with 84 the highest return (Prezioso, 2019). 85

An approach to sustainability based on territorial capital asks to assume new parameters to calculate sustainable development, overcoming only the economic, social, and ecological aspects. If the term "capital" carries with it the idea of the necessary goods used to pursue pre-established objectives, the "territorial" attribute recalls the role of the territory as a factor for a bottom-up development, built on local potential and "territorial diversity", and that takes into account the multidimensionality of the relationships that are intertwined in the territory taking in charge geography, history, culture, population identity, skills and vocations present and regional territorial function (economic and political).

Assuming the concept of territorial capital based on the reasoning offers the advantage of being able to embrace different elements of the environment (in a broad sense) and to know and define (and therefore govern) adaptation and mitigation actions.

In a dynamic vision, there is a stock of territorial capital which must therefore be maintained, innovated, developed, and transmitted to future generations in the same logic adopted for sustainable development. In other words, territorial capital must be conceived not only as an endowment of a certain territory, which is only the starting point of the analysis, but also as an investment to build future choices according to a sustainable

# <sup>101</sup> **2 II.**

# <sup>102</sup> 3 DO SPATIAL OR TERRITORIAL APPROACH TOWARD <sup>103</sup> SUSTAINABLE DEVELOPMENT? A TERRITORIAL EV <sup>104</sup> IDENCE FROM THE USE OF TERRITORIAL IMPACT <sup>105</sup> ASSESSMENT

Territorial Impact Assessment is defined as an ex-ante mechanism that can be used to identify the potential impacts of political choices to assess better actions for specific territories about different territorial capital.

In 2007 the European Commission declare the Territorial Impact Assessment (TIA) as a tool to support policy/decision making without however ever replacing it. A tool therefore able to support an efficient legislation (national and regional) considering at one time the several interaction among sectoral policies in relation to the territorial capital.

To this end, the European Committee of the Regions (CoR) in 2015 included the TIA among the tools in use and useful for the action of the European Commission by inserting the territorial dimension in the Better Regulation package (EC, 2015) and the European Parliament (2015) calls for its systematic application to the urban dimension so that sectoral policies are correctly addressed to towns, cities, and larger functional urban areas, taking into account, as a matter of priority, three elements: balanced territorial development, territorial integration, and territorial governance, looking at the role of territorial areas on economic growth, job creation, sustainable development.

The four TIA models currently to the attention of the European Commission (2020) 1 A recent Italian research have the purpose of declining the policy action about the territorial specificity so as to measure the ex-ante impact assessment of anthropic actions, estimating the interdependence relationships between socioeconomic, cultural, and environmental variables, adding them to traditional indicators of well-being (GDP, employment, productivity) (Faludi, 2016). Including the territorial specificity in the analysis is the crucial difference between a spatial approach and a territorial approach. The first considers a general solution to a political question; the second suggest solutions on the base of territorial diversity (Table 1).

Planning on the base of base of territorial specificity (also looking the functional relationships, Coronato 2019) can understand the development potential of each territory and which governance mechanism and planning actions is better on the base of the territorial typology (e.g., mountain areas, internal area, coastal areas, metropolitan city, protected area, islands, etc.) to increase the efficiency of investments (infrastructural, technological, production, etc.) (Prezioso, 2020). 1. MEGA and metropolitan systems with high urban influence and transnational/national functions that can facilitate cooperation between cities (or city parts) at regional, national and transnational levels.

used the STeMA TIA model (Prezioso, 2020) to measure the territorial cohesion of the Italian regions and provinces, links the policy choices with development actions to implement at a local scale. The added value brought by the model was that it distinguishes the ex-ante time (before the policy choice) from the ex-post (following the policy choices) and from the ex-post territorialization analysis showing how the same policy action (selected ex-ante) produces different results (between ex-post and ex-post territorialized) on the basis of territorial diversity (morphological, functional components, etc.).

The STeMA methodology analyzed the Italian regions and provinces in light of the objectives of the Europe 2020 strategy: smart growth, sustainable growth, inclusive growth, adding a fourth component to assess the economic efficiency of investments. The methodology identified 7 Systemic Territorial Functional Typologies (STFT) (Prezioso, 2019a) which combine 5 types of settlement system, 4 large geomorphological units (mountain / hill / valley / plain) and related subunits:

1 EATIA, STeMA, ESPON TIA Quick Check, TEQUILA 2 Project Title "Territorial Impact Assessment of 144 the Territorial Cohesion in the Italian regions. Place Evidence Model for Assessing Policies Devoted to Green 145 Economy in Internal Area and Metropolitan Inner Peripheries" (PRIN 73 PI Maria PREZIOSO -20155NXJ8T 146 -SH3), 2. High urban influence systems with transnational/ national specialized functions that can facilitate 147 urban-rural cooperation between authorities in interconnected areas at regional, national and transnational levels. 148 3. High urban influence systems without specialized functions and with few transnational/national functions 149 that can facilitate urban-rural cooperation between authorities in interconnected areas at regional, national and 150 transnational levels. 4. High urban influence systems without specialized functions and transnational/national 151 functions, thus not able to facilitate urban-rural cooperation between authorities in interconnected areas at 152 153 regional, national and transnational levels. 5. Low urban influence systems with regional/local specialized 154 functions that can facilitate urban-rural cooperation between authorities in interconnected areas at regional, national and transnational levels. 6. Low urban influence systems with regional/local functions that can 155 facilitate urban-rural cooperation between interconnected areas at regional and local levels. 7. Low urban 156 influence systems without specialized functions and transnational/national functions, thus not able to facilitate 157 urban-rural cooperation between authorities in interconnected areas at regional, national and transnational levels. 158 The evidence of the research, of which the case of the Umbria Region is reported below (Coronato, 2020), 159

## **3** DO SPATIAL OR TERRITORIAL APPROACH TOWARD SUSTAINABLE DEVELOPMENT? A TERRITORIAL EVIDENCE FROM THE USE OF TERRITORIAL IMPACT ASSESSMENT

shows that the territorial dimension, together with ecological, economic and social aspects, adds information on the measure of the efficiency of policy choices to achieve the sustainable development.

Volume XX Issue X Version I 25 (H) Umbria is a region of central Italy, located in the heart of the peninsula, called "the green heart of Italy". It has an area of 8,456 km<sup>2</sup> (of which 6,334 in the province of Perugia and 2,122 in the province of Terni) and a population of 878 540 inhabitants. It is the only Italian region not bathed by the sea and borders on Abruzzo, Lazio, Marche and Tuscany regions.

Umbria has been included in the "Snodo 2 territories" (MIT, 2014) aimed at realizing a partnership system 166 among Abruzzo, Lazio, and Marche regions (socalled Macroregion of the 'Italia di Mezzo') for the establishment 167 of a cooperative macro-region. In this framework, in implementation of the program dedicated to "Snodo 2 168 territories", the Macroregion of the 'Italia di Mezzo' has to support both the networking and enhancement of 169 naturalistic and environmental resources for tourism purposes and the development of sustainable widespread 170 The Umbria Region is, in fact, characterized by a "widespread" settlement model with a greater cities. 171 concentration in urban and peri-urban areas with consequences that impact the organization, and management 172 of services (transport, health, education, etc.), in particular the network ones. However, the urban sprawl of 173 the Umbria Region is a potential development opportunity for the regional "internal areas" by adapting the 174 quality and quantity of essential services (school, health and transport) to generate that turnaround (including 175 176 job demand) that in recent decades has led to a demographic escape from these areas (so-called: marginal) to better-served territories. In this regard, Umbria Regional Law n. 10/2015 sets the criteria for rationalizing 177 178 services in line with the associated forms of the municipalities (Union of Municipalities by the Delrio Law) around 179 which area characterized by different levels of the spatial periphery gravitate (DPS 2014).

The Umbria Region is therefore inserted in the urban and infrastructural context of central Italy, according 180 to a reticular model that integrates the different networks (transport, people, things, information, the network 181 of energy infrastructures, hygiene, and health), exceeding the vision of the "City Region" by focusing on the 182 cooperation mechanisms, especially of the transregional areas. The territorial and political approach turning 183 towards a new territorial model of multilevel polycentrism in which the two anime -"Umbria, a joint territory" 184 (geographic and infrastructural point of view) and "Umbria, the green region of Italy"-work cohesively and 185 integrated as planned into Territorial Strategic Plan -DST (2008). This approach also takes into account the 186 main morphological and environmental aspects of the regional territory (Tevere Valley, Apennines) and the 187 settlement and production structure of the territory. In this regard, the transport infrastructures are to be 188 implemented in relation to the role of Umbria in the national context (Figure 1). In the national context, 189 the Umbria Region presents itself as a hub and as such has the role of communicating the vital areas of the 190 country-system preserving own identity (DST, 2008, p. 1). For this purpose, the infrastructure project "Snodo 191 2 territory" connects the Tyrrhenian (Civitavecchia hub), Adriatic (Ancona hub) to the Orte-Ravenna central 192 route, directly connecting to Corridor Berlin-Palermo systems such as the Quadrilatero Umbria -Marche for 193 the strengthening of the transversal infrastructure connections between the two regions. Umbria Region is also 194 affected by an interregional territorial platform, called the "Central Apennines", which concerns the Terni area 195 and its connections with Rieti province and Abruzzo Region, which the Ministry of Infrastructures includes among 196 those of a strategic nature and which it develops along the road links of Terni-Rieti and the Terni-L'Aquila railway 197 line, bringing together urban systems and territories rich in environmental and cultural values (DST, 2015, p. 4). 198

However, Umbria is affected not only by physical but also ecological infrastructure projects (e.g. "The Tiber and its tributaries" project) and by the network of rural villages or thematic trails, as well as by the reorganization of Umbrian cities into networks built around specific themes or projects. With reference to the role of Umbria in the national context, the traditional image of Green Umbria or "Umbria, the green heart of Italy" has been replaced with "Umbria sustainability laboratory" which places at the center of territorial and development policies the environmental quality and landscape.

The existing projects have a supra-municipal dimension, often macro-regional, which aims to increase attractiveness (in terms of services and job opportunities) by investing in border areas to combat external migration to Tuscany, Latium and Marche according to a multilevel reticular polycentrism oriented not only to physical and/or ecological infrastructures but also to improve the organizational and service delivery levels -also using soft governance mechanisms (Coronato and Al, 2019) -to reach European targets by increasing the level of territorial cohesion within the region whose main strategic objectives are (DPS, 2015 p. 13 and 14):

-Counter the risk of regional isolation; -Encourage forms of coordination between the centers (community 211 of municipalities, consortia, thematic networks); -Encourage the qualification and environmental, landscape and 212 social sustainability of interventions Based on these regional strategic objectives, starting from the status quo (ex-213 ante), the STeMA methodology was questioned by selecting possible development actions. From the comparison 214 between exante and ex-post it was possible to evaluate whether the selected action triggered a development 215 process or not. Finally, the analysis was carried out with territorialization, that is, it was assessed whether the 216 development triggered by the selected policy action would bring a real advantage for the territory ?? The table 217 below (Table 2) summarizes the results of the query divided by the 4 STeMA determinants. For each determinant, 218 the ex-ante and expost results were reported in the two approaches, spatial and territorial. While the spatial 219 approach measures the distribution by class of indicators such as quantities used by the model; the territorial 220 approach weighs (evaluates) the same indicators as before according to the territorial typology of the study area 221 (for example: city with metropolitan function, capital city, province, rural area, hilly area, etc.). To clarify this 222

aspect under study. 3 STeMA methodology classified the Province of Perugia as Low Urban influence Systems 223 in 4 different morphological typologies, with transnational / national specialized functions able to make rural 224 cooperation between interconnected areas at regional, national, transnational level Transnational or National 225 functions" and the Province of Terni as Low Urban influence Systems territories in 4 different morphological 226 typologies, with regional / local functions, not able to make rural cooperation between interconnected areas at 227 regional, local level Regional / Local functions, it is enough, among other things, to think of the distribution 228 of digital services: having a scarce supply of digital services in a metropolitan city like Rome, government 229 headquarters, where service companies reside, with a high educational and healthcare offer, etc. it requires a 230 more urgent intervention than the same result but obtained in a poorly urbanized rural town. With the same 231 result, the spatial approach indicates that there is a need to invest in infrastructures to provide digital services; 232 the territorial approach gives us the size of the problem according to the territorial typology of the area affected 233 by the problem and consequently provides elements of support to the political decision maker in relation to the 234 235 resources to be invested.

The choices made have led to an improvement in both approaches compared to ex ante but it is the positive increase in territorialization that confirms the goodness of the choices in relation to the area of study and how incisive the intervention must be depending on the territorial typology in which it will have to take place. 4 The whole analysis is in Prezioso 2019 and 2020 5 The different number of class break (four in the spatial approach; six in the territorial approach) depends on the fact that the territorial approach takes into account the territorial systems listed by the STEMA methodology (Prezioso, 2019b)

242 IV. A New Dimension of Sustainability: Territorial Sustainability

In relation to these aspects, the content and objectives of territorial planning have significantly changed. A planning understood as a policy of controlling and guiding the organization of space as a physical entity -land use, organization of transport systems, public services -has gradually been replaced by a concept of planning as a tool for achieving better distribution of resources among the groups settled on the territory: this implies the consideration of the effects that a decision (or a set of decisions) can produce on the conditions of well-being of the population living in a specific spatial reality (Prezioso, 1995 and 2003; Conti, 2012).

This new approach to the environment and planning (territorial in the strict sense in a more broad context of "resources") has innovated the dimensions that measure sustainable development.

The need to reconcile economic growth and equitable distribution of resources arises from the awareness that economic growth alone would soon cause the collapse of natural systems. Hence the need to combine the three dimensions of development:

-Environmental sustainability is understood as the ability to preserve the three functions of the environment 254 over time: resource supplier, waste receiver, and direct source of utility. Within a territorial system, environmental 255 sustainability means the ability enhancing the environment as a "distinctive element" of the territory, while 256 ensuring the protection and renewal of natural resources and heritage. -Economic sustainability -can be defined 257 as the ability of an economic system to generate lasting growth of economic indicators. In particular, the ability to 258 income and work for the livelihood of populations. Within a territorial system, economic sustainability means the 259 ability to produce and maintain the maximum added value within the territory by effectively combining resources, 260 to enhance the specificity of local products and services; -Social sustainability can be defined as the ability to 261 262 guarantee conditions of human well-being (safety, health, education) equally distributed by class and by gender. Within a territorial system, social sustainability means the ability of the subjects to intervene together, effectively, 263 on the basis of the same concept of the project, encouraged by consultation between the various institutional 264 levels. The actions resulting from the intersectoral policies do not provide us with the size of the intervention 265 because they miss any information related to the territorial capital. For this reason, seems appears appropriate 266 to add the territorial dimension to the others, so to analyze in terms of policy actions -on the one hand -, and 267 territorial capital on the other, the complex of economic, ecological and social relations that site. This scope 268 is necessary to apply a systemic, transscalar, flexible and dynamic vision that, through policies, moves between 269 the various levels of programming, from local to global, from adaptation (local) to mitigation (global). Policies 270 relating to climate change, energy, services of general interest, territorial and maritime planning, environmental 271 protection although they have elements attributable to each of the classic dimensions of sustainability (impact 272 in terms of emissions, employment, growth, industry, wealth, etc.) for their transversal policy action converge in 273 territorial sustainability and suggest the use of forms of macroregional, sometimes trans-regional or cross-border 274 cooperation and increasingly flexible governance mechanisms ("soft governance"). Only with the addition of the 275 territorial dimension can we truly evolve towards a new approach to development -a sustainable development -to 276 be planned to increase the internal resilience of the systems by investing in local territorial capital. 277

The four dimensions are closely interrelated by a multiplicity of connections and, therefore they must not 278 be considered as independent elements, but must be analyzed in a systemic vision, as elements that together 279 contribute to the achievement of a common goal: sustainable development. This means that every programming 280 intervention must take into account the reciprocal interrelationships. If planning choices favored only some of 281 the dimensions, sustainable development would not occur. The intersectoral nature of environmental policies 282 283 therefore makes it necessary to work simultaneously on all dimensions of sustainability until a balance is found between the parties. If it is true that the "sustainability limit" is given by a balance between the dimensions 284 of sustainability where the economic, ecological, and social dimensions pertain to Sustainable development is 285

#### 4 CONCLUSION

generally defined as the point of equilibrium (of intersection) between the economic, social and environmental systems, underlining with this only two of its dimensions are privileged, sustainable development does not occur (but development from a perspective conservationist, ecologist or merely socio-economic). Table 3 shows some examples of intersectionality (?) among the policies attributable to the various dimensions of sustainability.

environmental loads, clean energy, safety, education, etc.), it is the territorial dimension that through systemic
territorial relations (metropolitan city, metropolitan area, internal area, marginal area, etc.), programming,
capacity building, local resources can find efficient and sustainable solutions. Including the territorial dimension
in the local planning process is useful to achieve the global policy objectives.

To represent the dimensions of sustainability on a Cartesian level by placing Planning -Local Adaptation on the x-axis, and the Policy Process -Global Mitigation on the y-axis, the more the local planning is consistent with global objectives, the more the mitigation effect increases globally (policy goal). In a spatial vision, development is obtained from a balance between economic, social and environmental sustainability. Still, as the shows (CFN. Tab 2), the same actions produce different effects depending on the reference territory. To become sustainable, development must, therefore integrate the territorial component (Figure 2).

# 301 4 Conclusion

301 The environmental and economic crisis and social poverty is central in the international policy objectives. It 302 requires finding systemic and intersectoral solutions able to protect the scarce resources available by providing 303 local-scale (adaptation) actions capable of generating a development process of a long term, which even on a 304 global scale, generates positive (mitigation) impacts. This awareness strongly pushes us to think according to 305 a territorial approach to planning the quantitative measure of a phenomenon needs to be territorialized, taking 306 into account functional territorial systems. This highlights the difference between a spatial approach and a 307 308 territorial approach to planning/policy. Finding a balance between the parts of the system and at the same time, considering the territory as a distinctive element of the analysis is also the basis of the transition from development 309 310 to sustainable development, which in line with the declarations, is intergenerational and intragenerational. The nonterritorialization of planning/policy choices generates uncertainty about the consumption/use of natural, 311 economic and social resources, producing a loss of territorial capital that is difficult to reproduce. The mitigating 312 impacts are nothing more than the sum of individual local adaptation actions. Acting locally by implementing 313 suitable and specific adaptation actions for each territory (territorial approach) to achieve the global policy 314 315 (impact mitigation) makes it possible to talk about sustainable development.

Year 2020 policy objectives (growth, employment, reduction of (Source: Author's elaboration) Figure 2: The territorial approach toward the sustainable development.



Figure 1: 2

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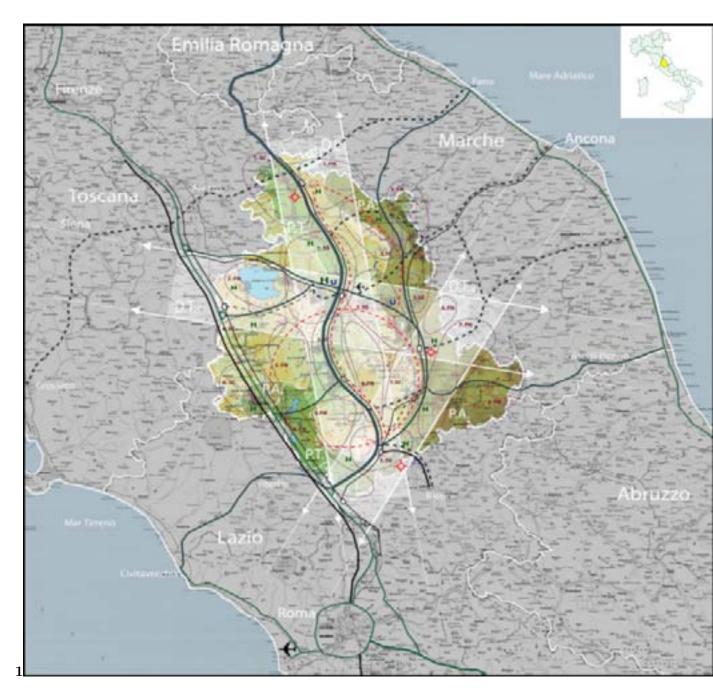


Figure 2: Figure 1 :

# 4 CONCLUSION

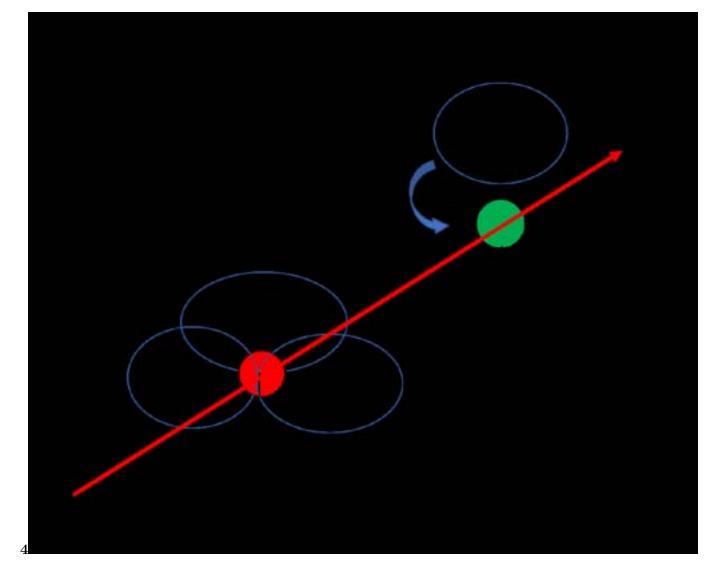


Figure 3: 4

1

Policy question	Spatial Approach								
question	on Approach Policy Territorial Analysis Answer choices			Analysis		Policy choices			
	Increase the	Which	is	s theIt is an internal		The		territory	$s_{t}$
	educational	territorial system		area	where	don't an	supply	e-learning	U.
	supply	where implement the policies to		insist primary	only and	high educati The	ion.	level	
Low Third	increasethesecondaryThirdeducation score?educational			areas "internal" so it is		in			
educational				supply		$\operatorname{not}$ with	connect		
level	Economic	What	is	the 60 years of	old	the ma	in city.	Increase the	
	support to the family	average age of the resident?				The age is l	nigh and	average accessibilit	р у
	5					the		economic	o t a
	?.	What is the main		Artisanship		specialization is		Increase the	a
		economic				the		supply to Life	
		specialization of the area?				manufa Learnii	$\operatorname{acturing}_{\operatorname{ng}}$	Long	
	?.	?.		?.		?.	-		
III. Do Spatial o Toward Sustaina Territorial Evide	ble Developmer	nt? A							

Figure 4: Table 1 :

Territorial Impact Assessment

# $\mathbf{2}$

STeMA Determinants	Spatial approach used in Umbria Regi		Territorial Approach u	sed in Um
	En ante	Ex	Ex ante	Ex
		$\operatorname{post}$		$\operatorname{post}$
SMART GROWTH	C ?	В	E ?	D
SUSTAINABLE GROWTH	B ?	А	D ?	$\mathbf{C}$
INCLUSIVE GROWTH	C ?	В	E ?	D
RESOURCH AND FUNDS	D ?	С	F ?	Ε

[Note: Spatial approach class break A=very high; B= high; C= low; D: Very low; Territorial Approach class break A= Absolute; B= Very high; C= High; D= Medium; E=Low; F= very low]

Figure 5: Table 2 :

## 3

		Development		
Environmental Sustainabil-	?	Economic Sustainability	?	Social Sustain-
ity				ability
Reduction of environmental	?	Sustainable use of resources	?	Health
loads				
Protection of biodiversity		Growth		
Clean energy	?	Employment	?	Education
		Fight against poverty		Inclusion
		Supply of territorial services		Accessibility
Sustainable use of resources	?	Mitigation and adaptation	?	Access to the re-
				source
?	?	?.	?	?.

Figure 6: Table 3 :

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