

Appendix A

Table A1: Comparison between the rationalistic and functional approaches used for the delineation of geographic specificities

	Rationalistic approach (Dijkstra and Poelman, 2011)	Functional approach (Geospecs, 2013)
Rationale	Develop a pan-European categorization for steering regional public investments and benchmarking monitoring of differentiated regional performance.	Address territorial development challenges and opportunities of communities by choosing a relevant definition of the ‘local’.
Method	Regions are characterised based on the extent of the coverage of a geographic specificity within its borders. First, delineate the extent of the ‘physical reality’ and then, assess the amount of population located in these areas.	Territories are defined as aggregations of areas or municipalities into larger geographical ensembles based on the contiguity of a geographical phenomenon.
Mountainous	<i>Mountain regions</i> at NUTS 3 level are defined as regions: - in which more than 50% of the surface is covered by topographic mountain areas; - or in which more than 50% of the regional population lives in these topographic mountain areas. <i>Topographic mountain areas</i> based on altitude and/or steepness of slopes in the surrounding areas.	The delineation is based on altitude, terrain roughness and slope. A total of 16 mountainous massifs were identified, based on the aggregation of mountainous municipalities. LAU2 units with more than 50% mountainous terrain should be considered as mountainous.
Islands/ Insularity	Islands are defined as territories having: - a minimum surface of 1 km ² ; - a minimum distance between the island and the mainland of 1 km; - a resident population of more than 50 inhabitants; - no fixed link (bridge, tunnel, dyke) between the island and the mainland. NUTS 3 island regions distinguished into five categories, depending on the size of the major island related to the NUTS 3 region: 1. regions where the major island has less than 50,000 inhabitants; 2. regions where the major island has between 50,000 and 100,000 inhabitants;	All territories that are physically disjoint from the European mainland or the main islands of the British Isles (UK and Ireland) are considered as insular, including parts of municipalities, but excluding inland islands. The typology recognises islands with a fixed connection to the mainland as a separate category and uses a multilevel approach (NUTS 1 to LAU2), as the socio-economic impacts and political significance of insularity differ depending on its occurrence at the national, regional or local scale. A total 319 “island territories”, defined as an individual municipality comprising multiple islands, or a single island with one

	<p>3. regions where the major island has between 100,000 and 250,000 inhabitants;</p> <p>4. regions corresponding to an island with 250,000 to 1 million inhabitants, or being part of such an island;</p> <p>5. regions being part of an island with at least 1 million inhabitants.</p>	<p>or more municipalities were identified. Multiple islands belonging to one municipality were considered as a single unit.</p>
Sparsity	<p><i>Low population density regions</i> as areas made up of:</p> <ul style="list-style-type: none"> - NUTS 2 geographic regions with a population density of less than 8 inhabitants per km²; - or NUTS 3 geographic regions with a population density of less than 12.5 inhabitants per km²' 	<p>Sparsity was characterised using the population potential measure, i.e. the total number of people that can be reached within a certain radius (50km) or within a certain travel distance (45 minutes by car).</p> <p>Sparsely populated areas are places where this population potential is under the threshold of 100,000 people, corresponding to 12.7 persons/km² within 50 km.</p> <p>Sparsely populated municipalities for which more than 50% of the area are below the threshold.</p> <p>39 'sparse territories' were identified and aggregated based on the contiguity of sparsely populated municipalities and in some cases belonging to the same NUTS 3 region.</p>

Table A2: List of 15 NUTS2 regions with specific geographical features selected as case studies (Source: ADE, 2012)

REGION (NUTS2) NAME	Member State	Operational Programme (OP) at NUTS2 level	ERDF Objective & Cohesion Fund (CF), 2000-2006	ERDF Objective & Cohesion Fund (CF), 2007-2013
Mountainous				
Steiermark	Austria	Yes	Objective 2 (except in AT221 Graz: no fund)	Regional Competitiveness
Rhône-Alpes	France	Yes	Objective 2	Regional Competitiveness
Silesia	Poland	Sectoral programmes	Objective 1 & CF	Convergence & CF
Centro	Portugal	Yes	Objective 1 & CF	Convergence & CF
Eastern Slovenia	Slovenia	Yes	Objective 1 & CF	Convergence & CF
Islands				
Copenhagen capital regional	Denmark	A national programme	Objective 2	Regional Competitiveness
Balearic Islands	Spain	Yes	Objective 1 & CF	Regional Competitiveness
Corsica	France	Yes	Objective 1	Regional Competitiveness
Northern Aegean	Greece	OP 2007-2013 covers several NUTS2 level regions	Objective 1 & CF	Convergence & CF
Sicily	Italy	Yes	Objective 1	Convergence
Sparsely populated regions				
Castilla-la-Mancha	Spain	Yes	Objective 1 & CF	Convergence & CF
East Finland	Finland	Yes	Objective 1	Phasing in
Stereia Ellada	Greece	OP 2007-2013 covers several NUTS2 level regions	Objective 1 & CF	Phasing in
Övre Norrland	Sweden	Yes	Objective 2	Regional Competitiveness
Highlands and Islands	UK	Yes	Objective 1	Phasing out

Table A3: Comparison of ERDF and Cohesion Fund commitments in islands, mountains and sparsely populated regions, 2000-06 (Source: ADE, 2012; SWECO, 2008; authors' calculations)

Total at NUTS 3 level	Billion Euros				Percentage of the total		
	Cohesion Fund (CF)	Objective 1	Objective 2	Total	Cohesion Fund (CF)	Objective 1	Objective 2
All EU regions	30.7	100.5	21.1	152.3	20.2	66	13.8
Mountains	3.5	16	1.8	21.3	16.5	74.9	8.6
Islands	0.65	8	0.15	8.8	7	91	2
Sparsely populated	0.34	1.13	0.13	1.6	21	71	8
Total: 3 types of territory	4.49	25.13	2.08	31.7			

Table A4: 2000-2006 programming period ERDF: Fields of Intervention by category and sub-category (Source: ADE, 2012; SWECO, 2008)

1. PRODUCTIVE ENVIRONMENT
11 Agriculture
12 Forestry
13 Promoting the adaptation and the development of rural areas
14 Fisheries
15 Assisting large business organisations
16 Assisting SMEs and the craft sector
17 Tourism
18 Research, technological development and innovation (RTDI)
2. HUMAN RESOURCES
21 Labour market policy
22 Social inclusion
23 Developing educational and vocational training not linked to a specific sector
24 Workforce flexibility, entrepreneurial activity, innovation, information & communication technologies
25 Positive labour market actions for women
3. BASIC INFRASTRUCTURE
31 Transport infrastructure
32 Telecommunications infrastructure and information society
33 Energy infrastructures (production, delivery)
34 Environmental infrastructure (including water)
35 Planning and rehabilitation
36 Social and public health infrastructure
4. MISCELLANEOUS
41 Technical assistance and innovative actions

Table A5: Socio-economic domains to compare the main Fields of Intervention (FOIs) in 2000-2006 and 2007-2013 ERDF programming periods

#	Socio-economic domain	2000-06 main FOIs	2007-13 main FOIs
1	Innovation & RTD, helping large firms	15 Assisting large business organisations	A. Innovation & RTD (1-4;7;9)
		18 Research, technological development and innovation (RTDI)	
2	SMEs and entrepreneurship	16 Assisting SMEs and the craft sector	B. Entrepreneurship (6-7;8)
3	ICT and telecommunications	32 Telecommunication infrastructure and information society	C. Information society (10-15)
4	Transport infrastructure	31 Transport infrastructure	D1. Transport - Rails (16-19)
			D2. Transport - Roads (20-23)
			D3. Transport - Other (Multimodal, air, boats) (24-32)
5	Energy infrastructure	33 Energy infrastructure (production and delivery)	E1. Energy - traditional sources (34-38)
			E2. Energy - Renewable (39-43)
6	Environmental infrastructure	34 Environmental infrastructure (including water)	F1. Environment protection and infrastructure (44-52;54)
		35 Planning and rehabilitation	F2. Risk prevention (53)
7	Tourism and culture	17 Tourism	G. Tourism and culture (55-60)
8	Urban and rural regeneration	11 Agriculture	H. Urban and rural regeneration (61)

		12 Forestry	
		14 Fisheries	
9	Labour market development	21 Labour market policy	I. Increasing the adaptability of workers and firms (62-64)
		22 Social inclusion	J. Improving access to employment and sustainability (65-70)
		23 Developing education and vocational training	K. Improving the social inclusion of less-favoured persons (71)
		24 Workforce flexibility, entrepreneurial activity, innovation, ICT	
		25 Positive labour market actions for women	
10	Social infrastructure	36 Social and public health infrastructure	L. Investment in social infrastructure (75-79)
			M1. Mobilisation for reforms in the fields of empl. and inclusion (80)
			M2. Strengthening institutional capacity (at nat., reg. and local level) (81)
			M3. Reduction of additional costs hindering the OMR development (82-84)
11	Technical assistance	41 Technical Assistance and innovative actions	M4. Technical assistance (85-86)

Table A6: Comparing ERDF (and Cohesion Fund (CF)) spending profiles by the four largest FOIs (as a percentage of total commitments) and by socio-economic domain in each of the 15 case study regions, 2000-2006 and 2007-2013 periods (Source: ADE, 2012; SWECO, 2008; DG Regional Policy SFC Database; author's calculations)

NUTS 2 region	ERDF 2000-06 classification	4 Main FOIs (% of total commitments), 2000-06		2000-06, socio-economic domains	4 Main FOIs (% of total commitments), 2007-13		2007-13, socio-economic domains
	ERDF 2007-13 classification						
Mountainous regions							
Steiermark	Objective 2 (except in AT221 Graz: no fund)	16. Assisting SMEs and the craft sector	27.2%	2	A. Innovation & RTD (1-4;7;9)	50%	1
		18. RTDI	27.0%	1	B. Entrepreneurship (6-7;8)	29%	2
	Regional Competitiveness	15. Assisting large business organisations	22.0%	1	C. Information society (10-15)	5%	2
		34. Environmental infrastructure	12.5%	6	I. Increasing the adaptability of workers and firms (62-64)	6%	9
Rhone-Alps	Objective 2	35. Planning and rehabilitation	35.6%	6	A. Innovation & RTD (1-4;7;9)	26%	1
		17. Tourism	25.1%	7	B. Entrepreneurship (6-7;8)	19%	2
	Regional Competitiveness	16. Assisting SMEs and the craft sector	13.2%	2	C. Information society (10-15)	12%	2
		34. Environmental infrastructure	9.9%	6	F1. Environment protection and infrastructure (44-52;54)	13%	6
Silesia	Objective 1 & CF	31. Transport infrastructure	45.7%	4	A. Innovation & RTD (1-4;7;9)	14%	1

		34. Environmental Infrastructure	38.8%	6	C. Information society (10-15)	12%	2
	Convergence & CF	16. Assisting SMEs and the craft sector	7.1%	2	D2. Transport - Roads (20-23)	18%	4
		36. Social and public health infrastructure	2.1%	10	H. Urban and rural regeneration (61)	13%	8
Centro	Objective 1 & CF	31. Transport infrastructure	24.5%	4	A. Innovation & RTD (1-4;7;9)	28%	1
		34. Environmental infrastructure	17.4%	6	F1. Environment protection and infrastructure (44-52;54)	13%	6
	Convergence & CF	16. Assisting SMEs and the craft sector	13.4%	2	G. Tourism and culture (55-60)	10%	7
		36. Social and public health infrastructure	11.1%	10	L. Investment in social infrastructure (75-79)	14%	10
Eastern Slovenia	Objective 1 & CF	31. Transport infrastructure	35.9%	4	A. Innovation & RTD (1-4;7;9)	23%	1
		34. Environmental infrastructure	35.6%	6	D1. Transport - Rails (16-19)	13%	4
	Convergence & CF	17. Tourism	11.7%	7	D2. Transport - Roads (20-23)	13%	4
		16. Assisting SMEs and the craft sector	8.2%	2	F1. Environment protection and infrastructure (44-52;54)	20%	6
Island regions							
Copenhagen capital city region (including Bornholm)	Objective 2	16. Assisting SMEs and the craft sector	33.8%	2	A. Innovation & RTD (1-4;7;9)	52.1%	1
		32. Telecommunication infrastructure and information society	33.3%	3	B. Entrepreneurship (6-7;8)	21.5%	2
	Regional Competitiveness	31. Transport infrastructure	14.2%	4	C. Information society (10-15)	13.0%	3

		18. RTDI	6.9%	1	G. Tourism and culture (55-60)	9.6%	7
Balearic Islands	Objective 2	34. Environmental infrastructure	69.6%	6	A. Innovation & RTD (1-4;7;9)	35%	1
		31. Transport infrastructure	10.9%	4	B. Entrepreneurship (6-7;8)	17%	2
	Regional Competitiveness	15. Assisting large business organisations	8.6%	1	D1. Transport - Rails (16-19)	22%	4
		18. RTDI	5.1%	1	G. Tourism and culture (55-60)	8%	7
Corsica	Objective 1	31. Transport infrastructure	31.9%	4	A. Innovation & RTD (1-4;7;9)	37%	1
		34. Environmental infrastructure	29.7%	6	C. Information society (10-15)	15%	3
	Regional Competitiveness	17. Tourism	9.6%	7	E2. Energy - Renewable (39-43)	11%	5
		36. Social and public health infrastructure	7.7%	10	F1. Environment protection and infrastructure (44-52;54)	15%	6
Northern Aegean	Objective 1 & CF	34. Environmental infrastructure	27.1%	6	D2. Transport - Roads (20-23)	24%	4
		31. Transport infrastructure	26.8%	4	D3. Transport - Other (Multimodal, air, boats) (24-32)	8%	4
	Convergence & CF	32. Telecommunication infrastructure and information society	16.2%	3	F1. Environment protection and infrastructure (44-52;54)	12%	6
		35. Planning and rehabilitation	8.6%	6	L. Investment in social infrastructure (75-79)	24%	10
Sicily	Objective 1	16. Assisting SMEs and the craft sector	21.7%	2	B. Entrepreneurship (6-7;8)	8%	2

		31. Transport infrastructure	21.3%	4	D3. Transport - Other (Multimodal, air, boats) (24-32)	13%	4
	Convergence	35. Planning and rehabilitation	17.0%	6	F1. Environment protection and infrastructure (44-52;54)	13%	6
		17. Tourism	9.3%	7	G. Tourism and culture (55-60)	15%	7
Sparsely populated regions							
Castilla la Mancha	Objective 1 & CF	31. Transport infrastructure	37.8%	4	B. Entrepreneurship (6-7;8)	14%	2
		34. Environmental infrastructure	27.7%	6	D1. Transport - Rails (16-19)	19%	3
	Convergence & CF	15. Assisting large business organisations	12.4%	1	D2. Transport - Roads (20-23)	12%	4
		35. Planning and rehabilitation	9.1%	6	F1. Environment protection and infrastructure (44-52;54)	19%	6
East Finland	Objective 1	16. Assisting SMEs and the craft sector	45.8%	2	A. Innovation & RTD (1-4;7;9)	45%	1
		18. RTDI	24.8%	1	B. Entrepreneurship (6-7;8)	21%	2
	Phasing In	31. Transport infrastructure	14.1%	4	C. Information society (10-15)	16%	3
		32. Telecommunication infrastructure and information society	6.6%	3	M4. Technical assistance (85-86)	4%	11
Sterea Ellada	Objective 1 & CF	31. Transport infrastructure	61.5%	4	A. Innovation & RTD (1-4;7;9)	11%	1
		16. Assisting SMEs and the craft sector	8.7%	2	B. Entrepreneurship (6-7;8)	12%	2
	Phasing In	34. Environmental infrastructure	6.4%	6	D2. Transport - Roads (20-23)	14%	4

		36. Social and public health infrastructure	5.5%	10	L. Investment in social infrastructure (75-79)	21%	10
Övre Norrland	Objective 2	16. Assisting SMEs and the craft sector	44.6%	2	A. Innovation & RTD (1-4;7;9)	44%	1
		18. RTDI	19.1%	1	B. Entrepreneurship (6-7;8)	16%	2
	Regional Competitiveness	31. Transport infrastructure	9.9%	4	E2. Energy - Renewable (39-43)	16%	5
		32. Telecommunication infrastructure and information society	9.6%	3	G. Tourism and culture (55-60)	12%	7
Highlands and Islands	Objective 1	16. Assisting SMEs and the craft sector	35.6%	2	A. Innovation & RTD (1-4;7;9)	36%	1
		31. Transport infrastructure	31.9%	4	B. Entrepreneurship (6-7;8)	24%	2
	Phasing Out	36. Social and public health infrastructure	7.6%	10	C. Information society (10-15)	9%	3
		32. Telecommunication infrastructure and information society	6.7%	3	G. Tourism and culture (55-60)	8%	7

References for Appendix A

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