III. 1.STATISTICAL UNITS (UNIDADES ESTATÍSTICAS)

Directiva	Units for dissemination or use of statistical information. Unidades para fins de divulgação ou utilização da informação estatística.
FCD	http://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/14 The theme statistical units must be seen as one of several thematic groups of administrative units, but may also include other area units (e.g. grids or watersheds) or points in point-based statistics (e.g. statistics on address level). The IMS paper (INSPIRE IMS, 2003) describes the following sub-grouping of administrative units - official administrative units - government management zones - blocks, census and statistical districts - civil security units - environmental reporting and management units - postal codes/ regions Units for dissemination of statistical information can be viewed as spatial units; areas, lines or point objects used in reporting of information, in geographical analysis and in distribution systems for environmental and socio-economic information. "Use" can be interpreted as something else than "dissemination", as the words is connected with the word "or". The use may represent any use in the full cycle of establishment, aggregation, assessment and display of "statistical information". Statistical information can be defined as "any numerical representation of a phenomenon".
Tópicos/IG	Vários tipos de divisão do território são utilizados para produzir ou visualizar estatísticas. O IMS paper descreve os seguintes subgrupos de unidades administrativas: - unidadeas administrativas oficiais - zonas de gestão governamental - quarteirões, census e divisões estatísticas - unidades de protecção civil - unidades de gestão e reporte ambiental - códigos/regiões postais
Instituições	INE ← Decreto-Lei n.º 166/2007 de 3 de Maio - Aprova a orgânica do INE, IP. IGP ← diplomas relativos à delimitação administrativa ← diplomas relativos ao reporte ambiental?? CTT← tem obrigações de serviço público?? INAG ← Decreto-Lei nº 135/2007, de 27 de Abril – Lei orgânica do INAG e Portaria nº 529/2007, de 30 de Abril - Aprova os Estatutos do INAG
CDG	- NUTS - Regiões e zonas agrárias - Áreas metropolitanas e associações de municípios INE - Secções e sub-secções estatísticas (BGRI) IGP - Carta Administrativa Oficial (CAOP) - Quadrícula UTM (para efeitos de reporte ambiental) CTT - Códigos Postais de 4 e 7 dígitos; INAG - Limite das bacias hidrográficas (para efeitos de reporte ambiental)
Observações	As NUTS e regiões e zonas agrárias (D.L. nº 46/89, de 15 de Fev e alterações), as áreas metropolitanas (D.L. nº224/2007, de 31 de Maio) e as associações de municípios (Lei nº 45/2008, de 27 de Agosto) são delimitadas com base nas NUTS e constituem zonas de gestão governamental. O INAG e o IGP não se consideram produtores deste tema Existem dúvidas quanto à possibilidade de os CTT terem ou não obrigações para com o INSPIRE, até porque se prevê a sua privatização dentro de 1/2 anos. No entanto, os CTT disponibilizam gratuitamente, os limites dos Códigos Postais de 4 dígitos (CP4)

	e vendem os centróides dos códigos postais de 7 dígitos (CP7) cuja área de cobertura nacional é de 70%. Os CTT não nomearam o Ponto de Contacto INSPIRE. Poderá haver outras unidades de reporte ambiental que não sejam as consideradas.

III. 2 BUILDINGS (EDIFÍCIOS)

Directiva	Geographical location of buildings. Localização geográfica dos edifícios.
FCD	http://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/15 A building is a covered facility, usable for the protection of humans, animals, things or the production of economic goods. A building refers to any structure permanently constructed or erected on its site. Information on location of buildings may be supplied as points or with the actual basic form of the building. Usually buildings are part of cadastre. On the local level buildings are available within the large scale cadastral maps or cadastral data sets and are geometrically represented as surfaces. Most buildings can be identified (geocoded) by address (separate theme in INSPIRE).
Tópicos/IG	Construções, imóveis. Cartografia Topográfica
Instituições	IGP ← Decreto-Lei nº 133/2007, de 27 de Abril – Lei orgânica do IGP e Portaria n.º 527/2007, de 30 de Abril – determina a estrutura nuclear dos serviços e as competências das respectivas unidades orgânicas. ← Decreto-Lei n.º 224/2007, de 31 de Maio - Cria o Sistema Nacional de Exploração e Gestão de Informação Cadastral (SiNErGIC) IGeoE e IGP ← Decreto-Lei n.o 193/95, de 28 de Julho que estabelece os princípios e as normas a que deve obedecer a produção cartográfica no território nacional e Despacho nº 23915 (2ª série) que aprova as listagens da cartografia oficial produzida pelo IGP, IGeoE e IH???
CDG	IGP - Sinergic (Parcelas Cadastrais) http://www.igeo.pt/sinergic/portugues/SiNErGIC.html - Cartografia Topográfica IGeoE - Cartografia topográfica de base?
Observações	O IGP e o IGeoE não se consideram produtores deste tema, apesar da respectiva cartografia ser oficial e incluir edifícios/construções. O INE, com a BGRI para o Censos 2011, parece ser a entidade que brevemente constituirá uma base uniforme nacional para este tema.

III. 3 SOIL (SOLO)

Directiva	Soils and subsoil characterised according to depth, texture, structure and content of particles and organic material, stoniness, erosion, where appropriate mean slope and anticipated water storage capacity. Solo e subsolo caracterizado de acordo com a profundidade, textura, estrutura e conteúdo das partículas e material orgânico, carácter pedregoso, erosão, eventualmente declive médio e capacidade estimada de armazenamento de água.
FCD	http://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/16 The proposed Soil Framework Directive (COM(2006) 232 final), which aims at the establishment of a framework for the protection of soil, specifies in Article 1 that soil is "the top layer of the earth's crust situated between the bedrock and the surface, excluding groundwater as defined in Article 2(2) of Directive 2000/60/EC of the European Parliament and of the Council". In the Communication from the Commission regarding the Thematic Strategy for Soil Protection (COM(2006)231 final), it is mentioned that "soil is generally defined as the top layer of the earth's crust, formed by mineral particles, organic matter, water, air and living organisms. It is the interface between earth, air and water and hosts most of the biosphere". As soil formation is an extremely slow process, soil can be considered essentially as a non-renewable resource. Soil provides us with food, biomass and raw materials. It serves as a platform for human activities and landscape and as an archive of heritage and plays a central role as a habitat and gene pool. It stores, filters and transforms many substances, including water, nutrients and carbon. In fact, it is the biggest carbon store in the world. These functions must be protected because of both their socio-economic and environmental importance. Soil is an extremely complex and variable medium. Over 320 major soil types have been identified in Europe and within each there are enormous variations in physical, chemical and biological properties. Soil's structure plays a major role in determining its ability to perform its functions. Any damage to its structure also damages other environmental media and ecosystems. Soil is subject to a series of degradation processes or threats. These include erosion, decline in organic matter, local and diffuse contamination, sealing, compaction, decline in biodiversity, salinisation, floods and landslides. A combination of some of these threats can ultimately lead arid or sub-arid climatic conditions to desertification." Typically, soil is characterized on the basis of soil profile descriptions, analysed by taking samples from genetic horizons or depth classes, and classified according to national or international nomenclature. Soil maps contain the borders of typical combinations of soil development factors of the target mapping scale. There is no internationally defined aggregation scheme between the various map scales. The collection of soil information can be broadly classified into three categories: a) Soil mapping, enabling to identify areas of land for management purposes. b) Soil inventories, providing a one-off assessment of soil conditions and/or properties at a point in time, and soil monitoring, providing a series of assessments showing how soil conditions and/or properties change over time. c) Soil thematic mapping (a) Soil maps The general aim of soil mapping is to provide a spatial representation and description of the soils of continents, countries, regions, farms, or any area of land of interest. It involves identifying the different types of soils that occur, collecting data on their nature, properties and potential use, and recording this information on maps and in geographic information systems and derived media. (b) Soil inventories and soil monitoring Soil inventories (predominantly based on "soil profiles") provide information on the soil condition. It can be introduced to soil maps as attribute (semantic) data describing soil properties. Soil monitoring in national or Europe-wide grid systems, or in stratified sampling regimes, is designed to provide information about how soils are changing with time (see also INSPIRE Theme 'Environmental Monitoring Facilities'). Geochemical surveys also gather soil information and are specifically targeted to provide information on natural background values and on overimposed anthropic pollution. (c) Thematic data/risk maps in soil protection and environmental reporting The general adoption of GIS technology and the creation of databases of georeferenced soil information have allowed a number of new types of assessments producing more policy relevant information than the basic soil maps. For example, modelling approaches using the existing soil inventories allow deriving information like soil erosion risk, organic matter content, diffuse contamination, soil compaction, salinisation, etc.
Tópicos/IG	Solo é a camada situada entre a rocha mãe e a superfície terrestre. Exclui as superfície de água. A recolha de informação sobre o solo pode ser classificado em 3 categorias: a) mapas de solo – representação espacial e descrição dos solos. Envolve a recolha dos diferentes tipos de solo, colhendo informação sobre a sua natureza, propriedades e uso potencial, e registo dessa informação em mapas e em sistemas de informação geográfica e meios derivados. b) Inventários e monitorização do solo – inventários do solo (predominantemente baseados em "perfis do solo") fornecem informação sobre a condição do solo. Pode ser introduzido no mapa de solos como atributo informação descritora das propriedadeas do solo. Monitorização do solo significa a mudança dos solos ao lomngo do tempo. Pesquisas geoquimicas também recolhem informação sobre os solos. c) Mapas de informação temática e de riscos relativos à protecção dos solos e reporte ambiental – a tecnologia SIG e a criação de bases de dados de informação georreferenciada solo permitiram um número de novos tipos de avaliações. Por exemplo, abordagens de modelação que com base nos inventários de solo permitem derivar informação como o

	risco de erosão do solo, o teor da matéria orgância, contaminação difusa, compactação do solo, salinização, etc
Instituições	DGADR ← Decreto Regulamentar nº 8/2007, de 27 de Fevereiro que estabelece a orgânica da DGADR e Portaria nº 219-C/2007, de 28 de Fevereiro, relativo à organização dos serviços e competências. INRB ← Decreto-Lei n.º 356/2007, de 29 de Outubro – Lei orgânica do INRB e Portaria n.º 1416/2007, de 30 de Outubro - Estatutos do INRB tem competências neste tema???
CDG	DGADR – Cartas de Solos e Capacidade de Uso, Série SROA/CNROA Formato Digital: • Carta de solos – formato digital. • Carta de capacidade de uso do solo - Formato digital • Carta de solos de aptidão agrícola e florestal da Beira Interior – Cartografia dos limites dos Aproveitamentos Hidroagrícolas em formato digital: Limites dos Aproveitamentos Hidroagrícolas em Exploração/Execução e Projecto (2007- 2013) INRB (INIA) – Projecto de I&D: Gs Solo – Criação de um sistema de informação geográfica relativo aos solos europeus, associado à Directiva INSPIRE – Acção I.6 "Levantamento de informação e/ou monitorização de poluentes no solo e materiais sedimentares"; Acção I.7 "Levantamento de efeitos na saúde humana associados a poluentes presentes em solos e materiais sedimentares e definição de estratégia de intervenção"; Acção I. 16 "Integração de informação por domínio prioritário e identificação de zonas de risco potencial" do PNAAS – Estudo dos efeitos da aplicação ao solo de farinha de matadouro sobre a cultura de azevém
Observações	O DGADR não preencheu os temas INSPIRE pelos quais se considera detentor/utilizador/distribuidor/produtor. Considerando a Lei orgânica e Estatutos, parece não haver qualquer obrigação formal do INRB para com este tema do INSPIRE contudo, alguns projectos de I&D do INIA parecem relevantes. O INRB não preencheu os temas INSPIRE pelos quais se considera detentor/utilizador/distribuidor/produtor.

III.4 LAND USE (USO DO SOLO)

Directiva	Territory characterised according to its current and future planned functional dimension or socio-economic purpose (e.g. residential, industrial, commercial, agricultural, forestry, recreational). Caracterização do território de acordo com a dimensão funcional ou finalidade sócio-económica planeada, presente e futura (por exemplo, residencial, industrial, comercial, agrícola, silvícola, recreativa).
FCD	http://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/17 Land regulation is the general spatial planning tool at regional and local levels. Land use may be characterised as ordinary mapping of existing functions as an objective picture of the use and functions of a territory, but may also be plans characterising how land may be utilised at present and in the future. There are two main land use definitions, a functional one and sequential one (Duhamel, 1998). The first of them defines land use as the description of land in terms or its socio-economic purpose (agricultural, residential, forestry etc.). The second one describes land use as a series of operations on land, carried out by humans, with the intention to obtain products and/or benefits through using land resources. Land use plans/ land user regulation The land use plans regulate actual and future use of areas. The land use plans commonly have significant textual regulations to each area/ land category or specific areas. The land use plans are of varying detail; Municipal land use plans, detailed regulation plans for blocks or smaller areas within urban areas. – Land use may be seen as divisions at a high level, e.g. distinguishing between private and state owned land. , e.g. at scale 1: 1 mill. – Land use plans is commonly made at regional levels as kinds of master plans, e.g. covering the full extent of municipalities and being at the scale 1: 50.000 – Land regulation plans at detailed low level may cover populated areas or areas of specific economic or social interest. The plans may direct utilization level, the % of building coverage within areas, height regulations or functional regulations, and maps produced may have a detailed scale, e.g. 1: 5000. It is a very diverse situation concerning land regulation/ land use plans as these spatial data commonly are based on national or regional legislation or other kinds of regulation. The documents/maps are frequently seen as legal documents, and the categories remain for decades as rights directing use land and property. Categories of land use follow such regulations. Furthermore, operational plans may for some areas be old and based on older legislation, and the nomenclature may have changed through time. Operational land use plans may be as old as 100 years or more. Also plans being proposed and being in a process or public/sectoral hearing can be relevant for dissemination in the infrastructure. A common strategy to activate land use plans in a GIS is through the production of raster versions of land use plans. This is by some seen as a very good strategy, as the rasterisation makes a "copy" of the visual content, thus locking the content and accuracy for changes and misleading interpretation of the legal map documents. Some organisations have a strategy of first supplying raster versions of existing plans, and with a long term plan for establishment of vector versions. Functional land use – according to socio-economic purpose Functional areas within urban or rural areas may be mapped through fieldwork, register information or through modelling using socio-economic input data in a GIS. The recommended classification of the land use phenomenon is based on the ISIC Rev.3 (International Standard Classification of All Economic Activities) classification drawn up by the United Nations (approved by the Statistical Commission in 1989) and recommended for use throughout the world. This classification is integrated in the sense that it ensures a full harmonization with another main branches of economic classifications: the classifications of products ICPC Central Product Classification) which are fundamental for foreign trade statistics, statistics of production and consumption, energy statistics, etc. The ISIC Rev. 3, it is important to state, is fully compatible with the EU NACE Rev. 1 (Nomenclature des Activités de la Communauté Européenne) system for the first two levels. (System replaced by 1.1.2008, see references). The ISIC system is made of four levels of breakdown: 17 sections, 60 divisions, 159 groups and 292 classes. The 17 sections of the first level are characterizing main economic activities. These categories are: SECTION A Agriculture, Hunting and Forestry SECTION B Fishing SECTION C Mining and Quarrying SECTION D Manufacturing SECTION E Electricity, Gas and Water Supply SECTION F Construction SECTION G Wholesale and Retail Trade, Repair of motor vehicles, motorcycles and Personal and household goods SECTION H Hotels and Restaurants SECTION I Transport, Storage and Communication SECTION J Financial intermediation SECTION K Real estate, Renting and Business activities SECTION L Public Administration and Defence, Compulsory social security

	SECTION M Education SECTION N Health and Social work SECTION O Other Community, Social and Personal Service Activities SECTION P Private Households with Employed Persons SECTION Q Extra-territorial Organizations and Bodies
Tópicos/IG	São duas as principais definições de uso do solo: funcional - descrição do solo em termos do objectivo socio-económico (agrícola, florestal, etc) - e sequencial - operações realizadas pelo homem com o objectivo de obter produtos e/ou benefícios (Duhamel, 1998). Planos e regulamentos de usos do solo regulam o uso actual e futuro do solo Existe uma classificação de uso do solo baseada no Standard Internacional de Classificação das Actividades Económicas (ISIC Rev.3), produzido pelas Nações Unidas e recomendado para ser utilizado em todo o mundo
Instituições	DGOTDU ← Decreto-Regulamentar nº 54/2007, de 27 de Abril - Estabelece a orgânica da DGOTDU IGP ← tem competências neste tema?
CDG	DGOTDU – Planos de uso do solo IGP – Carta de ocupação/uso do solo (COS)
Observações	A DGOTDU não preencheu os temas INSPIRE pelos quais se considera detentor/utilizador/distribuidor/produtor. Considerando a Lei orgânica e Estatutos parece não haver qualquer obrigação formal do IGP para com este tema apesar de se considerar produtor deste tema e nesse âmbito produzir informação geográfica.

III.5 HUMAN HEALTH AND SAFETY (SAÚDE HUMANA E SEGURANÇA)

Directiva	Geographical distribution of dominance of pathologies (allergies, cancers, respiratory diseases, etc.), information indicating the effect on health (biomarkers, decline of fertility, epidemics) or well-being of humans (fatigue, stress, etc.) linked directly (air pollution, chemicals, depletion of the ozone layer, noise, etc.) or indirectly (food, genetically modified organisms, etc.) to the quality of the environment. Distribuição geográfica da dominância de patologias (alergias, cancros, doenças respiratórias, etc.), informações que indiquem o efeito da qualidade do ambiente sobre a saúde (biomarcadores, declínio da fertilidade, epidemias) ou sobre o bem-estar dos seres humanos (fadiga, tensão, stress, etc.) de forma directa (poluição do ar, produtos químicos, empobrecimento da camada de ozono, ruído, etc.) ou indirecta (alimentação, organismos geneticamente modificados, etc.).
FCD	https://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/18 A descriptive approach to human health and safety will focus on the: – descriptive geographical distribution of diseases, wellbeing of humans or other health and safety qualities showing geographical patterns, may also include probability descriptions. – causes and elements affecting health – wellbeing of humans, including quality of the human environment – safety issues, behaviour linked to safety – health care services To illustrate kinds of geographical information which can be included in this INSPIRE theme, some examples on medical statistics and medical geography can be given: General statistics on health - change over time – mortality – the number of death in relation to a total population over a given period of time – life expectancy – the average number of years newborn children may expect to live if death subsequently occurs in accordance with the mortality for each age group of the population within this period. Life expectancy may also be estimated as the expected remaining time of life at any particular age. – Morbidity: incidence of disease in relation to a total population over a given period of time. Morbidity can be described by many different indicators: • incidences: the number of new cases in relation to a total population over a given period of time • cumulative incidences: the total number of new cases for a longer period of time, e.g. several years, in relation to a total population • prevalence: the total number of cases registered in a population at a given time in relation to a total population • rate, age-specific rate, age-adjusted rate. Relevant material on geographical patterns of health is comparison of the major sources of death or illness at different points in time. This can, for instance, illustrate epidemiological transitions, with a fall in infant mortality and infectious disease and a rise in degenerative diseases. Incidence data on specific diseases or other health issues Incidences overviews can be split by male/females, age, region or rural-urban sub-division, and data may give opportunities to depict trends over time. Examples which can be treated geographically – Kinds of diseases and illnesses: coronary heart disease, stroke, infant mortality, mortality related to cancer, morbidity overview, cardiovascular diseases, musculo-sceletal diseases, mental health problems, injuries, sexually transmitted diseases, infectious diseases. – Cancer incidence in particular: Cancer comprises a variety of types with different geographical patterns. Incidence data from pubic registers material on age-specific trends, gender variations in a geographical context, incident rates and survival rates: Cancer of the tongue, mouth, throat, stomach, colon, rectum, lunge, prostate, kidney, urinary bladder, malignant melanoma, lymphatic cancer. Causes of poor or good health – risk factors – exposures The theme may also include focus on the causes of poor (or good) health. For the purpose of INSPIRE it is convenient to define health in an environmental context, viewing health as a result of an interplay between three factors, man as a biological organism, habitat and behaviour - the human organism's ability to withstand chemical, physical, biological, psychological or social stresses. – Firstly, it can provide clues about the causes of disease. Although examples of geographical studies leading to basic new knowledge about disease causation are rare, geographical disease patterns may generate hypotheses about causes which can be followed up using other approaches, or suggestions from other research approaches can be tested geographically. – Secondly, such information can be useful in the planning of strategies for health promotion. – Thirdly, knowledge about geographical variations in different aspects of health can be useful in health care planning. Geographical distribution over exposure elements may help understanding links between exposure and health or illness. A causation analysis should include the following two concepts: Risk factor: factor which is known to increase the risk of a disease or

	other problems: Exposure: to be exposed to a risk factor: – Exposure to chemical agents in the environment, in air, water, food and soil, has been implicated in numerous adverse effects on humans from cancer to birth effects. E.g. geochemical geographical data may be used in analysis of exposure. – Among exposures which have been shown to be carcinogenic the following can be mentioned; radioactive and ultraviolet radiation, some chemicals, stimulants such as alcohol and nicotine, food and some occupational factors. – Two groups of hazardous chemicals – heavy metals and persistent organic pollutants (POPs) are currently receiving particular attention. Further attention should also be given to CMR (cancerogenic, mutagenic and reprotoxic chemicals), PBT (persistent, bioaccumulative, toxic chemicals) and vPvB (very persistent and very bioaccumulative substances), which are substances of special concern according to REACH. Exposure to heavy metals has been linked with developmental retardation various cancers and kidney damage. Exposure with gold and lead has also been associated with the development of auto-immunity. Growing evidence that POPs have serious human health effects. – Exposure to GMOs in the environment, in air, water, food and soil is currently receiving particular attention since it may potentially cause adverse effects on human health and the environment. Human well-being: Human wellbeing may be linked to environmental stress, e.g. noise, heavy traffic, pollution, it may also be reflected in statistics on rates negative wellbeing, e.g. psychiatric problems, alcohol-related causes of illness, social problems or death, health problems or death by traffic accidents, injuries or death by other accidents, suicide in general or firearm suicide as a particular case. Security Security may contain issues like peoples' own experience or perception of their security situation, be linked to rates of a long range of indicators e.g. crime rates, or be probability maps for e.g. crime. Health services Health services may be interpreted as part of the theme health, as their occurrences and quality in closely linked to health and wellbeing. The issues may reflect public health services in a geographical context, - distribution of e.g. hospitals and similar institutions, medical laboratories or institutions for rehabilitation purposes. Details may be given on distribution, rates, and quality parameters about doctors, nurses, physiotherapists or other practitioners. It may also include services in the form of ambulance services, ambulance regions and other kinds of emergency management systems, where use of GIS have proved to improve performances. Peoples own health care of themselves and their families - by their next of kin – is another important service not commonly being registered.
Tópicos/IG	Principais tópicos: – distribuição geográfica de doenças, condições de conforto/bem-estar e de outras questões de sáude e segurança evidenciando padrões geográficos e descrições probabilísticas. – Causas e elementos que afectam a saúde – bem-estar incluindo a qualidade dos ambientes humanizados – questões de segurança, comportamentos associados à segurança – Serviços de cuidados de saúde Exemplos de informação geográfica: - Variação espacial e temporal de Estatísticas de Saúde: • mortalidade • Esperança de vida • Morbilidade (e indicadores: incidência, incidência cumulativa, prevalência, taxas) e consideração de material relevante sobre os padrões geográficos e comparação das principais causas de morte ou doenças em diferentes pontos no tempo. Por exemplo será possível ilustrar as transições epidemiológicas, incidindo na mortalidade dos recém-nascidos, nas doenças infecciosas e no aumento das doenças degenerativas. - Incidência de doenças específicas ou de outras questões de saúde: Incidência por género, idade, região, rural-urbano, e avaliação de tendências em termos temporais Exemplos que podem ser analisados em termos espaciais: • Tipos de doenças e patologias: coronárias, AVC, mortalidade infantil, mortalidade por cancro, morbilidade, doenças cardiovasculares, doenças ósseas e musculares, problemas mentais, lesões, doenças sexualmente transmissíveis, doenças infecciosas. • Incidência de Cancro – diferentes tipos de cancro com diferentes padrões geográficos e com diferentes factores em consideração (idade, género, taxas de ocorrência e de sobrevivência) - Causas de boa ou má saúde – factores de risco – exposição Saúde no contexto ambiental (biológico, habitat e comportamento) fornece: • Pistas sobre as causas das doenças.

	• Informação útil para o planeamento de estratégias para a promoção da saúde • Informação útil para o planeamento dos serviços de cuidados de saúde. – Exposição - Factores de risco: Distribuição geográfica da exposição a elementos com efeitos na saúde/doença: • Exposição a agentes químicos no ambiente (ar, água, alimentos, solo) – análise espacial de dados geoquímicos pode ser importante • Exposição de características carcinogénicas (radiação radioactiva e ultravioleta, alguns químicos e estimulantes como a nicotina e o álcool, alguns alimentos e factores ocupacionais) • Exposição a substâncias perigosas (metais pesados, poluentes orgânicos persistentes, CMRs, PBT, vPvB) • Exposição a OGMs no ambiente, no ar, na água, nos alimentos e no solo. - Bem-estar humano Bem-estar humano pode estar associado ao stress ambiental (e.g. ruído, tráfego, poluição) também reflectido nas estatísticas de problemas psiquiátricos, álcool, problemas sociais, morte, probleams de saúide ou morte por acidentes de viação, lesões ou morte por outros acidentes, suicídio em geral. - Segurança Percepção das próprias pessoas relativamente à sua segurança pode associar-se a diferentes indicadores (e.g. taxas de criminalidade, mapas de probabilidade de crime). - Serviços de cuidados de saúde Serviços de saúde num contexto geográfico – distribuição de hopsitais e instituições afins, laboratórios médicos ou instituições de reabilitação (distribuição, taxas, parâmetros de qualidade sobre médicos, enfermeiros, fisioterapeutas e outros profissionais). Outros serviços: âmbulâncias e outros serviços de emergência médica por região, centros de saúde,….
Instituições	DGS ← Decreto-Regulamentar nº 66/2007, de 29 de Maio – Lei orgânica da DGS INEM ← Decreto-Lei nº 220/2007 de 29 de Maio – Estatutos do INEM INSA ← Decreto-Lei nº 271/2007, de 26 de Julho – Lei orgânica do INSA
CDG	DGS - Principais Indicadores de Saúde para Portugal - SSESP - Sistema de Suporte a Emergências de Saúde Pública - CESonline - Carta de Equipamentos de Saúde (Sistema de informação para actualização e consulta dos elementos relativos ao equipamento médico instalado) - SARA - Sistema de Alerta e Resposta Apropriada - SisAGUA – Sistema de monitorização da qualidade da água para consumo humano, águas balneares e águas minerais e de nascente. - SisRH – Gestão de Resíduos Hospitalares INEM – ..a fazer INSA - Departamento de Saúde Ambiental: • Estudo e investigação da Saúde Humana, factores de risco de natureza ambiental, exposição aos factores de risco. – Departamento de Epidemiologia (DEP) • registos epidemiológicos, bases de dados, bioestatística, epidemiologia, epidemiologia clínica e investigação em serviços de saúde. • previsões e cenários sobre a ocorrência de situações com potencial impacto na saúde. • contributo para "observatório nacional de saúde" do INSA. – Outros dados importantes: • Indicadores de saúde do INS (Inquérito Nacional de Saúde) com periodicidade quinquenal. • taxas de incidência de várias doenças transmissíveis e não transmissíveis - MÉDICOS-SENTINELA” • Dados sobre a ocorrência de anomalias congénitas através dos serviços de pediatria e de obstetrícia dos hospitais portugueses, e estimativas anuais de prevalência - RENAC (Registo Nacional de Anomalias

	Congénitas) • Previsões sobre os efeitos das ondas de calor na mortalidade da população - ÍCARO (Importância do calor: repercussões sobre os óbitos). • Ocorrência de acidentes domésticos e de lazer utilizando uma amostra de serviços de urgência de hospitais e centros de saúde - ADÉLIA (Acidentes domésticos e de lazer: intervenção adequada) • Vigilância diária da mortalidade - dados de rotina do Instituto dos Registos e do Notariado e do Instituto da Tecnologias da Informação - VDM (Vigilância diária da mortalidade) • Revisão e reavaliação regular dos dados disponíveis da mortalidade portuguesa visando, nomeadamente, identificar as causas de morte que, em cada ano sofrem alterações inesperadas - Obob's (Observatório de óbitos)
Observações	A DGS, o INEM e o INSA não têm ponto de contacto INSPIRE

III.6 UTILITY AND GOVERNMENTAL SERVICES (SERVIÇOS DE UTILIDADE PÚBLICA E DO ESTADO)

Directiva	Includes utility facilities such as sewage, waste management, energy supply and water supply, administrative and social governmental services such as public administrations, civil protection sites, schools and hospitals. Inclui instalações e serviços de utilidade pública, como redes de esgotos, gestão de resíduos, fornecimento de energia, abastecimento de água, serviços administrativos e sociais do Estado tais como administrações públicas, instalações da protecção civil, escolas e hospitais.
FCD	https://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/19 A very broad INSPIRE theme including different kinds of objects: Utility services/networks: Physical construction for transport of defined products: These may include pipelines for transport of oil, gas, water, sewage or other pipelines. Transmission lines may include electrical, phone, cable-TV or other networks. Transmission lines for both land and at sea/water (bottom) is important. All kinds of transmission systems have nodes and are linked to facilities for production and treatment of different kinds of products. Despite being heavily interlinked, the themes in INSPIRE are treated separately – the production and treatment facilties are treated mainly in the theme production and industrial facilities. Transmission systems may be of different kinds: - Oil and gas pipelines: Major lines from oil and gas fields/extraction areas and storage sites. Important production and treatment facilities of such resources is linked to a such a transport network, such as nuclear power stations, power stations, transformer stations and oil tanks. GISCO, Energy/ industry authorities, Companies - Water pipelines: Location of water pipelines – large and local network. Large transmission lines are of interest here. Linked to production facilities for water for consumption/processes. Irrigation lines treated separately under agricultural facilities. Water supply institutions, Utilities/ health - Sewage pipelines: Sewage network, linked to sewerage facilities. Major lines of interest here. Utilities - Transmission lines- electrical: Data set showing larger transmission lines for electricity, both at land and sea. The location of lines is important knowledge for the energy sector itself, land use planners, construction, fisheries for sea cables. Parts of the information important in low flight hindrance databases. Large: national energy/industry institutions. Local authorities, Companies - Transmission lines-phone/ data/cable-TV: Location of phone/ data: Rough data needed in land planning. Important transmission nodes, e.g. antennas, may be seen as part of the network. The cables placement can conflict other natural resource utilization activities, e.g. fisheries. Technical data accuracy for local level Companies Rough pipeline and utility service databases exist at European level, e.g. GISCO database with scale 1: 1.000.000. Data within countries is non-homogenous. There are examples of national portals warning on construction, distributing maps/data on location of pipelines. At local and regional level the responsibility of government offices or different operators/ firms. In some countries there are national portals for information about cables etc in construction work. Waste treatment facilities and waste storage: It is important to identify the environmental protection facilities with unique identifiers. The data component category coincides with economic/statistical categories (NACE/SERIEE). Location by geographical point, by address or in some cases as area. - Controlled waste treatment sites for non-hazardous waste at land: geographical location of official or regulated facilities for waste treatment and storage; Included in the spatial component category "environmental protection facilities" • storage sites at land – landfills • incinerators • other treatment facilities • Information on kind of treatment, kind of substances treated, capacity, percentage biodegradable waste, energy recovery from incinerators and landfills - Controlled waste treatment facilities for hazardous waste at land: geographical location of official or regulated facilities for treatment and storage of hazardous waste; Included in the spatial component category "environmental protection facilities". Reported according to SEVESO II Directive. Distinction between • thermal treatment, • landfills • nuclear waste treatment and storage • and other treatment for hazardous waste (e.g. chemical), • other treatment facilities • Information about kind of treatment, kind of substances treated, capacity (and potential risks). - Regulated areas for dumping of waste at sea: Areas at sea for dumping of waste, e.g. ships, oil drilling platforms, industrial waste, military waste. OSPAR Permits on marine dumping. Reporting per contracting party and site (?) waste category, number of permits issued, tonnes licensed and contracting party. Important in environmental management and management of biological resources at sea. . Submission of data for the Annual OSPAR Report on Dumping of wastes at Sea from OSPAR Convention for the protection of the marine environment of the north-east Atlantic. The anticipated

	delivery authorities could be sea management/ marine/ waste/ environmental authorities, OSPAR. Included in the spatial data component "area regulation". Does also include nuclear waste. Example is Russian dumping sites: Official sources states a total of 0.45 PBq of liquid radioactive material has been dumped in the Barents Sea and 0.32 PBq in the Kara Sea. Most of the solid radioactive waste has been dumped along the east coast of Novaja Zemlya and the open Kara Sea. Some material on existing sites and amounts are available. - Illegal or non-controlled dumping of waste - sea and land. Illegal landfills/"wildfills" on land areas are common, but policies are directed to reduce the number of such storage of waste. It is important in local waste management and pollution control to locate such illegal land fills, in order to carry out targeted actions. Non-controlled areas at sea where waste is recorded is also important, this can be shipwrecks, industrial waste, military waste, cars. OSPAR Permits on marine dumping. - Mining waste: Mining waste is a special kind of waste. The residues from mining can contain a low content of metals or minerals not being economically extractable, but leaching can cause contamination of soil and water. The tailings of mining activities are usually located near the site of extraction. In management and assessment of mining waste there are needs for spatial data such as location of mines and tailings, water catchments, river network, water and sea, soil. - Sewage sludge: generation, sewage pipelines network and sewage treatment facilities: Is treated as a group here: • Sewerage/wastewater treatment facilities, Information on capacity, kind of treatment, category of recipient. • Sewage networks treated under the data component: utilities. • Sewage sludge spread to agricultural lands - regulated "permission zones" • Sewage sludge spread - agricultural lands and soil deposits suitability mapping Environmental. protection facilities The theme does also include a specific kind of facilities: Environmental protection facilities include a series communal or private facilities of sewage/ wastewater treatment sites, waste treatment facilities (e.g. incineration , landfills), anti-noise constructions facilities, protection facilities against natural hazards (slide walls, flood walls etc). It is important to identify the environmental protection facilities with unique identifiers. The data component category coincides with economic/statistical categories (NACE/SERIEE). Location by geographical point, by address or in some cases as area. Examples - Waste treatment and disposal site - hazardous waste: Waste treatment plants location for hazardous waste. Major distinction between hazardous and non-hazardous waste. Distinction between thermal treatment, landfills and other treatment for hazardous waste (chemical/ radioactive),. incineration, landfills and other treatment for non-hazardous waste. Information about kind of treatment, kind of substances treated, capacity (and potential risks). Waste Directive (Directive 75/442/EEC), Mining Waste Directive (Directive 2006/21/EC), SEVESO II, WFD, MS to DG ENV - Sewage/ wastewater treatment site: Wastewater treatment facilities, Information on capacity, kind of treatment, category of recipient. Sewage networks treated under the data component: utilities. WFD, MS to DG ENV, local authorities. Facilities defined in Directive 91/271/ECC (urban waste water) / industrial waste may be part of this general category of Sewage/wastewater treatment site. - Natural hazards protection facilities: Any kind of facilities or constructions protecting against natural hazards, e.g. land slide walls, flood walls etc). Hydrographic services, civil security, local authorities. - Anti-noise constructions: Constructions/walls or other facilities for limiting the spread of noise from road, rail and air traffic, industrial or other noise. For industrial includes modification at the source. Workplace protection excluded. 6EAP Administrative and social governmental services such as public administrations, civil protection, sites, schools, hospitals. The kinds of sites are commonly presented in governmental and municipal portals and map system as "point of interest"-data, and may be point-based location of a variety of categories of municipal and governmental services and social infrastructure. - police stations, - fire fighter stations - hospitals - health care centres - care centres for the elderly - schools and kindergartens - renovation/ waste delivery sites - government and municipal offices
Tópicos/IG	Instalações e serviços de utilidade pública: - Gasodutos e oleodutos – principais linhas que saem dos locais de extracção e armazenamento e instalações às quais esta rede de transporte está ligada como são as centrais nucleares, centrais eléctricas, estações transformadoras e tanques de petróleo. - Condutas de água – redes de grandes dimensões e redes locais. Inclui as redes de abastecimento de água para consumo humano e para produção. As linhas de irrigação estão associadas às instalações agrícolas. Inclui as instalações de abastecimento de água.

	- Rede de esgotos - Rede de fornecimento energia eléctrica por terra e por mar - Linhas de transmissão de telefone/ dados/ TV cabo - Aterros controlados de tratamento de resíduos não perigosos na terra: localização geográfica de instalações oficiais ou regulamentadas para o tratamento e armazenamento dos resíduos. - Instalações de tratamento controlado de resíduos perigosos na terra - Áreas regulamentadas para despejo de resíduos no mar - por exemplo resíduos de navios, plataformas de perfuração de petróleo, - resíduos industriais, resíduos militares. Inclui os resíduos nucleares - Despejo ilegal ou não controlado de resíduos no mar e no solo - Resíduos da exploração mineira - Lamas de esgoto – Inclui a produção, rede de condutas de esgotos e instalações de tratamento de águas residuais Instalações de protecção ambiental – série de instações comuns e privadas como é o caso de: - Estações de tratamento e depósito de lixos - Locais de tratamento de águas e esgotos - Construções anti-ruído Serviços administrativos e sociais do Estado - Instalações de polícia - Instalações de combate aos fogos - Hospitais - Centros de saúde - Centros de apoio à terceira idade - Escolas e infantários - Ecopontos - Edifícios governamentais e municipais
Instituições	DGOTDU ← Decreto-Regulamentar nº 54/2007, de 27 de Abril - Estabelece a orgânica da DGOTDU INAG ← Decreto-Lei nº 135/2007, de 27 de Abril - Estabelece a orgânica do INAG e Portaria nº 529/2007, de 30 de Abril - Aprova os seus Estatutos IGP, IGeoE e IH ← Decreto-Lei n.o 193/95, de 28 de Julho - Estabelece os princípios e as normas a que deve obedecer a produção cartográfica no território nacional e Despacho nº 23915 (2ª série) - Aprova as listagens da cartografia oficial produzida pelo IGP, IGeoE e IH GEP [MTSS] ← Decreto-Lei n.º 209/2007, de 29 Maio – Lei orgânica do GEP GEPE [ME] ← Portaria n.º 356/2007, de 30 de Março - Estrutura nuclear dos serviços do GEPE e competências das respectivas unidades orgânicas
CDG	a fazer ... GEP [MTSS] - Carta Social - Rede de serviços e equipamentos sociais GEPE [ME] - Roteiro das Escolas http://roteiro.min-edu.pt/ - base de dados que reúne informação sobre os estabelecimentos de educação pré-escolar e dos ensinos básico e secundário
Observações	Em relação ao IGP, IGeoE e IH, existem dúvidas quanto à integração destas instituições neste tema, apesar de serem produtoras de cartografia oficial e possuirem informação relativa a este tema. O IGeoE e o IH não se consideram produtores deste tema mas o IGP sim. A DGOTDU, o GEP [MTSS] e o GEPE [ME] não preencheram os temas INSPIRE pelos quais se consideram detentores/utilizadores/distribuidores/produtores.

III.7 ENVIRONMENTAL MONITORING FACILITIES (INSTALAÇÕES DE MONITORIZAÇÃO DO AMBIENTE)

Directiva	Location and operation of environmental monitoring facilities includes observation and measurement of emissions, of the state of environmental media and of other ecosystem parameters (biodiversity, ecological conditions of vegetation, etc.) by or on behalf of public authorities. A localização e funcionamento de instalações de monitorização do ambiente inclui a observação e medição de emissões, do estado das diferentes componentes ambientais e de outros parâmetros dos ecossistemas (biodiversidade, condições ecológicas da vegetação, etc.) pelas autoridades públicas ou por conta destas.
FCD	https://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/20 Environmental monitoring facilities are facilities for observations and measurements of emissions, status and effects of environmental media (e.g. air, forest, marine water) and/or other environmental aspects (e.g. biodiversity, human health). The concept of monitoring may relate to systematic and hierarchical structures, including monitoring networks, monitoring stations, monitoring site and subsites. The monitoring sites may be permanently located at a site or can be temporal, only used for a certain time. Continuous moving monitoring facilities, e.g. on ships, may be a kind of monitoring facility. Monitoring sites in the form of locations and areas can be reported as georeferenced points, lines and polygons. In cases where data are classified or confidential, aggregation to grids may be a possibility. It is problematic that the definition of the theme refers to the kinds of delivery organisations to supply data, as the INSPIRE Directive in specific paragraphs defines for which organisations the directive is valid.
Tópicos/IG	Instalações de monitorização ambiental são estações de medição das emissões e da qualidade ambiental (por exemplo, ar, água) e/ou de observações relacionadas com outros aspectos ambientais (por exemplo, biodiversidade, saúde humana). O conceito de monitorização engloba as redes de monitorização, as estações de medição e os portais que incluem dados e informação resultante das medições e observações ambientais. São também incluídas as instalações de monitorização em movimento contínuo (por exemplo, instaladas em navios). Os locais de medição/observação podem ser permanentes, localizados num determinado local, ou podem ser temporários, utilizados apenas por um determinado período de tempo. Os áreas monitorizadas podem ser representadas através de pontos geo-referenciados, linhas e polígonos. Nos casos em que os dados são classificados como confidenciais, estes podem ser agregados.
Instituições	APA ← Decreto-Lei n.º207/2006 – Criação da APA e Decreto Regulamentar n.º 53/2007 - Missão, Atribuições e Organização Interna da APA INAG ← Decreto-Lei nº 135/2007, de 27 de Abril – Lei orgânica do INAG e Portaria nº 529/2007, de 30 de Abril - Aprova os Estatutos do INAG INRB ← Decreto-Lei n.º 356/2007, de 29 de Outubro – Lei orgânica do INRB e Portaria n.º 1416/2007, de 30 de Outubro - Estatutos do INRB tem competências neste tema??? IH← Decreto-Lei n.º 134/91, de 4 de Abril – Lei orgânica do IH ICNB← Decreto-Lei nº 136/2007, de 27 de Abril – Aprova a orgânica do ICNB e Portaria nº 530 / 2007, de 30 de Abril - Aprova os estatutos do ICNB
CDG	APA – QualAr – Base de dados On-Line sobre a Qualidade do AR INAG – RQA - Rede de Qualidade de Água – SNIRH – Sistema Nacional de Informação de Recursos Hídricos INRB (IPIMAR) – Medições de qualidade marinha (não permanentes mas em campanhas). Análises físico-químicas, bioquímicas, microbiológicas IH – Medições de qualidade marinha (não permanentes mas em campanhas). Análises físico-químicas, bioquímicas, microbiológicas ICNB – SIPNAT – Sistema de Informação do Património Natural. A informação diz respeito a espécies da Fauna de Vertebrados.
Observações	Considerando a Lei orgânica e Estatutos, parece não haver qualquer obrigação formal do INRB para com este tema do INSPIRE contudo, alguns projectos de I&D do IPIMAR parecem relevantes. O INRB não preencheu os temas INSPIRE pelos quais se considera detentor/utilizador/distribuidor/produtor. Também a APA não preencheu os temas INSPIRE pelos quais se considera detentor/utilizador/distribuidor/produtor. O IH e o ICNB não se consideram produtores deste tema.

III.8 PRODUCTION AND INDUSTRIAL FACILITIES (INSTALAÇÕES DE PRODUÇÃO E INDUSTRIAIS)

Directiva	Industrial production sites, including installations covered by Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control (1) and water abstraction facilities, mining, storage sites. Sítios de produção industrial. Inclui instalações de extracção de água, minas, locais de armazenagem.
FCD	https://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/21 Location of production industry, mines, waste/disposal sites and energy production facilities. Concerning industry these may be chemical, hydrocarbons (oil-gas), mines or any other industry. Usage of PRTR categories as common nomenclature for such facilities is relevant as it comprises a very broad set relevant industrial activities. The categorisation may be mapped to other international categorisation systems like NACE, SERIEE or ISIC. The definition mentions also water abstraction, mining and storage sites. The latter may be storage sites for different kinds of "products" needed as input in industrial/production processes, or may be seen as storage sites for real products and also form "waste" from the production process. The theme production and industrial facilities" must be seen as one of several thematic groups of "facilities" such as - utility and government services - environmental monitoring facilities - agriculture and aquaculture facilities The IMS paper (INSPIRE IMS, 2003) contained a different sub-grouping of utilities and facilities with the groups transmission lines and pipelines, environmental protection facilities, production facilities, industry, agricultural facilities, trade and service facilities. The first and last in the IMS is not mentioned as separate themes in the draft Directive text, neither is the environmental protection facility. Two new themes have been introduced: "Utility and governmental services" and "Environmental monitoring facilities". The definition includes a reference to the IPPC directive. IPPC Directive (Directive 96/61/EC) describes the European Emission Register (EPER) in Art 15 (3). This Directive and the clauses have been affected, as the PRTR Regulation (Regulation (EG) Nr. 166/2006 of 18.01.2006) has become effective. This Regulation establishes an integrated pollutant release and transfer register at Community level (PRTR) - and it deletes (among others) Art. 15 (3) of the IPPC Directive. Kinds of production/industry facilities: - Industrial sites: Agglomerations and individual localisation of major industry, including chemical, hydrocarbon refineries, forestry, fisheries etc. Id on firm/site. SEVESO II - Nuclear installation location: Will be used as a reference point for discharges from Nuclear Installations. Reporting on each production unit: Submission of data for the Annual Report on Liquid Discharges from Nuclear Installations from OSPAR Convention for the protection of the marine environment of the North-East Atlantic Ocean. This is a legal obligation for the following nations: Belgium, Denmark, France, Germany, Norway, Portugal, Spain, Sweden, Switzerland, the Netherlands, and United Kingdom. Not necessarily reporting on geographical location, but unit name/address or other id could link information to a geographical location. OSPAR/ HELCOM - Energy resource extraction and production site: Localisation of energy production sites for production of heat, electricity, oil and gas. The sites may include extraction sites, e.g. for oil and gas (platforms), hydropower stations, nuclear power plants, The sites also includes the distribution facilities for energy, storage sites, but not the network (See data component utilities). - Mines: Individual localisation of mines or generalised mining areas, including storage sites, landfills, sedimentation dams etc.
Tópicos/IG	Localização indústria de produção (quimica, hidrocarbonetor (petróleo, gás), minas ou qualquer outra indústria), minas, aterros de resíduos e instalações de produção de energia. Captações de água, locais de extracção e de armazenamento (de produtos que constituem “inputs” ao processo ou indústria de produção, ou de produtos reais ou de resíduos do processo de produção) Tipos de instalações de Indústria/produção: – Zonas industriais - Aglomerações e localização individual da grande indústria, incluindo a indústria química, refinarias de hidrocarbonetos, silvicultura, pescas, etc; – Localização de instalações nucleares; – Elaboração de relatórios sobre cada unidade de produção: apresentação de dados para o relatório anual sobre descargas líquidas de Instalações Nucleares da Convenção OSPAR para a protecção do ambiente marinho do Nordeste do Oceano Atlântico. Esta é uma obrigação legal para os seguintes países: Bélgica, Dinamarca, França, Alemanha, Noruega, Portugal, Espanha, Suécia, Suíça, Holanda e Reino Unido. Não é necessario informação sobre localização geográfica, mas o nome da unidade e o endereço ou outro id que permita ligar as informações a uma localização geográfica. – Locais de extração e produção de recursos energéticos: Localização dos locais de produção de energia para a produção de calor, eletricidade, petróleo e gás. Os locais podem incluir: locais de extracção, por exemplo, de petróleo e gás (plataformas), estações hidroelétricas, instalações nucleares; instalações de distribuição de energia, os locais de armazenamento. A rede não é considerada. – Minas - Localisação individual de minas ou grandes áreas mineiras, incluindo locais de armazenamento, aterros, barragens de sedimentação, etc.
Instituições	DGEG ← Decreto-Lei nº 139/2007, de 27 de Abril– Lei orgânica da DGEG; Decreto-Lei nº 363/2007, de 2 de Novembro - Regime-jurídico aplicável à produção de electricidade por intermédio de instalações de pequena potência (unidades de microprodução);

	Decreto-Lei nº 340/2007, de 12 de Outubro - Lei das pedreiras e Decreto-Lei n.º 389/2007, de 30 de Novembro - Altera o Decreto-Lei n.º 267/2002, de 26 de Novembro, que estabelece os procedimentos e define as competências para efeitos de licenciamento e fiscalização de instalações de armazenamento de produtos do petróleo e postos de abastecimento de combustíveis, e o Decreto-Lei n.º 125/97, de 23 de Maio, que estabelece as disposições relativas ao projecto, à construção e à exploração das redes e ramais de distribuição alimentadas com gases combustíveis da terceira família, simplificando o respectivo licenciamento LNEG ← Decreto-Lei nº 208/2006, de 27 de Outubro – orgânica do Ministério da Economia e Inovação e Decreto-Lei n.º 354/2007, de 29 de Outubro - orgânica do LNEG APA ← Ponto Focal Nacional da Comissão OSPAR documento formal da nomeação?????
CDG	a fazer...
Observações	A DGEG considera-se apenas detentora desta informação e não produtora. A APA não preencheu os temas INSPIRE pelos quais se considera detentor/utilizador/distribuidor/produtor. E não se sabe qual é o documento formal que a nomeia Ponto Focal Nacional da Comissão OSPAR

III.9 AGRICULTURAL AND AQUACULTURE FACILITIES (INSTALAÇÕES AGRÍCOLAS E DE AQUACULTURA)

Directiva	Farming equipment and production facilities (including irrigation systems, greenhouses and stables). Equipamento e instalações de produção agrícola (incluindo sistemas de irrigação, estufas e estábulos).
FCD	https://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/22 Agricultural facilities: The farming facilities are constructions used in agricultural production. Agriculture is defined to include cropping of annual crops or perennials and rearing/ breeding of animals. Forestry in general is probably not included, but intensive forestry plantations on former fields may be included? Facilities can be classified according to the NACE1.1 used in official statistics when relevant. The ISIC system for classification of industrial sites may also be relevant. Examples of farming productions facilities are irrigation systems, greenhouses, stables, tanks and pipelines. The definition of a facility should be clarified, e.g. if facilities such as wall systems for prevention of erosion, channel systems used in irrigation, terrace systems used for fruit production are constructions outside the scope of a "facility". Aquaculture facilities: Productions and treatment facilities for fish, mussels, seaweed and other kinds of aquaculture. Aquaculture does only include permanent or semi-permanent systems for breeding of the organisms, and does not include locations for catching animals or plants in their natural environment. Aquaculture facilities may exist both in marine waters, inland water environments and as terrestrial production systems.
Tópicos/IG	Instalações agrícolas: construções agrícolas usadas na produção agrícola. Geralmente não inclui silvicultura mas plantações silvícolas intensivas em campos antigos poderão ser incluidos...? Exemplos de instalações de produção agrícola: sistemas de irrigação, estufas, estábulos, tanques e canalizações Instalações aquícolas: instalações de produção e tratamento de peixes, mexilhões, algas e outros tipos de aquicultura. Aquicultura incli apenas sistemas permanentes ou semi-permanentes para a reprodução dos organismos e não inclui locais para a captura de animais ou plantas em seu ambiente natural. As explorações aquícolas podem existir tanto nas águas marítimas e ambientes de águas interiores como em sistemas de produção terrestre.
Instituições	IFAP ← tem competências neste tema? AFN ← Decreto-Lei n.º 159/2008, de 8 de Agosto – Lei orgânica da AFN e Portaria n.º 958/2008, de 26 de Agosto - Determina estrutura das direcções regionais e da estrutura nuclear dos serviços centrais da AFN DGADR ← Decreto Regulamentar nº 8/2007, de 27 de Fevereiro – Lei orgânica da DGADR e Portaria nº 219-C/2007, de 28 de Fevereiro - Organização dos serviços e competências. DGPA ← Decreto Regulamentar n.º 9/2007 de 27 de Fevereiro – Lei orgânica da DGPA
CDG	a fazer..
Observações	Os diplomas relativos ao IFAP são muito vagos. Contudo, esta instituição que sucede às atribuições do INGA no que respeita ao controle de ajudas comunitárias no âmbito da PAC e obrigações de reporting para a UE, possui informação que se enquadra neste tema. O IFAP não preencheu os temas INSPIRE pelos quais se considera detentor/utilizador/distribuidor/produtor. A DGADR não preencheu os temas INSPIRE pelos quais se considera detentor/utilizador/distribuidor/produtor. A DGPA não nomeou Ponto de Contacto INSPIRE

II.10 POPULATION DISTRIBUTION - DEMOGRAPHY (DISTRIBUIÇÃO DA POPULAÇÃO-DEMOGRAFIA)

Directiva	Geographical distribution of people, including population characteristics and activity levels, aggregated by grid, region, administrative unit or other analytical unit. Distribuição geográfica da população, incluindo características demográficas e níveis de actividade, agregada por quadrícula, região, unidade administrativa ou outra unidade analítica.
FCD	http://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/23 There is a long tradition in collecting demographic and economic/activity statistics. All geographical levels interested, includes municipal and intra-municipal levels. Common to have statistics with geographical breakdown on country level, regional/ county level and municipal level. In some countries also information on census districts. These last decades, the statistical offices have started producing demographic and socio-economic statistics in large urban areas with a reference to blocks of houses and to process these data with a GIS. In some countries, the methodology chosen refers to aggregation of location-based information (address/households) on a grid (e.g. 1x1 km or 0.1x0.1 km). Includes a broad spectrum of information sources, such as regional statistics at EuroStat; other European and National data, Regional data and Local breakdowns. The theme may thematically be divided into several components. The Directive text points at broad groups of sub-themes - population characteristics - population/ human activity levels Concerning population information, this will or can include total population, age: population figures for each year class or aggregated year classes (0-5, 6-15, 16-20, 21-30, 31-40, 41-50, 51-67, 68-80, over 81). It could also include gender, mortality, life expectancy, migration. Figures could be offered as yearly versions, one could also like to give information of changes over time, such as growth/reduction in population, e.g. last 2 years, last 5 years, last 10 years. It could also include details on average night and day figures for some of the components. The sub-theme of population could include socio-economic information about the population, such as number of households, rate of employment, education, income, households with children etc. Themes relevant to local, regional and national statistics also includes topics such as resource exploitation, agricultural production and a variety of environmental themes. Concerning "activity levels" used in the definition of the theme, this is probably an inclusion of a theme being treated separately in the INSPIRE position paper – namely "economic activities/local statistics". Economic activities including production, consumption, stocks, income, employment: statistics referred to administrative units, grids, facilities, networks, addresses, monetary and physical units. Economic data on transport and traffic are classified here. In general, economic activities are described according to the NACE rev.1.1. The NACE is the official classification of economic activities in the European Union and covers all industries. Examples relating directly to the protection of the environment is given underneath: - 23.30 (part) Processing of nuclear fuel - 37.10 Recycling of metal waste and scrap - 37.20 Recycling of non-metal waste and scrap - 41.00 Collection, purification and distribution of water - 51.57 Wholesale of waste and scrap - 90.01 Collection and treatment of sewage - 90.02 Collection and treatment of other waste - 90.03 Sanitation, remediation and similar activities - In other industries, Environmental protection activities and expenditure need additional data, as it is presented in the SERIEE handbook (CEPA), EuroStat 1994 (Version 2002). Population distribution could also mean geographical aggregations of buildings into settlements, villages, townships, towns, cities. Data may be materialised as hierarchical settlement databases with details on population figures for geographical objects either centre point location or area/settlement extent. Population distribution may also be or functional or physical characterisation of built-up areas within a settlement area. One example of an overall functional zoning can be the distribution of CBD areas within a city (CBD=Central business district). Detailed area categorisation can be done, e.g. kind of apartment, flat, cooperative society, self-owned, house/villa, semi-detached house, terrace house, apartment block. Disaggregating of statistics is a methodology for transforming data at a higher aggregation to lower aggregates based on models. The EEA European population base introduces a transformation of statistics from administrative regions to small grid cells by a model based on knowledge of population distribution – land cover. Figures are aggregated to grid cells, and may therefore be seen as within the definition of this theme. Population censuses take place with a periodicity of e.g. 10 years. In between, administrative registers of civil state supply a regular flow of data used generally for presenting annual statistics. New trends in statistics will probably lead to abandon the national censuses of large countries for a rotating system based on regional censuses supplemented by a broader collection of data from administrative registers.
Tópicos/IG	Estatísticas do Eurostat Estatísticas demográficas e socio-económicas. Características da população e actividades económicas e produtivas com impacto no ambiente. Actividades que visam a protecção do ambiente. Por exemplo: processamento de combustível nuclear; reciclagem de resíduos e desperdícios metalizados; reciclagem de resíduos e desperdícios não metalizados; captação, tratamento e distribuição de água; venda por grosso de desperdícios e sucata; recolha e tratamento de esgoto; coleta e tratamento de outros resíduos; saneamento,

	despoluição e actividades similares. Distribuição da população, tipos de alojamentos, etc.
Instituições	INE ← Decreto-Lei n.º 166/2007 de 3 de Maio - Aprova a orgânica do INE, IP
CDG	a fazer..
Observações	O INE não se considerou produtor deste tema.

III.11 AREA MANAGEMENT/RESTRICTION/REGULATION ZONES AND REPORTING UNITS (ZONAS DE GESTÃO/RESTRIÇÃO/REGULAMENTAÇÃO E UNIDADES DE REFERÊNCIA)

Directiva	Areas managed, regulated or used for reporting at international, European, national, regional and local levels. Includes dumping sites, restricted areas around drinking water sources, nitrate-vulnerable zones, regulated fairways at sea or large inland waters, areas for the dumping of waste, noise restriction zones, prospecting and mining permit areas, river basin districts, relevant reporting units and coastal zone management areas. Zonas geridas, regulamentadas ou utilizadas para a comunicação de dados a nível internacional, europeu, nacional, regional e local. Compreende aterros, zonas de acesso restrito em torno de nascentes de água potável, zonas sensíveis aos nitratos, vias navegáveis regulamentadas no mar ou em águas interiores de grandes dimensões, zonas de descarga de resíduos, zonas de ruído condicionado, zonas autorizadas para efeitos de prospecção e extracção mineira, bacias hidrográficas, unidades de referência pertinentes e zonas abrangidas pela gestão das zonas costeiras.
FCD	http://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/24 A wide range of management areas both at European, national, regional and local levels. The themes and its feature types allow information content from any sector – e.g. environmental, transport, health, education, energy, fisheries, agriculture. Sector-specific management areas contain information about management zones in sectors, not already being covered by the INSPIRE theme "Administrative units". Here only a few examples are given. These may include health care management regions, defence enrolement regions, school regions, fire fighter management regions, police responsibility regions, rescue operation regions, National and IMO adopted Traffic Separation Schemes (TSS) and Deep Water Routes, Military Practice Areas, Explosive Dumping Grounds etc. Different regimens and regulations may be relevant, some examples are given; - Safety at Sea - SOLAS - dissemination of data and information for safe navigation - NAVAREA commitments may be relevant to the specification process River Basin Districts, management area for WFD, is not specifically being defined a subset of water catchments, and is therefore relevant to be defined as a separate management area. Sub-units for reporting under the Water Framework Directive is being discussed, but not yet decided. In the specification process care should be given to differences in definition, nature-based delineation relevant to water catchments, delineation based on administrative decisions conflicting nature-based catchment boundaries relevant for river management zones. WFD: art 2, annex I, ii): River basin district means the area of land and sea, made up of one or more neighbouring river basins together with their associated groundwater and coastal waters, which is identified under Article 3(1) as the main unit for management of river basins. WFD: Annex I, ii): Geographical coverage of the river basin district- the names of the main rivers within the river basin district together with a precise description of the boundaries of the river basin district. Anticipated sources: Environmental / hydrological institutions, Mandatory reporting from MC. The implementation of delineation in the countries may not reflect the nature-based definition in the WFD.
Tópicos/IG	Áreas de gestão ao nível europeu, nacional, regional e local. Abrange todos os sectores, desde ao ambiental, transportes, saúde, educação, energia, pescas e agricultura. São as áreas de gestão específicas de cada sector que não estão cobertas pelo tema das áreas administrativas, como por exemplo a saúde, a defesa, as escolas, o combate a fogos, polícia, operações de resgate, etc.... Compreende aterros, zonas de acesso restrito em torno de nascentes de água potável, zonas sensíveis aos nitratos, vias navegáveis regulamentadas no mar ou em águas interiores de grandes dimensões, zonas de descarga de resíduos, zonas de ruído condicionado, zonas autorizadas para efeitos de prospecção e extracção mineira, bacias hidrográficas, unidades de referência pertinentes e zonas abrangidas pela gestão das zonas costeiras.
Instituições	DGOTDU← Decreto-Regulamentar nº 54/2007, de 27 de Abril, que estabelece a orgânica da DGOTDU INAG← Decreto-Lei nº 135/2007, de 27 de Abril, que estabelece a orgânica do INAG e Portaria nº 529/2007, de 30 de Abril, que aprova os Estatutos do INAG ICNB← Decreto-Lei nº 136/2007, de 27 de Abril, que aprova a orgânica do ICNB e a Portaria nº 530 / 2007, de 30 de Abril, que aprova os Estatutos do ICNB LNEG←Decreto-Lei n.º 354/2007, de 29 de Outubro, relativo à orgânica do LNEG APA← Decreto-Regulamentar nº 53/2007, de 27 de Abril, que estabelece a orgânica da APA DGADR←Decreto Regulamentar n 8/2007, de 27 de Fevereiro, que estabelece a orgânica da DGADR e a Portaria nº 219-C/2007, de 28 de Fevereiro relativa a organização dos serviços e competências. AFN ← Decreto-Lei n.º 159/2008, de 8 de Agosto – Lei orgânica da AFN IVV ← Decreto-Lei Nº 46/2007 de 27 de Fevereiro – aprova a orgânica do IVV
CDG	a fazer.. DGOTDU – Limites do instrumentos de gestão territorial – a fazer…
Observações	A DGOTDU, a APA e a DGADR não preencheram os temas INSPIRE pelos quais se consideram detentores/utilizadores/distribuidores/produtores. O ICNB e o IVV não se consideram produtores deste tema.

III.12 NATURAL RISK ZONES (ZONAS DE RISCO NATURAL)

Directiva	Vulnerable areas characterised according to natural hazards (all atmospheric, hydrologic, seismic, volcanic and wildfire phenomena that, because of their location, severity, and frequency, have the potential to seriously affect society), e.g. floods, landslides and subsidence, avalanches, forest fires, earthquakes, volcanic eruptions. Zonas sensíveis, caracterizadas de acordo com os riscos naturais (todos os fenómenos atmosféricos, hidrológicos, sísmicos, vulcânicos e os incêndios que, pela sua localização, gravidade e frequência, possam afectar gravemente a sociedade), como sejam inundações, deslizamentos de terras e subsidências, avalanches, incêndios florestais, sismos, erupções vulcânicas.
FCD	http://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/25 "Natural risk zones" are zones where natural hazards areas intersect with highly populated areas and/or areas of particular environmental/ cultural/ economic value. Risk in this context is defined as: risk = hazard x probability of its occurrence x vulnerability of the exposed populations and of the environmental, cultural and economic assets in the zone considered. Natural hazards are natural processes or phenomena occurring in the biosphere that may constitute a damaging event. Natural hazards can be classified by origin namely: geological, hydrometeorological or biological. Hazardous events can vary in magnitude or intensity, frequency, duration, area of extent, speed of onset, spatial dispersion and temporal spacing. An international definition on hazard is relevant in defining the theme. The internationally agreed terminology on disasters should be adopted in this document (UNISDR): Hazards is defined as a potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards can include latent conditions that may represent future threats and can have different origins: natural (geological, hydrometeorological and biological) or induced by human processes (environmental degradation and technological hazards). Hazards can be single, sequential or combined in their origin and effects. Each hazard is characterised by its location, intensity, frequency and probability. Geological hazards are natural earth processes or phenomena that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Geological hazard includes internal earth processes or tectonic origin, such as earthquakes, geological fault activity, tsunamis, volcanic activity and emissions as well as external processes such as mass movements: landslides, rockslides, rock falls or avalanches, surfaces collapses, expansive soils and debris or mud flows. Geological hazards can be single, sequential or combined in their origin and effects. Hydrometeorological hazards are natural processes or phenomena of atmospheric, hydrological or oceanographic nature, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hydrometeorological hazards include: floods, debris and mud floods; tropical cyclones, storm surges, thunder/hailstorms, rain and wind storms, blizzards and other severe storms; drought, desertification, wildland fires, temperature extremes, sand or dust storms; permafrost and snow or ice avalanches. Hydrometeorological hazards can be single, sequential or combined in their origin and effects. Many of the hazards are sudden in their nature. However, several categories of natural hazards with major impacts on civil security and on environmental/ cultural and economic assets are not sudden in nature. They may be permanent phenomena going unnoticed (e.g..: radon gas emanations, deficit or excess of elements in soils and water), or slow phenomena (slow ground motion). Technological hazards are commonly sudden failure of a construction or a process causing significant damage. Natural hazards have the potential to precipitate technological hazards. Usually continuous processes like pollution/emission is not classified as hazards. However, repeated emissions might be called hazards, e.g. large scale chemical, radiation or oil spills. Continuous pollution and other environmental problems may have an adverse effect also on the size and frequency of some kinds of natural hazards. Knowledge about "Natural hazards areas" is important in the identification and delineation of risk zones. The natural hazards areas may reflect all atmospheric, meteorological, hydrologic, geological and wildfire phenomena that, because of their location, severity, and frequency, have the potential to seriously affect society, e.g. floods, landslides and subsidence, avalanches, forest fires, earthquakes, volcanic eruptions, shrinking and swelling soils, radon gas emanations, deficit or excess of trace elements in soils or water. Data and services are probably needed for both risk assessment and emergency situations Special warning services may be relevant. Underneath is given examples of some important natural hazards, with information on occurrence: location and frequency and with some information on the datasets, coverage etc. Areas prone to flooding by inland waters and lakes: Areas flooded due to exceptional raise of water table in groundwater, rivers and lakes, affecting adjacent land or areas further away being at the same altitude or lower than the flooding water. Affecting housing and industrial sites, agricultural land, transport network, sewage systems, dams etc. Occurrence: Flat river plains, delta areas, valley bottoms and shorelines. - Physical mapping of areas susceptible to flooding, line for highest recorded level, also division into zones with different susceptibility classes. Data needs: detailed elevation model and measurements in the field - Areas with certain regulations/ restrictions for different land use/ resource use linked to flooding risk. - Constructions for flood control - Data set on restriction zones on land use/ building/ activities downstream reservoirs in case of reservoir brake-down - Drainage capacity of ground and soil sealing areas with low drainage capacity Areas prone to flooding by spring tide/ exceptional sea level rise Areas prone to flooding due to exceptional raise of water table the sea and backwaters, affecting adjacent land or areas further away being at the same altitude or lower than the flooding water. Affecting housing and industrial sites, agricultural land, transport network, sewage systems, dams etc Occurrence: Flat coastal areas, areas lower than original sea level. Commonly harbours, trade areas etc. Frequency: Floods, as storms, are among the most common natural disasters in Europe – with the effect of being of the most costly in terms of economy and insurance. - Physical mapping of areas susceptible to flooding, line for highest recorded level, also division into zones with different

susceptibility classes. Data needs: detailed elevation model and/or measurements in the field.

- measures by radar satellites or air born equipment to measure water level
- field measurement

- Constructions for flood control
- Areas with certain regulations/ restrictions for different land use/ resource use linked to flooding risk.

Earthquakes

Earthquakes are widespread in the EU and other European Countries. The most destructive events have occurred in the Mediterranean countries, particularly Greece and Italy, which are in the collision zone between the Eurasian and African crustal plates. Through the last three decades several thousand persons have died and injured, several hundred thousand became homeless in events in Greece and Italy. Data needed for getting overview and handling the hazard:

- date and time of occurence; - epicenter location, depth, with a liability index - Magnitude and type of magnitude used - Observations (local intensity (MSK 1964 standard) with a liability index) - Triggered effects – Fault
- Data needed for emergency/ rescue operations

Volcano eruptions:

A few active volcanoes exist in the EU and other European Countries. The activity is low and generally the threats are minimal compared to other natural hazards. Some destructive events have occurred in the Mediterranean countries, such as Italy over the past decades. Actions are usually coped with at the local level.

- It is difficult to outline important spatial data sets linked to volcano activities. There might exist maps on expected lava flow channels and restriction areas for certain activities.

Mud slides, land slides and quick (saline leached) clay soils slides:

- clay rich shrinking and swelling soils
- areas of unstable terrain, slide area divided into zones of different susceptibility classes
- borehole locations with further information on the salt content etc
- affected area if area is subject to slumping and landslip
- Areas with activity restrictions – which kinds of operations are allowed in order to prevent slides and which areas are not to be built on. Different countries have different threshold levels e.g. concerning slope degree on land used for buildings, the values depending on the ground condition (soil, clay, bedrock)

Areas prone to mountain blocks slides and stone slides:

Occurrence: Mountain block slides mostly in alpine environment with "young landscapes" where frost and water erosion is active, stone slides areas with steep slopes and loose material. Problems occur where land use includes settlements, infrastructure etc.

- Physical mapping of areas susceptible to land block slides divided into zones with different susceptibility classes. Based on mapping of bedrock structures.
- Physical mapping of areas susceptible to stone slides divided into zones with different susceptibility classes. Further info on kind of material. A rough assessment can be based on analysis of slope angle, slope length and rock stability.
- Anticipated affected areas followed by a land block slide; the stone masses themselves and following flooded areas.
- Areas with certain regulations/ restrictions for different land use/ resource use linked to land block slide risk and stone slide risk.
- Constructions for directing stone slides

Areas prone to snow slides - avalanches:

Occurrence: In areas with significant snow cover combined with steep slopes. Wind will affect the creation of snowdrifts.

- Physical mapping of areas susceptible to snow slides divided into zones with different susceptibility classes
- Areas with certain regulations/ restrictions for different land use/ resource use linked to snow slide risk.
- Constructions for directing slides

Areas susceptible to forest, bush and grassland fires

Areas susceptible to forest, bush and grassland fires can be analysed by using

- Satellite images
- Vegetation cover, composition and strata
- Elevation data
- Meteorological data, Precipitation, temperature, winds

Areas of installations prone to storms/ wind damage

Occurrence: Unclear picture; seas, coastal areas and narrow valleys, but also other areas within the continent. In addition

	storms, as floods, are among the most common natural disasters in Europe – thus also being the most costly in terms of economy and insurance. - Data sets. Areas with recorded extreme wind Coastal erosion Coastal erosion is an important and costly category of natural hazard of growing significance in a climate change context Radon areas Natural radiation from bedrocks and unconsolidated rocks are considered as natural risk zones due to a possible high radon concentration in indoor air.
Tópicos/IG	Riscos naturais Riscos geológicos Riscos hidrometeorológicos Riscos de tempestades e destruição provocada pelo vento Zonas de risco de cheias provocadas por águas interiores Zonas de risco de cheias provocadas pela subida do nível do mar Riscos de erosão costeira Riscos de radiação Terramotos/sismos Erupções vulcânicas Deslizamentos Avalanches Desmoronamentos
Instituições	IGP ← tem competências neste tema? ANPC ← Decreto-Lei nº 75/2007, de 29 de Março – Lei orgânica da ANPC AFN ← Decreto-Lei n.º 159/2008, de 8 de Agosto – Lei orgânica da AFN e Portaria n.º 958/2008, de 26 de Agosto - Determina estrutura das direcções regionais e da estrutura nuclear dos serviços centrais da AFN INAG ← Decreto-Lei nº 135/2007, de 27 de Abril – Lei orgânica do INAG e Portaria nº 529/2007, de 30 de Abril - Aprova os Estatutos do INAG LNEG ← Decreto-Lei nº 208/2006, de 27 de Outubro – orgânica do Ministério da Economia e Inovação e Decreto-Lei n.º 354/2007, de 29 de Outubro - orgânica do Laboratório Nacional de Energia e Geologia, IP IM ← tem competências neste tema??? IH ← tem competências neste tema???
CDG	IGP - Carta de Risco de Incêndio Florestal ANPC - a fazer.. AFN - Mapa de Perigosidade de Incêndio Florestal - Desertificação ????? INAG - Sistema Nacional de Informação de Recursos Hídricos (SNIRH) - Zonas inundáveis LNEG - a fazer.. IM - Risco de incêndio meteorológico ????? - Actividade sísmica http://www.meteo.pt/pt/sismologia/sismObservGeral.jsp IH - a fazer..
Observações	O IGP considera-se produtor deste tema e tem informação geográfica que nele se enquadra contudo carece de competências formais.

	O IM e o IH possuem informação relativa a este tema mas não se consideram produtores. A ANPC não preencheu os temas INSPIRE pelos quais se considera detentor/utilizador/distribuidor/produtor.

III.13 ATMOSPHERIC CONDITIONS (CONDIÇÕES ATMOSFÉRICAS)

Directiva	Physical conditions in the atmosphere. Includes spatial data based on measurements, on models or on a combination thereof and includes measurement location Condições físicas da atmosfera. Inclui dados geográficos baseados em medições, em modelos ou numa combinação de ambos, bem como os sítios de medição.
FCD	https://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/26 Historical versions of the theme definition are found in the INSPIRE IMS and Scoping papers: - Spatial data reflecting the physical conditions of the air and atmosphere, either as isolines, grids or other spatial forms. These can be based on measurements or models. This could also include the measurement locations. (INSPIRE IMS, 2003) - Physical conditions in the atmosphere, represented as lines, grids or points. Includes spatial data sets based on measurements, on models or on a combination thereof and includes measurement locations. (INSPIRE Scoping, 2004) In order to place into context the range of spatial data types relevant to this theme, we consider the typical 'forecast cycle' of a national meteorological service (NMS). This will: (a) collect meteorological observations over (say) a six-hour interval, (b) 'assimilate' these into a numerical model to produce an estimate of the current atmospheric state, (c) use this analysis as the initial condition for a model forecast run forward in time (typically out to several days). Four broad types of data are involved at different phases of the cycle: 1. Observations: around 11000 surface stations globally make up the Global Observing System, reporting such atmospheric parameters as weather, cloud, temperature, humidity, wind, visibility, pressure. A subset of these stations make 'climate observations' which include daily temperature minimum and maximum, sunshine hours, rainfall amount etc. In addition, around 1000 'upper-air' stations make radiosonde (free-rising balloon) observations of pressure, wind, temperature and humidity. Voluntary observing ship and drifting buoys make marine observations including sea surface temperature, and wave height and period. Several hundred thousand reports per day of pressure, winds and temperature are made from aircraft observations. 2. Synoptic analysis: Gridded wind, temperature, humidity, geopotential height, precipitation, etc. Also, 'sensible weather' elements (fronts, cloud, thunderstorm activity etc) will be analysed. 3. Forecasts: Numerous forecast products are produced operationally. A conventional weather forecast contains similar elements to the synoptic analysis. 4. Climatological data: Long-term time-series' of data (either observations or analyses) may be analysed statistically to create climatologies (e.g. 20th century decadal averages, seasonal/monthly minimum or maximum, etc.). There is considerable overlap and ambiguity between the themes 'Atmospheric conditions' and 'Meteorological geographical features' – e.g. weather conditions ('Meteorological geographical features') including precipitation, temperature, wind etc. are precisely components of the atmospheric state ('Atmospheric conditions'). Numerous suggestions have been made by stakeholders to resolve this ambiguity. They include: - merging the themes (it is impossible to amend the Directive, but it would be sensible to consider the themes jointly during data specification development) - distinguishing 'field-based data' (Atmospheric conditions) from 'point-based data' (Meteorological geographical features) - distinguishing 'time-series & near-real-time data' (Atmospheric conditions) from 'gridded climate data' (Meteorological geographical features) - distinguishing 'climate data' (Atmospheric conditions) from 'observations and forecasts' (Meteorological geographical features) To resolve the ambiguity between themes, we consider the multi-level approach to data needs assessment applied in the INSPIRE 'Environmental Thematic User Needs Position Paper' (2002). Data at local or regional level are often needed for management and policy implementation, while lower resolution ('smaller scale') data are often required for reporting and policy development/evaluation. The latter includes summaries and integrated data products. The scope of 'Atmospheric conditions' thematic data should be limited to (six-hourly) synoptic analyses and forecasts (typically gridded model fields), climatological data, and other integrated and/or summary data. Ambiguity remains in some areas. For instance, it is unclear whether the Directive definition should include air quality information (e.g. airborne particulates, atmospheric chemistry). Similarly, while marine observations are collected in support of meteorological forecasting, they include parameters associated with the oceanographic/sea themes. Certain physical parameters of the atmospheric boundary-layer could be associated either to the atmospheric or oceanographic themes. These ambiguities are referred to the TWG and will be informed also by Use Cases and User Requirements. The WMO operates a dedicated network (the Global Telecommunications System) to distribute observations and data products. Data exchange is governed by WMO Resolution 40, which provides for free and unrestricted exchange of observational data 'essential' for forecast activities. 'Additional' nominated data and products may be provided with charge, while all data must be supplied free of charge (excluding costs of reproduction and delivery) for research and education. . The ECOMET Catalogue (http://www.meteo.oma.be/ECOMET/Categories of data and products.htm) provides a 'one-stop shop' index of both 'essential' and chargeable data and product offerings from European NMSs. A similar catalogue is available for the European Centre for Medium-range Weather Forecasting (ECMWF) (http://www.ecmwf.int/products/catalogue/).
Tópicos/IG	O âmbito do tema "Condições Atmosféricas" deverá ser limitado às previsões e análises sinópticas (6 horas) (tipicamente modelos matriciais), aos dados climatológicos e a outros dados de integração.

	Os dados espaciais relevantes para este tema são os dados típicos de um "ciclo de previsão" de um serviço meteorológico nacional: 1. Observações de cerca de 11000 estações de superfície que globalmente constituem o Global Observing System, que reporta parâmetros atmosféricos tais como: - previsões do estado do tempo - nebulosidade - temperatura - humidade - vento - visibilidade - a pressão atmosférica Um subconjunto destas estações faz "observações climáticas" que incluem a temperatura diária mínima e máxima, horas de sol, quantidade de precipitação. Adicionalmente, cerca de 1000 'upper-air' stations fazem observações de pressão atmosférica , vento, temperatura e humidade por radiosondas. Navios de observação realizam as observações marinhas para suportar as previsões meteorológicas, incluindo: - temperatura superficial do mar, - altura e período das ondas. Observações aéreas produzem informação diária de pressão atmosférica, ventos e temperaturas. 2. Análise sinóptica: Grelhas de ventos, temperaturas, humidade, nível geopotencial, precipitação, etc. e ainda, 'elementos sensíveis do estado do tempo' (frentes, nuvens, tempestades, etc). 3. Previsões: as previsões do estado do tempo incluem elementos semelhantes aos da análise sinóptica. 4. Dados Climatológicos: 'Séries de tempo de longo-prazo' dos dados (observações ou análises) podem ser analisadas estatisticamente para criar climatologias (médias ponderadas por década do século XX, mínimos e máximos sazonais, etc.). Permanece a dúvida se este tema inclui a informação relativa à qualidade do ar (e.g. partículas no ar, química atmosférica).
Instituições	IM ← Lei n.º 157/2007, de 27 de Abril - Lei orgânica do IM IH ← Decreto-Lei n.º 134/91, de 4 de Abril – Lei orgância do IH APA ← Decreto-Regulamentar nº 53/2007, de 27 de Abril – Lei orgânica da APA e Portaria n. 573-C/2007 de 30 de Abril - Estrutura dos Serviços e Competências das Unidades Orgânicas da APA (se se considerarem as questões de qualidade do ar) INAG ← Decreto-Lei nº 135/2007, de 27 de Abril – Lei orgânica do INAG e Portaria nº 529/2007, de 30 de Abril - Aprova os Estatutos do INAG
CDG	IM – Informações e previsões do tempo no território nacional; – vigilância e o estudo do clima e da sua variabilidade, contribuindo para a análise dos efeitos decorrentes das alterações climáticas e para a definição das correspondentes medidas de adaptação; – vigilância sísmica e elaborar e difundir informação adequada; – rede de estações magnéticas fixas e móveis e elaborar e difundir a informação adequada; – rede de medição dos parâmetros atmosféricos e dar apoio, nas suas áreas de competência, à definição e exploração dos resultados das redes de monitorização da qualidade do ar – Ambiente Atmosférico • observação/monitorização da radiação solar e UV, do ozono total e do ozono à superfície, dos compostos de enxofre no ar, da matéria particulada (PM10), dos compostos inorgânicos e de metais pesados na água da precipitação. • Monitorização, em particular na troposfera, das concentrações dos constituintes atmosféricos que possam afectar a qualidade do ambiente e/ou o clima - enxofre, óxidos de azoto, amoníaco, compostos orgânicos voláteis, matéria particulada (PM10), metais pesados e poluentes orgânicos persistentes. IH - Sistema de Informação de Climatologia Meteo-Oceanográfica – SICMO http://www.hidrografico.pt/climatologia.php O Sistema de Informação de Climatologia Meteo-Oceanográfica (SICMO) contém informação climatológica mensal e bi-sazonal da temperatura do mar à superfície, informação de climatologia bi-sazonal meteorológica e ainda dados de climatologia hidrológica mensal por áreas com espaçamento de um grau. APA e INAG - a fazer…

Observações	Regista-se uma sobreposição considerável entre este tema e o tema III.14 Condições geometeorológicas. Assim, foram consideradas as mesmas instituições. Permanece a dúvida se este tema inclui ou não informação relativa à qualidade do ar (e.g. partículas no ar, química atmosférica). De modo similar, as observações marinhas de suporte à previsão meteorologica, incluem parâmetros associados aos temas oceanográficos. Sugestões dos parceiros para resolução das ambiguidades existentes entre os temas III.13 e III.14: – junção dos temas na fase de especificação dos dados – distinção entre 'field-based data' (Condições atmosféricas) de 'point-based data' (Condições geometeorológicas) – distinção 'time-series & near-real-time data' (Condições atmosféricas) from 'gridded climate data' (Condições geometeorológicas) – distinção entre 'dados climáticos" (Condições atmosféricas) de "observações e previsões" (Condições geometeorológicas) A APA não preencheu os temas INSPIRE pelos quais se considera detentor/utilizador/distribuidor/produtor. O IH e o INAG não se consideram produtores deste tema

III.14 METEOROLOGICAL GEOGRAPHICAL FEATURES (CONDIÇÕES GEOMETEOROLÓGICAS)

Directiva	Weather conditions and their measurements; precipitation, temperature, evapotranspiration, wind speed and direction. Condições atmosféricas e sua medição; precipitação, temperatura, evapotranspiração, velocidade e direcção do vento.
FCD	https://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/27 Historical versions of the theme definition are found in the INSPIRE IMS and Scoping papers: – Weather conditions and their measurements; precipitation, temperature, evapotranspiration, wind. (INSPIRE IMS, 2003) – Weather conditions and their measurements; precipitation, temperature, evapotranspiration, wind speed and direction (INSPIRE Scoping, 2004) In order to place into context the range of spatial data types relevant to this theme, we consider the typical 'forecast cycle' of a national meteorological service (NMS). This will: (a) collect meteorological observations over (say) a six-hour interval, (b) 'assimilate' these into a numerical model to produce an estimate of the current atmospheric state, (c) use this analysis as the initial condition for a model forecast run forward in time (typically out to several days). Four broad types of data are involved at different phases of the cycle: 1. Observations: around 11000 surface stations globally make up the Global Observing System, reporting such atmospheric parameters as weather, cloud, temperature, humidity, wind, visibility, pressure. A subset of these stations make 'climate observations' which include daily temperature minimum and maximum, sunshine hours, rainfall amount etc. In addition, around 1000 'upper-air' stations make radiosonde (free-rising balloon) observations of pressure, wind, temperature and humidity. Voluntary observing ship and drifting buoys make marine observations including sea surface temperature, and wave height and period. Several hundred thousand reports per day of pressure, winds and temperature are made from aircraft observations. 2. Synoptic analysis: Gridded wind, temperature, humidity, geopotential height, precipitation, etc. Also, 'sensible weather' elements (fronts, cloud, thunderstorm activity etc) will be analysed. 3. Forecasts: Numerous forecast products are produced operationally. A conventional weather forecast contains similar elements to the synoptic analysis. 4. Climatological data: Long-term time-series' of data (either observations or analyses) may be analysed statistically to create climatologies (e.g. 20th century decadal averages, seasonal/monthly minimum or maximum, etc.). There is considerable overlap and ambiguity between the themes 'Atmospheric conditions' and 'Meteorological geographical features' – e.g. weather conditions ('Meteorological geographical features') including precipitation, temperature, wind etc. are precisely components of the atmospheric state ('Atmospheric conditions'). Numerous suggestions have been made by stakeholders to resolve this ambiguity. They include: - merging the themes (it is impossible to amend the Directive, but it would be sensible to consider the themes jointly during data specification development) - distinguishing 'field-based data' (Atmospheric conditions) from 'point-based data' (Meteorological geographical features) - distinguishing 'time-series & near-real-time data' (Atmospheric conditions) from 'gridded climate data' (Meteorological geographical features) - distinguishing 'climate data' (Atmospheric conditions) from 'observations and forecasts' (Meteorological geographical features) To resolve the ambiguity between themes, we consider the multi-level approach to data needs assessment applied in the INSPIRE 'Environmental Thematic User Needs Position Paper' (2002). Data at local or regional level are often needed for management and policy implementation, while lower resolution ('smaller scale') data are often required for reporting and policy development/evaluation. The latter includes summaries and integrated data products. The scope of 'Meteorological geographical features' thematic data should be limited to local-level high-resolution (weather-related) data, typically observations. – This includes synoptic observations from stations making up the WMO RA VI (European) Regional Basic Synoptic Network. The WMO operates a dedicated network (the Global Telecommunications System) to distribute observations and data products. Data exchange is governed by WMO Resolution 40, which provides for free and unrestricted exchange of observational data 'essential' for forecast activities. 'Additional' nominated data and products may be provided with charge, while all data must be supplied free of charge (excluding costs of reproduction and delivery) for research and education. The ECOMET Catalogue (http://www.meteo.oma.be/ECOMET/Categories of data and products.htm) provides a 'one-stop shop' index of both 'essential' and chargeable data and product offerings from European NMSs. A similar catalogue is available for the European Centre for Medium-range Weather Forecasting (ECMWF) (http://www.ecmwf.int/products/catalogue/).
Tópicos/IG	O âmbito do tema "Condições geometeorológicas" deverá limitar-se a dados de estado do tempo locais e de alta resolução, tipicamente: - Observações sinópticas das estações da WMO RA VI (European) Regional Basic Synoptic Network. A WMO gere uma rede dedicada (the Global Telecommunications System) que distribui dados observados e produtos associados. A troca de dados é gerida pela WMO Resolution 40, que fornece gratuitamente e sem restrições dados observados essenciais para as actividades de previsão do estado do tempo. Dados e produtos adicionais podem ser fornecidos mediante pagamento de taxas, mas todos os dados deverão ser fornecidos sem custos (apenas os de reprodução e envio) para

	investigação e ensino. O catálogo ECOMET (http://www.meteo.oma.be/ECOMET/Categories of data and products.htm) funciona como um índice 'one-stop shop' tanto para os dados e produtos essenciais, como para os "cobrados" dos serviços meteorológicos Europeus. Existe um catálogo semelhante para o European Centre for Medium-range Weather Forecasting (ECMWF) (http://www.ecmwf.int/products/catalogue/).
Instituições	IM ← Lei n.º 157/2007, de 27 de Abril - Lei orgânica do IM IH ← Decreto-Lei n.º 134/91, de 4 de Abril – Lei orgância do IH INAG ← Decreto-Lei nº 135/2007, de 27 de Abril – Lei orgânica do INAG e Portaria nº 529/2007, de 30 de Abril - Aprova os Estatutos do INAG APA ← Decreto-Regulamentar nº 53/2007, de 27 de Abril – Lei orgânica da APA e Portaria n. 573-C/2007 de 30 de Abril - Estrutura dos Serviços e Competências das Unidades Orgânicas da APA (se se considerarem as questões de qualidade do ar)
CDG	IM - Informações e previsões do tempo no território nacional; - vigilância e o estudo do clima e da sua variabilidade, contribuindo para a análise dos efeitos decorrentes das alterações climáticas e para a definição das correspondentes medidas de adaptação; - vigilância sísmica e elaborar e difundir informação adequada; - rede de estações magnéticas fixas e móveis e elaborar e difundir a informação adequada; - rede de medição dos parâmetros atmosféricos e dar apoio, nas suas áreas de competência, à definição e exploração dos resultados das redes de monitorização da qualidade do ar; - Observação Meteorológica • Medição de grandezas e monitorização da evolução temporal e espacial dos principais elementos meteorológicos. • Medições da pressão atmosférica, da temperatura e da humidade relativa do ar e do vento, em regra duas vezes por dia, desde a superfície do globo até cerca de 30Km de altitude. • monitorização de trovoadas. • Informação recolhida por satélites meteorológicos, designadamente o METEOSAT/MSG (europeu) e os NOAA (americano). • Monitorização de elementos ambientais, designadamente os que se referem à composição da atmosfera, incluindo ozono total e à superfície e radiação UV. IH - Sistema de Informação de Climatologia Meteo-Oceanográfica (SICMO) - contém informação climatológica mensal e bi-sazonal da temperatura do mar à superfície, informação de climatologia bi-sazonal meteorológica e ainda dados de climatologia hidrológica mensal por áreas com espaçamento de um grau. http://www.hidrografico.pt/climatologia.php INAG - Sistema Nacional de Informação de Recursos Hídricos (SNIRH): Dados hidrometeorológicos; Avaliação da Precipitação com base em dados recolhidos em 37 estações udométricas; Evolução da Temperatura e Humidade Relativa nos últimos 7 dias APA - a fazer…
Observações	Regista-se uma sobreposição considerável entre este tema e o tema III.13 Condições atmosféricas. Assim, foram consideradas as mesmas instituições. O IH não se considera produtor deste tema A APA não preencheu os temas INSPIRE pelos quais se considera detentor/utilizador/distribuidor/produtor.

III.15 OCEANOGRAPHIC GEOGRAPHICAL FEATURES (CARACTERÍSTICAS OCEANOGRÁFICAS)

Directiva	Physical conditions of oceans (currents, salinity, wave heights, etc.). Condições físicas dos oceanos (correntes, salinidade, altura das ondas, etc.).
FCD	https://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/28 Historical versions of the theme definition are found in the INSPIRE IMS and Scoping papers: - The measurable physical conditions of oceans e.g. salinity, oxygen, other chemical components, currents. Representation e.g. as isolines, grids or other spatial organisation. Based on measurements directly or combined with models. (INSPIRE IMS, 2003) - Physical conditions of oceans (e.g. currents, salinity, etc) represented as lines, grids or points. Includes spatial data sets based on measurements, on models or on a combination thereof and includes measurement locations (INSPIRE Scoping, 2004) Both 'Oceanographic geographical features' and 'Sea-regions' are concerned with physical conditions of marine water-masses. (This is a similar overlap to that which exists for themes 7.13 "Atmospheric Conditions" and 7.14 "Meteorological geographical features".) To resolve the ambiguity, we consider the multi-level approach to data needs assessment applied in ETC. Data at local or regional level are often needed for management and policy implementation, while lower resolution ('smaller scale') data are often required for reporting and policy development/evaluation. The latter includes summaries and integrated data products. We regard the theme "Oceanographic geographical features" as being concerned with the high seas and larger oceanic physical/dynamic structures. Operational forecasting of ocean dynamic physical conditions – together with the prerequisite observations – are key elements of this theme (e.g. through the GMES Marine Core Service), with France and UK both running a operational facilities. Relevant observational data include: - remote-sensing of sea surface temperature, dynamic topography (by satellite altimeter), synthetic aperture radar winds, ocean colour (for primary productivity and sedimentation) - drifting buoys – surface velocity, temperature, atmospheric pressure - ships-of-opportunity and regular voluntary observing ships provide temperature (bathythermograph) profiles - Argo floats provide temperature and salinity profiles
Tópicos/IG	Características físicas dos oceanos Batimétricas Nível do mar Previsão do estado do mar, baseada em modelos Previsão das marés e da agitação marítima
Instituições	INRB ← Decreto-Lei n.º 356/2007, de 29 de Outubro – Lei orgânica do INRB e Portaria n.º 1416/2007, de 30 de Outubro - Estatutos do INRB tem competências neste tema??? IH← Decreto-Lei n.º 134/91, de 4 de Abril – Lei orgânica do IH IM ← Lei n.º 157/2007, de 27 de Abril - Lei orgânica do IM IGP ← Decreto-Lei nº 133/2007, de 27 de Abril – Lei orgânica do IGP LNEG ← tem competências para neste tema???
CDG	INRB (IPIMAR) - Medições de características físicas e químicas dos oceanos (temperatura, salinidade, ...) IH - Estações Ondógrafo – agitação marítima, temperatura da água do mar - Previsão das marés e Previsão da Agitação Marítima - Cartas náuticas (batimétricas). Cartas dos sedimentos IM - Modelos de previsão do estado mar (medições de temperatura, vento e pressão atmosférica) IGP - Medição do nível do Mar LNEG - a fazer
Observações	Considerando a Lei orgânica e Estatutos, parece não haver qualquer obrigação formal do INRB para com este tema do INSPIRE contudo, alguns projectos de I&D do IPIMAR parecem relevantes. O INRB não preencheu os temas INSPIRE pelos quais se considera detentor/utilizador/distribuidor/produtor.

	O IGP não se considera produtor deste tema apesar de dispor de informação que nele se enquadre O LNEG considera-se produtor deste tema apesar de não parecer ter competências formais.

III.16 SEA REGIONS (REGIÕES MARINHAS)

Directiva	Physical conditions of seas and saline water bodies divided into regions and sub-regions with common characteristics. Condições físicas dos mares e massas de água salinas divididas em regiões e sub-regiões com características comuns.
FCD	https://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/29 A historical version of the theme definition is found in the INSPIRE IMS paper: - Seas and saline water bodies divided into regions and sub-regions. Each region with common characteristics, concerning water flow/ circulation, adjacent river catchments, bio-chemical or temperature of water, based on scientific criteria. Detailed information at regional level exist (INSPIRE IMS, 2003). Both 'Oceanographic geographical features' and 'Sea-regions' are concerned with physical conditions of marine water-masses. (This is a similar overlap to that which exists for themes 7.13 "Atmospheric Conditions" and 7.14 "Meteorological geographical features".) To resolve the ambiguity, we consider the multi-level approach to data needs assessment applied in ETC. Data at local or regional level are often needed for management and policy implementation, while lower resolution ('smaller scale') data are often required for reporting and policy development/evaluation. The latter includes summaries and integrated data products. We regard the "Sea regions" theme as focussing on the local/regional level coastal zone. Whereas 7.15 'Oceanographic geographical features' focuses on physical conditions and general circulation of offshore oceanic waters, the 'Sea regions' theme is concerned with marine features of the coastal zone – regions defined as 'transitional waters' and 'coastal waters' in the Water Framework Directive: - transitional waters: bodies of surface water in the vicinity of river mouths which are partly saline in character as a result of their proximity to coastal waters but which are substantially influenced by freshwater flows - coastal waters: surface water on the landward side of a line, every point of which is at a distance of one nautical mile on the seaward side from the nearest point of the baseline from which the breadth of territorial waters is measured, extending where appropriate up to the outer limit of transitional waters The World Meteorological Organisation also has a geometry-based sea region classification, dividing the ocean into Marsden Squares. Both biotic and physical parameters and indicators are important in the classification and delineation of sea regions. Physical data requirements for important indicators defined in the WFD and the Integrated Coastal Zone Management policy are outlined in the ETC paper. These include: - nutrients (nitrate, phosphate and nitrogen: phosphorus ratio) by regional sea and water body type - concentrations of hazardous substances and pollutants (incl. heavy metals, persistent organic pollutants) - productivity indicators (incl. surface cholorophyll-a) - biological classification of waters - water masses/layers characterised by bulk temperature and salinity properties - polar area features (incl. pack ice) - wind (climatological and meteorology - benthic parameters (sediment, benthic communities/habitats) - sea level - chemical species and concentrations - physical characteristics (incl. temperature, salinity) - currents (including surface currents) - tidal zones - waves
Tópicos/IG	Áreas marinhas protegidas
Instituições	INRB ← Decreto-Lei n.º 356/2007, de 29 de Outubro – Lei orgânica do INRB e Portaria n.º 1416/2007, de 30 de Outubro - Estatutos do INRB tem competências neste tema??? IH← Decreto-Lei n.º 134/91, de 4 de Abril – Lei orgânica do Instituto Hidrográfico LNEG ← tem competências para neste tema??? ICNB← Decreto-Lei nº 136/2007, de 27 de Abril – Aprova a orgânica do ICNB e Portaria nº 530 / 2007, de 30 de Abril - Aprova os estatutos do ICNB
CDG	INRB (IPIMAR) - Medições de características físicas e químicas dos oceanos (temperatura, salinidade, ...) IH - Estações Ondógrafo – agitação marítima, temperatura da água do mar - Cartas náuticas (batimétricas). Correntes marítimas - Cartas dos sedimentos

	LNEG - a fazer.. ICNB - Áreas marinhas protegidas
Observações	Considerando a Lei orgânica e Estatutos, parece não haver qualquer obrigação formal do INRB para com este tema do INSPIRE contudo, alguns projectos de I&D do IPIMAR parecem relevantes. O INRB não preencheu os temas INSPIRE pelos quais se considera detentor/utilizador/distribuidor/produtor. O IH e o ICNB não se consideram produtores deste tema O LNEG considera-se produtor deste tema apesar de não parecer ter competências formais.

III.17 BIO-GEOGRAPHICAL REGIONS (REGIÕES BIOGEOGRÁFICAS)

Directiva	Areas of relatively homogeneous ecological conditions with common characteristics. Zonas de condições ecológicas relativamente homogéneas com características comuns.
FCD	https://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/30 Data component description: Bio-geographical regions show the extent of areas with common characteristics, usually based on climatic, topographic and geobotanical information. Thus the bio-geographical regions show areas with relatively homogeneous ecological conditions. Included in this theme is vegetation map data. The determination of structure and composition of the vegetation is based essentially on stands of ecosystems and their correlation with particular site conditions, commonly based on plant-sociological classification. Vegetation can be mapped either as actual/existing or potential vegetation cover. The classification of potential vegetation depicts the potential distribution of the main natural plant communities. The mapping is based essentially on remaining stands of natural or near-natural ecosystems corresponding to the actual climatic and edaphic conditions. Several high-level data exists for Pan-European level, large-scale data with fragmented systems, resolution and coverage. Once produced, the bio-geographical data and potential vegetation map data potential vegetation maps are relatively stable and regarded as reference data/maps. Mapping of existing vegetation at local level needs to be updated to depict changes in vegetation. - Nomenclature: The high-level and pan-European data follow agreed nomenclatures. Concerning local and regional data, there exist a broad variety of nomenclatures, e.g. in vegetation mapping. - Span in accuracy: Bio-geographical regional data commonly small-scale data, e.g. in 1: 1 mill or smaller. Vegetation data are commonly more detailed, at local level medium precision data, 1: 50.000 or better. Common scales used are 1:25.000 and 1: 10.000. - Clarification about definition, boundary to other INSPIRE themes: Boundary between land cover and bio-geographical regions.
Tópicos/IG	Regiões Biogeográficas Terrestres Regiões Biogeográficas Marinhas
Instituições	ICNB← Decreto-Lei nº 136/2007, de 27 de Abril – Aprova a orgânica do ICNB e Portaria nº 530 / 2007, de 30 de Abril - Aprova os estatutos do ICNB
CDG	ICNB - Regiões Biogeográficas Terrestres (ICNB) - Regiões Biogeográficas Marinhas (ICNB)
Observações	O ICNB não se considera produtor deste tema

III.18 HABITATS AND BIOTOPES (HABITATS E BIÓTOPOS)

Directiva	Geographical areas characterised by specific ecological conditions, processes, structure, and (life support) functions that physically support the organisms that live there. Includes terrestrial and aquatic areas distinguished by geographical, abiotic and biotic features, whether entirely natural or semi-natural. Zonas geográficas caracterizadas por condições ecológicas, processos, estrutura e funções (de apoio às necessidades básicas) específicos que constituem o suporte físico dos organismos que nelas vivem. Inclui zonas terrestres e aquáticas, naturais ou semi-naturais, diferenciadas pelas suas características geográficas, abióticas e bióticas.
FCD	https://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/31 The "Habitats and biotopes" category of spatial data defined in the INSPIRE Directive is one of several themes in a wider grouping of biological organisms and biological communities - biodiversity. Includes habitats and biotopes as areas and their boundaries. Common to all spatial data that falls under this category is characterisation of the distribution of geographical areas being functional areas for living organisms, biotopes being the spatial and biotic environment of a biotic community/biocoenosis, while habitats being the spatial environment of specific species. Both climatic, geological, chemical and biological conditions affect distribution of species and communities, thus distribution and conditions of habitats and biotopes. Some species have strict specific requirements to the environment, while others are accepting broad ranges in environmental conditions. Thus biotopes and habitats may vary broadly between different organisms. Some species changes biotopes throughout the year, by changes in seasons or due to migration. Some biotopes/habitats are depending on management, e.g. all kinds of cultural landscapes. Time series in mapping may be used to identify changes in biotopes/habitats. Description of living areas for any kind of biota, usually used as a term for describing areas used by zoo-biota. Habitats commonly follow geobotanical/ bio-geographical regions/ vegetation types. In rough terms land cover classes and vegetation classes represent terrestrial habitats. Habitats can also be described at more detailed levels e.g. hedgerows, creeks etc. At sea differences in temperature, salinity, current, depth, topography, seabed geology or sediment conditions may form different habitats. Habitats and biotopes data can be made both by mapping in the field, remote sensing and aerial photography interpretation or modelling. Different documents and communities follow different definitions for habitats and biotopes. An example is the Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora. EUNIS has been developed as an international nomenclature for habitats. Different countries or communities have different classification systems. There may be difficulties in mapping accurately certain habitat classes between national nomenclatures and also between national and European nomenclatures. To find common European definitions and nomenclatures need to take into account both national systems and the different definitions used by international communities. Habitats and biotopes does only include areas represented by natural boundaries and classified according to their ecological or physical condition. Habitats and biotopes being designated as protected sites is not included, they fall under another category of INSPIRE themes, namely "Protected sites", as these represent administrative area regulation and not ecologically founded boundaries. The terms natural or semi-natural needs clarification, artificial landscapes being habitats (cultural landscapes like town areas, cultivated land, orchards, pastures etc) may be defined to be out of the scope of the theme.
Tópicos/IG	Características e classificação dos habitats naturais e seminaturais de Portugal Continental Distribuição dos habitats em Portugal Continental
Instituições	ICNB← Decreto-Lei nº 136/2007, de 27 de Abril – Aprova a orgânica do ICNB e Portaria nº 530 / 2007, de 30 de Abril - Aprova os estatutos do ICNB
CDG	ICNB - Distribuição dos habitats em Portugal Continental - Habitats naturais e seminaturais de Portugal Continental (características e composição florística)
Observações	O ICNB não se considera produtor deste tema

III.19 SPECIES DISTRIBUTION (DISTRIBUIÇÃO DAS ESPÉCIES)

Directiva	Geographical distribution of occurrence of animal and plant species aggregated by grid, region, administrative unit or other analytical unit. Distribuição geográfica da ocorrência de espécies animais e vegetais agregadas por quadrícula, região, unidade administrativa ou outra unidade analítica.
FCD	https://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/32 Pan-European, national or local mapping initiatives, resulting in spatial data for species in terrestrial and marine environments, e.g. for birds, insects, mammals, amphibians, reptiles, fish or vascular plants. Clarification: - The definition in INSPIRE Directive proposal does not include individual observations or other point based data, but focuses on aggregated versions of data about geographical distribution of species. Aggregation can be at any level of resolution, e.g. in geographical grid systems divided into 100x100 meter grid or 50x50km grid cells. Possibly also point-based observations and isolines generation between observations should be accepted and included in INSPIRE. Possibly these can be defined as options in the "other analytical unit". Aggregation may also be interpreted not only as space-based aggregation, but time-based aggregation as well. - Only species are mentioned in the INSPIRE definition. But earlier INSPIRE documents (INPIRE IMS, 2003) mentions both species or species grouped e.g. to families.
Tópicos/IG	Distribuição de espécies em Portugal Continental (fauna e flora) Mapas das Regiões de Proveniência das espécies florestais ocupação de várias espécies agrícolas e florestais??
Instituições	ICNB ← Decreto-Lei nº 136/2007, de 27 de Abril – Aprova a orgânica do ICNB e Portaria nº 530 / 2007, de 30 de Abril - Aprova os estatutos do ICNB AFN ← Decreto-Lei n.º 159/2008, de 8 de Agosto – Lei orgânica da AFN IGP ← tem competências relativamente à COS?
CDG	ICNB – Sistema de Informação do Património Natural (SIPNAT) – Distribuição de espécies em Portugal Continental (fauna e flora) AFN – Delimitação e respectivos Mapas das Regiões de Proveniência das espécies florestais IGP – Carta de Ocupação do Solo (COS)
Observações	O ICNB não se considera produtor deste tema O IGP não se considera produtor deste tema mas é o produtor da COS que possui informação relativa à distribuição das espécies (note-se que o IGP parece não ter competências legais para produzir a COS...)

III.20 ENERGY RESOURCES (RECURSOS ENERGÉTICOS)

Directiva	Energy resources including hydrocarbons, hydropower, bio-energy, solar, wind, etc., where relevant including depth/height information on the extent of the resource. Recursos energéticos, incluindo os de hidrocarbonetos, hidroeléctricos, de bio-energias, de energia solar, eólica, etc.,incluindo, quando pertinente, informação sobre as cotas de profundidade/altura do recurso.
FCD	https://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/33 Pan-European, national or local initiatives on mapping occur, resulting from governmental initiatives or private interests. There is a main distinction between fossil fuels and renewable energy resources. The concept of energy resources provides focus to the resource aspect and the extent/distribution of the resources. Thus, the technical constructions for abstraction, transport and treatment are not covered by this theme. However they are to a large extent covered in other themes, such as production and industrial facilities. Energy use, e.g. petrol consumption, is not covered by this theme. Licence areas, permission areas or planning areas linked to energy resource exploitation is covered by the theme "Area management/restriction/regulation zones and reporting areas". The term resource can be problematic to define, the quantification and thus location of a resource is depending on the technical and economic situation. Resource aspects should not only be restricted to the resources under utilisation, but should also include un-utilised resources. Fossil fuel resources include - Oil accumulation: hydrocarbot fields, petroleum volumes - Natural gas accumulations, including solid methane clathrates - Coal, lignite or peat deposits - Uranium ore deposits For these resources the nature, location and 3D geometry of the deposit (= geological resource) of the deposit, the nature of the economic energy carrier and the size of the reserves at a point in time are key attributes. The different kinds of renewable energy resources may include: - Hydropower: Water resources especially mapped according to energy potential. Commonly undertaken in the MS, carried out by governmental bodies or private firms. - Bio-energy resources: Forest resources, “scrap” forest, cereals or agricultural residues can be used for energy purposes, e.g. in the form of firewood or biodiesel. The resources or supply is sometimes being estimated and mapped. - Wind energy: Country inventories of wind energy is being done in areas where wind is being utilised or planned utilised. Estimated by wind measurement together with topographical information. Example: http://www.nve.no/vindatlas/ - Geothermal energy: The Earth's natural heat flow is of high interest as a renewable and clean energy source. Mapping of the resource can be available or relevant at local, regional or national levels. A Pan-European Atlas was published in 2002 by the EC (see reference materials). Geothermal energy systems use the natural heat of the subsoil by utilising warm groundwater from surficial deposits for direct heating or electricity generation (open system). Alternatively, shallow geothermal flows are exploited by ground source heat pumps (closed system). Common heat sources in bedrock or subsoil may be utilized - a circulation of an antifreeze solution in collector hoses which are lowered into relatively shallow boreholes bedrock or circulation of ground water from deep boreholes in bedrock. Heat pumps are suitable, too, for example for extraction of heat from air, rivers, seas and artificial components. - Solar power and resources: In order to reduce the need for extra heating solar conditions at local sites are important to bring into account in local planning. National, regional and local inventories on solar energy conditions is needed, relating to heating needs. Systems for storing solar heat is found at some locations. Solar resources may also be used in electricity production, through the use of solar cell technology (silicium cells). Air-based heat pumps can use solar energy stored in the air. - Other energy resources such as waves, currents etc.: The different kinds of renewable energy resources is long. The list above is only giving some examples. The quantification of the resources may be aggregated or detailed. The detailed information is to a large extent private business information. This includes for instance data about the internal structure of geological structures within oil fields. Within the INSPIRE context the data in question will mainly be aggregation and overview data. However, for public planning purposes at the local level detailed information about some of the renewable energy resources may be relevant. The geographical representation of the resources (objects) may be different in different scales. In the mapping and exploitation of the resources 2-d (ordinary maps) and 3-d geographical data are being used. Resources may be mapped by natural boundaries. Aggregated or overview information can be referring to grid cells in a geographical grid system, administrative units/areas, statistical units/areas or points.
Tópicos/IG	Notas: Consideração dos combustíveis fósseis e das energias renováveis; centra-se nos recursos e na sua extensão/distribuição; as infra-estructuras de extracção, transporte e tratamento e a utilização/consumo de energia não estão incluidos neste tema. Combustíveis fósseis: - Reservas de petróleo: campos de hidrocarbonetos, volumes de petróleo - Reservas de gás natural:, including solid methane clathrates - Depósitos de carvão, linhite ou turfa - Depósitos do minério urânio

	Energias renováveis - Hidroeléctrica: Mapas do potencial hidroeléctrico dos recursos hídricos - Recursos Bioenergéticos: Recursos Florestais , floresta "scrap", cereais ou resíduos agrícolas utilizáveis em produção de energia como madeira ou biodiesel. (mapas dos recursos, ou da oferta em termos energéticos). - Energia Eólica: Mpas de potencial eólico (e.g. conjugação dos dados dos ventos com o relevo); mapas de energia eólica em exploração. Estimated by wind measurement together with topographical information. Example: http://www.nve.no/vindatlas/ - Energia geotérmica: Mapas de distribuiição dos recursos de energia geotérmica ao nível local, regional ou nacional; - Energia solar – recursos e potencial: Insolação a nível local para utilização no planeamento municipal; inventários de condições de energia solar em relação com as necessidades de aquecimento; localização de sistemas de armazenamento da energia solar. - Outros recursos energéticos: energia das ondas, correntes, etc.
Instituições	DGEG ← Decreto-Lei nº 139/2007, de 27 de Abril – Lei orgânica da DGEG , Decreto-Lei nº 340/2007, de 12 de Outubro - Lei das pedreiras e Decreto-Lei n.º 389/2007, de 30 de Novembro - Altera o Decreto-Lei n.º 267/2002, de 26 de Novembro, que estabelece os procedimentos e define as competências para efeitos de licenciamento e fiscalização de instalações de armazenamento de produtos do petróleo e postos de abastecimento de combustíveis, e o Decreto-Lei n.º 125/97, de 23 de Maio, que estabelece as disposições relativas ao projecto, à construção e à exploração das redes e ramais de distribuição alimentadas com gases combustíveis da terceira família, simplificando o respectivo licenciamento LNEG ← Decreto-Lei nº 208/2006, de 27 de Outubro – orgânica do Ministério da Economia e Inovação e Decreto-Lei n.º 354/2007, de 29 de Outubro - orgânica do LNEG AFN ← Decreto-Lei n.º 159/2008, DR n.º 153, Série I, a 8 de Agosto – Lei orgânica da AFN e Portaria n.º 958/2008, de 26 de Agosto. DR. n.º 164, Série I - Determina estrutura das direcções regionais e da estrutura nuclear dos serviços centrais da AFN INAG ← Decreto-Lei nº 135/2007, de 27 de Abril – Lei orgânica do INAG e Portaria nº 529/2007, de 30 de Abril - Aprova os Estatutos do INAG
CDG	DGEG – Recursos energéticos: petróleo, carvão, gás; ondas, solar, eólica, geotérmica, biomassa, hídrica, biocombustível, biogás e lenhas e resíduos. – Recursos geológicos: massas minerais (pedreiras), depósitos minerais (minas), águas minerais e de nascente, recursos geotérmicos e petróleo. – Pedreiras: "Considerando que a actual Lei de Pedreiras [Decreto-Lei nº 340/2007 de 12 de Outubro] em vigor é um dos principais instrumentos da política para este sector [pedreiras], as acções prioritárias a desenvolver pelas diferentes entidades competentes deverão ter como objectivo: (...) Criar na DGEG um sistema de informação centralizada com acesso via Internet, tendo em vista uma ligação mais eficaz e rápida às D.R.E. e às Câmaras Municipais. Deverá ser de fácil acesso e "amigável", de forma a permitir uma actualização fácil do Cadastro Nacional de Pedreiras e a atribuição do respectivo nº nacional por parte da DGEG." – Energias Renováveis (energia das ondas, energia solar, energia eólica, energia geotérmica, biomassa): "Na área das Energias Renováveis compete à Direcção Geral de Energia e Geologia, designadamente: (...) Promover a inventariação dos recursos energéticos renováveis, numa perspectiva de identificação do potencial existente; Desenvolver o inventário das instalações de energias renováveis em exploração e dos projectos em desenvolvimento;(...)" – Águas, Minas e Pedreiras: "Na área dos recursos geológicos, compete à Direcção-Geral de Energia e Geologia, designadamente(...) Colaborar com os organismos competentes nos domínios do ordenamento do território e da protecção do ambiente na partilha de informação relevante para o aproveitamento racional dos recursos geológicos;(...)" – Catálogo de Recursos Geotérmicos em Portugal Continental http://e-geo.ineti.pt/bds/recursos_geotermicos/ – Cadastro das Minas: Contratos de Prospecção e Pesquisa ; Contratos de Concessão de Exploração http://www.dgge.pt/pagina.aspx?js=0&codigono=6363640664086437AAAAAAAA\\\\\\ LNEG – Sistema Nacional de Informação Geocientífica http://e-geo.ineti.pt/maps.aspx – Geo-sítios, Inventário de Sítios com Interesse Geológico http://e-geo.ineti.pt/bds/geositios/intro.htm – Base de Dados de Pedreiras http //e-geo.ineti.pt/bds/pedreiras/default.aspx – Sondagens http://e-geo.ineti.pt/bds/sondabase/default.aspx – Sistema de Informação de Ocorrências e Recursos Minerais Portugueses (SIORMINP) http://e-geo.ineti.pt/bds/ocorrencias/default.aspx – Base de Dados de Pontos de Água http://e-geo.ineti.pt/bds/hidro/pontos_agua.aspx – Cartografia digital http://e-geo.ineti.pt/geociencias/cartografia/digitais/cartas_digitais.htm

	AFN e INAG - a fazer
Observações	O DGEG, o LNEG, a AFN e o INAG não se consideram produtores deste tema

III.21 MINERAL RESOURCES (RECURSOS MINERAIS)

Directiva	Mineral resources including metal ores, industrial minerals, etc., where relevant including depth/height information on the extent of the resource. Recursos minerais, incluindo minérios metálicos, minerais industriais, etc., incluindo, quando pertinente, informação sobre as cotas de profundidade/altura do recurso.
FCD	https://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/34 The mineral resources data theme refers to the description of natural concentrations of very diverse minerals of potential or proven economic interest. Important attributes are the nature, genesis, location, extent/distribution of these resources. The economic and technical data related to the location of areas licensed for exploration or mining, to the exploitation of deposits, transport, treatment and waste disposal are not covered by this theme. However, storing of material near mines and quarries is necessary. Knowledge how the constituents affect the surroundings is of importance, e.g. leakage from sulphides etc. They are to a large extent covered in other themes, such as production and industrial facilities. Energy minerals such as coal, uranium, oil and gas are excluded in this theme, as they are found in theme "energy resources". Exploration licence areas and areas permitted for mining are covered by the theme "Area management/restriction/regulation zones and reporting areas". Mineral resources data refers to: - Anomalies: locations where background concentrations of potentially valuable elements in soils, stream sediments or rocks onshore or offshore exceed the normal background values expected given the local geological context. Such maps are widely used in mineral exploration. Attributes are location, chemical elements, nature of the sampled element (s), analytical value(s); - Occurrences: points or areas where concentrations of a given mineral (s) are observed but without a proven economic potential. Attributes are location, nature of the mineral(s), analytical data, nature of the host rock, geometry/ morphology of the observed occurrence(s) - Deposits: areas bearing mineral concentrations with economic potential. Attributes are detailed below A mineral resource encompasses all quantities of mineral resources, discovered and undiscovered, that are contained in, or have been produced from, naturally occurring accumulations on or within the earth's crust. Resource information is generally available for deposits held by companies listed on the Western stock markets, as they face reporting obligations. National legislation also influences the detail of data publicly available. Detailed data or data related to some rare metals deposits with high-technology applications, may be difficult to obtain considered to be of economic/ private interest and therefore, problematic to distribute. The mineral resources sector is divided in a number of segments, differentiated by the technologies involved in exploration and mining, the markets and the nature of the exploited material(s): - Metal mining (non-energy metallic ores, uranium pertaining to the energy sector); - Industrial minerals; - Construction minerals and rocks; e.g. natural stone (dimension stone), sand and gravel and crushed bedrock aggregates - Ornamental stones; - Precious and semi-precious stones. The description of the three first categories is included in the European Commission (DG Enterprise) document listed among the reference documents (Box 1 provides a comprehensive definition). The definitions included in that document should to be adhered to, in order to promote consistency of the semantics used in EC documents. Ornamental stones are all those rocks that are used for ornamental purposes inside and outside of constructions (marble, granite, labradorite, syenite …). Precious and semi-precious minerals are used for jewelry (an overlap exists with the ornamental stones segment some colourful semi-precious minerals being used for both jewelry and decoration).
Tópicos/IG	Extracção de minério metálico Minerais industriais Rochas e minerais para construção Pedras ornamentais Pedras preciosas e semi-preciosas
Instituições	LNEG ← Decreto-Lei nº 208/2006, de 27 de Outubro – orgânica do Ministério da Economia e Inovação e Decreto-Lei n.º 354/2007, de 29 de Outubro - orgânica do LNEG DGEG ← Decreto-Lei n.º 208/2006 de 27 de Outubro – Lei orgância do MEI
CDG	LNEG - Base de Dados de Pedreiras http://e-geo.ineti.pt/bds/pedreiras/default.aspx - Sondagens http://e-geo.ineti.pt/bds/sondabase/default.aspx - Sistema de Informação de Ocorrências e Recursos Minerais Portugueses (SIORMINP) http://e-geo.ineti.pt/bds/ocorrencias/default.aspx - Cartografia hidrogeológica (200K e diversas escalas)

	- Cartografia geológica (25K, 50K, 100K, 200K e 500K) (10K – concelho de Lisboa) - Carta das Fontes e do Risco de Contaminação da Região de Entre-Douro-e-Minho DGEG - a fazer…
Observações	O LNEG e o DGEG não se consideram produtores deste tema