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COPERNICUS OPERATIONAL MAPPING OF LAND CHARACTERISTICS ON A CONTINENTAL SCALE. STATUS, LESSONS-LEARNED AND FUTURE DEVELOPMENT

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ABSTRACT:

Frequently updated land-cover and land-use (LCLU) information is vital for the monitoring of European environmental change, Community policy support, the creation of environmental indicators and reporting. In the context of Copernicus (the European programme for the establishment of a European capacity for earth observation), the European Environment Agency (EEA) is currently in the final phase of implementing the pan-European and local components of the Copernicus Initial Operations land monitoring services (GIO land) that include the mapping of 5 high resolution layers (HRL) on land cover characteristics for the 2012 reference year. These HRLs are mapping 1) degree of imperviousness, 2) forest (tree cover density and forest type), 3) permanent grasslands, 4) wet lands and 5) permanent water bodies, for 39 countries in Europe. The HRL's are being produced at 20m spatial resolution, and additionally distributed as validated 100m grid products. The HRL's will complement and provide additional information to the existing CLC (Corine Land-Cover) datasets. In addition a new CLC-change layer (2006-2012) and status layer (CLC2012) are being produced. Another part of the Copernicus land services is the "local component", comprising and update of the existing 2006 Urban Atlas mapping (towards the 2012 reference year), and the mapping of riparian zones (2012 reference year), for biodiversity monitoring and ecosystem services assessment. We report on the status and expected availability and dissemination of these products, draw some first conclusions and "lessons learned" looking back at 3 years of initial operational production and outline future developments for the pan-European component of the Copernicus land services.