Peer learning sessions of the 2021 Regional Forum on Sustainable Development for the UNECE Region

Presentation of policy practices as a basis for the peer learning discussion
Session 4.2. Digital Transformation for SDG implementation

Title of intervention, country and name of presenter	**"Example of Hydrometeorological Data Policy in the South East Europe as a potential step towards Open data policy"** **(15 countries of SEE region)** **Milan DACIC – WMO Representative for Europe** **World Meteorological Organization (WMO)**
Brief description	Climate change cause impacts on natural and human systems on all continents and across the oceans and are felt on various human and natural systems. One of the most striking features of climate change is that, due to the sensitivity of the Earth system and its inter-linked components, the frequency of occurrence of weather, water and climate extreme events is unfavourably altered. Projected changes in the climate system indicate that the surface temperature may rise over the 21st century under all assessed greenhouse gas emission scenarios. It is very likely that heat waves will occur more often and last longer, and that extreme precipitation events will become more intense and frequent in many regions. Adaptation and mitigation are complementary strategies for reducing and managing the risks of climate change, and contribute to climate-resilient pathways for sustainable development. One of the soft measures of adaptation to climate change is the empowerment of countries to develop or improve their Multi-Hazard Early Warning Systems. This needs to be done at national, sub-regional, regional and global scales, which is driven by the global nature of hydrometeorological business. Climate change is a threat to sustainable development. Nonetheless, there are many opportunities to link mitigation, adaptation and the pursuit of other societal objectives through integrated responses. Successful implementation relies on relevant tools, suitable governance structures and enhanced capacity to respond, all of which is part of the continuous work on policy framework. Digital and IT transformation opens digital opportunities for people and enables real-time exchange, enhancing the quality of information and advisories from jointly owned digital/cloud-based multi-hazard early warning system. The issue of data – as it is presented in Agenda 2030 – is identified as playing a fundamental and necessary role in the sustainable development space. The breadth of the 2030 Agenda for Sustainable Development and on-going development of ICTs provide opportunities for a more systematic and ambitious approach to data collection, management and integration. **With this in mind, eighteen countries of South East Europe are discussing on how to improve cooperation (Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Greece, Hungary, Israel, Jordan, Lebanon, North Macedonia, Moldova, Montenegro, Romania, Serbia, Slovenia, Turkey, and Ukraine) with joint development of the South-East European Multi-Hazard Early Warning Advisory System. Fifteen of them already signed a Regional Data Policy Agreement - Policy on the Exchange of Hydrological and Meteorological Data, Information, Forecasts and Advisories under the South-East European**

Policy goal(s) or challenge(s) to be addressed	In approaches for managing the risks of climate change through adaptation, on institutional level and in legislative framework, it is envisaged, inter alia, to update the water regulations and agreements, and laws to support disaster risk reduction, including the laws on hydrometeorological business of interest of the whole country, and in the context of international agreements (e.g. Convention of the World Meteorological Organization, UNFCCC, and other relevant international treaties). In both structural/physical/technological and social categories, further work on design, setting up, or improving existing information sharing on hazard and vulnerability mapping; early warning and response systems; systematic monitoring and remote sensing; climate services; and integrated assessments are crucial for the positive effect of the digital information gathered through multi-hazard early warning system. In Educational category, the awareness raising and integration into education; gender equity in education; participatory action in research & social learning; knowledge-sharing and learning platforms are all important for sustainability of actions. In many countries of South East Europe existing legislative framework needs to be updated with modern laws on hydrometeorological activities that must be aligned with the broader legislation, in particular the one on disaster risk reduction. Part of this process is the discussion about the Open Data Policy, a burning issue to many stakeholders in the countries. WMO supports these deliberations through World Meteorological Congress and other constituent bodies (Regional Associations, and Technical Commissions). The Digital Strategy of the European Commission sets a vision to become a digitally transformed, user-focused and data-driven administration by 2022. EU digital strategy aims at creating a single EU data space, where all data, including sensitive business data, are secure and businesses have easy access to high-quality industrial data to boost growth and create value, while minimising the environmental footprint. Some countries from South-East Europe and Middle East, may need to align their data policies as part of the European integration process, or under other multilateral partnerships with the EU. On the way towards eventual full open data policy, which proved to benefit societies the most, WMO and its Member States in South East Europe offered stepwise approach in adoption of the data policy which will benefit the production of global, regional and national hydrometeorological warnings. Further processing of these warning that is a national prerogative is to be performed by authoritative voices on weather, water and climate matters on national levels, including the National Meteorological and Hydrological Services

Instruments and proposals	WMO Member States from South East Europe proposed the Data Policy Agreement as an intermediate way to achieve eventual full and unrestricted open data policy in the foreseeable future. By adopting this policy, the global, regional and local production of warnings could benefit from wealth of existing, but not adequately shared, digital data and observations and secure best possible quality of impact-based forecasts and warnings. The value of a comprehensive integrated approach led the WMO Member States adopt the concept of an **Integrated Global and Regional Observing System**, which will enhance the observational component and engage the essential regional and national actors for the successful integration of these systems. The States shall meet the new regulations on delivering observations for global exchange, increasing the spatial and temporal resolutions. A Systematic Observation Financing Facility is being established by WMO, in collaboration with partner agencies, such as the World Bank and the Green Climate Fund, to assist the states develop and operate infrastructure to provide digital observations into the regional and global system for local and global benefit. The immediate goal is to improve the forecasting and warning services for the socio-economic benefit. The international data exchange practice and policy, which defines the free flow of observations around the globe, has evolved significantly over this period. But now, its robustness and its relevance are being tested by the enormous, transformative change in data, science, and technology and the rapid growth of the private sector. There is a need to share additional data types such as weather radar data, that have not been exchanged before, and to consider the emerging role of the private sector in creating digital observations and products. It is therefore timely to review the data requirements, arrangements and policies for data exchange against the Earth System Strategy, including the Earth System monitoring, prediction and services, to ensure they remain fit for purpose in an era of climate change, extreme weather and water-related hazards. Digital and IT transformation provide the technical platform to do that, while the States and Governments need to review and adopt a new policy on weather, water and climate data, at the forthcoming World Meteorological Congress in 2021.
Constraints and difficulties	Existing national data policies, if restrictive, are hampering the research and development, but also full operational practice of numerous specialized meteorological and hydrological centers with sub-regional, regional and global scope. The main difficulty stem from inadequate resourcing of national organizations (such as national meteorological and hydrological services, and similar technical agencies). These organizations are forced to sell their observations to secure revenues for their operational work, including the maintenance of the existing observing station network. This, in turn, is a consequence of inadequate legislative framework that does not support the production, maintenance and sharing of digital information which is essential for the production of forecast and warnings, and various weather, climate and water related analyses.

Lessons	Eighteen WMO Member States from South East Europe agreed to improve cooperation (Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Greece, Hungary, Israel, Jordan, Lebanon, North Macedonia, Moldova, Montenegro, Romania, Serbia, Slovenia, Turkey, and Ukraine) with joint development of their South-East European Multi-Hazard Early Warning Advisory System. Fifteen countries already signed a Regional Data Policy Agreement - Policy on the Exchange of Hydrological and Meteorological Data, Information, Forecasts, and Advisories under the South-East European Multi-Hazard Early Warning Advisory System. The collaboration and improved data sharing with the Global/Regional Specialized Meteorological Center (e.g. European Center for Medium Weather Prediction – ECMWF) proved to benefit the operational production at larger scales, which in turn benefit the national authorities in their issuing of warnings at the national level. Joint work on sharing digital data, development of tools, and pursuing in establishing Digital Common Information Platform, which supports this digitally intense cooperation, results in better quality of information and advisories of multi-hazard risks. The circle of improved digital data exchange is closed on the benefit of all involved countries and regional/global institutions. WMO is considering promoting this type of collaboration elsewhere in the World through implementation of its Global Multi-Hazard Alert System (WMO-GMAS). **Digitalization, partnership and open data policy could reduce the COVID-19 pandemic impact essentially and contribute to building back better.**
Links to additional materials	https://public.wmo.int/en/projects/see-mhews-a