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Establishment of WMO RA V Virtual Laboratory (VLab) for Meteorological Satellite Education and Training Center of Excellence (CoE) in Indonesia: Challenges and Opportunities

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Surrounded by the ocean, countries in the Regional Association V (South-West Pacific) of the World Meteorological Organization face some challenges in the scarcity of comprehensive meteorological observation data pertaining to the vast surrounding oceanic expanse. This scarcity poses a grave risk, as it directly correlates with the accuracy of weather forecasts both in the countries and the broader region. To mitigate this issue, the significance of meteorological satellite data becomes self-evident. Yet, building the analytical and utilization capabilities required for harnessing the potential of this data. Countries in the South-West Pacific region are confronted with the formidable task of acquiring the knowledge and technical expertise necessary to extract actionable insights from meteorological satellite information. In this backdrop of challenges, the establishment of a dedicated World Meteorological Organization Virtual Laboratory for Meteorological Satellite Education and Training (VLab) Center of Excellence in the region emerges as an imperative and urgent necessity. Such a center holds the potential to serve as a transformative catalyst, empowering member countries to accelerate their capacity development efforts. Through a coordinated and collaborative approach, this center can equip countries with the requisite skills, knowledge, and infrastructure to unlock the full potential of meteorological satellite data.

It represents a beacon of hope, ushering in a new era of precision forecasting and weather resilience, for the entire South-West Pacific member countries and the region.

As a Regional Training Center endorsed by the World Meteorological Organization for Meteorology and Hydrology, as well as a Specialized Training Center affiliated with the Ocean Teacher Global Academy of IOC UNESCO for Maritime Meteorology and Tsunami, the Agency for Meteorology, Climatology, and Geophysics of the Republic of Indonesia (BMKG) possesses the requisite expertise and infrastructure to serve as a VLab (Virtual Laboratory) dedicated to Meteorological Satellite Education and Training Center of Excellence (CoE) within the region. This endeavor complements the existing VLab CoE hosted by the Bureau of Meteorology Australia, fostering collaborative excellence in meteorological satellite education and training across the region.

A SWOT analysis has been conducted to streamline the establishment of RA V VLab CoE for Meteorological Satellite Education and Training in Indonesia. The findings underscore the pivotal significance of fostering collaboration on multiple fronts. This includes synergistic partnerships with existing VLab CoEs, as well as robust engagement with training centers spanning both the immediate region and beyond. Equally crucial is forging collaborative alliances with satellite data providers, underscoring the critical role of data accessibility and cooperation in the success of this initiative.