

## TNI's Innovation To Make A Hydroelectric Power Plant In Mapenduma Results In Bright Papua And Welcomed Happily By The Residents

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MAPENDUMA- The Task Forces of the Para Raider Infantry Battalion 432/Waspada Setia Jaya Kostrad, one of the military units under The Indonesian Armed Forces Operational Command (KOOPS TNI) in Papua, is currently carrying out the mobile security at the border of Indonesia and Papua New

Guinea, especially in Nduga Regency area, Papua Pegunungan Province. On Tuesday, 2 July 2024, the 432 Task Forces successfully completed its innovative work in the form of creating a Hydroelectric Power Plant (PLTA) in the Mapenduma Village, Mapenduma District. After almost 2 weeks of the making process, this innovative work was successfully completed and produced a new source of electrical power for lighting the houses of Mapenduma residents.

Commander of the 432 Task Forces, Lieutenant Colonel Zulfikar Akbar Helmi, emphasized to the Soldiers to think and act positively to support efforts to create a safe and peaceful situation in Papua. Therefore, since 14 June 2024, the Communications and Electronics Officer, Second Lieutenant Dimas Aji Satria, has been planning an innovation project in the Mapenduma which is experiencing problems with lighting residents' houses. Together with Private Chief Class Etna Bancin, who has skills in the carpentry field, 2LT Dimas tried to overcome the obstacles faced by residents regarding the lighting problem.

To this point, the residents have only relied on Solar Cells as sources of electrical power in their houses. However, the geographical contour of the Mapenduma, which is in a mountainous area with weather conditions that are always foggy, has resulted that the Solar Cells not being optimal to support lighting for the residents' houses. Responding to these conditions, 2LT Dimas and PCC Etna tried to create a new source of electricity in the Mapenduma by utilizing the existence of water source which is still located in the Mapenduma Village.

Since the planning and preparation process, the two Soldiers agreed to build a waterwheel using materials and electrical equipment those were available in the local area. Next, they obtained several simple materials such as wood, nails and PVC (polyvinyl chloride) pipes, as well as several electrical devices in the form of BLDC (Brushless DC motors) Generator, Accu, Inverters, Cables and MPTT (Maximum Power Point Tracking) power controllers. After the innovative hydroelectric power plant was completed, the residents of Mapenduma Village were very happy to welcome it. Even a community figure, Mr. Markus Gwijangge said, "We are happy that the TNI is here to provide solutions to community's problems. God bless the TNI."

"An innovation of the 432 Task Forces to create a hydroelectric power plant in the Mapenduma Village has provided a creative solution which is expected to support efforts to accelerate development in the Papua region," said the KOOPS TNI Commanding General, Brigadier General Lucky Avianto, upon receiving the program report.

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