



Indonesia – Radiation Data Monitoring System (I-RDMS)

No.	Station Name	Station Code	Latitude	Longitude	St_Group	Status	Elevation (m)
1	Kappang, South Sulawesi (AS044)	KAPI	-5.0142	119.7517	CTBTO (INA)	Used	300
2	Lembang, Bandung, West Java	LEM	-6.8266	107.6175	JISNET (Japan)	Used	1283
3	Bautama, NTT (AS045)	BATI	-10.2065	123.6633	CTBTO (INA)	Used	344.81
4	Jayapura, Papua (AS041)	JAY	-2.51447	140.70433	CTBTO (INA)	Used	458.76
5	Sorong, West Papua (AS042)	SIJI	-0.86912	131.26605	CTBTO (INA)	Used	200.91

I-RDMS Installation in CTBT station
 The placement at the Indonesia CTBT station produces **verification of information** regarding any **incident of nuclear weapons** related activity and whether the **effects of radiation** reached Indonesia. It is also purposed to **obtain the baseline data on environmental radioactivity** under normal conditions.

MUST BUILD A RELIABLE NUCLEAR EARLY WARNING SYSTEM, WHY?

- Radioactive release from an NPP accident (e.g., Fukushima 2011) or military activity might spread across the national border to Republic of Indonesia's territory. → **transboundary release threat.**
- Potential threat might spread across 13,466 islands throughout Indonesia with a coastline of 54,716 km. → **where and when the transboundary release will arrive to Indonesia?**
- Indonesia commitment by ratifying related international convention:
 - Nuclear Non-Proliferation Treaty (NPT)**, ratified with **Act No 8/1978.**
 - Convention on **Early Notification of a Nuclear Accident**, ratified with **PR No. 81/1993.**
 - The **Southeast Asia Nuclear Weapon Free Zone Treaty (SEANWFZ)**, ratified with **PR No. 9/1997.**

Location Survey

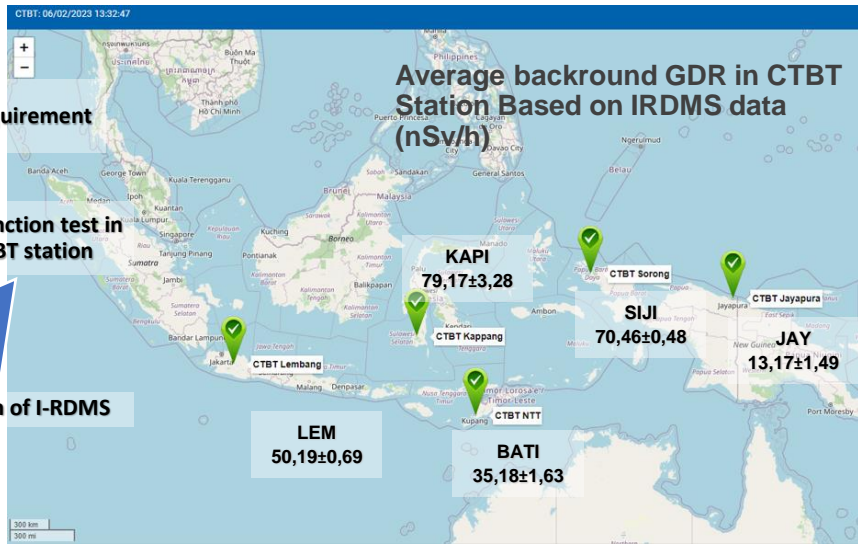
Specification requirement
 Configuration in BAPETEN



ENVINET SARA-101-L4-H Detector Spectroscopic Gamma Detector – NaI(Tl) Scintillation Detector 1,5" x 1,5"

Function test in CTBT station

Operation of I-RDMS



Operation

Daily monitoring

Alarm

Preventive maintenance & energy calibration

Gamma dose rate (GDR) trendline, temperature, battery voltage, connection status

Technical failure or increasing GDR (rotating alarm, email, SMS)

- Ensure the data quality and equipment performance
- Prevent any potential failure

Conclusions

- The I-RDMS at the CTBT station continues to **provide environmental radioactivity monitoring data** with varying values for each region.
- BAPETEN is working with the BMKG to gradually increase the number of detectors to **expand the surveillance area** in Indonesia. Beside of 5 CTBT stations in 2018, BAPETEN also had installed 17 stations in BMKG stations since 2019-2022 and continue to achieve the target.

Recommendations

Hopefully there will be an opportunity to **share knowledge** from countries that have similar systems on how to **maintain the equipment, ensure the data quality, alalyze the data, share the data** to the related stakeholder, and **respond the radiological alarm/notifications.**