



Nuclear Security Pocketbook for Indonesia's Security Officer

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Background and Goal

Nuclear security has been a global issue related to the deployment of nuclear technology, and hence there is a need to improve the human resources on it. The radioactive material smuggling incidents in Indonesia in 2020 proved that Indonesian police and security officers' knowledge in nuclear security must be improved.

Since 2018, the Department of Nuclear Engineering and Engineering Physics of Universitas Gadjah Mada (UGM) has conducted several three-day trainings on the introduction to Nuclear Security for security officers, especially those on duty in Yogyakarta Special Province. The Police Chief of Yogyakarta Special Province fully supported the event to enhance their staff's knowledge because he realized that some places in his work area were utilizing radioactive material. He sent more than fifteen persons every year to the training.



The Nuclear Security Training for security officers in 2018

However, in 2020, such classical training could not be performed due to the COVID-19 pandemic in Indonesia. To face the problem, the department arranged a nuclear security pocketbook to be distributed to Indonesia's security officers, especially The National Police.

Book Arrangement

Since there are 3,695 industrial and medical facilities using ionizing radiation sources in Indonesia, the pocketbook targeted members of the Indonesia Police who are responsible for protecting facilities. Therefore, the training materials were designed to introduce basic nuclear security knowledge.

The 32-page two-sided pocketbook was written by sixteen faculty members and added some illustration graphics by four students. The book was made concise with as few as possible words and pictures to make it easier for the security officer to understand.



The pocketbook cover (left), an example of the content (right)

The contents were based on the training materials that have been conducted by the department in 2019:

No.	Topics
1.	Nuclear Engineering Program at Universitas Gadjah Mada
2.	Nuclear Radiation
3.	Risks and Benefits of Nuclear Radiation for Living
4.	Nuclear Radiation Detection and Measurement
5.	Radiation Detector for Nuclear Security: PRD, RID, and RPM
6.	Nuclear Security Principles and Global Cases
7.	Nuclear Emergency Procedures in Indonesia
8.	Nuclear Installations and Radiation in Indonesia
9.	Physical Protection Systems for Nuclear Installations and Facilities
10.	Nuclear Security in Radioactive Materials Transportation

Conclusions and Acknowledgements

- The users looked enthusiastic when they received the pocketbook because the contents are closely related to their duty. Therefore, we can conclude that the pocketbook has fulfilled their present need in securing nuclear facilities.
- We would like to thank the Faculty of Engineering UGM for their support.
- We also thank the users for their valuable responses. Hopefully, we can improve our cooperation.

Compared to classical training, the drawback of this book is that it does not have practical activities, such as table-top exercises and radiation source detection practices. On the other hand, the book was distributed widely that it could be accessed and read not only by Yogyakarta's security officer but also by the staff in the entire country.



The pocketbook could not cover practical activities such as radiation source detection practice (left), table-top exercise (right)

3. Users and Their Responses

The book was sent to the UGM's security office and several centers belonging to the Republic of Indonesia's Police, such as:

- The education and training center,
- The forensic laboratory center,
- The special troops located in Jakarta,
- The special troops located in Yogyakarta,
- The special troops located in Lampung,
- The West Java Province's Police.



The security commander of UGM (upper left), the head of police forensic laboratory center (upper right), the head and staff of police education and training center (left)

They appeared enthusiastic about the pocketbook when they received it via courier service. It showed that they needed the knowledge closely related to their duty, especially the special troops in Yogyakarta Special Province. They do not only ask for additional delivery but also ask for strengthening the cooperation. The request for the pocketbook has also come from the Yogyakarta Office of the National Search and Rescue Agency (BASARNAS). They also want to participate in the next training.