

**“The Regional Emerging Disease Intervention (REDI) Centre
Meeting on International Laboratory Biosafety and Biosecurity”
Singapore, 7-8 April 2005**

Laboratory Biosafety and Biosecurity in Indonesia

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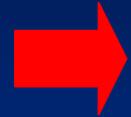
Ministry of Health Republic of Indonesia

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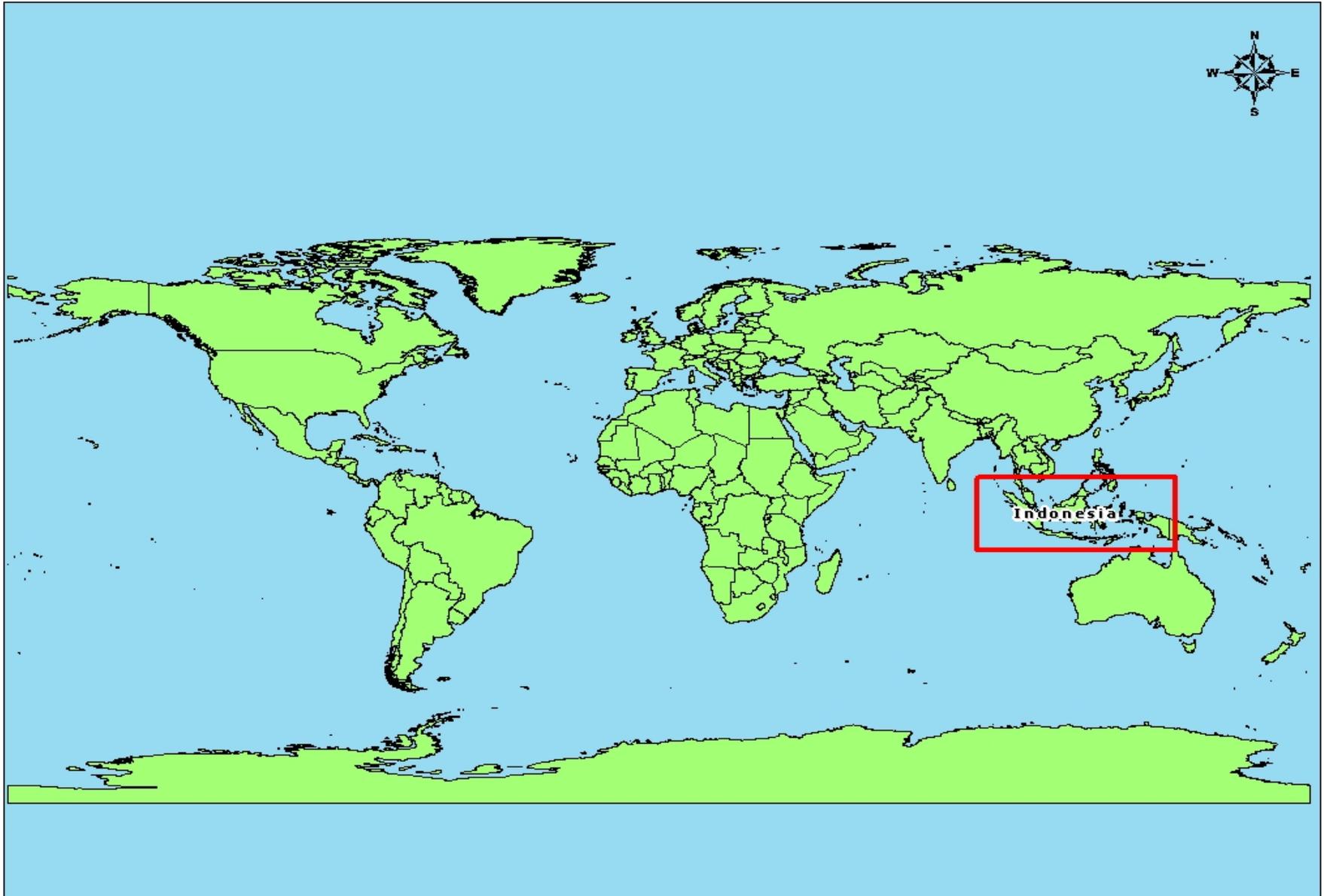
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World Map



I. Introduction (1)

Geography, climate and population

- Indonesia consists of 5 major islands, +/-3,000 medium and 13,677 small islands
- The location is between two continents
- The total area is 5,193,250 km²
(39% land and 61% sea territory)
- It has dry and rainy seasons
- The range of temperature is from 20° C to 30°C and the humidity is from 65% to 90%

Map of Indonesia



I. Introduction (2)

Geography, climate and population

- Indonesia is divided into 33 Provinces, 441 districts, 5.175 sub-districts and 66,721 villages
- Total population in 2003/2004 is 216,200,000 with pop. density of 113 persons per km²
- There are > 300 ethnic groups



I. Introduction (3)

Biological threats in Indonesia

* **Pattern of possible "Biological Threats" (WHO):**
anthrax, botulism, HF, smallpox, plague
and tularemia

* **Other Infectious Diseases :**
tuberculosis, malaria, cholera, typhoid fever, HIV-
AIDS, influenza

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II. Regulation

The main regulation on laboratory safety:

- Decree of the Minister of Health of The Republic of Indonesia Number 1244 of 1994 regarding Guidelines on Biosafety in Microbiology and Biomedical Laboratories.**



Decree of the Minister of Health of The Republic Indonesia Number 1244 of 1994

regarding Guidelines on Biosafety in Microbiology and Biomedical laboratories

- **Article I - Introduction**
- **Article II - Classification of microorganism and laboratory**
- **Article III - Management of Work-safety Laboratory**
- **Article IV - General Guidelines**
 - a. **General**
 - b. **Good Laboratory Practice**
 - c. **Specimen management**
 - d. **Layout and facility of the laboratory**
 - e. **Sterilization, disinfection, decontamination, and waste laboratory management**
 - f. **Laboratory equipments and preventable hazard**
 - g. **Health of laboratory workers**
 - h. **Stipulation on supporting workers**
 - i. **Transportation of specimens and infectious materials from laboratory.**

Decree of the Minister of Health of The Republic Indonesia Number 1244 of 1994

regarding Guidelines on Biosafety in Microbiology and Biomedical laboratories

- **Article V - Biosafety Laboratory 1 and 2**
- **Article VI - Biosafety Laboratory 3**
- **Article VII - Biosafety Laboratory 4**
- **Article VIII - Chemical Agents : hazard and method of security**
- **Article IX - Radioactive agent : Hazards and method of security**
- **Article X - Method of laboratory security with animal facility**
- **Article XI - Other stipulations**



Classification of lab. based on its function

(according to Health Lab. Directorate, DG of Medical Services, Min. of Health)

- 1. Educational laboratory**
- 2. Service Laboratory**
- 3. Research Laboratory**
- 4. Production Laboratory**



Classification of lab. based on its function

No.	Function of the laboratory	Total
1.	Education	17
2.	Service	46
3.	Research	3
4.	Production	1
	Total	67

The other related regulations :

- Law of the RI Number 23 Of 1992 regarding health (article 22 & 23)
- Regulation of the Min. of Health RI Number 949/Menkes/SK/VIII/2004 regarding guidelines for early preparedness system of infectious diseases outbreaks
- Decree of the Min. of Health RI Number 424/Menkes/SK/IV/2003 regarding determination of SARS as a potential outbreak disease and the guidelines to manage it.
- Decree of the Min. of Health RI Number 1116/Menkes/SK/VIII/2003 regarding guidelines for Epidemiology Surveillance System
- Decree of the Min. of Health RI Number 1479/Menkes/SK/X/2003 regarding guidelines for Epidemiology of Communicable and Non-communicable Surveillance System
- Decree of the Min. of Trade and Industry RI No. 254/MPP/Kep/2000 regarding the export and import of certain dangerous materials, including chemical and biological agents

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III. Biosafety and Biosecurity Efforts ...(1)

Beside Biosafety, why the Biosecurity is also important?

Some conditions in our country need more attention:

- **Geographic condition**
- **Some diseases as “Biological Threat” (WHO) are endemic in certain areas of Indonesia i.e. anthrax, dengue hemorrhagic fever, and plaque.**
- **Big proportion of population with low income capacity, poor h. environment condition & h. status**
- **There are some separatist or extremist groups in certain parts of Indonesia.**



III. Biosafety and Biosecurity Efforts ...(2)

Biosafety & Biosecurity efforts have been done:

- **Training regarding Weapons of Mass Destruction (WMD) April 2003 in Jakarta in collaboration with US Embassy Jakarta**
- **National Seminar on Bioterrorism, July 2003, in Jakarta, by Ministry of Science & Technology.**



III. Biosafety and Biosecurity Efforts.... (3)

- Outbreak Response Team established by DG of CDC and NIHRD of MOH.
- Early Warning & Outbreak Response System (EWORS) a software created and tried out by NIHRD & CDC of MOH and Namru-2 (WHO Collaborating Centre for Emerging Infectious Diseases)
- Other efforts: Indonesia as a coordinator of Asean web-based networking on EID → Asean Disease Surveillance. Net

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IV. National Preparation Efforts

- 1. Strengthen national capacity building for biosafety and biosecurity in the laboratories:**
 - personnel**
 - equipment**
 - law enforcement & sanctions**
- 2. Enhancing collaboration and networking within Asean and with developed countries**



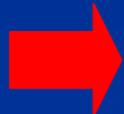
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V. Future threats

- * Geographic condition of Indonesia**
- * Possibilities used by Separatist and Extremist Groups/Organizations**
- * Possibility of some scientists joining those extremist groups**



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VI. Conclusions

- 1. The main regulation on laboratory safety need to be revised**
- 2. Some efforts have been done regarding biosafety and biosecurity**
- 3. There is a need for national preparation efforts to strengthen capacity building and enhancing collaboration and networking within Asean and with developed countries**
- 4. Future threats are to be considered as part of the preparation efforts of biosafety and biosecurity in the laboratory.**



Thank you

