

***A CROSS-NATIONAL STUDY OF  
SCIENCE LITERACY AND PERCEPTION  
OF RADIATION ACROSS SEVEN FNCA  
COUNTRIES***

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# ***PUBLIC INFORMATION AND OUTREACH AS A PROCESS OF COMMUNICATION***

## **I. FIVE VARIABLES IN A GENERALIZED MODEL OF COMMUNICATION:**

1. **WHO** (THE SOURCE, THE SENDER) SAYS
2. **WHAT** (THE MESSAGE, THE CONTENT)
3. **TO WHOM** (THE AUDIENCE, THE RECEIVER)
4. **HOW** (THE CHANNEL, THE MEDIA) AND
5. **WITH WHAT EFFECT** (THE EFFECT)

## **II. “PUBLIC INFORMATION AND OUTREACH” INVOLVES SYSTEMATIC STUDIES ON THE SENDER, THE MESSAGE, THE MEDIA, THE AUDIENCE AND THE EFFECT OF COMMUNICATION.**

# *WHAT IS "FNCA"?*

## **WHAT DOES "FNCA" STAND FOR?**

**IT STANDS FOR "THE FORUM FOR NUCLEAR COOPERATION IN ASIA".**

## **FNCA CONSISTS OF 8 ASIA-PACIFIC NATIONS:**

**AUSTRALIA, CHINA, INDONESIA, JAPAN, KOREA, THE PHILIPPINES, THAILAND AND VIET NAM.**

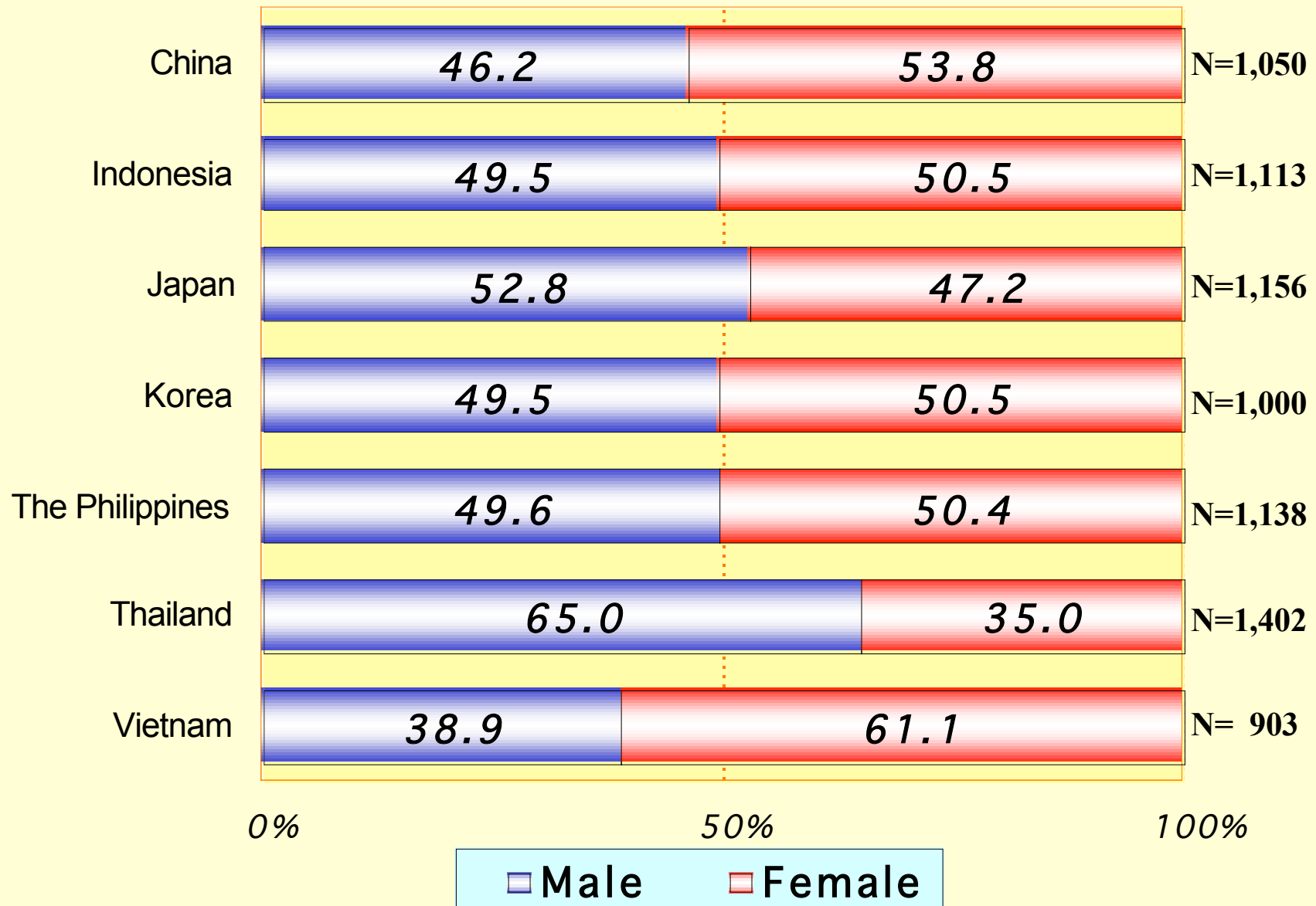
## **WHAT DOES FNCA DO?**

**FNCA HAS A TOTAL OF 11 RESEARCH PROJECTS IN 8 AREAS, INCLUDING "RESEARCH REACTORS", "AGRICULTURAL USE OF RADIATION", "RADIATION ONCOLOGY" AND "PUBLIC INFORMATION".**

# ***THE PURPOSE OF THE CROSS-NATIONAL SURVEY STUDY***

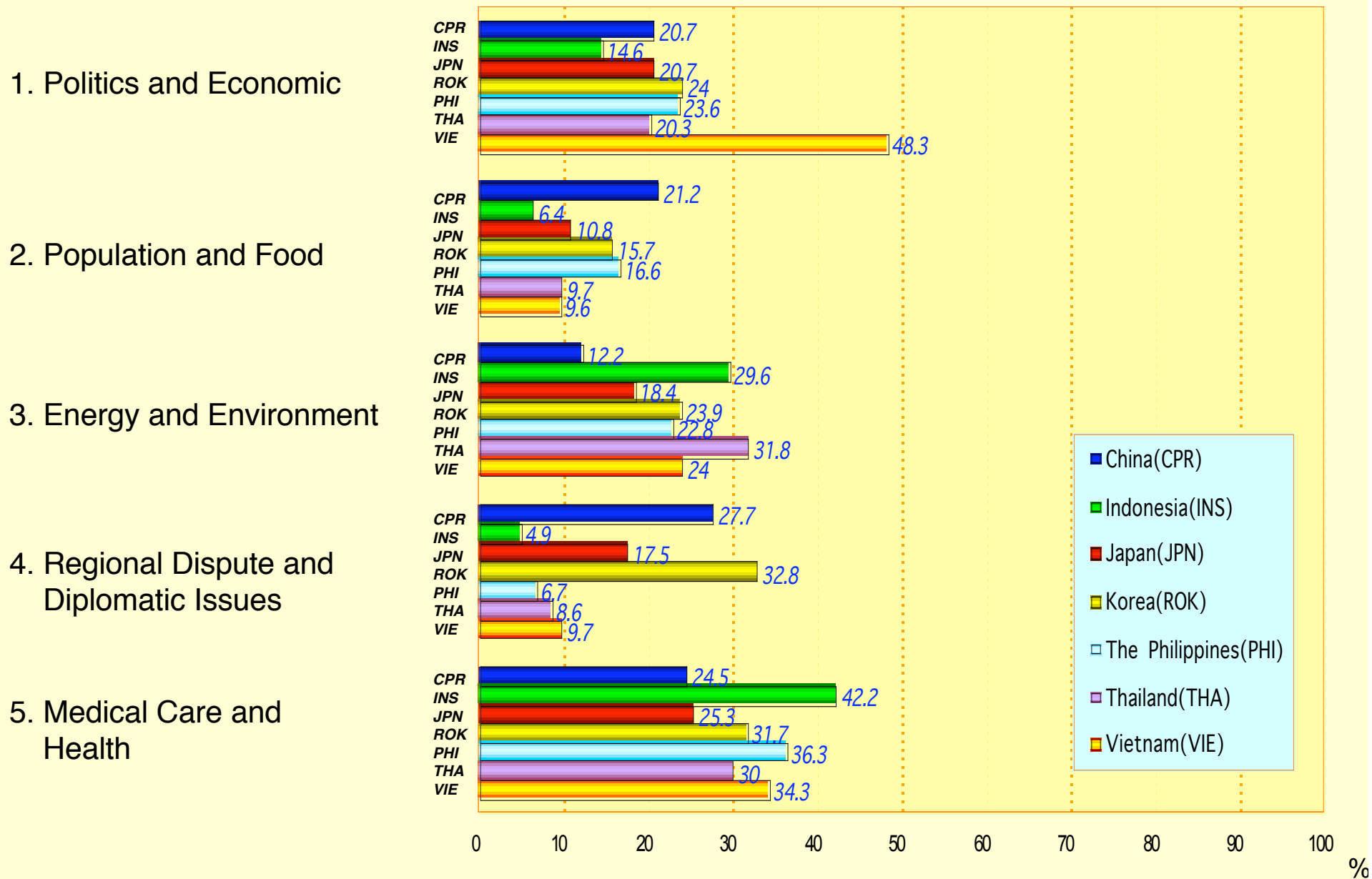
- 1. WHAT ARE 1000 MALE AND FEMALE HIGH-SCHOOL STUDENTS IN EACH OF THE SEVEN FNCA COUNTRIES INTERESTED IN ?**
- 2. HOW DO THEY LIKE TO STUDY SCIENCE COURSES AT SCHOOL?**
- 3. WHAT ARE THEIR SOURCES OF INFORMATION ON SCIENCE AND TECHNOLOGY?**
- 4. HOW DO THEY LEARN ABOUT “RADIATION” OR “RADIOACTIVITY” ?**
- 5. WHAT IS THE MEANING OF “RADIATION” TO THEM? AND WHAT DO THEY WANT TO LEARN ABOUT “RADIATION”?**

# 1. Percentages of Male and Female Students

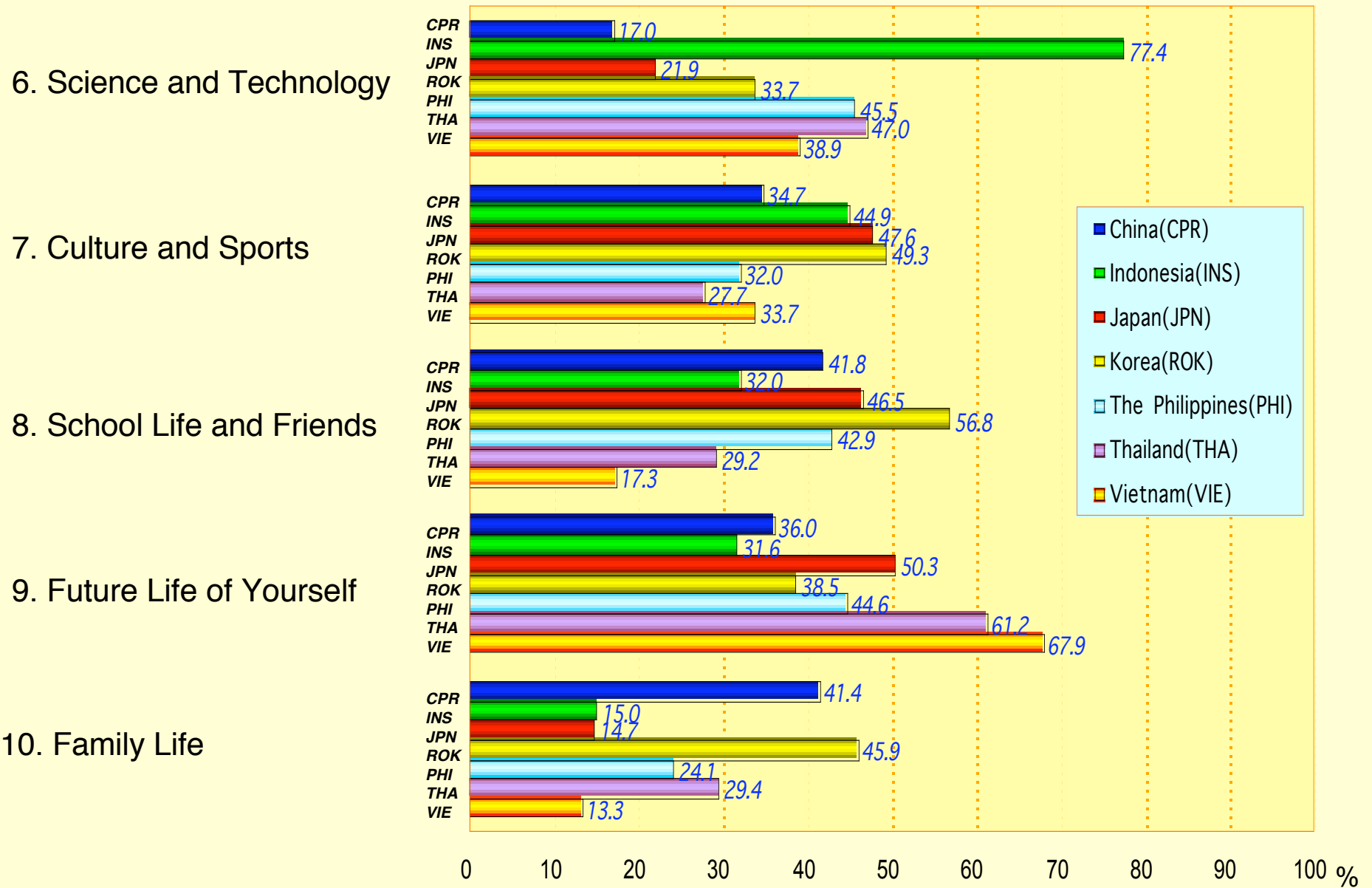


## 2-1. Which among the following issues/items are you most interested in? Please select up to three of your highest interest.

5

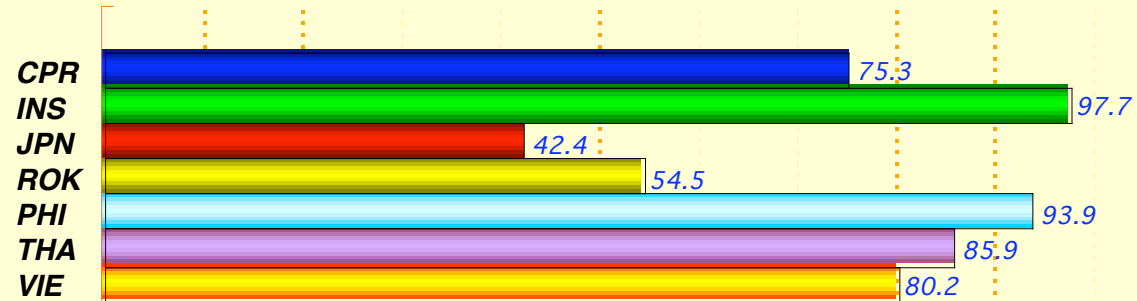


2-2. Which among the following issues/items are you most interested in? (continued) 6  
 Please select up to three of your highest interest.

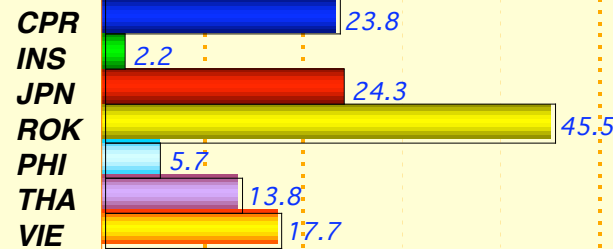


### 3. Do you like science courses given in school?

I like them very much.  
I like them.



I dislike them.  
I strongly dislike them.



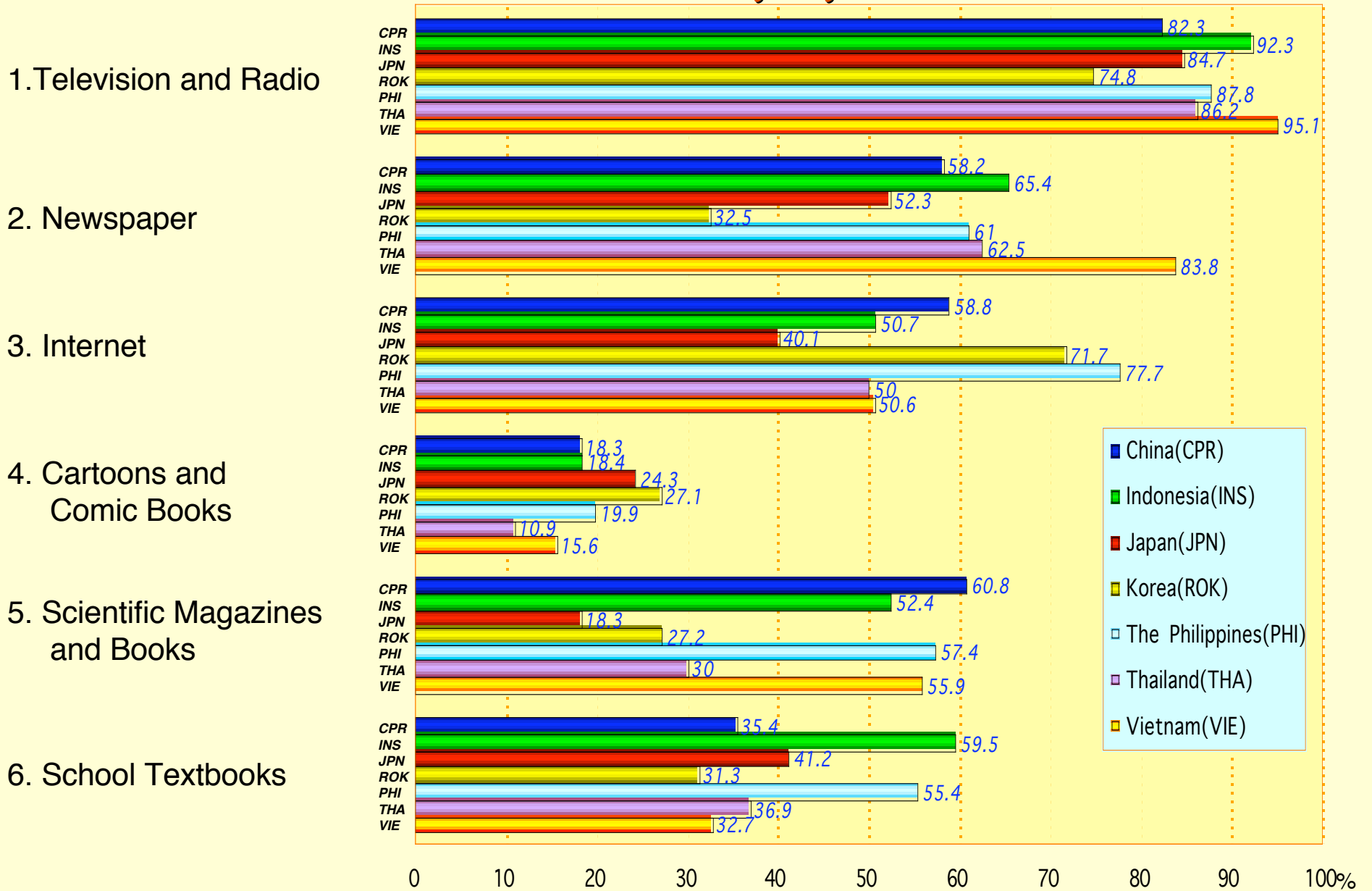
I can not say.





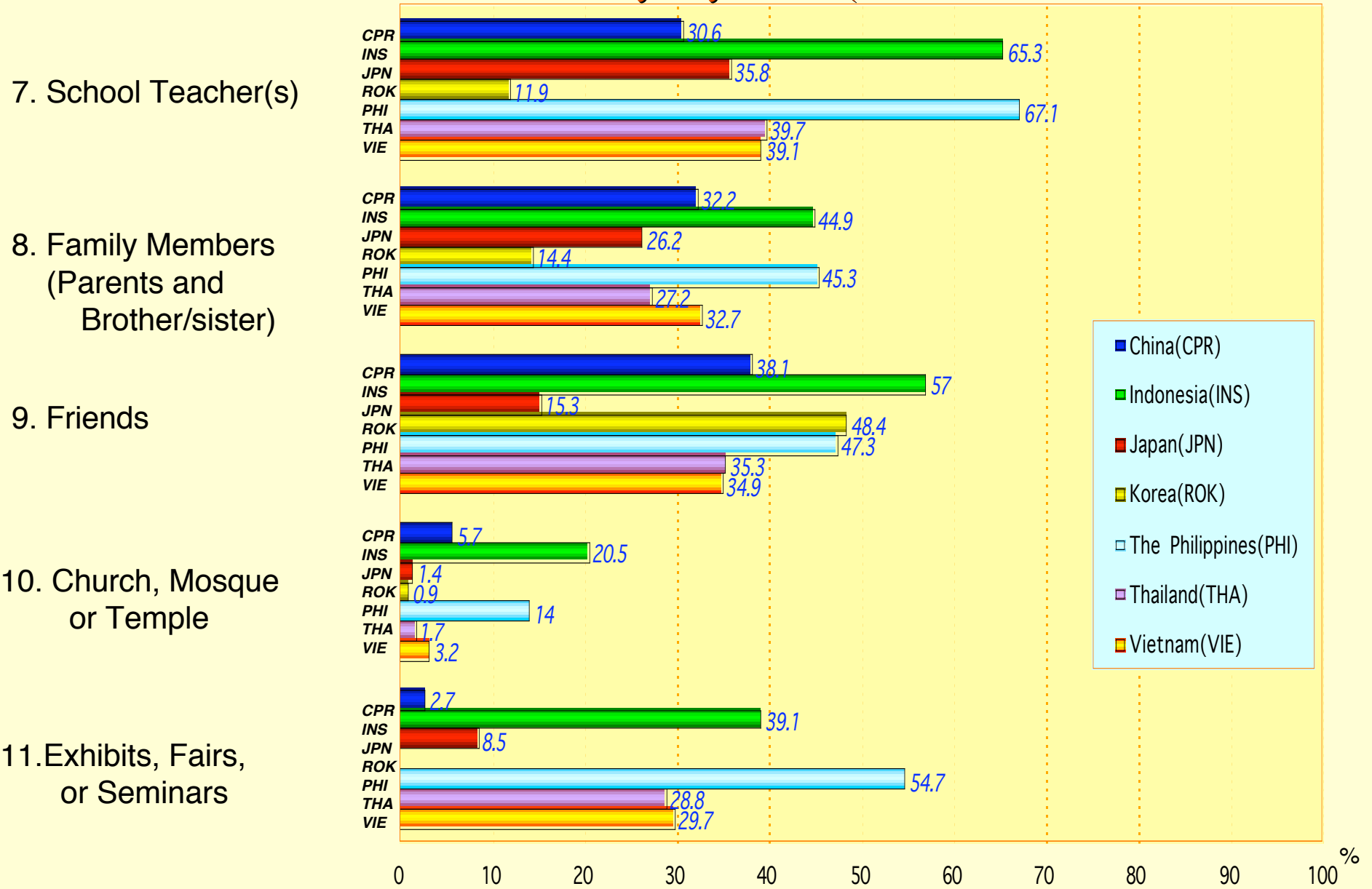
# 4-1. What are your sources of information about science and technology?

Please select as many as you like.



## 4-2. What are your sources of information about science and technology?

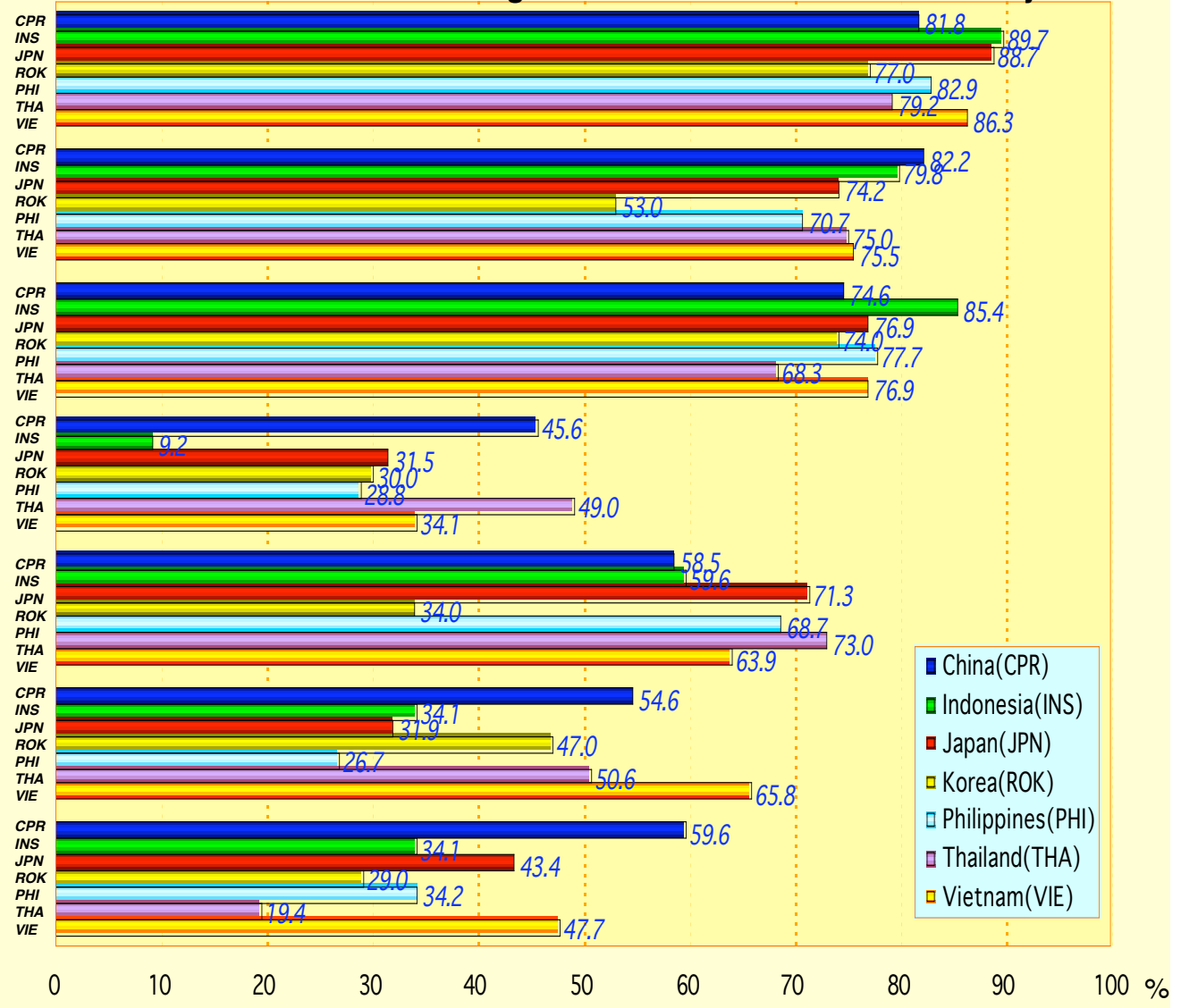
Please select as many as you like.(continued)



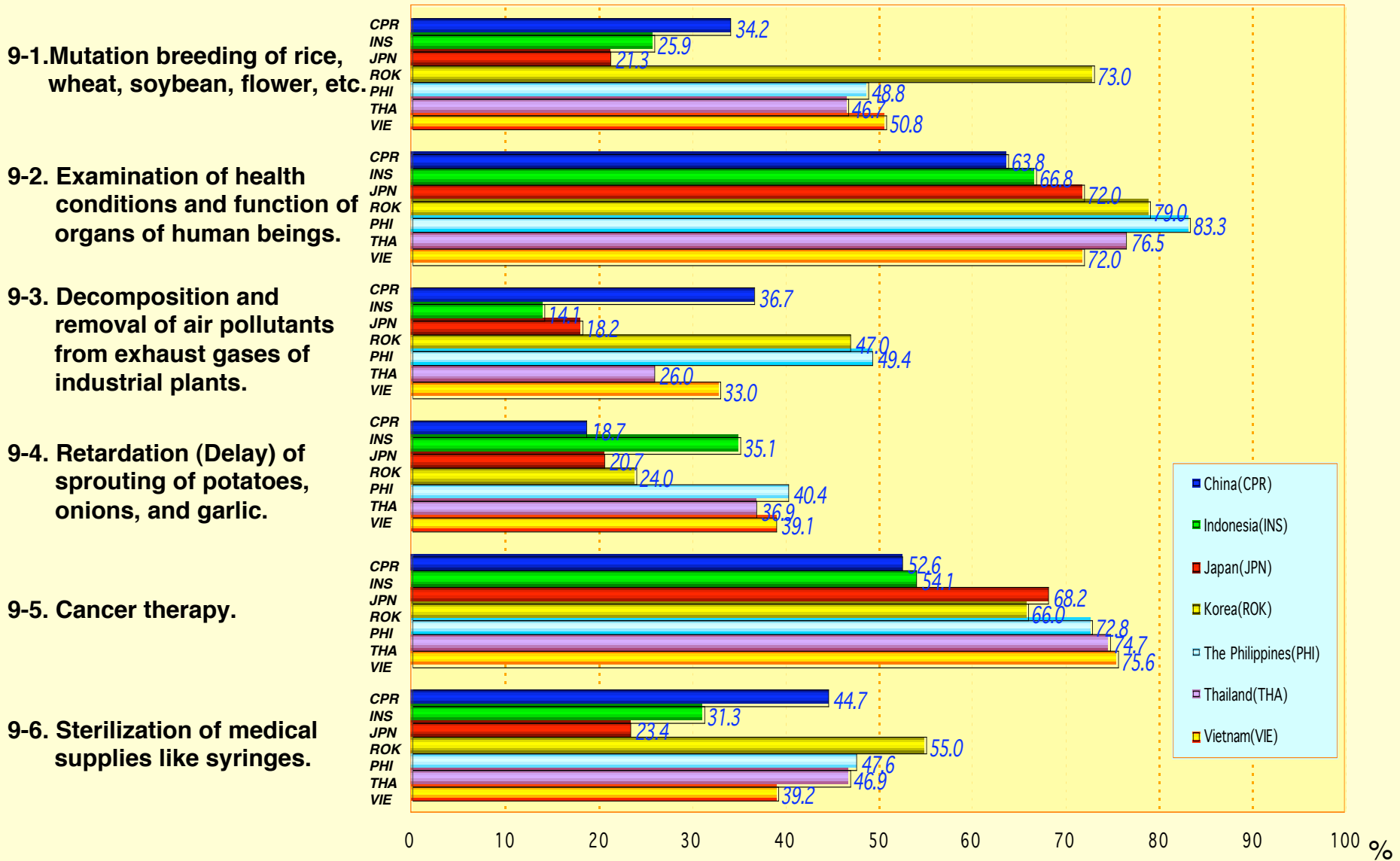
# 5. Following are statements about science and technology. Do you think the following information about science and technology is right or wrong? Please select one item among the three choices. 10

Percentage of Persons who Answered Correctly

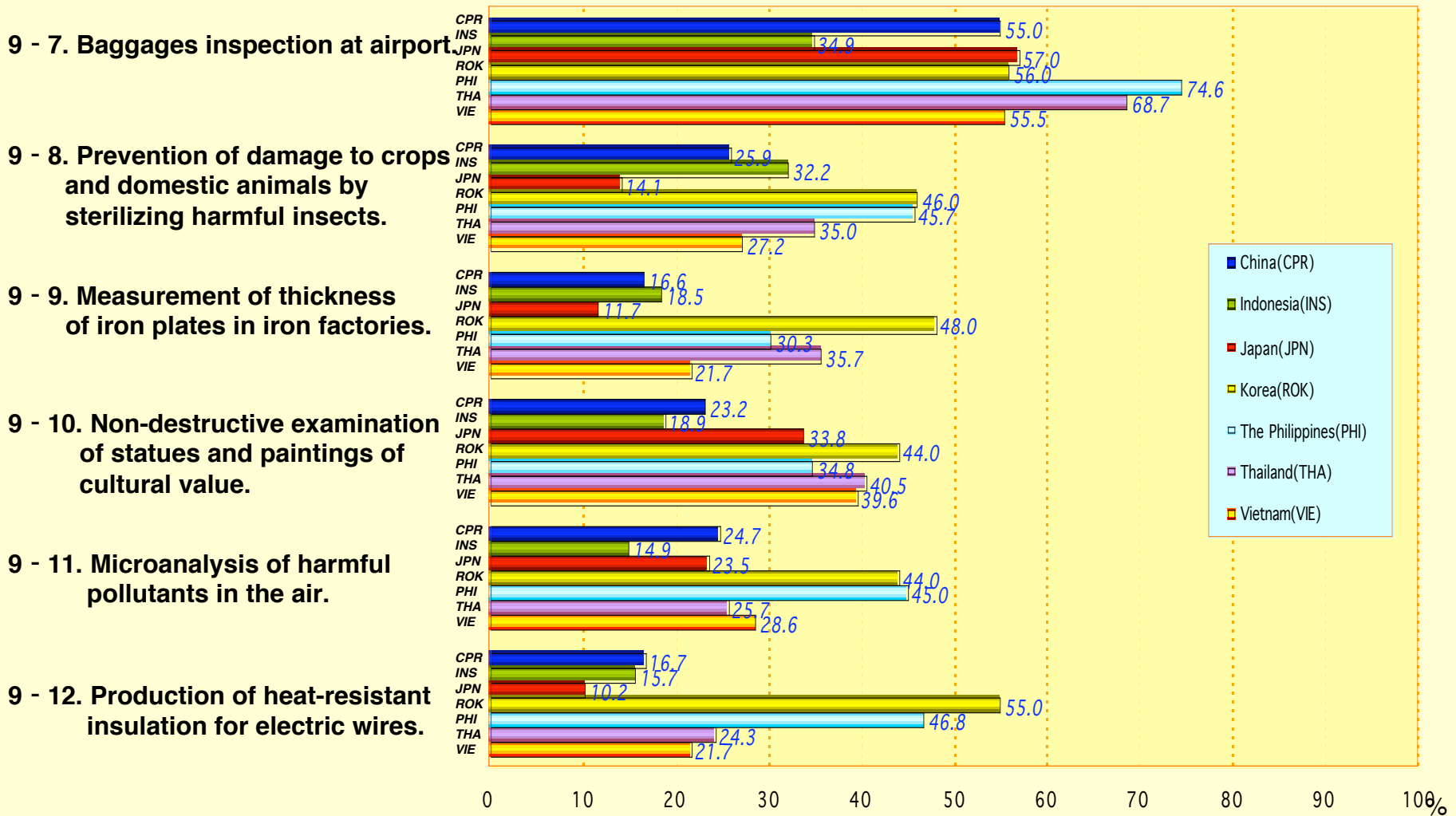
- 3-1. The temperature at the center of the earth is very hot. ( R )
- 3-2. Materials that emit radiation are artificially made. ( F )
- 3-3. Oxygen in the air is mainly produced by photosynthesis of green plant. ( R )
- 3-4. A laser is obtained by concentration of acoustic waves. ( F )
- 3-5. An electron is smaller than an atom. ( R )
- 3-6. The factor that determines the sex of a child is genes of a father. ( R )
- 3-7. The major reason for global warming is the release of chlorofluorocarbons. ( F )



6-1. Radiation is used for various applications worldwide. Please let us know your knowledge about the following applications of radiation by selecting one among the four choices. (“I know well” + “I know it to some extent”)



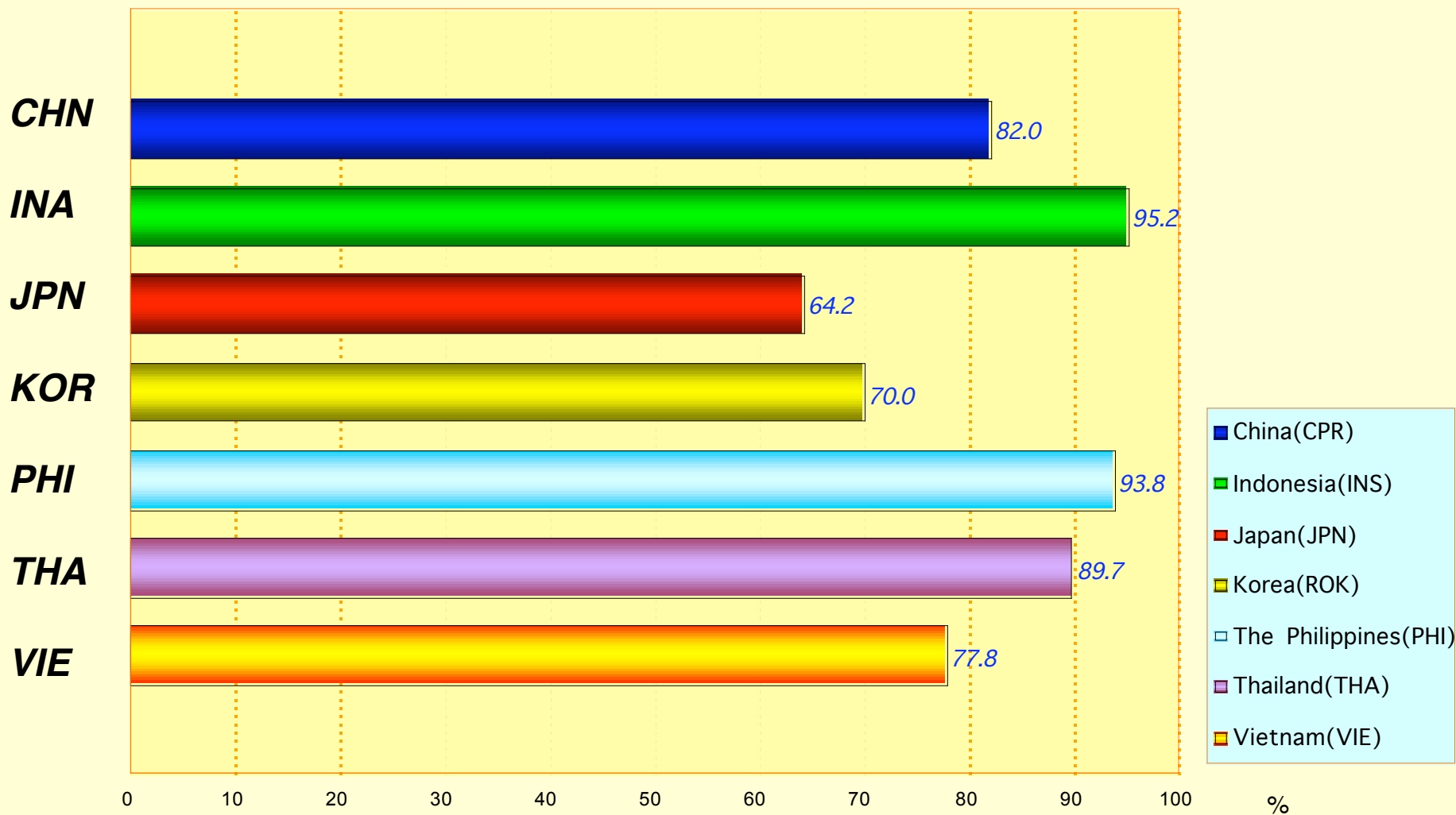
6-2. Radiation is used for various applications worldwide. Please let us know your knowledge about the following applications of radiation by selecting one among the four choices. (“I know well” + “I know it to some extent”) (continued) 12



## 7. Are you interested in topics on radiation? Please select one among the three choices.

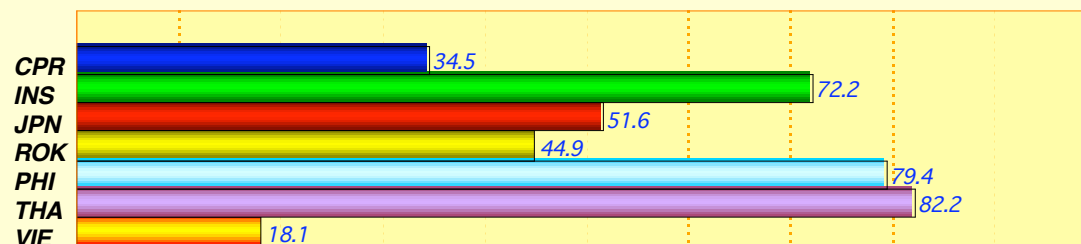
13

Percentage of those who answered “Yes, I am very much interested” and “Yes, I am somewhat interested”.

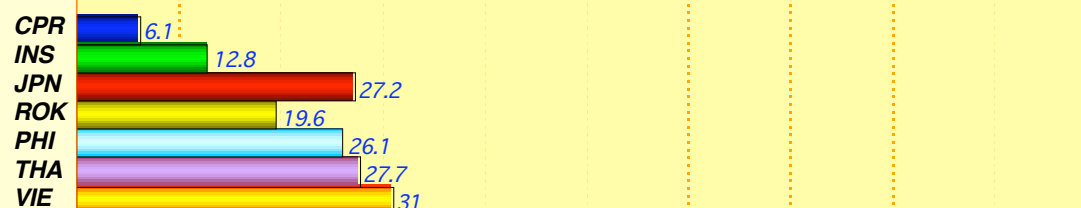


## 8. Q&A on radiation (ratio of answer "Yes")

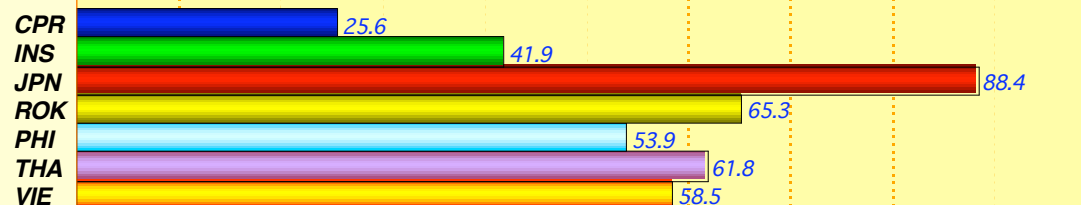
F4. Have you ever been taught about "radiation" or "radioactivity" in the past at school?



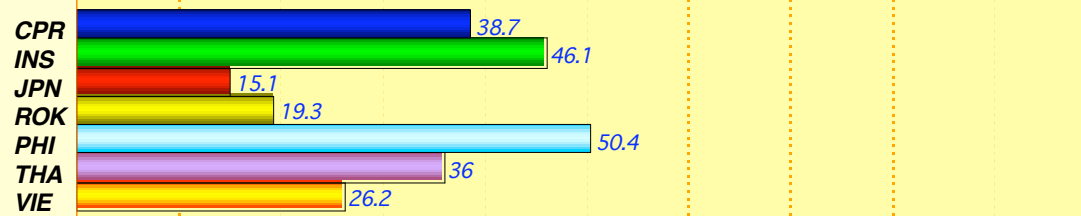
F5. Have you ever visited a university, a research institute, or a science and technology exhibition to learn about radiation.



F6. Have you ever had a Roentgen (X-ray) photograph taken.



F7. Is there any person who received medical care by radiation among your family members or acquaintance?

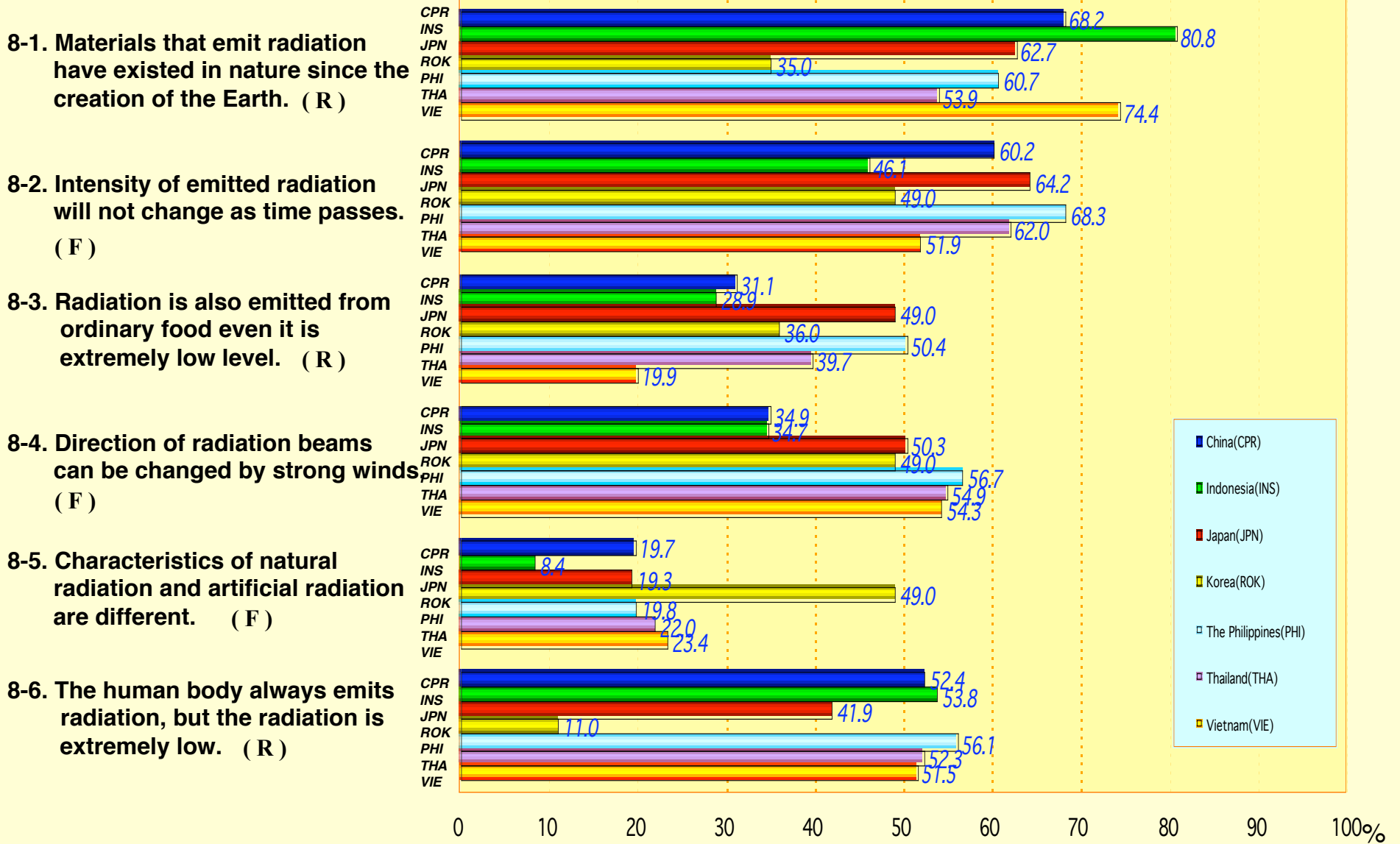


0 10 20 30 40 50 60 70 80 90 100 %

# 9. The following are some statements about “radiation”.

Please select as many as you like.

Percentage of Persons who Answered Correctly

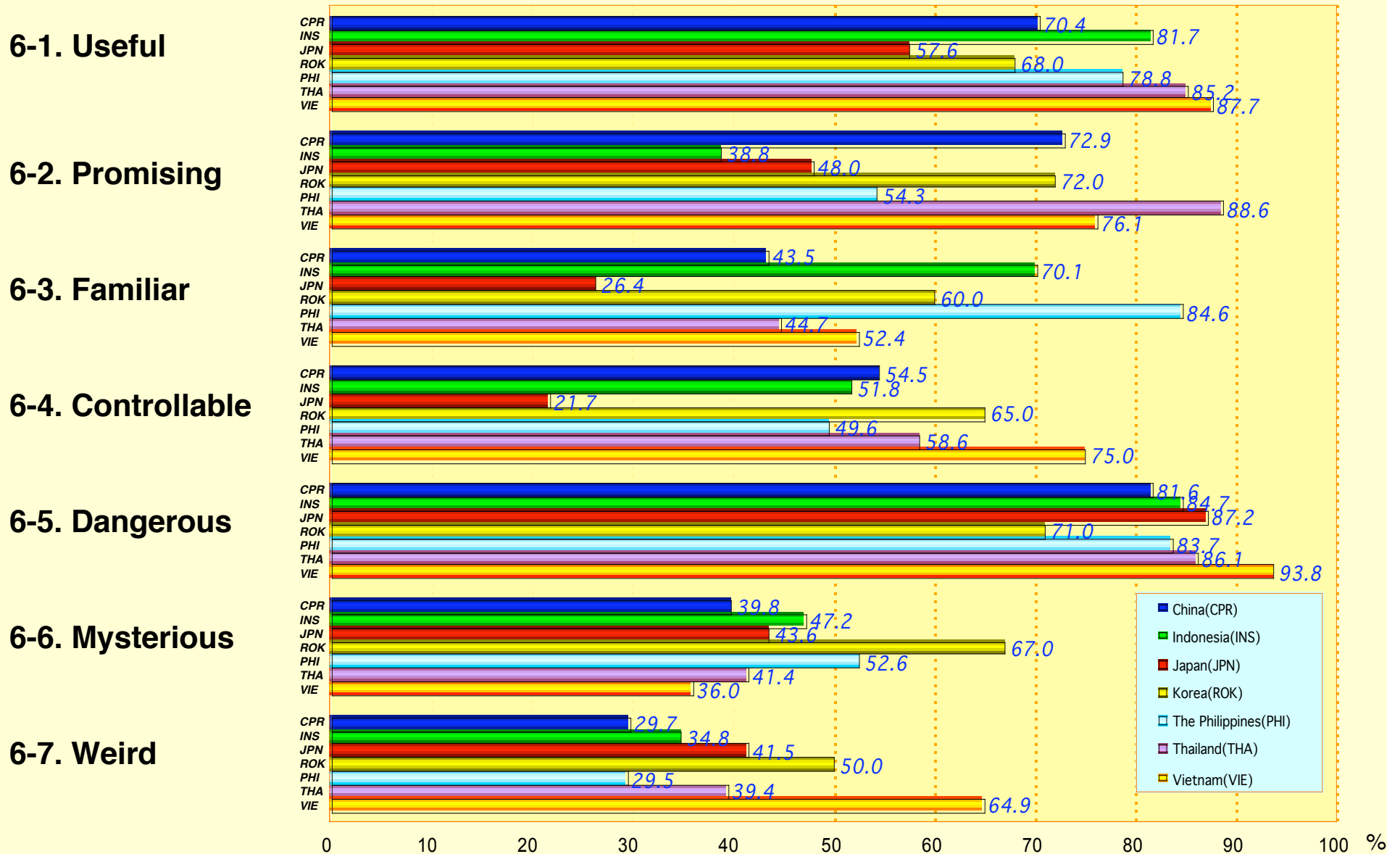




# 10. Following are statements about “radiation”.

Please select one answer among the three choices.

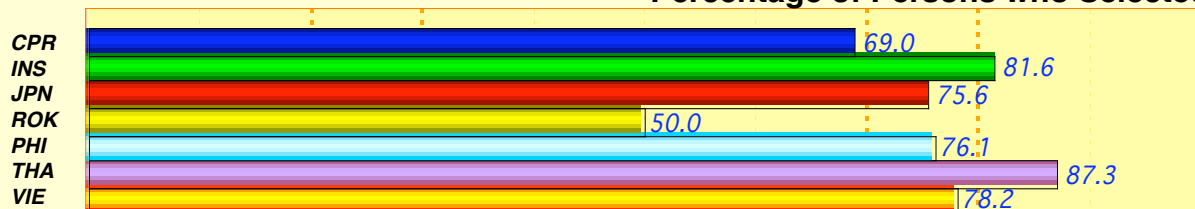
Percentage of Persons who Answered “ Yes I agree ” + “ I agree slightly ”



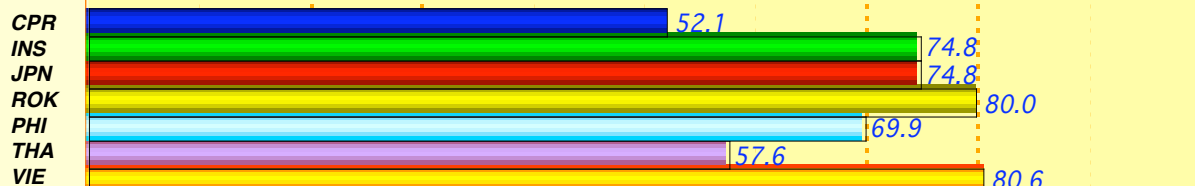
# 11-1. What do you imagine when you hear the word “radiation”? Please select as many as you like.

Percentage of Persons who Selected

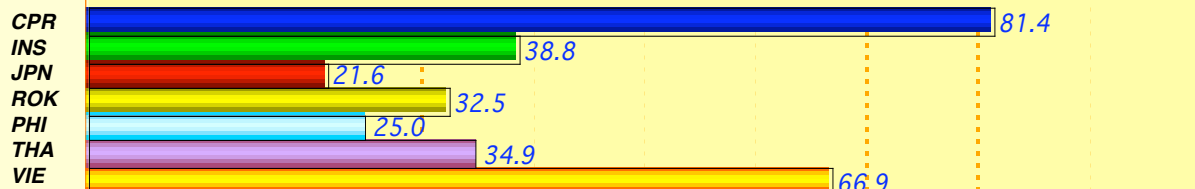
1. Roentgen  
(X-ray) Radiography



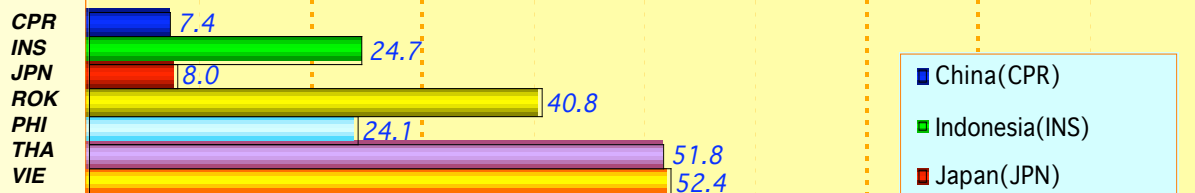
2. Hiroshima, Nagasaki  
or Nuclear Weapon



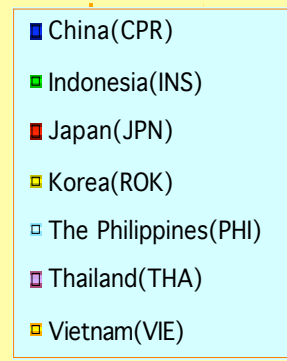
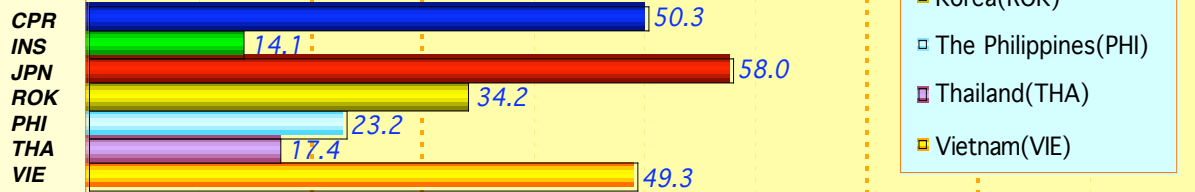
3. Mr. and Mrs. Curie



4. Food Irradiation

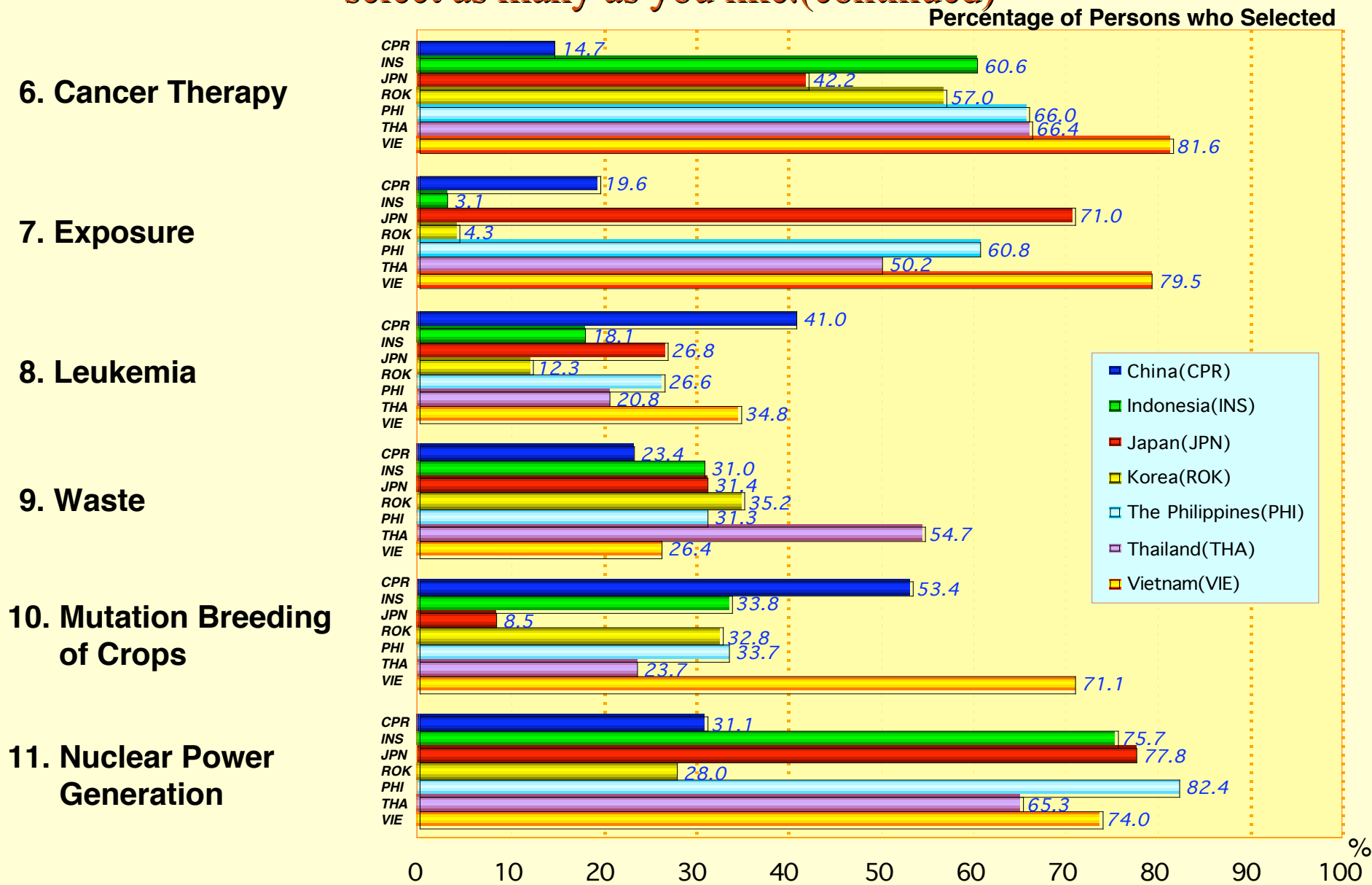


5. Chernobyl



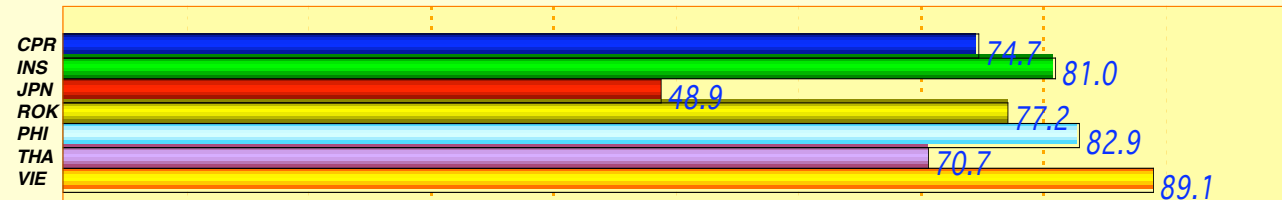
0 10 20 30 40 50 60 70 80 90 100%

# 11-2. What do you imagine when you hear the word “radiation”? Please select as many as you like.(continued)

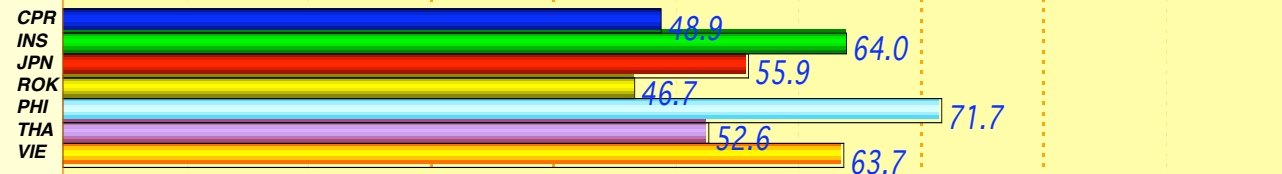


# 12-1. What do you want to know about “radiation”?

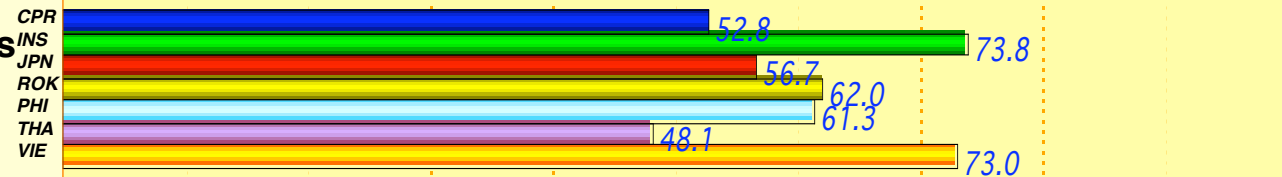
1. Amount of radiation exposure that may affect health of human beings



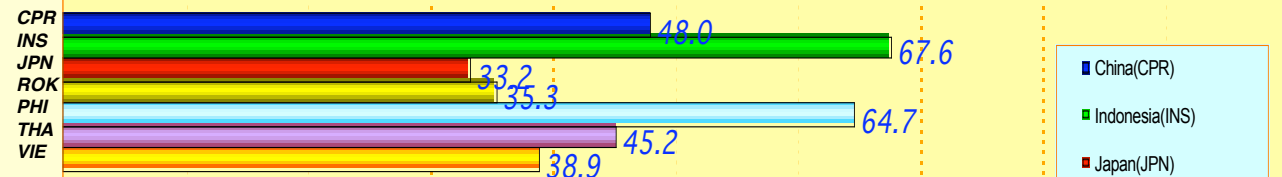
2. Safety measures in managing radiation exposure



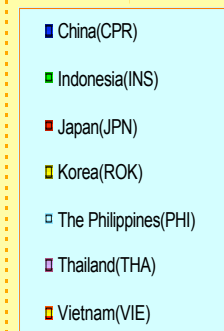
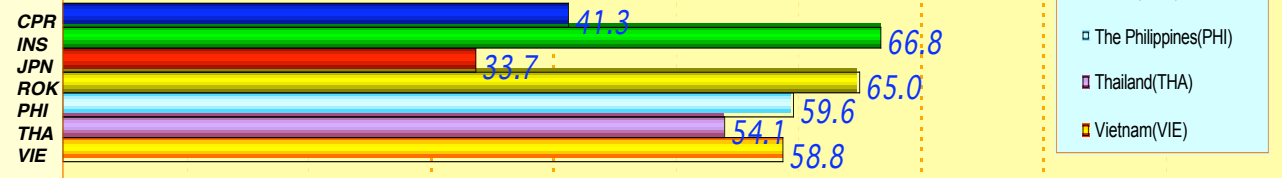
3. Emergency preparedness for radiation-related accidents



4. Facilities that are using radiation



5. Application in food



0 10 20 30 40 50 60 70 80 90 100 %

## 12-2. What do you want to know about “radiation”?

20

