Chapter 5

Descriptive Results

October 2022

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1. Overview

This chapter provides an overview of the descriptive statistics of the responses. The number of respondents in each country is as follows: Indonesia: n=1000, Malaysia: n=1050. Table 5.1 and Figure 5.1 show the employment status of all respondents in the two countries. Although survey experiments were conducted in Malaysia and not Indonesia, we first present the pooled results.
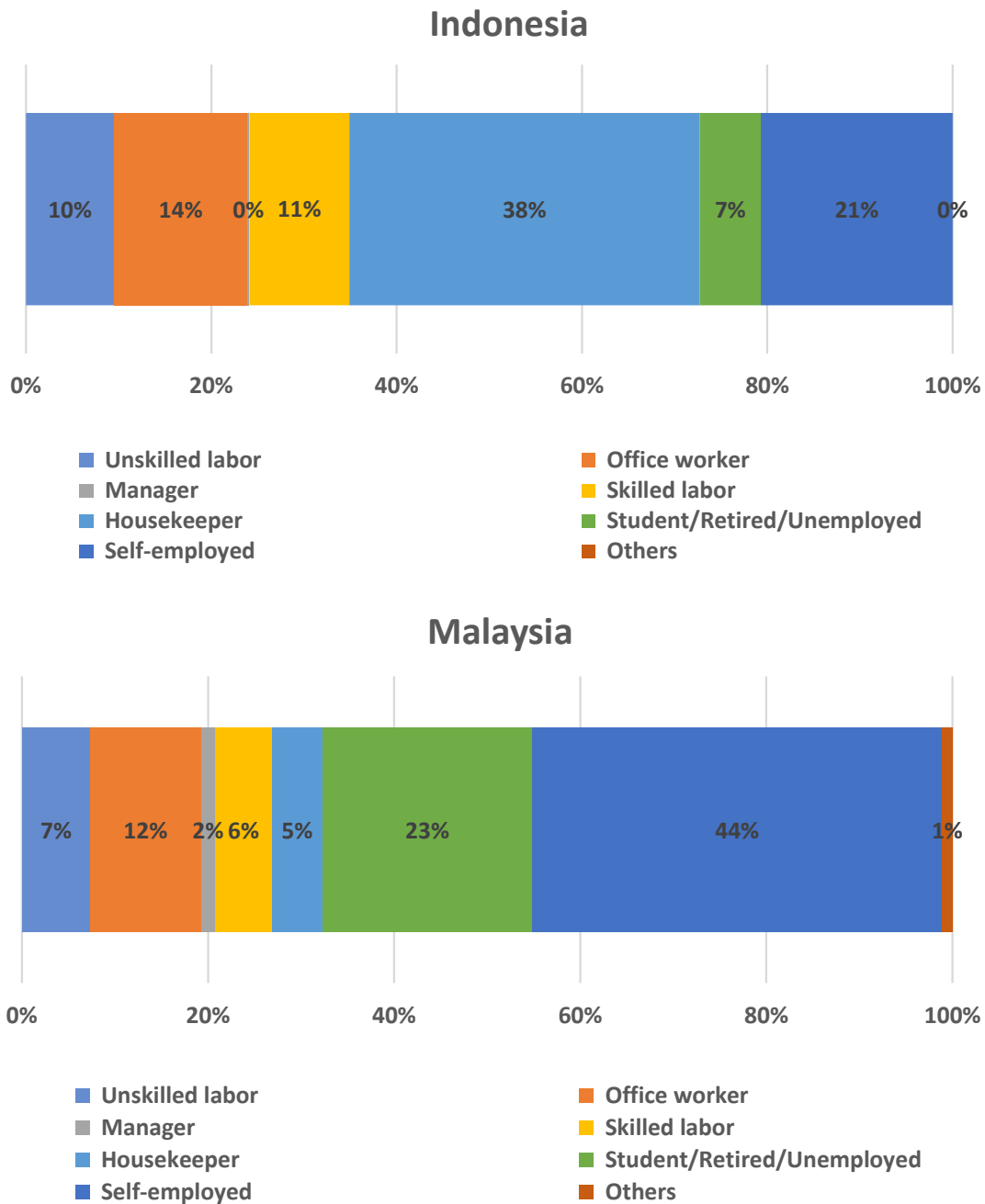
Most common occupations differ by country. The most common occupations are as follows: in Malaysia, self-employed (44%) followed by student/retired/unemployed (23%); in Indonesia, housekeeper (38%), followed by self-employed (21%). Note that most of the surveys were conducted during daytime, and the respondents thus tended to be those who remain at home during the daytime.

Table 5.1. Occupation of Respondents in All Regions

Country	Indonesia (n=1000)		Malaysia (n=1050)	
	Number of respondents	%	Number of respondents	%
1. Unskilled labour	95	10%	77	7%
2. Office worker	144	14%	125	12%
3. Manager	2	0%	16	2%
4. Skilled labour	108	11%	64	6%
5. Housekeeper	378	38%	57	5%
6. Student/Retired/ Unemployed	66	7%	237	23%
7. Self-employed	207	21%	462	44%
8. Others	0	0%	12	1%
Blank	0	0%	0	0.0%
SUM	1000	100%	601	100%

Source: Authors' calculation.

Figure 5.1. Respondent Occupation Percentages

Indonesia

■ Unskilled labor				■ Office worker		
■ Manager				■ Skilled labor		
■ Housekeeper				■ Student/Retired/Unemployed		
■ Self-employed				■ Others		

Malaysia

|						
■ Unskilled labor				■ Office worker		
■ Manager				■ Skilled labor		
■ Housekeeper				■ Student/Retired/Unemployed		
■ Self-employed				■ Others		

Source: Authors' calculation.

2.   Monthly Electricity Consumption

Figure 5.2 shows the electricity consumption per month in each country. The most frequent level of monthly electricity consumption ranged from 100–200 kilowatt hours (kWh)/month in Indonesia and 200–300 kWh/month in Malaysia. Both distributions have a long tail.

Figure 5.2. Electricity Consumption
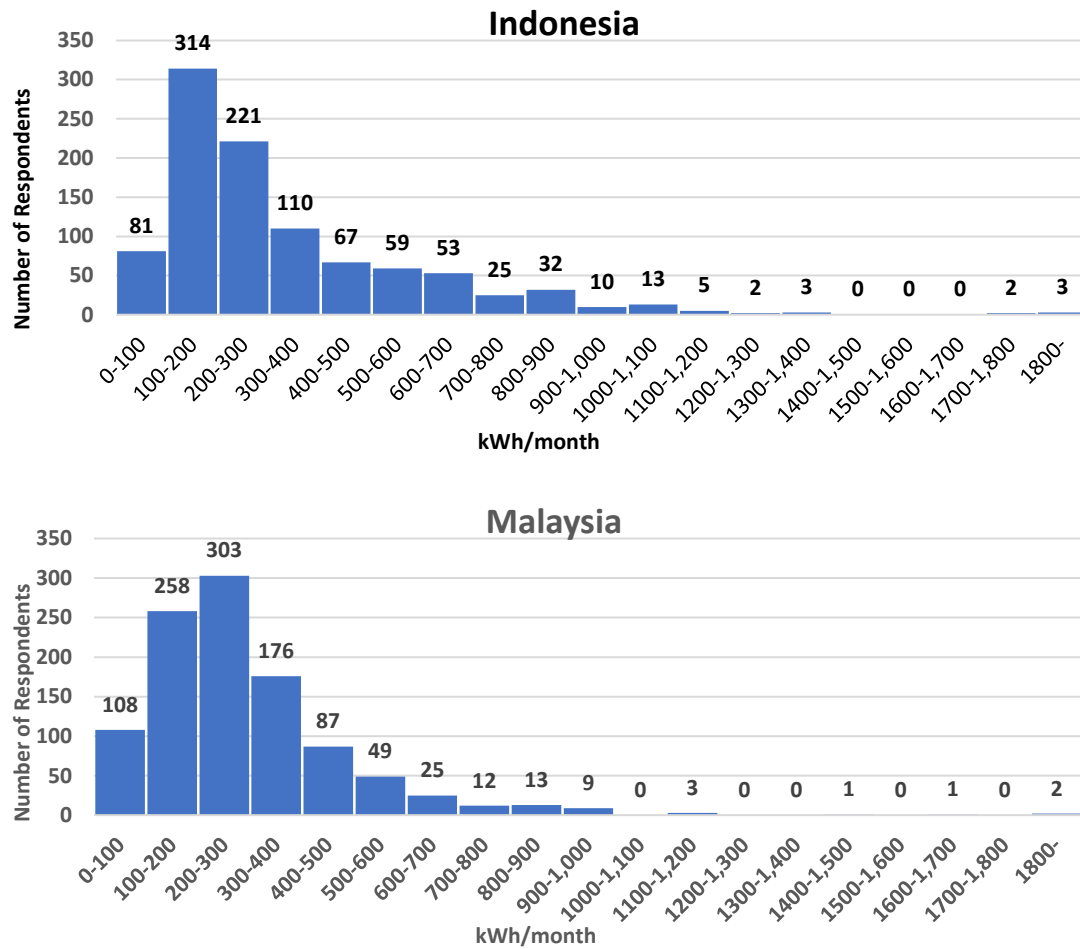
kWh = kilowatt hour.

Source: Authors' calculation.

3. Monthly income

Figure 5.3 shows the monthly income in the two countries. The most frequent levels of income were US$280–380/month in Indonesia and US$240–360/month in Malaysia. Both distributions have a long tail as with the electricity consumption. The distribution of monthly electricity consumption does not follow the same pattern as the monthly income distribution in the two examined regions.
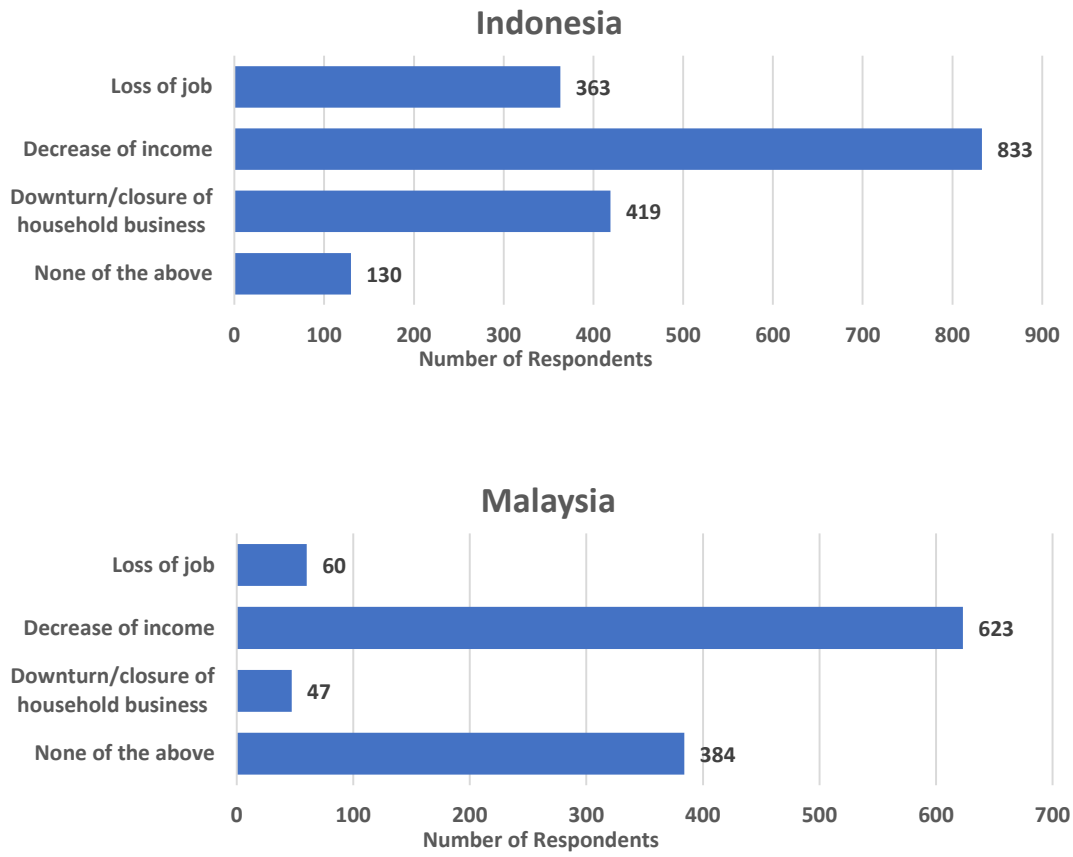
Figure 5.3. Distribution of Monthly Income

Indonesia

Income (USD/month)	Number of Respondents
0-140	40
140-280	203
280-380	268
380-450	197
450-590	154
590-700	81
700-840	28
840-1050	19
1050-1400	6
1400-	4

Malaysia

Income (USD/month)	Number of Respondents
0-240	126
240-360	187
360-480	163
480-600	143
600-720	75
720-850	96
850-970	41
970-1090	57
1090-1210	32
1210-1330	48
1330-1450	12
1450-1570	14
1570-1690	4
1690-1810	8
1810-1930	4
1930-2050	9
2050-2170	2
2170-	29

Source: Authors' calculation.

4. Effects of COVID-19

As noted, the survey was conducted during the COVID-19 pandemic, which affected the respondents deeply. Figure 5.4 shows the results for the effects of COVID-19 on the respondents. In both countries, more than 60% of respondents indicated 'Decrease of income'. However, in Malaysia, about one in three respondents chose none of 'Decrease of income' or 'Loss of job' or 'Downturn/closure of household business.

Figure 5.4. Effects of the COVID-19 Pandemic

Indonesia

Category	Number of Respondents
Loss of job	363
Decrease of income	833
Downturn/closure of household business	419
None of the above	130

Number of Respondents

Malaysia

Category	Number of Respondents
Loss of job	60
Decrease of income	623
Downturn/closure of household business	47
None of the above	384

Number of Respondents

Source: Authors' calculation.

5. Attitudes Towards Environmental Issues

Figure 5.5 shows the environmental issues considered most and second-most important by respondents. In Indonesia, many respondents selected 'Flooding' and 'Air pollution'. In Malaysia, respondents selected 'Water shortage' as the most and 'Global warming and climate change' as the second-most important. The trend to pay attention to global warming and climate change was also seen in the 2021 results in Malaysia. Note that the respondents might also have chosen flooding or water shortage as impacts of anthropogenic climate change. Additionally, it is noteworthy that air pollution is related to fossil fuel combustion.

Figure 5.5. Perceived Importance of Environmental Issues
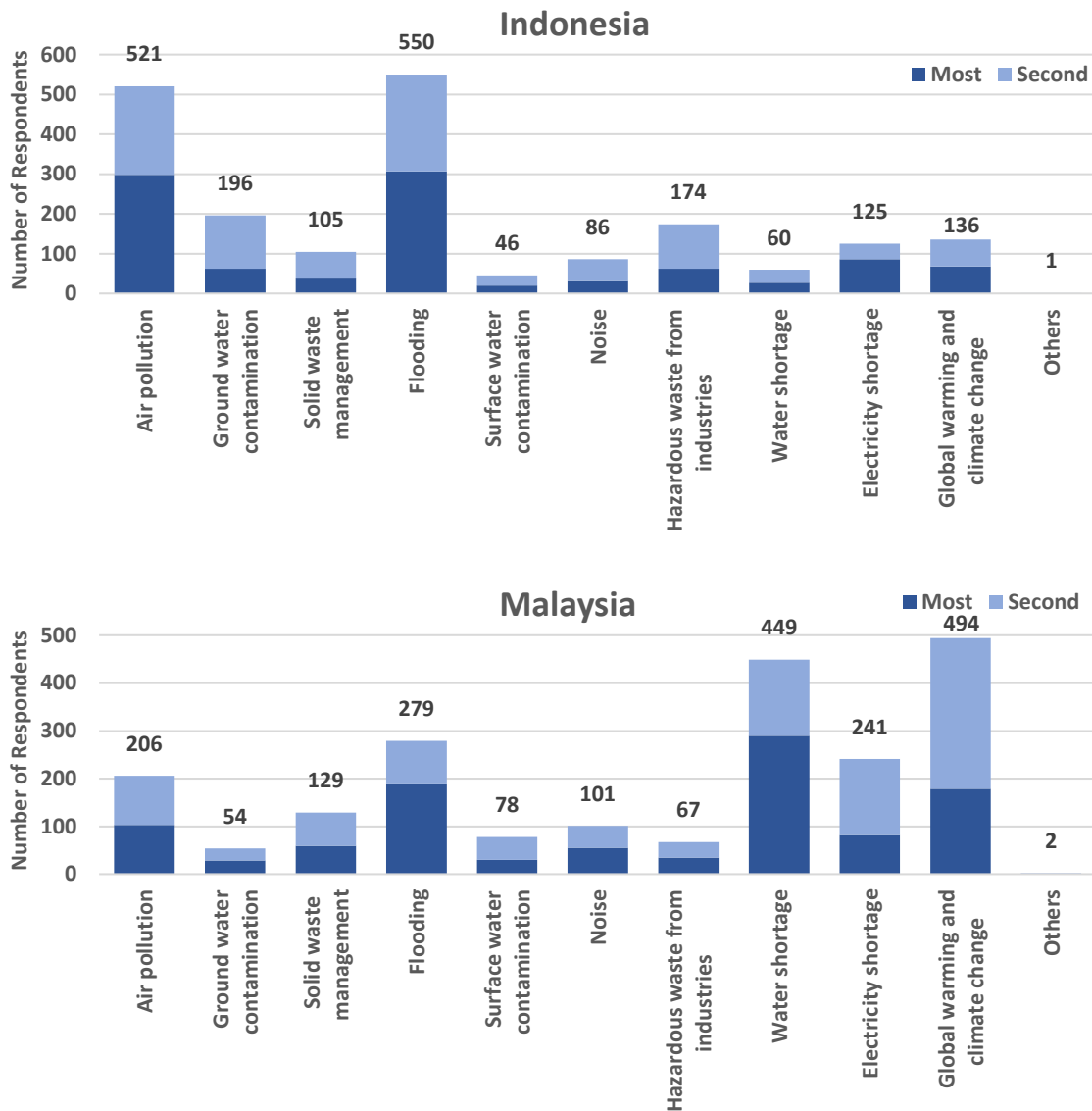
Source: Authors' calculation.

Figure 5.6 shows the attitudes towards climate change in both countries. Many respondents are concerned about climate change and have heard a lot about climate change in the news. In Malaysia, about 80% of the respondents either strongly agree or agree with the statement that climate change will harm them personally. The fraction is smaller in Indonesia, at about 53%.

Figure 5.6. Attitudes Towards Climate Change Issue

Indonesia

	Strongly agree	Agree somewhat	Neither agree not disagree	Disagree somewhat	Strongly disagree	Don't know
How concerned, if at all, are you about climate change?	46%	37%	13%	2%		
Do you think climate change will harm you personally?	26%	27%	28%	14%		
Science and technology will eventually solve our problems with climate change	40%	35%	17%	4%		
I hear a lot about climate change in the news.	33%	37%	16%	5%		

- ■ Strongly agree
- ■ Agree somewhat
- ■ Neither agree not disagree
- ■ Disagree somewhat
- ■ Strongly disagree
- ■ Don't know

Malaysia

	Strongly agree	Agree somewhat	Neither agree not disagree	Disagree somewhat	Strongly disagree	Don't know
How concerned, if at all, are you about climate change?	36%	52%	11%	1%		
Do you think climate change will harm you personally?	34%	47%	14%	4%		
Science and technology will eventually solve our problems with climate change	29%	40%	25%	4%		
I hear a lot about climate change in the news.	26%	46%	23%	5%		

- ■ Strongly agree
- ■ Agree somewhat
- ■ Neither agree not disagree
- ■ Disagree somewhat
- ■ Strongly disagree
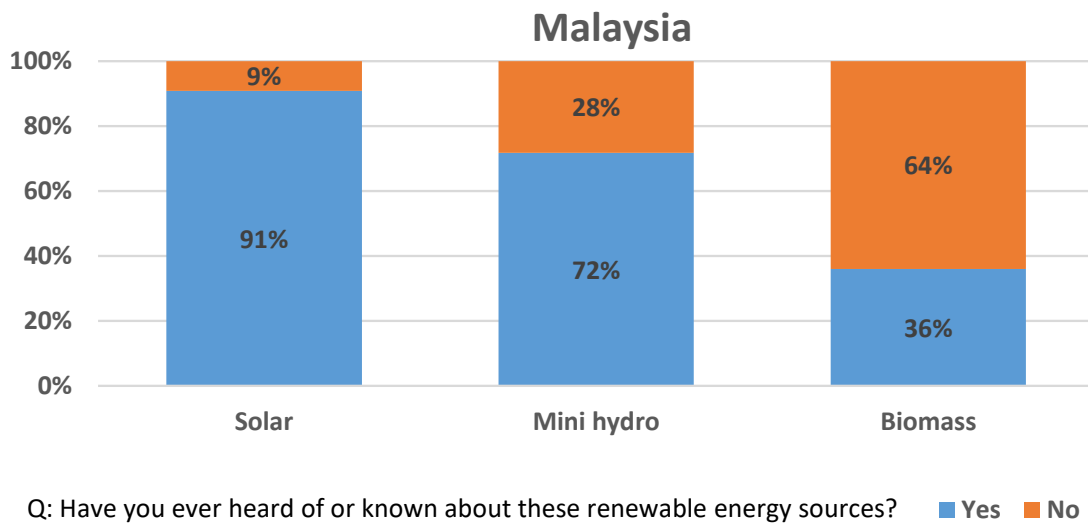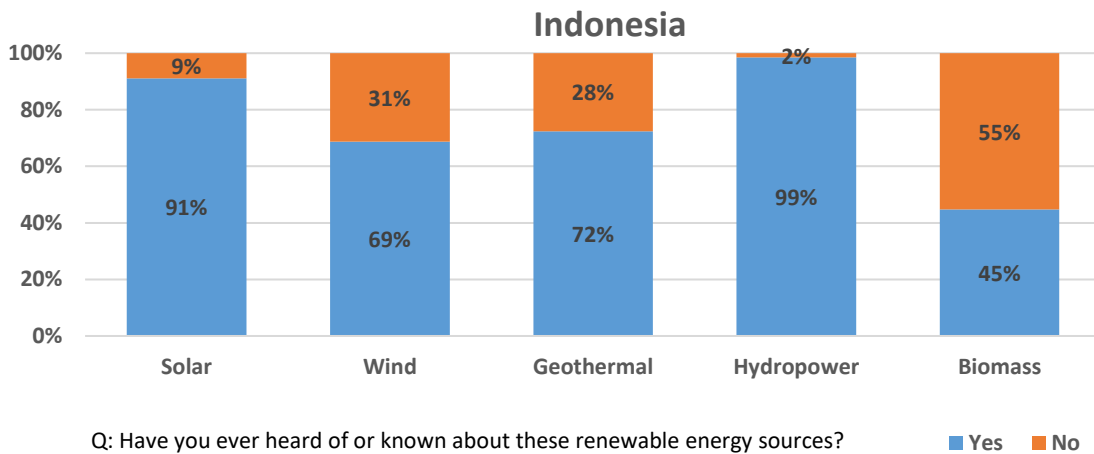- ■ Don't know

Source: Authors' calculation.

6.   Attitudes Towards Types of Renewable Energy

Figure 5.7 shows people's knowledge about renewable energy sources. In Indonesia, hydropower was the most popular, with 99% answering 'Yes'. Solar was popular too, with about 90% answering 'Yes' in both countries. Biomass was least well known in both countries, especially in Malaysia, where only 36% of respondents answered 'Yes'.

Figure 5.7. Knowledge About Renewable Energy Sources

Indonesia

Q: Have you ever heard of or known about these renewable energy sources?   ■ Yes ■ No

Malaysia

Q: Have you ever heard of or known about these renewable energy sources?   ■ Yes ■ No

Source: Authors' calculation.

Figure 5.8 shows the proportions of respondent evaluations regarding RE types. In Indonesia, hydropower was considered the most environmentally friendly. Solar energy was considered environmentally friendly in both Indonesia (51% responded 'very environmentally friendly') and Malaysia (60% responded 'very environmentally friendly'). Respondents expressed concerns regarding biomass in Indonesia (2% responded 'environmentally unfriendly'), Malaysia (5% responded 'environmentally unfriendly'). The same pattern was observed in the prior two years' surveys, where solar was considered more environmentally friendly and biomass less environmentally friendly in all surveyed countries.

Figure 5.8. Attitudes Towards Renewable Energy
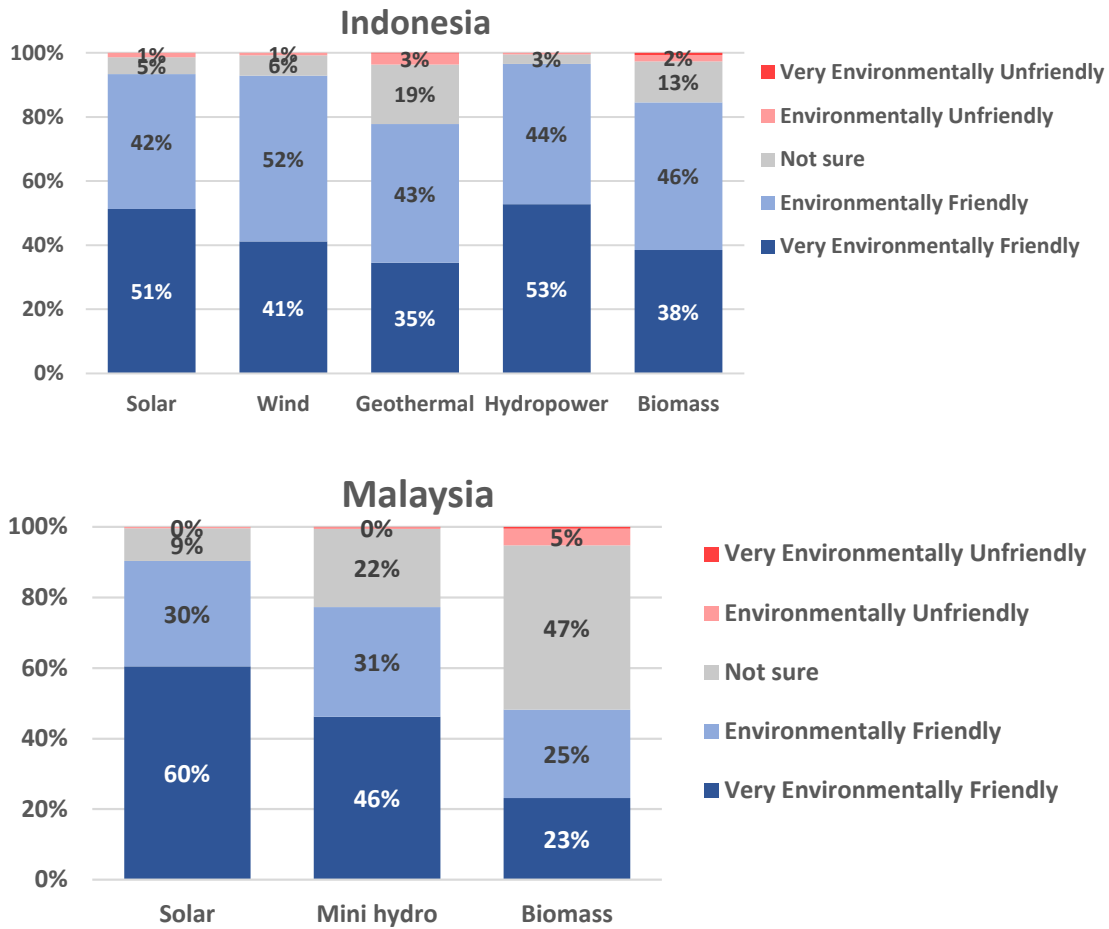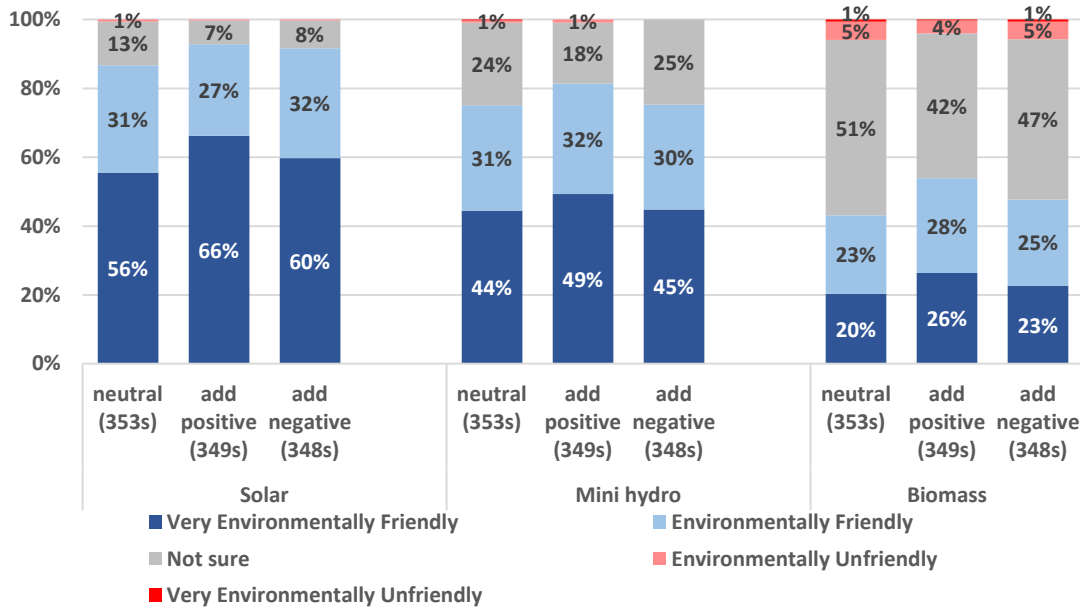

Source: Authors' calculation.

7. Survey Experiments on Renewable Energy in Malaysia

A survey experiment was conducted in which participants were randomly divided into groups each receiving one of three informational materials about renewable energy.

Figure 5.9 shows the proportions of respondent evaluations regarding RE types in Malaysia. More respondents in the 'add positive' group selected that solar and biomass are very environmentally friendly. A Kruskal-Wallis H test was conducted to determine if the response was different for three groups that either listened to: (a) neutral (n = 353); (b) add positive (n = 349); and (c) add negative (n = 348). A Kruskal-Wallis H test showed that there was a statistically significant difference in the response between the three groups, $\chi^2(2)$ = 10.209, p = 0.0061 for solar and $\chi^2(2)$ = 8.286, p = 0.0159 for biomass.

Figure 5.9. Attitudes Towards Renewable Energy

Q. How do you feel about renewable energy sources below?

Source: Authors' calculation.

8.   Attitudes Towards Carbon Dioxide Removal Technologies

Figure 5.10 shows people's knowledge about carbon dioxide removal (CDR) technologies. CDR was not familiar with the respondents. The largest number of Indonesian respondents (38%) and Malaysian respondents (54%) answered 'I have not heard of them'.

Figure 5.10. Knowledge of CDR Technology

Indonesia
- 4%
- 9%
- 23%
- 27%
- 38%

Malaysia
- 4%
- 16%
- 25%
- 54%

■ I know a great deal about carbon dioxide removal technologies
■ I know a fair amount about carbon dioxide removal technologies
■ I know just a little about carbon dioxide removal technologies
■ I have heard of carbon dioxide removal technologies but know almost nothing about it
■ I have not heard of carbon dioxide removal technologies before today
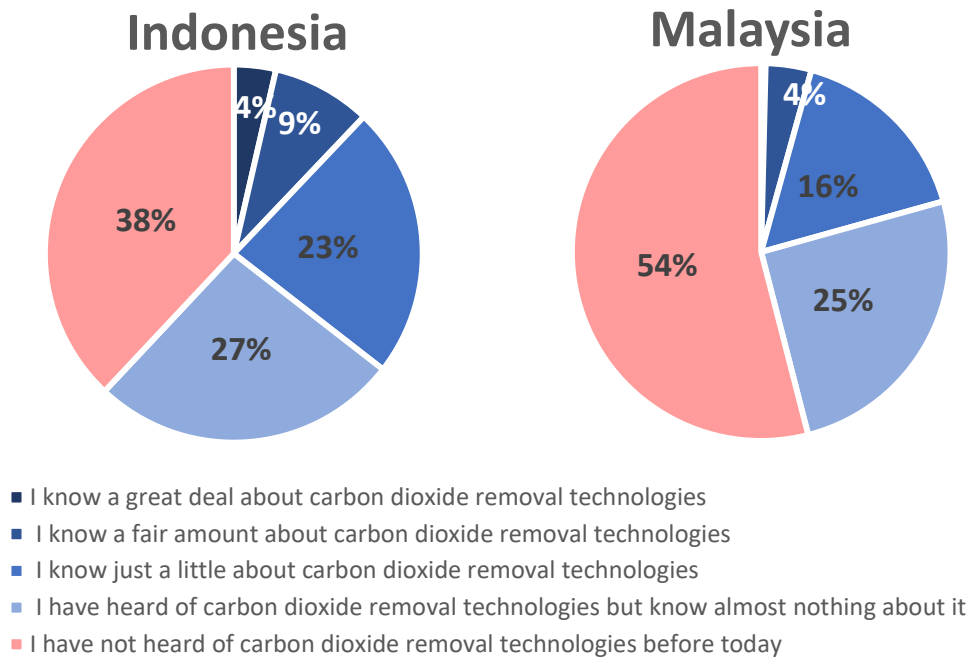
CDR = carbon dioxide removal.

Source: Authors' calculation.

Figure 5.11 shows the attitudes towards the risks and benefits of CDRs in Indonesia, where 73% of respondents answered either 'Strongly agree' or 'Agree somewhat' to the statement 'There may be negative impacts of [CDR] on the environment'. Similarly, 69% of respondents answered either 'Strongly disagree' or 'Disagree somewhat' to the statement '[CDR] will lower the drive to cut carbon emissions'. The results from Malaysia, where a survey experiment was conducted, will be described in Chapter 7.

Figure 5.11. Attitudes Towards CDR Technologies

Indonesia

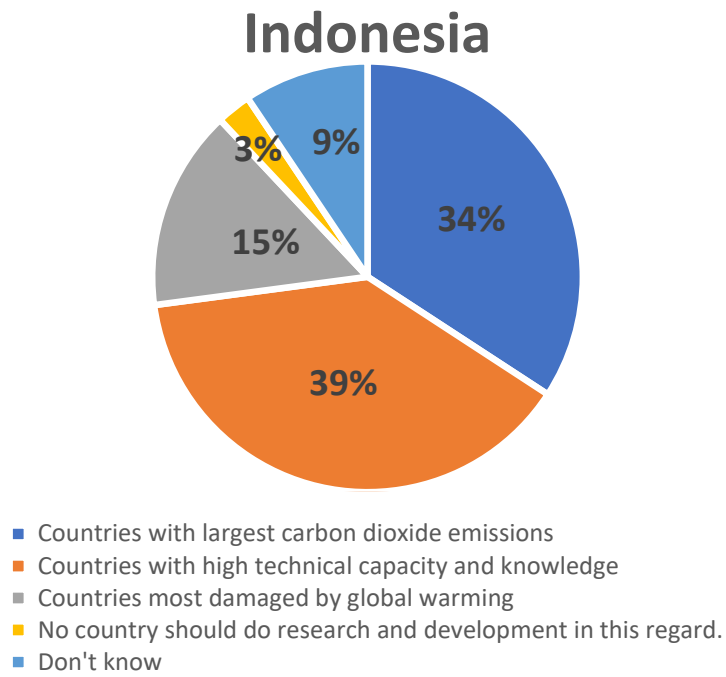|	Strongly agree	Agree somewhat	Neither agree not disagree	Disagree somewhat	Strongly disagree	Don't know
There may be negative impacts of carbon dioxide removal technologies on the environment	32%	41%	18%	4%	1%	4%
Carbon dioxide removal technologies will lower the drive to cut carbon emissions	31%	38%	23%	3%	1%	4%
Carbon dioxide removal technologies are being driven more by profit than by the public interest	20%	31%	31%	9%	5%	5%
Carbon dioxide removal technologies will mainly benefit rich countries and impact on poor countries	22%	29%	27%	9%	9%	4%
Carbon dioxide removal technologies could help to provide more time to reduce emissions	27%	35%	28%	3%	2%	6%
It will be cheaper to use carbon dioxide removal technologies than to reduce the consumption of fossil fuels	22%	34%	30%	5%	2%	7%
Carbon dioxide removal technologies will help slow climate change down faster than by simply cutting greenhouse gas…	24%	39%	27%	4%		6%
Carbon dioxide removal only deals with the symptoms and not the causes of emissions	20%	27%	37%	6%		9%

CDR = carbon dioxide removal.

Source: Authors' calculation.

Finally, Figure 5.12 shows the attitudes towards the future of CDR research and development in Indonesia. The highest share of respondents (39%) answered that the countries with high technical capacity and knowledge should be foremost in developing such technologies, followed by countries with the largest CO_2 emissions (34%).

Figure 5.12. Answer to 'In your Opinion, what Countries Should be at the Forefront in the Development of Carbon Removal Technology?'

Indonesia

- ■ Countries with largest carbon dioxide emissions
- ■ Countries with high technical capacity and knowledge
- ■ Countries most damaged by global warming
- ■ No country should do research and development in this regard.
- ■ Don't know

Source: Authors' calculation.