# Chapter 5

# **Descriptive Results**

February 2022

# This chapter should be cited as

ERIA (2022), 'Descriptive Results', in Hisashi Yoshikawa (ed.), *Public Attitudes Towards Energy Policy and Sustainable Development in ASEAN Countries.* ERIA Research Project Report FY2021 No. 22, Jakarta: ERIA, pp.45-58.

# Chapter 5

# **Descriptive Results**

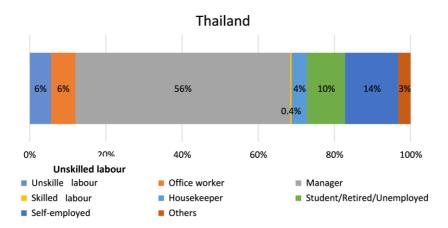
# 1. Overview

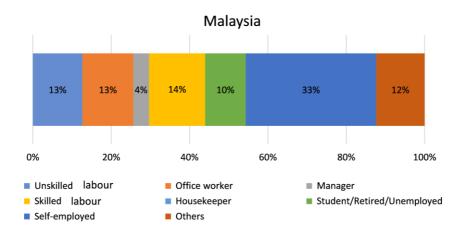
This chapter provides an overview of the descriptive statistics of the responses. The number of respondents in each country is as follows: Thailand: n=250, Malaysia: n=300, and the Philippines: n=500.

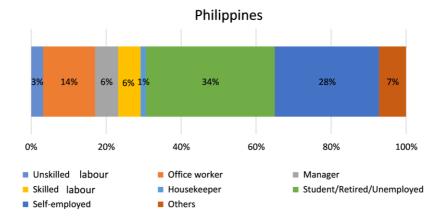
Table 5.1 and Figure 5.1 show the employment status of all respondents in all regions. Common occupation status differs by country. The most common occupations are as follows: manager (56%) in Thailand, self-employed (33%) in Malaysia, students, retired, or unemployed (34%) in the Philippines, followed by self-employed in Thailand and the Philippines (14% and 28%, respectively) and skilled labour (14%) in Malaysia.

Country	Thailand		Malaysia		Philippines		
•	(n=2	250)	(n=3	300)	(n=500)		
Country-specific question No.	Q34		p4Q39		PART4 Q7		
	Number of respondents	%	Number of respondents	%	Number of respondents	%	
1. Unskilled labour	14	6%	38	13%	16	3%	
2. Office worker	16	6%	39	13%	69	14%	
3. Manager	141	56%	12	4%	31	6%	
4. Skilled labour	1	0.4%	43	14%	30	6%	
5. Housekeeper	10	4%	0	0%	7	1%	
6. Student/Retired/ Unemployed	25	10%	31	10%	172	34%	
7. Self-employed	35	14%	100	33%	139	28%	
8. Others	8	3%	37	12%	36	7%	
Blank	0	0%	0	0%	0	0%	
SUM	250	100%	300	100%	500	100%	

Figure 5.1: Respondent Occupation Percentages

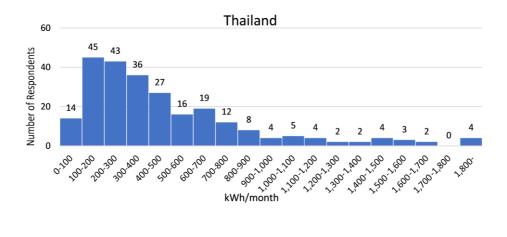




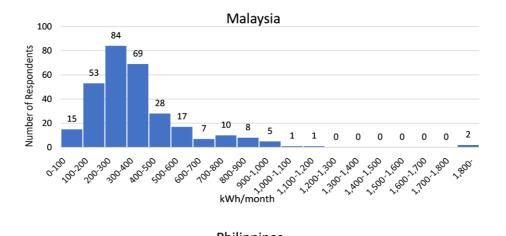


#### 2. **Monthly Electricity Consumption**

Figure 5.2 shows the electricity consumption per month in each country. The highest concentration of monthly electricity consumption ranged from 100-200 kilowatt hour (kWh)/month in Thailand and the Philippines and 200-300 kWh/month in Malaysia.



**Figure 5.2: Electricity Consumption** 



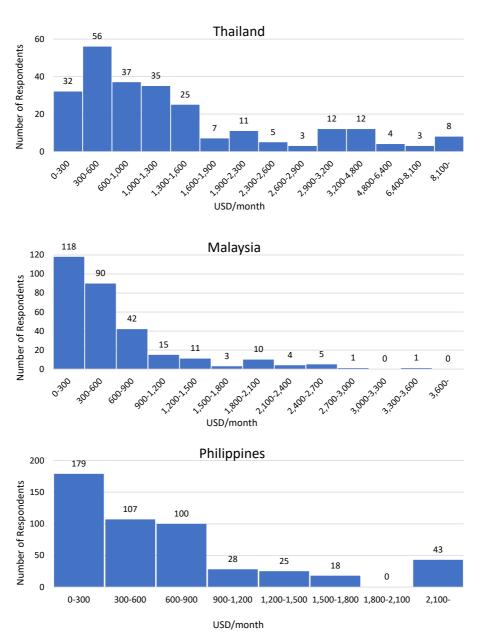


kWh = kilowatt hour.

# 3. Monthly income

Figure 5.3 shows the monthly income in each country. The highest concentration of income ranged from USD300–600/month in Thailand and USD0–300/month in Malaysia and the Philippines. The gap between high- and low-income populations is greatest in Thailand.

The distribution of monthly electricity consumption does not follow a similar pattern as the monthly income distribution in the three examined regions.





## 4. Effects of COVID-19

As noted, the survey was conducted during the COVID-19 pandemic. Figure 5.4 shows the results on the effects of COVID-19 on the respondents. In all countries, many respondents selected 'Decrease of income.' In the Philippines, the number of respondents who selected 'Loss of job' was also high. In Malaysia, about half of the respondents did not select 'Decrease of income' or 'Loss of job.'

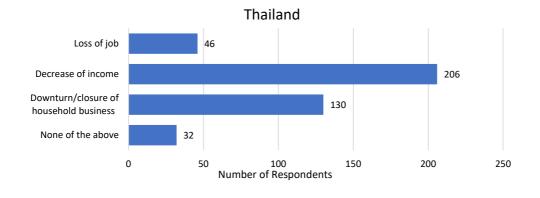
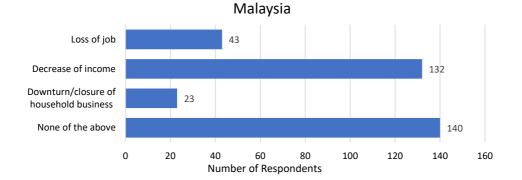
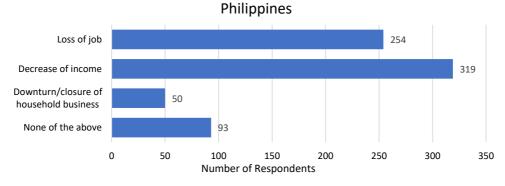


Figure 5.4: Effects of the COVID-19 Pandemic





# 5. Attitudes Towards Environmental Issues

Figure 5.5 shows the environmental issues considered most and second-most important by respondents. Air pollution was a serious environmental problem in Thailand and the Philippines. In Thailand, most respondents selected 'Air pollution' as the most important. This trend follows the 2020 results in the country. In Malaysia, the largest number of respondents selected 'Global warming and climate change' as the most and second-most important. In the 2020 survey in Viet Nam, Thailand, Myanmar, and Lao People's Democratic Republic, this trend was not observed; thus, people seem to pay more attention to global warming and climate change.

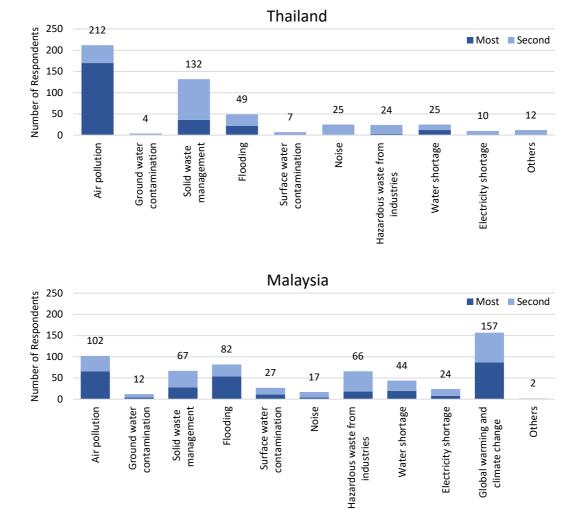
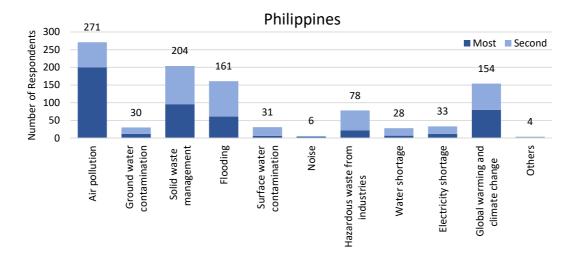


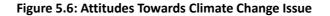
Figure 0.1: Perceived Importance of Environmental Issues

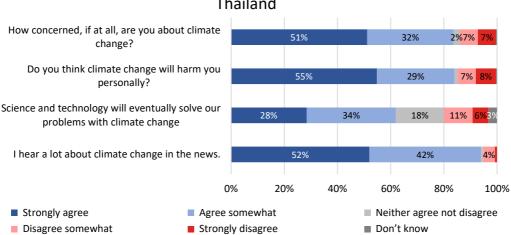
50



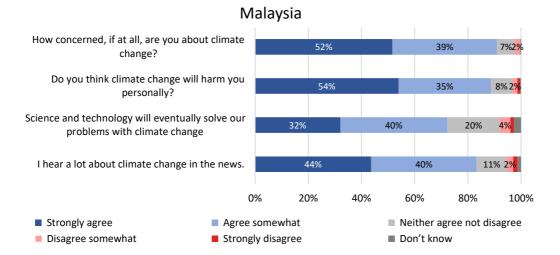
Note: 'Global warming and climate change' was not included in Thailand's questionnaire. Source: Authors' calculation.

Figure 5.6 shows the attitudes towards climate change in the three countries. In the Philippines, respondents were more strongly concerned about the effects of climate change than Thailand and Malaysia. Respondents who answered 'Strongly agreed' to the first and second questions were 75% and 71%, respectively. In Thailand and Malaysia, a similar pattern was observed in the answers for the first and second questions. For the third question, respondents in the three countries showed identical patterns.

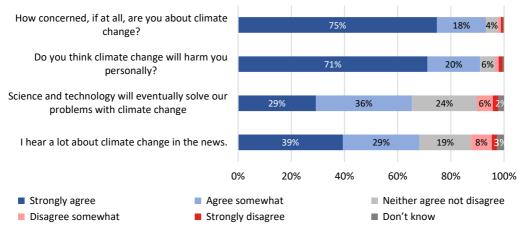




# Thailand



# Philippines



#### 6. **Attitudes Towards Types of Renewable Energy**

Figure 5.7 shows people's knowledge about renewable energy sources. Solar was the most popular, with over 90% answering 'Yes' in all countries. Biomass was least well known in all countries, especially in the Philippines, where only 26% of respondents answered 'Yes.'

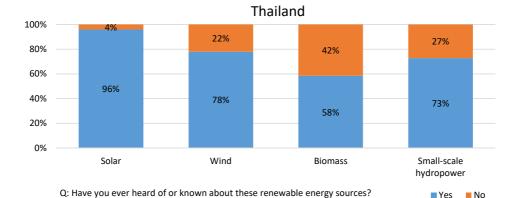
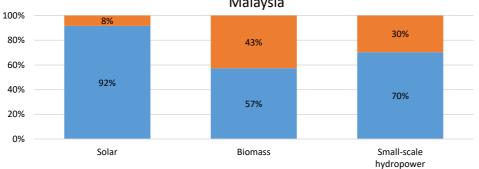


Figure 5.7: Knowledge About Renewable Energy Sources

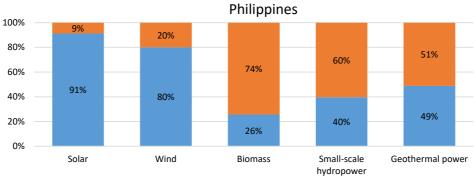


Malaysia

Yes No

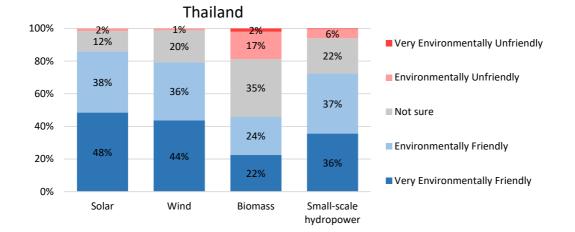
Yes No

Q: Have you ever heard of or known about these renewable energy sources?

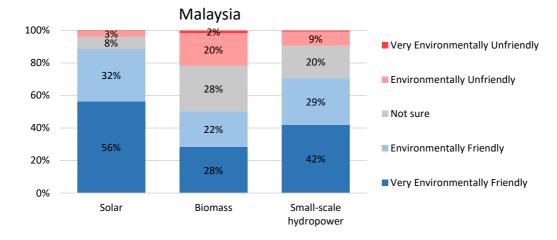


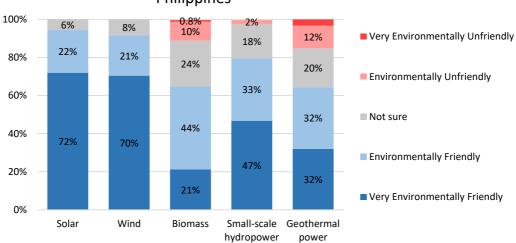
Q: Have you ever heard of or known about these renewable energy sources? Yes No 🛛

Figure 5.8 shows the proportions of respondent evaluations regarding RE types. In all regions, solar energy was considered most environmentally friendly, with solar considered as more environmentally friendly in Thailand (48% responded 'very environmentally friendly'), Malaysia (56% responded 'very environmentally friendly'), and the Philippines (72% responded 'very environmentally friendly'). Wind power was also considered environmentally friendly in both Thailand and the Philippines. Respondents expressed more concerns regarding biomass in Thailand (17% responded 'environmentally unfriendly'), Malaysia (20% responded 'environmentally unfriendly'), and the Philippines (10% responded 'environmentally unfriendly'). The same pattern was observed in the last year's survey, where solar and wind were considered more environmentally friendly, and biomass was considered less environmentally friendly in all regions.



# Figure 5.8: Attitudes Towards Renewable Energy

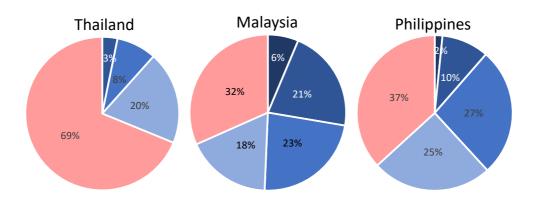




# Philippines

### 7. Attitudes Towards Carbon Dioxide Removal Technologies

Figure 5.9 shows people's knowledge about carbon dioxide removal (CDR) technologies. In Malaysia and the Philippines, 27% and 12%, respectively, answered 'I know a great deal about [CDR] technologies' and 'I know a fair amount about [such] technologies,' with over 60% of respondents saying they have at least heard of them. However, in Thailand, the largest share of respondents (69%) answered 'I have not heard of them,' which was the largest share amongst the three countries.



#### Figure 5.9: Knowledge of CDR Technologies

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

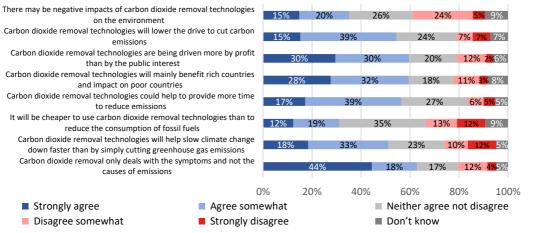
CDR = carbon dioxide removal.

Figure 5.10 shows the attitudes towards the risks and benefits of CDRs in the three countries. In the Philippines, the proportion of respondents who answered 'Neither agree nor disagree' to all questions was about 30%, more neutral than in other countries. The highest support came from Malaysia, where 71% of respondents answered either 'Strongly agree' or 'Agree somewhat' to the statement of '[CDR] technologies could help [...] provide more time to reduce emissions.'

Source: Authors' calculation.

# Figure 5.10: Attitudes Towards CDR Technologies

# Thailand

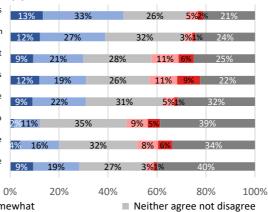


# Malaysia

There may be negative impacts of carbon dioxide removal technologie on the environment		14%	25%	14%	26%	16% 6%	5
Carbon dioxide removal technologies will lower the c emissions	lrive to cut carbon	24%		43%	11%	11% <mark>5%</mark> 5%	5
Carbon dioxide removal technologies are being driven more by profit than by the public interest Carbon dioxide removal technologies will mainly benefit rich countries and impact on poor countries Carbon dioxide removal technologies could help to provide more time to reduce emissions It will be cheaper to use carbon dioxide removal technologies than to reduce the consumption of fossil fuels Carbon dioxide removal technologies will help slow climate change down faster than by simply cutting greenhouse gas emissions Carbon dioxide removal only deals with the symptoms and not the causes of emissions		17%	25%	20%	19%	12% 7%	
		25%	3	4%	17%	13% <mark>4%</mark> 6%	5
		24%		47%	16	% 4 <mark>%</mark> *7%	
		18%	35%		20% 13	<mark>3% 2%</mark> 11%	
		32%		37%	169	6% 7%	
		32%		33%	20%	<mark>6%</mark> 8%	
	0	% 20	40	6	0% 80	0% 10	)09
<ul><li>Strongly agree</li><li>Disagree somewhat</li></ul>	ewhat Neither agree no sagree Don't know			ot disagree	5		

# Philippines

There may be negative impacts of carbon dioxide rer on the environment Carbon dioxide removal technologies will lower the emissions Carbon dioxide removal technologies are being dri than by the public interest Carbon dioxide removal technologies will mainly be and impact on poor countries Carbon dioxide removal technologies could help to to reduce emissions	13% 12% 9% 12% 9%	27 21% 19% 22%	
It will be cheaper to use carbon dioxide removal technologies than to reduce the consumption of fossil fuels Carbon dioxide removal technologies will help slow climate change down faster than by simply cutting greenhouse gas emissions Carbon dioxide removal only deals with the symptoms and not the causes of emissions			6 19%
<ul><li>Strongly agree</li><li>Disagree somewhat</li></ul>	0 Agree some Strongly dis		20%



Don't know

8% 100%

CDR = carbon dioxide removal.

Finally, Figure 5.11 shows the attitudes towards the future of CDR research and development in the three countries. In Thailand and Malaysia, the highest share of respondents answered that the countries with the largest carbon dioxide emissions should be foremost in developing carbon removal technologies, with 40% and 50% respectively. In the Philippines, the highest share of respondents (46%) answered that the countries most damaged by global warming should be foremost in developing such technologies.

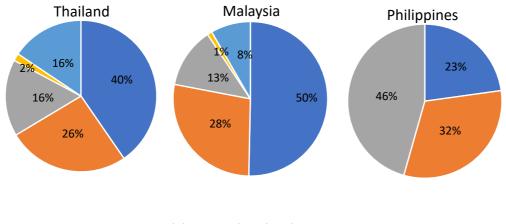


Figure 5.11: Answer to 'In your Opinion, what Countries Should be at the Foremost in the Development of Carbon Removal Technology?'

- 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

Note: 'No country should do research and development in this regard' and 'Don't know' was not included in the questionnaire for the Philippines.