

**TWEED SHIRE COMMUNITY CLIMATE ACTION  
READINESS SURVEY  
TECHNICAL REPORT**

**PREPARED FOR THE TWEED SHIRE COUNCIL  
APRIL 2023**

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## **CONTENTS**

<b>Table of tables.....</b>	<b>4</b>
<b>1 Survey Objectives.....</b>	<b>6</b>
<b>2 Survey Responses.....</b>	<b>7</b>
<b>3 Survey Findings.....</b>	<b>9</b>
3.1 Demographics .....	9
3.1.1 Summary of demographics of respondents .....	12
3.2 Section A: How You Live Your Life .....	12
3.2.1 Section A Discussion .....	19
3.3 Section B: How You See Yourself and How You See Various Social, Political, and Environmental Issues.....	19
3.3.1 Section B Discussion.....	21
3.4 Section C: Your Experiences of Extreme Weather and Natural Disasters.....	21
3.4.1 Section C Discussion.....	22
3.5 Section D: Your Experiences and Views about Climate Change .....	22
3.5.1 Section D Discussion .....	30
3.6 Section E: Your Feelings about Climate Change .....	30
3.6.1 Section E Discussion.....	31
3.7 Section F: Your Responses to Climate Change .....	31
3.7.1 Section F Discussion .....	35
3.8 Section G: Your Understanding of Climate Change .....	36
3.8.1 Section G Discussion .....	37
3.9 Future Contact: .....	37
<b>4 Summary and Recommendations.....</b>	<b>37</b>
<b>5 References .....</b>	<b>39</b>
<b>6 Appendix 1: Participation Information Sheet .....</b>	<b>40</b>
<b>7 Appendix 2: Survey Consent Form.....</b>	<b>41</b>
<b>8 Appendix 3: Distributed Survey .....</b>	<b>42</b>

## **Table of tables**

Table 1: A7 comparison of 252 and 227 respondents .....	7
Table 2: B9 comparison of 252 and 227 respondents .....	8
Table 3: Residential Postcode .....	9
Table 4: Gender.....	9
Table 5: Age Groups.....	10
Table 6: Education .....	10
Table 7: Employment Status .....	10
Table 8: Household Income.....	11
Table 9: Identity as CALD or Indigenous.....	12
Table 10: Main Language .....	12
Table 11: Home Tenancy.....	12
Table 12: A6. Do you always or nearly always (%): .....	13
Table 13: A6. Have you in the last two weeks (%):.....	14
Table 14: A6. Have you in the last three years (%): .....	15
Table 15: A6. Do you currently (%):.....	15
Table 16: A-TSC-1 & A7 .....	16
Table 17: A-TSC-1 breakdown.....	16
Table 18: A7 expanded .....	16
Table 19: Barriers to Involvement.....	17
Table 20: Level of Interest.....	18
Table 21: A9 breakdown.....	18
Table 22: Initiative support .....	19
Table 23: B-TSC-1 breakdown.....	20
Table 24: Greenhouse Emissions Reductions.....	21
Table 25: Impacts of 2022 Floods .....	21
Table 26: Government Funding.....	22
Table 27: Government Funding Success .....	22
Table 28: Views on current and future climate impacts.....	23
Table 29: D3 breakdown .....	23
Table 30: D5 breakdown .....	23
Table 31: D15 & D16 breakdown .....	23
Table 32: D18 & D20 breakdown .....	24
Table 33: D29 breakdown .....	24
Table 34: D3 Expanded.....	24
Table 35: D5 Expanded.....	24
Table 36: Perceptions of timeframe .....	25
Table 37: Climate-related emergency plans.....	25
Table 38: D-TSC-1 breakdown.....	26
Table 39: Other climate-related emergency plans .....	26
Table 40: Guidance or support.....	26
Table 41: D-TSC-3. Where do you get your information on the following primarily from (%): .....	27
Table 42: D-TSC-4. During the event/s you experienced – what were your most trusted sources of information: .....	27
Table 43: Social Media Information Source .....	28
Table 44: Perceptions towards climate change.....	28

<i>Table 45: D23, D25, &amp; D27 breakdown</i> .....	29
<i>Table 46: D26 breakdown</i> .....	29
<i>Table 47: Problems associated with climate change</i> .....	29
<i>Table 48: D28 breakdown</i> .....	30
<i>Table 49: Concern over climate change</i> .....	31
<i>Table 50: E1 breakdown</i> .....	31
<i>Table 51: E2 breakdown</i> .....	31
<i>Table 52: E7 breakdown</i> .....	31
<i>Table 53: Lifestyle aspect changes</i> .....	32
<i>Table 54: Moral obligations</i> .....	33
<i>Table 55: F4 breakdown</i> .....	33
<i>Table 56: Likelihood to participate</i> .....	34
<i>Table 57: F5 breakdown</i> .....	34
<i>Table 58: Willingness to change</i> .....	35
<i>Table 59: F6 breakdown</i> .....	35
<i>Table 60: True or False Knowledge</i> .....	36
<i>Table 61: Individual Climate Change Knowledge</i> .....	37

## 1 Survey Objectives

This survey is phase 2 of the *Climate Ready Tweed* project, led by researchers from the Griffith Climate Action Beacon and Social Marketing @ Griffith for the Tweed Shire Council (TSC). The project aims to support Tweed Shire residents and community in partnership with TSC to reduce their carbon footprint and shift from vulnerability to climate risks and impacts to climate resilience by identifying community perspectives, experiences, and strategies for climate action in the Tweed. This project has been made possible by grant funding from the Australian Government.

The survey aimed to establish a baseline understanding of Tweed Shire residents' perceptions and experiences with climate action, including greenhouse gas emissions contributions and actions to reduce them, as well as preparedness for and adaptation strategies for climate events such as floods and bushfires.

The survey was structured into eight parts to allow the exploration of themes of relevance to effective climate action:

- a. Lifestyle and everyday behaviours
- b. Views of political involvement
- c. Impacts of the 2022 flooding
- d. Experiences and views about climate change
- e. Feelings about climate change
- f. Response to climate change
- g. Understanding of climate change
- h. Demographic data

The survey was digitally distributed through Limesurvey via a range of channels to the Tweed community, including:

- TSC Business, Wildlife and Sustainability e-newsletter subscribers
- Residents and ratepayers organisations and industry groups
- TSC Facebook page
- TSC media release and standing page on the website
- TSC Your Say Tweed webpage

The LimeSurvey was distributed to survey respondents from the EcoFestival held in November 2022 (*see Ecofestival Report*) that indicated an interest in participating in the future steps of this project. The project team also circulated the survey link to community networks and individuals for sharing.

This research is approved through the Griffith University Ethics Committee: GU ref no: 2022/776. All respondents read and gave informed consent to participate in the survey and project as per the Participant Information Sheet (*see Appendix 1*) and the Consent Form (*see Appendix 2*).

The survey was designed to allow respondents to continue participating in the project through a follow-up interview and community co-design workshops following this research phase.

## 2 Survey Responses

By online dissemination via TSC channels and media platforms, 252 eligible and complete surveys were included in the analysis. The Lime Survey originally consisted of 720 responses, but through a quality control process, this number was reduced to 252 due to the following:

- 252 responses were removed for incomplete responses.
- 172 responses were omitted as the respondents did not give a Tweed Shire postcode.
- 44 responses were omitted as the responses were nearly identical, indicating replication from a bot or the same respondent.

The survey placed one attention question: “If you are reading this carefully, answer strongly disagree to this question” (*see Question F4 in Appendix 3*). 227 of the 252 completed survey respondents (90%) answered this question correctly. The remaining 10% picked another option reflecting poor attention to this question. However, we retained all 252 responses during the analysis. It was found that there were no significant differences between 227 and 252 responses to warrant removing 25 responses based on one attention question. We present two examples of questions A7 and B9 below (*see Table 1 and Table 2*).

*Table 1: A7 comparison of 252 and 227 respondents*

	252 responses mean	252 responses std	227 responses mean	227 responses std
A7. Compared to the average Australian’s engagement in pro-environmental behaviours like those listed in the previous question, I think I am (on a 6-point scale ranging from “not involved at all” to “a lot more involved”).	4.09	1.578	4.14	1.567

Table 2: B9 comparison of 252 and 227 respondents

<b>B9: The Australian Federal Government is committed to reducing greenhouse gas emissions by 43% by 2030. Do you think this is enough?</b>	<b>252 responses #</b>	<b>252 responses %</b>	<b>227 responses #</b>	<b>227 responses %</b>
I support the target: 43% emissions reduction by 2030 is about right	41	16.3	35	15.4
The target is too low: we should reduce emissions by more than 43% by 2030	104	41.3	98	43.2
The target is too high: we should reduce emissions by less than 43% by 2030	30	11.9	27	11.9
I do not think we should have a target at all	58	23.0	50	22.0
No opinion/ Don't know	7	2.8	5	2.2
I don't really understand emission targets	12	4.8	12	5.3



### 3 Survey Findings

#### 3.1 Demographics

Tweed Shire residents from every Tweed postcode took the survey. Regarding residence, 30.2% reported living in 2486, 22.6% in 2484, and 15.9% in 2485 (*see Table 3, Question ii in Appendix 3*). Postcodes 2488, 2483, and 2490 had the lowest response rates, 5.2%, 1.2%, and 0.8%, respectively.

*Table 3: Residential Postcode*

Postcode	#	%	TSP <sup>^</sup> %
2483 (Wooyung, Bilinudgel, Upper Burringbar)	3	1.2	11*
2484 (Murwillumbah, Uki, Tyalgum down to Mt Burrell)	57	22.6	19
2485 (Tweed Heads)	40	15.9	14
2486 (Tweed Heads South, Bilambil to Cobaki)	76	30.2	32
2487 (Fingal Head, Kingscliff, Chinderah)	35	13.9	13
2488 (Cabarita Beach and Bogangar)	13	5.2	3
2489 (Pottsville, Hastings Point)	26	10.3	7
2490 (Tumbulgum)	2	0.8	1

<sup>^</sup> *Tweed Shire population*

*\*Includes Byron Shire Council residents of 2483*

More survey respondents identified as female (57.5%) than male (*see Table 4, Question H1 in Appendix 3*). This survey slightly over-represents females compared with the Tweed Shire population percentage (TSP %) (51.9%) (ABS, 2021). There were multiple attempts to reach out and obtain more responses from men and those under 40 through sports organisations and universities or TAFE, yet it still arose to be a challenge.

*Table 4: Gender*

H1. Gender	#	%	TSP <sup>^</sup> %
Male	96	38.1	48.1
Female	145	57.5	51.9
Other/Non-binary	1	0.4	-
Prefer not to say	10	4.0	-

<sup>^</sup> *Tweed Shire population*

Tweed Shire residents aged 18 and over were eligible to take the survey, with the largest number of respondents being in the age group of 60-69 (28.97%), followed by 30-39 (17.86%) (*see Table 5, Question ii in Appendix 3*). Both groups had higher percentages of survey respondents than the general Tweed Shire Population (13.3% and 11.8%, respectively) (ABS, 2021). Overall, 54 respondents (14 males and 39 females) were between 18 and 40 (21.4%), equivalent to the 21% of Tweed Shire residents in the same age bracket. However, despite efforts to target young people through social media posts, we note our sample contained a higher proportion in the 30-39 age bracket and lower in the 18-29 bracket. To balance this, we will bring in youth perspectives through targeted sampling in the interview phase.

Table 5: Age Groups

Age Group	#	%	TSP^ %
18-29	9	3.6	8.4*
30-39	45	17.9	11.8
40-49	29	11.5	11.7
50-59	42	16.7	12.8
60-69	73	28.9	13.3
70-79	44	17.5	10.2
80+	10	3.9	5.7

^ Tweed Shire population

\*This value is for the 20-29 age bracket

With respect to education levels, those with a Postgraduate Degree/Diploma comprised 42.9% of respondents (*see Question H7 in Appendix 3*). The following groups were those with College Certificates or Diplomas at 21.1% and Undergraduate Degrees at 19.8% (*see Table 6*). Residents with higher degrees were overrepresented in the survey compared with the Tweed Shire population, where 17.7% hold a Bachelor's or Higher degree, 9.7% have Advanced Diploma, and 23.6% hold vocational achievements (ABS, 2021). This bias towards those of higher degrees could be due to several factors, including the survey topic, the ability to complete the survey online, or self-doubt in individuals' ability to comprehend the survey. This will be considered in relation to the design and analysis of results of this project since it is known from the national climate action survey that those more likely to be pro-environmental or pro-climate action are the higher educated (Bradley, Deshpande, and Paas, 2023).

Table 6: Education

H7. Highest level of education completed:	#	%	TSP^ %
Year 10 or below	13	5.3	28.6
Year 11	4	1.6	7.7
Year 12	14	5.7	44.5
College Certificate or Diploma	52	21.1	9.7
Trade Qualification/Apprenticeship	9	3.6	23.6
Undergraduate Degree	49	19.8	17.7
Postgraduate Degree/Diploma	106	42.9	

^ Tweed Shire population

Respondents predominantly either worked full-time (39.7%) or were retired (35.5%) (*see Table 7, Question H9 in Appendix 3*). Working part-time and not in paid employment due to a disability followed at 11.6% and 4.5%, respectively. These statistics are slightly higher than the 2021 Census, as Tweed residents who work full-time consisted of 47.5% (ABS, 2021). This leads to a potential negative bias among full-time employees who could not participate in the survey or those without the time to participate in a survey on this topic. Statistics of retirement rate in the Census could not be found.

Table 7: Employment Status

<b>H9. Employment status</b>	<b>#</b>	<b>%</b>	<b>TSP<sup>^</sup> %</b>
Working - Full-time (35+ hours per week)	96	39.7	47.5
Working – Part-time	28	11.6	39.8
Working on a Casual Basis	9	3.7	-
Unemployed – seeking work	1	0.4	5.0
Retired	86	35.5	-
Unpaid work – volunteering/looking after house/children/dependents	6	2.5	14.3
Not in paid employment due to a disability	11	4.5	-
Not in paid employment due to COVID-19	4	1.7	-
Student - not in paid employment	1	0.4	-

<sup>^</sup> Tweed Shire population

Regarding 2021-2022 FY household income, 20.6% of respondents preferred not to share, with 15.9% indicating they made \$40,000 or less and 15.1% indicating they made \$100,001-\$150,000 (*see Table 8, Question H14 in Appendix 3*). Compared to the survey, in the 2021 Census, 32.2% of Tweed residents made less than \$603 a week (\$31,356 yearly), and 15.8% made \$1,771 or more a week (\$92,092 yearly), showing slight differences in the survey results (ABS, 2021). The Census data is inconsistent with the data collected in the survey and can be identified as a lack of access to technology, lack of awareness about the survey, or lack of time.

*Table 8: Household Income*

<b>H14. Approximate combined household income during the 2021-2022 financial year:</b>	<b>#</b>	<b>%</b>
\$40,000 or less	40	15.9
\$40 001-\$60,000	34	13.5
\$60,001-\$80,000	18	7.1
\$80,001-\$100,000	31	12.3
\$100,001-\$150,000	38	15.1
\$150,001-\$200,000	26	10.3
Greater than \$200,000	13	5.2
Prefer not to say	52	20.6

Overall, 31 respondents (12.3%) identified as Culturally and Linguistically Diverse (*see Table 9, Question H17a in Appendix 3*), and 6 (2.4%) responded as Indigenous (*see Table 9, Question H17b in Appendix 3*). Four of those who identify as Indigenous also identified as Culturally and Linguistically Diverse. The 2021 Census indicated that 4.1% of Tweed residents identified as Indigenous, showing a slight underrepresentation in the survey (ABS, 2021). We are working with the TSC Indigenous Liaison Officer and the Aboriginal Advisory Council to bring Indigenous voices more strongly into the remaining phases of the project (interviews and community workshops).

Most respondents (98%) indicated English as the primary language spoken at home (*see Table 10, Question H21 in Appendix 3*). The 2021 Census stated that 5% of homes in Tweed spoke other languages at home, illustrating a gap in reaching that target in the survey that may reflect a bias towards English speakers (ABS, 2021).

Table 9: Identity as CALD or Indigenous

H17a. CALD	CALD		Aboriginal and/or Torres Strait Islander	
	#	%	#	%
Yes	31	12.3	6	2.4
No	197	78.2	231	91.7
Prefer not to say	24	9.5	15	6.0

Table 10: Main Language

H21. Household Main Language	#	%
English	242	98
Prefer not to say	5	2.0

An overwhelming majority of respondents (205, 81.3%) owned their home (*see Table 11, Question H-TSC-1 in Appendix 3*). This is higher than the 68% of Tweed residents who owned their own home, 20.4% renting privately and 2.6% in social housing (ABS, 2021). This will need to be considered in relation to the uptake of suggestions for home carbon reduction actions (i.e., renters have no control over household infrastructure or fixtures). This sample may appear to have more ability to take greenhouse gas emission reduction actions relating to the home compared to the general population.

Table 11: Home Tenancy

H-TSC-1. Home Tenancy	#	%	TSP^ %
Rent	29	11.5	20.4
Own	205	81.3	68
Prefer not to say	18	7.1	-
Social housing	-	-	2.6

^ Tweed Shire population

### 3.1.1 Summary of demographics of respondents

Overall, the demographic data illustrated a good representation across the Tweed Shire, but some groups were over or underrepresented in the survey. Those in the 18–29-year age group, unemployed, low household income, lower education levels, and Indigenous were underrepresented. Understanding the gaps helps interpret the survey results and inform where perspectives may need to be balanced further in the following stages. Although we cannot completely correct this in the project, the analysis and interpretation can consider how the survey sample may or may not represent the wider Tweed Shire population.

## 3.2 Section A: How You Live Your Life

Tweed Shire residents were first asked about environmentally conscious household behaviours they do and the affiliated reasons (*see Question A6 in Appendix 3*). Many respondents indicated they carry a reusable drink container (61.9%), refuse to use non-biodegradable plastic products (56.7%), signed a petition, written a letter, or similar in support of an environmental issue (58.3%), donated money to groups that aim to protect the

environment (40.1%) and voted for a pro-environment candidate (54%) because of their environmental concerns (*see Table 12, Table 13, Table 14, & Table 15*).

Respondents indicated a strong sense of environmental connection concerning reusable containers and plastic, with less so on switching off appliances and saving energy on hot water. Half of the respondents (50%) said they do not turn off appliances at the wall for other reasons, including inconvenience, time, etc., and can be explored further in the following stages of this project.

*Table 12: A6. Do you always or nearly always (%):*

		<b>No, because there is no opportunity to do so</b>	<b>No, for another reason</b>	<b>Yes, but not because of environmental concerns</b>	<b>Yes, because of environmental concerns</b>
1	Wash your clothes in cold (rather than hot) water.	1.6	21.0	39.7	37.7
2	Turn off 'at the wall' appliances like TVs and computers when not in use.	4.8	50.0	23.8	21.4
3	Carry your own reusable drink container.	2.0	13.1	23.0	61.9
4	Refuse to use non-biodegradable plastic products (e.g., bags, containers, straws, utensils).	10.7	25.8	6.7	56.7

Survey respondents indicated their public transport use in the last two weeks is limited in Tweed Shire due to lack of opportunity (47.20%) and other reasons (40.50%). This is an area for exploration in depth with interviewees.

Global red meat production, beef especially, has the highest carbon footprint per kg of any food (OurWorldinData.org, 2021) and understanding residents' servings and sources of red meat is an important area that can inform community climate reduction strategies. The data indicates that 46.9% of respondents in the two weeks prior to filling in the survey ate red meat at a level consistent with a low-carbon footprint diet, but 53.2% are still eating a high-carbon diet. This is another area to explore further with Tweed residents.

Tweed Shire residents indicated that 50.4% do not point out other's environmentally harming behaviours for other reasons. This is consistent with social norms, where people generally do not want to confront others about their behaviours.

Table 13: A6. Have you in the last two weeks (%):

		No, because there is no opportunity to do so	No, for another reason	Yes, but not because of environmental concerns	Yes, because of environmental concerns
1	Used public transport.	47.2	40.5	8.3	4.0
2	Eaten fewer than two servings of red meat.	1.6	51.6	29.8	17.1
3	Point out to other people that their behaviour is harming the environment.	19.0	50.4	1.2	20.4

Many respondents indicated they have signed a petition, written a letter, or posted on social media (58.3%) and voted in elections for a party based on their pro-environmental policies (54%) for environmental concerns. The results illustrate that Tweed residents did not attend a pro-environment rally, meeting, or protest (61.9%), did not take money out of institutions that invest in coal and oil companies (63.5%), and did not contact government members about an environment issue (55.6%) for other reasons not relating to the environment.

Looking over a longer period (3 years) helps understand the sustainability actions Tweed residents are taking in relation to various participatory processes, which indicates the overall willingness to take up different direct and indirect climate actions. Results indicate a wide range of responses and uptake across community-oriented actions (e.g., attending a pro-environmental rally or beach clean-up) and more individual or home-oriented actions (e.g., growing own food). This variation indicates a wide range of strategies for outreach and types of messages needed to engage residents in climate action.

Table 14: A6. Have you in the last three years (%):

		No, because there is no opportunity to do so	No, for another reason	Yes, but not because of environmental concerns	Yes, because of environmental concerns
1	Signed a petition, written a letter, posted on social media, or similar in support of an environmental issue.	8.3	27.4	6.0	58.3
2	Donated money to a group that aims to protect the environment.	7.9	48.0	4.0	40.1
3	Attended a pro-environmental rally, meeting, march, or protest.	15.5	61.9	2.4	20.2
4	Participated in a litter clean-up, beach clean-up, land-care project, or similar.	11.9	46.4	6.0	35.7
5	Voted in an election for a candidate or party because of its/their pro-environmental policies.	3.2	38.1	4.8	54.0
6	Taken any of your money/savings/superannuation funds out of institutions that invest in industries that are bad for the environment (e.g., coal, gas and oil companies).	14.3	63.5	1.2	21.0
7	Contacted a government member about an environmental or climate change issue.	7.9	55.6	5.60	31.0

When asked about their current behaviours, 78.9% of respondents grow some of their own fruits, vegetables, and herbs, and 32.9% of them for environmental behaviours. On the contrary, most respondents do not belong to any environmental group (71.7%).

Table 15: A6. Do you currently (%):

		No, because there is no opportunity to do so	No, for another reason	Yes, but not because of environmental concerns	Yes, because of environmental concerns
1	Grow some of your own fruit, vegetables, and/or herbs.	9.1	11.9	46.0	32.9
2	Belong to an 'environmental' group (e.g., Friends of the Earth, World Wildlife Fund, Greenpeace).	5.6	65.1	3.2	26.2

On a scale of 1-4 (1 – fair to 4 – excellent), respondents indicated their current average knowledge about climate change to be moderately high (M=2.61) (*see Table 16, Question A-TSC-1 in Appendix 3*). On a scale of 1-6, Tweed Shire residents indicated their involvement in pro-environmental behaviours. The average indicated that residents believed they had a slightly higher engagement than others (M=4.09) (*see Table 16, Question A7 in Appendix 3*). A breakdown of where the average respondent lies is shown in Table 17. Just over a quarter of respondents (29.8%) indicated they engaged in pro-environment about the same as others, with a little more (25%) and a lot more (20.2) following (*See Table 18*).

Table 16: A-TSC-1 & A7

	Mean	Std. Deviation
A-TSC-1. Rate your knowledge about climate change	2.61	0.936
A7. Compared to the average Australian’s engagement in pro-environmental behaviours like those listed in the previous question, I think I am (on a 6-point scale ranging from “not involved at all” to “a lot more involved”).	4.09	1.578

Table 17: A-TSC-1 breakdown

	Fair	Good	Very Good	Excellent
A-TSC-1. Rate your knowledge about climate change		*		

Table 18: A7 expanded

A7. Compared to the average Australian’s engagement in pro-environmental behaviours like those listed in the previous question, I think I am:	Frequency	Percent
Not involved at all	30	11.9
A lot less involved	19	7.5
A little less involved	14	5.6
About the same as other people	75	29.8
A little more involved	63	25
A lot more involved	51	20.2

Survey respondents were asked to indicate what barriers they encountered when taking pro-environmental actions (*see Question A8 in Appendix 3*). A range of possible barriers was provided, with the option for respondents to provide their own. The top 4 barriers selected by respondents were (*see Table 19*):

- These actions are not able to stop or solve environmental problems (77, 30.6%),
- Lack of trust in authorities supplying information about environmental issues (76, 30.2%),
- The actions are too expensive (55, 21.8%), and
- Environmentally friendly products or services are unavailable (52, 20.6%).



Table 19: Barriers to Involvement

	<b>A8. Almost all of us can do more to maintain the quality of our environment. Which of the following LIMIT your involvement in further pro-environmental actions?</b>	<b>Frequency</b>	<b>Percent</b>
1	These actions are not going to stop or solve environmental problems	77	30.6
2	I do not trust the authorities that give out information about environmental issues	76	30.2
3	These actions are too expensive	55	21.8
4	The environmentally friendly product or service is not available	52	20.6
5	I am too busy/I do not have enough time	47	18.7
6	I have my own routines, habits, and ways of doing things that are different from these	40	15.9
7	The environmentally friendly product or service that is available is not of satisfactory quality	40	15.9
8	None of the above	35	13.9
9	These actions are too inconvenient/too much effort	31	12.3
10	I don't think we are currently facing environmental problems worth addressing	29	11.5
11	I do not believe climate change is happening	28	11.1
12	Environmental problems are too great for me/for one individual to have any impact	22	8.7
13	I do not know what to do	21	8.3
14	I have health concerns/reasons or believe these behaviours are not suitable for my health	20	7.9
15	These actions are not a high priority, so I never seem to get around to them	16	6.3
16	I am not aware of the benefits of these behaviours for the environment	14	5.6
17	I can't do these things because of my age, ill health, or disability	14	5.6
18	I do not know whom to talk to, contact, or engage with on environmental issues	13	5.2
19	These behaviours do not benefit me	11	4.4
20	These behaviours do not suit the lifestyle of my family or friends – that's not the way we do things	11	4.4
21	I am not particularly interested in environmental issues	9	3.6
22	I did not cause any environmental problems, so I have no responsibility to fix them	4	1.6

The top indicated free responses to A8 consisted of climate change not being just man-made (9), others producing more emissions (5), and believing in a bias or censorship of other views (4). Tweed Shire residents' response to "I do not believe climate change is happening" at 11.1% is higher than the national survey figure of 7.3% (Bradley, Deshpande, and Paas, 2023).

On a scale of 1-5 (1 – not interested at all to 5 – already doing this), survey respondents were asked to indicate their interest in specific actions to help reduce their carbon footprint. Actions indicated in Question A9 were taken from the national Climate Action Survey and comprised of assessing interest in specified behaviours in the future (Bradley, Deshpande, and Paas, 2023).

The number of respondents who have already adopted the behaviours is reflected separately in the final column of Table 20. After removing the ‘already doing this’ and the ‘not applicable/not sure/prefer not to say’ options, an average was calculated of the opinions that selected one of the following four options: not at all interested, not very interested, somewhat interested, and very interested.

The average respondent indicated a strong interest in purchasing household energy through a green supplier, generating their electricity, and installing solar battery systems (*see Question A9 in Appendix 3*). Respondents were less interested in getting an electric car or participating in local community renewable energy projects (*see Table 20*). A breakdown of Question A9 average indications can be found in *Table 21*.

*Table 20: A9 Level of Interest*

<b>A9. Thinking ahead to the next three years, what is your level of interest in each of these actions?</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Respondents that indicated ‘already doing this’</b>
Installing solar energy battery storage systems for your home	213	2.95	1.329	39 (15.5%)
Generating your own energy to meet your household’s needs and feeding excess energy back into the network/grid.	130	2.71	1.512	122 (48.4%)
Getting an electric car or a hybrid engine car.	223	2.59	1.366	29 (11.5%)
Purchasing more of your household’s energy through a green power supplier.	189	2.58	1.396	63 (25%)
Participating in local community projects relating to renewable energy	236	2.53	1.259	16 (6.3%)

*Table 21: A9 breakdown*

	<b>Not interested at all</b>	<b>Not very interested</b>	<b>Somewhat interested</b>	<b>Very interested</b>
Installing solar energy battery storage systems for your home			*	
Generating your own energy to meet your household’s needs and feeding excess energy back into the network/grid.		*		
Getting an electric car or a hybrid engine car.		*		
Purchasing more of your household’s energy through a green power supplier.		*		
Participating in local community projects relating to renewable energy		*		

### 3.2.1 Section A Discussion

This set of questions explored individual, and household actions, willingness to act and pay to act on climate change. Key issues have been identified for further exploration, such as the range of barriers people face in acting (i.e., costs and availability), along with barriers that require more complex responses to improve (i.e., infrastructure, funding, policy, and advocacy to other levels of government).

The top 4 barriers identified in A8 above imply different strategies are needed to support environmentally friendly action in the Tweed. The suggested strategies below are ways to support environmentally friendly actions.

1. Emphasise the impact small actions make
2. Use non-institutionalised messengers to convey information, e.g., local voices
3. Draw attention to low or no-cost actions
4. Utilise community networks to highlight green alternatives or develop local green businesses and networks

### 3.3 Section B: How You See Yourself and How You See Various Social, Political, and Environmental Issues

On a scale of 1-4 (1 – strongly oppose to 4 – strongly support), TSC residents were asked to indicate their views on initiatives the government could implement as policies. The average across all options was somewhat supportive, with the government working with landholders to strengthen ecosystem health (M=3.63), a policy prioritising ecosystem-based adaptation strategies (M=3.60) and Strengthening construction and building sustainability (M=3.48) getting the highest support. In contrast, putting a tax on carbon emission (M=2.94) and using the funding to invest in renewables (M=2.93) are the lowest desired by residents (*see Table 22, Question B-TSC-1 in Appendix 3*). A breakdown of average responses to Question B-TSC 1 can be found in Table 23.

Table 22: Initiative support

	<b>B-TSC-1. To what extent would you support or oppose the following initiatives if/when proposed by the government as policies?</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
1	Government to work with landholders on key connectivity corridors in the region to strengthen ecosystem health and wildlife diversity	248	3.63	0.685
2	A policy prioritising ecosystem-based adaptation strategies such as tree and vegetation planting	248	3.60	0.752
3	Strengthen construction and building sustainability requirements for all new builds.	246	3.48	0.856
4	The new flood package announcement from the NSW government in October 2022.	182	3.27	0.808
5	Establish a climate risk rating map to guide the development and assessment of new buildings	247	3.23	1.046
6	Stimulate public/private investment in a national clean energy power system to replace all coal power	246	3.11	1.166
7	Invest in a national electric vehicle (EV) infrastructure network, including charging stations.	245	3.08	1.134

8	Remove government subsidies for fossil fuel-based mining and exploration.	239	3.06	1.202
9	Use post-COVID government stimulus funding to kick-start the transition to a low-carbon and climate-resilient national future	237	3.02	1.233
10	Establish a community voice with local and state governments for developing climate action strategies	242	2.99	1.132
11	Set a national net zero-carbon emission target by 2050 at the latest	244	2.94	1.272
12	Put a tax on carbon emissions, with the money raised being invested in clean, renewable energy	247	2.93	1.257

Table 23: B-TSC-1 breakdown

	<b>B-TSC-1. To what extent would you support or oppose the following initiatives if/when proposed by the government as policies?</b>	<b>Strongly Oppose</b>	<b>Somewhat Oppose</b>	<b>Somewhat Support</b>	<b>Strongly Support</b>
1	Government to work with landholders on key connectivity corridors in the region to strengthen ecosystem health and wildlife diversity			*	
2	A policy prioritising ecosystem-based adaptation strategies such as tree and vegetation planting			*	
3	Strengthen construction and building sustainability requirements for all new builds.			*	
4	The new flood package announcement from the NSW government in October 2022.			*	
5	Establish a climate risk rating map to guide the development and assessment of new buildings			*	
6	Stimulate public/private investment in a national clean energy power system to replace all coal power			*	
7	Invest in a national electric vehicle (EV) infrastructure network, including charging stations.			*	
8	Remove government subsidies for fossil fuel-based mining and exploration.			*	
9	Use post-COVID government stimulus funding to kick-start the transition to a low-carbon and climate-resilient national future			*	
10	Establish a community voice with local and state governments for developing climate action strategies		*		
11	Set a national net zero-carbon emission target by 2050 at the latest		*		
12	Put a tax on carbon emissions, with the money raised being invested in clean, renewable energy		*		

Respondents were asked their thoughts on the Australian Government's GHG emission reduction goal of 43% by 2030; almost half (41.3%) indicated the target is too low (*see Table 24, Question B9 in Appendix 3*).

Table 24: Greenhouse Emissions Reductions

<b>B9. The Australian Federal Government is committed to reducing greenhouse gas emissions by 43% by 2030. Do you think this is enough?</b>	<b>Frequency</b>	<b>Percent</b>
I support the target: 43% emissions reduction by 2030 is about right	41	16.3
The target is too low: we should reduce emissions by more than 43% by 2030	104	41.3
The target is too high: we should reduce emissions by less than 43% by 2030	30	11.9
I do not think we should have a target at all	58	23.0
No opinion/ Don't know	7	2.8
I don't really understand emission targets	12	4.8

### 3.3.1 Section B Discussion

The results of Section B illustrate the broader need for climate action beyond the Tweed. It can provide insights into how state and Federal Government policies shape and support local council action. This may suggest a role for advocacy by the community and TSC as a pathway for change in relation to climate adaptation.

### 3.4 Section C: Your Experiences of Extreme Weather and Natural Disasters

TSC residents were asked to share how the 2022 floods affected them (*see Question C9 in Appendix 3*). Most respondents observed damage to other people's property (232, 92.1%), witnessed others directly affected (227, 90.1%), had a family member or friend affected (162, 64.3%), and helped clean up after the floods (141, 56%) (*see Table 25*).

Table 25: Impacts of 2022 Floods

<b>C9. During the recent flooding events in the Tweed Shire and Northern NSW region, did you:</b>	<b>Frequency</b>	<b>Percent</b>
observe damage to other people's property?	232	92.1
witness other people directly impacted by the flooding?	227	90.1
have a family member or close friend impacted by the flooding?	162	64.3
help clean up after the flooding?	141	56.0
get physically 'cut-off' or 'trapped' in some place?	138	54.8
lose the capacity to perform your usual work in your usual way?	123	48.8
experience any property damage/loss?	88	34.9
experience any financial loss?	83	32.9
experience psychological distress or trauma?	77	30.6
get involved in rescue work associated with the flooding?	75	29.8
have any other person/s needing to become dependent on you?	46	18.3
need to spend one or more nights somewhere other than your home?	21	8.3
suffer any physical injury?	9	3.6

Respondents were then asked if they applied for government funding to help with relief efforts (*see Table 26, Question C10 in Appendix 3*). Of the 252 respondents, 88 experienced property damage in the floods (*see Table 25*). Of those 88, only 42 indicated yes to applying, and 36 of those applications were successful (*see Table 27, Question C11 in Appendix 3*).

Table 26: Government Funding

<b>C10. Did you apply for government relief funding to help you with the impacts of the flooding?</b>	<b>Frequency</b>	<b>Percent</b>
Yes	42	47.7
No	46	52.3

Table 27: Government Funding Success

<b>C11. Was your application for relief funding successful?</b>	<b>Frequency</b>	<b>Percent</b>
Yes	36	85.7
No	6	14.3

### 3.4.1 Section C Discussion

The results of Section C illustrate the impacts of the 2022 floods felt by Tweed Shire residents. A resounding number of respondents experienced flooding, with 88 (34.9%) dealing with property damage and 77 (30.6%) experiencing psychological trauma or distress. The results are being explored further through interviews. The community workshop scope will be designed with this sensitivity in mind to not re-traumatise participants and create a space for some of these issues to be explored, channelled into action, and move on from a sense of frustration or powerlessness which is indicated.

## 3.5 Section D: Your Experiences and Views about Climate Change

Using a scale of 1-7 (1 – strongly disagree/not at all serious/not at all vulnerable to 7 – strongly agree/extremely serious/extremely vulnerable) or 1-6 (1 – not at all serious to 6 – extremely serious), the survey respondents were asked to rank their views on climate change, its current and future impact, and the vulnerability of the Tweed region. Respondents tend to agree that climate change is happening (M=5.43) (*see Question D3 in Appendix 3*), and that climate change is moderately important to them personally (M=4.73) (*see Question D5 in Appendix 3*). Respondents believe climate change will be severe in 2050 (M=4.97) (*see Question D16 in Appendix 3*), with climate change being moderately serious now (M=4.60) (*see Question D15 in Appendix 3*). Respondents indicated they believe the Tweed region is highly vulnerable to one or more natural disasters (M=5.48) (*see Question D18 in Appendix 3*). The Tweed region is moderately vulnerable to the impacts of climate change (M=4.82) (*see Question D20 in Appendix 3*). The average among respondents illustrates that they slightly agree that climate change requires action now (*see Question D29 in Appendix 3*).

As shown in *Table 28*, there is a strong sentiment for understanding climate change is an important issue impacting Tweed residents. The results below illustrate that Tweed residents want climate action. However, the mean difference between D18 and D20 may reflect the views of some residents that do not connect natural disasters with climate change. This is an area for exploration in the interviews, and we will use responses to D3 and D5 to inform the selection of a representative sample for interviews. Breakdowns of average responses to the questions shown in *Table 28* are illustrated in *Table 29**Table 30**Table 31**Table 32**Table 33*. A further breakdown of D3 and D5 can be seen in *Table 34**Table 35*.

Table 28: Views on current and future climate impacts

	Mean	Std. Deviation
D3. I am certain that climate change is really happening	5.43	2.059
D5. How important is the issue of climate change to you personally?	4.73	2.157
D15. How serious a problem do you think climate change is right now?	4.60	2.274
D16. How serious a problem do you think climate change will be in 2050?	4.97	2.343
D18. How vulnerable do you think the Tweed and Northern Rivers region is to one or more natural disasters (e.g., floods, droughts, cyclones & bushfires)?	5.48	1.642
D20. How vulnerable do you think the Tweed and Northern Rivers region is to the impacts of climate change?	4.82	2.300
D29. To what extent do you agree or disagree with this statement: Climate change is an issue that requires urgent action NOW	4.99	2.422

Table 29: D3 breakdown

	Strongly Disagree	Disagree	Tend to Disagree	Neither Agree Nor Disagree	Tend to Agree	Agree	Strongly Agree
I am certain that climate change is really happening					*		

Table 30: D5 breakdown

	Not at all important	Low importance	Slightly important	Moderately important	Important	High importance	Extremely important
How important is the issue of climate change to you personally?				*			

Table 31: D15 &amp; D16 breakdown

How serious a problem do you think climate change:	Not at all serious	Low seriousness	Slightly serious	Moderately serious	High seriousness	Extremely serious
D15. is right now?				*		
D16. will be in 2050?				*		

Table 32: D18 &amp; D20 breakdown

How vulnerable do you think the Tweed and Northern Rivers region is to:	Not at all vulnerable	A little vulnerable	Slightly vulnerable	Moderately vulnerable	Vulnerable	Highly vulnerable	Extremely vulnerable
D18. one or more natural disasters (e.g., floods, droughts, cyclones & bushfires)?					*		
D20. the impacts of climate change?				*			

Table 33: D29 breakdown

D29. To what extent do you agree or disagree with this statement:	Strongly Disagree	Disagree	Tend to Disagree	Neither Agree Nor Disagree	Tend to Agree	Agree	Strongly Agree
Climate change is an issue that requires urgent action NOW					*		

Table 34: D3 Expanded

D3. I am certain that climate change is really happening	Frequency	Percent
Strongly Disagree	24	9.5
Disagree	17	6.7
Tend to Disagree	7	2.8
Neither Agree nor Disagree	15	6
Tend to Agree	28	11.1
Agree	38	15.1
Strongly Agree	123	48.8

Table 35: D5 Expanded

D5. How important is the issue of climate change to you personally?	Frequency	Percent
Not Important	29	11.5
Low Importance	29	11.5
Slightly Important	22	8.7
Moderately Important	21	8.3
Important	29	11.5
High Importance	45	17.9
Extremely Important	77	30.6

The survey respondents indicated that Australia is already feeling the climate change effects (see Question D14 in Appendix 3). As shown below, many respondents (67.1%) state that



Australia already feels the impacts of climate change (*see Table 36*). Responses show a strong belief in climate change impacts in Australia, being recognised by 67.1% of respondents. It also highlights the division among Australians, where almost 15 % of respondents do not recognise climate change as a real issue. Like D3 and D5, we will use D14 to guide interviews and co-design sessions by identifying what actions contribute to respondents' emission reduction and event preparedness.

*Table 36: Perceptions of timeframe*

<b>D14. When, if at all, do you think Australia will start feeling the effects of climate change?</b>	<b>Frequency</b>	<b>Percent</b>
We are already feeling the effects	169	67.1
In the next 10 years	8	3.2
In the next 25 years	5	2.0
In the next 50 years	8	3.2
In the next 100 years	2	0.8
Beyond the next 100 years	5	2.0
Never	37	14.7
Don't know/No opinion	18	7.1

On a scale of 1-5 (1 – no plan at all and 5 – a strong plan), residents were asked to indicate their plan level for certain climate-related disasters (i.e., floods, droughts, bushfires, storms, heatwaves). Results emphasise subscribing to a basic plan among most climate-related disasters (*see Table 37, Question D-TSC-1 in Appendix 3*). Table 38 illustrates the average respondent breakdown of Question D-TSC-1.

*Table 37: Climate-related emergency plans*

<b>D-TSC-1.</b>	<b>Mean</b>	<b>Std. Deviation</b>
Floods	1.99	0.990
Droughts	1.8	1.002
Bushfire	1.91	1.004
Storms	1.83	0.779
Heatwave	1.7	0.858
Any other	2.33	1.419

Table 38: D-TSC-1 breakdown

	1 = No plan at all	2	3	4	5 = a strong plan
Floods	*				
Droughts	*				
Bushfire	*				
Storms	*				
Heatwave	*				
Any other (please specify)		*			

Respondents were asked to indicate plans they had for any other climate-related events; food shortage (4), medical (3), and sea-level rise (2) appeared as the most frequent (*see Table 39*).

Table 39: Other climate-related emergency plans

Other	Frequency
food shortage	4
medical-related	3
sea-level rise	2

Respondents were asked if they used any guidance when preparing for the floods of 2022, with 53 (21%) indicating they used guidance (*Table 40, Question D-TSC-2 in Appendix 3*).

Table 40: Guidance or support

D-TSC-2. Did you use any guidance or support from organisations on how to prepare?	Frequency	Percent
Yes	53	21
No	199	79

The questions about preparedness and planning will be used as a foundation indicator to select participants for the next phase of the project, interviews. It will allow us to understand better what residents consider a plan at different levels (basic or strong), what resources they use to develop them, and how the process can be better supported.

Those who responded that they used guidance in preparation for the floods were then asked what the primary source of their information is about different events (i.e., climate change, extreme weather events, and emergencies in the Tweed) (*see Question D-TSC-3 in Appendix 3*). Climate change news was sourced predominantly from scientific organisations (13.5%) (*see Table 41*). Extreme weather event news also came from scientific organisations (8.3%) and emergency service organisations (6.7%). Regarding emergencies in the Tweed, information from emergency services organisations (7.9%) and council newsletters and websites were the most popular (4.8%). Other guidance-related news included travel restrictions, tides and current conditions, and general world events.

Table 41: D-TSC-3. Where do you get your information on the following primarily from (%):

Media Source	Climate Change	Extreme Weather Events	Emergencies in the Tweed	Other
TV news	2.8	3.6	1.2	1.6
Neighbours and community leaders	0.4	-	-	0.4
Emergency Services Organisations (e.g., SES, Red Cross, Rural Fire Service)	1.2	6.7	7.9	2.0
Social media	0.8	0.8	3.2	0.8
Council newsletter and website	0.8	-	4.8	-
Other government agency websites	1.2	0.8	0.4	-
Local community webpages	-	-	-	0.4
Scientific organisations – (e.g., CSIRO, BOM, Universities)	13.5	8.3	1.6	0.8
<b>Total (number of respondents)</b>	<b>52</b>	<b>51</b>	<b>51</b>	<b>15</b>

Respondents were then asked about their most trusted source of information during the climate-related extreme events (*see Question D-TSC-4 in Appendix 3*). Respondents trust emergency services organisations the most (26) (*see Table 42*). In the days following the events, emergency services organisations continued to be the most trusted source (14). In the weeks and months after the event, the council website and newsletter emerged as the most trusted (16).

Table 42: D-TSC-4. During the event/s you experienced – what were your most trusted sources of information:

	To keep up to date on the event during it		In the days that followed the event		In the weeks and months that followed	
	Frequency	%	Frequency	%	Frequency	%
TV news	3	1.2	6	2.4	7	2.8
Neighbours and community leaders	2	0.8	5	2.0	5	2.0
Emergency Services Organisations (e.g., SES, Red Cross, Rural Fire Service)	26	10.3	14	5.6	1	0.4
Social media	9	3.6	7	2.8	6	2.4
Local community webpages	1	0.4	3	1.2	4	1.6
Council newsletter and website	2	0.8	7	2.8	16	6.3
Other government agency websites	2	0.8	4	1.6	3	1.2
Scientific organisations – CSIRO, BOM, Universities	5	2.0	2	0.8	5	2.0
Other websites	-	-	2	0.8	3	1.2

Few respondents indicated gaining information from social media (*see Question D-TSC-40 in Appendix 3*), with only 10 indicating Facebook and 1 indicating Instagram as information sources (*see Table 43*).

*Table 43: Social Media Information Source*

<b>If you get information from social media, please indicate which social media.</b>	<b>Frequency</b>	<b>Percent</b>
Facebook	10	4.0
Instagram	1	0.4

Respondents were asked whether they feel social pressure to think in a certain way about climate change. Four questions measured these feelings on a scale of 1-7 (*see Question D23 in Appendix 3*). A reliability analysis reflected homogeneity among these items; hence, they were combined into one measure. Results show slightly high social pressure (M= 3.96) to think about climate change in a certain way (*see D23 in Table 44*).

Tweed Shire residents were asked whether they felt efficacious in addressing the effects of climate change. Three questions measured self-efficacy on a scale of 1-7 (*see Question D25 in Appendix 3*). A reliability analysis reflected homogeneity among these items; hence, they were combined into one measure. Results show moderately high self-efficacy (M= 4.49) in addressing the effects of climate change (*see D25 in Table 44*).

Respondents were also asked about their opinions about climate scientists. Four questions measured these feelings on a scale of 1-5 (*see Question D26 in Appendix 3*). A reliability analysis reflected homogeneity among these items; hence, they were combined into one measure. Results show moderate respect for climate scientists (M= 3.53) (*D26 in Table 44*).

Tweed residents were asked whether they felt collectively efficacious to address the effects of climate change. Four questions measured self-efficacy on a scale of 1-7 (*see Question D27 in Appendix 3*). One of the four questions in Question D27 was negatively worded and led to reversing the responses prior to analysis. A reliability analysis reflected homogeneity among these items; hence, they were combined into one measure. Results show moderately high collective efficacy (M= 4.995) to address the effects of climate change (*see D27 in Table 44*). Table 45 Table 46 illustrate breakdowns of questions found in Table 44.

*Table 44: Perceptions towards climate change*

<b>Perceptions towards climate change</b>	<b>Number of questions</b>	<b>Scale</b>	<b>Mean</b>	<b>Std. Deviation</b>
D23. Social pressure to think in a certain way about climate change.	4	1-7	3.965	2.130
D25. Self-efficacy to address effects of climate change.	3	1-7	4.493	1.717
D26. Opinions about climate scientists.	4	1-5	3.531	1.379
D27. Collective efficacy to address effects of climate change.	4	1-7	4.995	1.798

Table 45: D23, D25, &amp; D27 breakdown

	Strongly Disagree	Disagree	Tend to Disagree	Neither Agree Nor Disagree	Tend to Agree	Agree	Strongly Agree
D23. Social pressure to think in a certain way about climate change.			*				
D25. Self-efficacy to address effects of climate change.				*			
D27. Collective efficacy to address effects of climate change.				*			

Table 46: D26 breakdown

	Not at all	A little	A moderate amount	More than moderately	A great deal
D26. Opinions about climate scientists.			*		

On a scale of 1-5, respondents were asked to indicate through what process we can solve problems relating to climate change in the next few decades (*see Question D28 in Appendix 3*). Business corporation actions (3.3), collective community action (3.24), and government actions (3.15) were the most useful in solving climate change (*see Table 47*). A breakdown of average responses from Tweed residents can be seen in Table 48. In total, 210 respondents answered this question.

Table 47: Problems associated with climate change

<b>D28. In your view, how likely is it that over the next few decades, problems associated with climate change can be solved through</b>	Mean	Std. Deviation
The actions of business corporations	3.30	1.323
Collective community actions	3.24	1.218
Government actions (e.g., new environmental laws or policies)	3.15	1.346
New technology	2.99	1.155
The actions of other individuals	2.90	1.188
My own actions	2.74	1.23
Other	2.21	1.332
Natural processes (e.g., changes in natural weather cycles)	1.99	1.166

Table 48: D28 breakdown

D28. In your view, how likely is it that over the next few decades, problems associated with climate change can be solved through	Not at all likely	Slightly likely	Likely	Very likely	Extremely likely
The actions of business corporations			*		
Collective community actions			*		
Government actions (e.g., new environmental laws or policies)			*		
New technology		*			
The actions of other individuals		*			
My own actions		*			
Other		*			
Natural processes (e.g., changes in natural weather cycles)	*				

### 3.5.1 Section D Discussion

The questions of Section D covered a wide variety of views, information, and beliefs of individuals relating to climate change. The analysis illustrated moderate awareness of climate change and its impacts on Tweed residents, with it being driven by the combination of floods, fires, and floods again. Different residents have felt effects very differently, indicating a need for place-based responses – those on the coast are dealing with different impacts than those in the hinterland and mountainous areas, for example. A need for more information in relation to creating sound and evidence-based plans for climate events is clear in the data. The sources of information are clear during a disaster; there is a strong reliance on SES, Red Cross, and other nominated emergency services. However, there is a need to fill gaps in planning and post-disaster recovery and explore the local networks that inform action and keep people safe in times of crisis. The interviews will explore this as it is important for understanding Tweed Shire residents' willingness to change and what support is needed.

### 3.6 Section E: Your Feelings about Climate Change

On a scale of 1-4, the average respondent indicated concern about climate change (M=2.96) (see E1 in Table 49, Question E1 in Appendix 3), which has increased slightly over the past year (M=4.81) (see E2 in Table 49, Question E2 in Appendix 3). Questions in E7 measured negative feelings about the threat of climate change. Six questions measured these feelings on a scale of 1-7 (see E7 in Table 49, Question E7 in Appendix 3). A reliability analysis reflected homogeneity among these items; hence, they were combined into one measure. Results show respondents neither agree nor disagree about the threat of climate change (M=3.996). Breakdowns of the average response in Table 49 can be found in Table 50 Table 51 Table 52.

Table 49: Concern over climate change

	Number of questions	Scale	Mean	Std. Deviation
E1. How concerned, if at all, are you about climate change?	1	1-4	2.96	1.139
E2. Has your level of concern about climate change increased, decreased, or remained the same over the past year?	1	1-7	4.81	1.494
E7. Feelings about the threat of climate change.	6	1-7	3.996	1.886

Table 50: E1 breakdown

	Not at all concerned	Not very concerned	Fairly concerned	Very concerned
E1. How concerned, if at all, are you about climate change?		*		

Table 51: E2 breakdown

	Decreased substantially	Decreased moderately	Decreased slightly	Remained the same	Increased slightly	Increased moderately	Increase substantially
E2. Has your level of concern about climate change increased, decreased, or remained the same over the past year?				*			

Table 52: E7 breakdown

	Strongly Disagree	Disagree	Tend to Disagree	Neither Agree Nor Disagree	Tend to Agree	Agree	Strongly Agree
E7. Feelings about the threat of climate change.				*			

### 3.6.1 Section E Discussion

Responses to Section E indicate that overall, Tweed residents are not very concerned about climate change. This is an area of future research to explore the individuals' changes over time in relation to feelings about climate change. 17.9% of respondents currently do not believe climate change is an issue.

### 3.7 Section F: Your Responses to Climate Change

Respondents indicated aspects of their lifestyles they have changed in the last year to reduce their contributions to climate change (*see Question F3 in Appendix 3*), with recycling more,

reduced plastic usage, becoming energy efficient, and reducing food wastage as the top 4 (see Table 53). Results indicated that changing electric suppliers, purchasing a bicycle, and carpooling was the least changed behaviour.

Table 53: Lifestyle aspect changes

	<b>F3. Some people change their lifestyle to reduce their contribution to climate change. Which of the following aspects of your lifestyle have you changed because you wanted to reduce your impact on climate change?</b>	<b>Frequency</b>	<b>Percent</b>
1	Recycled more	189	75.0
2	Reduced my use of plastic items	165	65.5
3	Become more efficient in my consumption of power (electricity, gas) from the grid/power companies	159	63.1
4	Reduced the amount of food I throw out	149	59.1
5	Switched to products that are more environmentally friendly	146	57.9
6	Plant more native plants	146	57.9
7	Used compost to improve soil health	146	57.9
8	Avoided making unnecessary purchases	138	54.8
9	Become more efficient in my water consumption	134	53.2
10	Purchased more things that are locally (rather than remotely) made/grown	131	52.0
11	Changed to 'green' (e.g., solar) power	109	43.3
12	Driven my car less	108	42.9
13	Consumed less red meat	91	36.1
14	Changed my electricity supplier	67	26.6
15	I have changed none of these aspects of my lifestyle over the past year due to concerns about climate change.	50	19.8
16	Purchased a bicycle	43	17.1
17	Carpooled more often	39	15.5

Questions in F4 were measured with eight questions (see Question F4 in Appendix 3). Factor analysis revealed two underlying factors: Individual moral obligation to climate change (F4-1) and climate change-related behavioural norms of family, friends, networks, and community (F4-2) leading to negative feelings about the threat of climate change. Each concept was measured with four questions on a scale of 1-7. Reliability analysis revealed that questions measuring each concept reflected homogeneity; hence, the four questions of F4-1 were combined into one measure. A similar process was carried out for F4-2. Results show a moderate personal obligation to climate change ( $M=4.483$ ) (see F4-1 in Table 54) and moderate norms among people the respondents know ( $M=4.444$ ) (see F4-2 in Table 54). A breakdown of the average response to Question F4 can be found in Table 55.

These questions reflect to what extent residents are influenced to undertake climate-ready behaviours. While a moral obligation is intrinsic to an individual, behavioural norms of close networks are extrinsic. A moderate intrinsic and extrinsic influence would result in residents positively accepting the climate change risks and potentially supporting mitigation and adaptation policies and adopting appropriate behaviours.



Table 54: Moral obligations

	Number of questions	Scale	Mean	Std. Deviation
F4-1. Moral obligation to adopt climate change behaviours	4	1-7	4.483	1.848
F4-2. Climate change-related behavioural norms of family, friends, networks, and community	4	1-7	4.444	1.241

Table 55: F4 breakdown

	Strongly Disagree	Disagree	Tend to Disagree	Neither Agree Nor Disagree	Tend to Agree	Agree	Strongly Agree
F4-1. Moral obligation to adopt climate change behaviours				*			
F4-2. Climate change-related behavioural norms of family, friends, networks, and community				*			

Tweed Shire residents were asked to indicate their likelihood of participating in community action relating to climate-related events and their peers on a scale of 1-5 (*see Question F5 in Appendix 3*). This question was not mandatory as it was learned that civil disobedience (an option in the question) is an arrestable offence in NSW.

The number of respondents who have already adopted the behaviours is reflected separately in the final column of Table 56. After removing the ‘already doing this’ option, an average was calculated of the opinions that selected one of the following four options: definitely would not, would not, would, definitely would.

Respondents indicated, on average, that they were more likely not to engage in non-violent disobedience against corporate or government activities that impact climate change negatively (*see Table 56*). A breakdown of the average responses in *Table 56* can be found in *Table 57*.

Table 56: Likelihood to participate

<b>F5. How likely are you to do each of the following things if a person you like and respect asked you to?</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Respodents that indicated 'already doing this'</b>
Volunteer your time to an organisation working in climate change.	218	2.28	0.978	27 (10.7%)
Join a campaign to convince elected officials to take action to reduce climate change.	211	2.22	1.025	24 (13.5%)
Write letters, email or phone government officials about climate change.	201	2.20	0.992	42 (16.7%)
Support an organisation engaging in non-violent civil disobedience against corporate or government activities that make climate change worse.	221	2.16	1.028	19 (7.5%)
Donate money to an organisation working on climate change.	207	2.11	0.972	36 (14.3%)
Personally engage in non-violent civil disobedience against corporate or government activities that make climate change worse.	230	1.96	0.938	10 (4%)

Table 57: F5 breakdown

<b>F5. How likely are you to do each of the following things if a person you like and respect asked you to?</b>	<b>Definitely would not</b>	<b>Would not</b>	<b>Would</b>	<b>Definitely would</b>
Volunteer your time to an organisation working in climate change.		*		
Join a campaign to convince elected officials to take action to reduce climate change.		*		
Write letters, email or phone government officials about climate change.		*		
Support an organisation engaging in non-violent civil disobedience against corporate or government activities that make climate change worse.		*		
Donate money to an organisation working on climate change.		*		
Personally engage in non-violent civil disobedience against corporate or government activities that make climate change worse.	*			

On a scale of 1-7, respondents were asked how they felt about certain lifestyle changes to reduce climate change. The most preferred options included having renewable energy infrastructure, changing their lifestyle, and greatly reducing energy usage (*see Table 58, Question F6 in Appendix 3*). A breakdown of F6 average responses can be found in *Table 59*.

Table 58: Willingness to change

	<b>F6. To what extent do you agree or disagree with the following statements? To help reduce climate change, I am willing to:</b>	<b>Mean</b>	<b>Std. Deviation</b>
1	have renewable energy infrastructure, such as a solar farm in my local area	4.98	2.181
2	change my lifestyle	4.80	1.964
3	greatly reduce my energy (e.g., electricity) use	4.78	1.987
4	work with my local community to find ways to adapt to living with climate change	4.70	2.107
5	take part in a community-wide climate change movement	4.00	2.259
6	accept cuts in my standard of living.	3.43	2.025
7	pay significantly more for energy-efficient products	3.41	2.167
8	pay higher personal taxes	3.10	2.21
9	pay more for fuel (petrol, diesel, etc.)	3.03	2.20
10	pay more for electricity	2.95	2.143

Table 59: F6 breakdown

	<b>F6. To what extent do you agree or disagree with the following statements? To help reduce climate change, I am willing to:</b>	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Slightly disagree</b>	<b>Neither agree nor disagree</b>	<b>Slightly agree</b>	<b>Agree</b>	<b>Strongly agree</b>
1	have renewable energy infrastructure, such as a solar farm in my local area				*			
2	change my lifestyle				*			
3	greatly reduce my energy (e.g., electricity) use				*			
4	work with my local community to find ways to adapt to living with climate change				*			
5	take part in a community-wide climate change movement				*			
6	accept cuts in my standard of living.			*				
7	pay significantly more for energy-efficient products			*				
8	pay higher personal taxes			*				
9	pay more for fuel (petrol, diesel, etc.)			*				
10	pay more for electricity		*					

### 3.7.1 Section F Discussion

Tweed Shire residents' responses to Section F illustrate a slight willingness to take action and change aspects of their lifestyle to reduce the impacts of climate change. Having different options for participation and lifestyle changes is crucial to allowing everyone to participate in

a way that is easy and accessible for them. There were no actions that had overwhelming agreement or disagreement.

### 3.8 Section G: Your Understanding of Climate Change

Tweed Shire residents were asked to indicate their knowledge about climate change-causing statements. The top statements residents disagreed with consisted that climate change can be slowed by using more air conditioning in summer (234) and by consuming more meat and dairy products (204). On the other hand, they believed climate change changed can be reduced if more trees were planted (183), climate change is due to the build-up of greenhouse gases (174), plastic contributes to climate change due to being created from fossil fuels (170), and poorer nations or communities are experiencing climate change at greater impacts (167) (*see Table 60*). There is an overall understanding of causes and actions that can be done to help reduce climate change impacts on communities.

*Table 60: True or False Knowledge*

	<b>G1. Please indicate whether you think the following statements are true or false. If you do not know, just click on “Do not know”, rather than asking someone</b>	<b>True</b>	<b>False</b>	<b>Do not know</b>
1	Climate change can be slowed down if more trees were planted	183	46	23
2	Climate change is caused by the build-up of greenhouse gases (e.g., carbon dioxide, methane) in the atmosphere	174	58	20
3	Plastic is produced from fossil fuels and therefore contributes to climate change	170	45	37
4	Those who are most socially and economically disadvantaged (e.g., poorer nations/communities) experience the greatest impacts of climate change	167	53	32
5	Climatic extremes are increasing, and are causing food shortages and food insecurity globally	164	61	27
6	The economic consequences of climate change are greater than the economic consequences of moving away from fossil fuels	141	72	39
7	When the ocean absorbs increasing levels of carbon dioxide (CO <sub>2</sub> ), it becomes more acidic, damaging shellfish	133	33	86
8	Climate change will increase the risk of waterborne diseases	122	57	73
9	Solar (or ‘photovoltaic’) panels are now a cheaper source of new-build electricity generation than coal and gas	116	64	72
10	Food waste is one of the three biggest global contributors to carbon dioxide (CO <sub>2</sub> ) emissions	94	64	94
11	Climate change is mainly caused by the hole in the ozone layer	37	169	46
12	People can help reduce the rate of climate change by consuming more meat and dairy products	16	204	32
13	We can reduce the rate of climate change by using more air conditioning in summer	7	234	11

Tweed Shire residents were asked to self-report their overall climate change knowledge, with most respondents (42.9%) stating they knew quite a lot, with a little (29.8%) and a great amount (21.4%) following (*see Table 61*).

Table 61: Individual Climate Change Knowledge

<b>G10. Overall, how much do you feel you know about climate change?</b>	<b>Frequency</b>	<b>Percent</b>
Nothing at all	1	0.4
Virtually nothing	11	4.4
A little	75	29.8
Quite a lot	108	42.9
A great amount	54	21.4
Just about everything	3	1.2

### **3.8.1 Section G Discussion**

Section G looked at Tweed Shire residents' knowledge of climate change statements and their general knowledge. The questions help gauge Tweed residents' knowledge and will help project stakeholders understand the amount of information that needs to be shared with the Tweed community.

Respondents claim to know a lot about climate change, but their understanding of it is inconsistent. It is stronger in general knowledge topics such as the role of trees, greenhouse gases, plastic, meat consumption, air conditioner, food security, and impact on poorer nations and communities. However, it seems divided into economic consequences, energy sources, ocean health, human health, and food waste. Such an observation reflects what residents know, but it is also likely that these perceptions reflect what they believe based on their political and economic inclinations.

### **3.9 Future Contact:**

Of the 252 respondents, 88 indicated they would like to be added to the TSC sustainability newsletter, with 82 wanting to be added to the TSC Wildlife newsletter (*see Question H-TSC-2 in Appendix 3*). A total of 182 respondents indicated they would like a summary of the findings from the survey conducted (*see H-TSC-2a in Appendix 3*).

Survey respondents interested in participating in the project's third stage, interviews consisted of 127 (50.4%) (*see Question H-TSC-3 in Appendix 3*). Those interested in participating in the fourth stage, co-design sessions totalled 135 (53.6%) respondents (*see Question H-TSC-3a in Appendix 3*).

## **4 Summary and Recommendations**

Across the entirety of the survey, it is apparent that climate change is an important issue for most Tweed Shire residents. Over the last few years, climate change has become an increasingly important issue among residents. In addition, TSC residents view the Australian Federal Government's greenhouse gas reduction commitment as too low. It is clear in the results that TSC residents are taking small actions to help reduce their impact on the planet through reusable water bottles and reducing their single plastics usage. Undertaking small actions like these is the first step to creating better climate resilience and behaviours in residents.

Even with small behaviour changes, there are still barriers that limit residents from having the full capability to reduce their climate impacts. The most frequently mentioned barriers include environmentally friendly actions being too expensive, individuals being too busy to alter their lifestyles, and people believing their actions will not solve climate change. Residents were also found to be most interested in investing in their solar panel systems at home, thus illustrating what information and resources could benefit the Tweed community. TSC residents are concerned about climate change, with a majority stating that climate action needs to be taken now to lessen the effects of climate change in the future.

The 2022 floods devastated the Tweed Shire and Northern Rivers region, illustrating how most respondents witnessed others being impacted and needing help in the aftermath. Understanding the impacts of the 2022 floods will allow the creation of a plan to help those still dealing with the effects a year later.

Residents believe that reductions to climate change can best be achieved through actions of big corporations, communities, and the government. There is a desire from residents wanting the TSC council to work with landholders in creating corridors in the community to strengthen ecosystem health and wildlife diversity. More information about climate change must be shared with residents, and individuals can do better to help reduce human-related climate change impacts. In addition to increased information, climate-friendly products or services must be affordable and easy to access for all residents.

Overall, Tweed Shire residents are willing to change and help reduce their impacts on climate change. Tweed Council can engage their residents in helping create a greener region that can adapt and overcome more climate events that may happen in the years to come. With that, we recommend that the council consider integrating education campaigns to bring awareness of what individuals can do to reduce their carbon footprint. It is also recommended to create an environment where people can find the resources and information needed to learn more about 'green living', such as solar panels, gardening, and lifestyle changes. Tweed Council can also become a platform to support better and inform people of electric vehicle purchase, usage, and service capabilities.

## 5 References

Australian Bureau of Statistics (2021). *2021 Tweed Census All persons Quickstats*. Available at: <https://www.abs.gov.au/census/find-census-data/quickstats/2021/LGA17550> accessed 1 March 2023.

Bradley, G., Deshpande, S., and Paas, K. (2023). *Climate Action Survey, 2022: Technical Report*. Gold Coast, QLD: Griffith University

Our World in Data (2021) *Food: greenhouse gas emissions across the supply chain infographic* available at: <https://ourworldindata.org/food-choice-vs-eating-local> accessed 1 March 2023.

## 6 **Appendix 1: Participation Information Sheet**

### **The Participant Information Sheet for the Community Climate Action and Readiness Survey for the Tweed Shire**

GU Ref No: 2022/776

#### **Who is conducting the research**

Griffith University (Griffith Climate Action Beacon and Social Marketing @ Griffith) is conducting the research on behalf of Tweed Shire Council.

#### **What you will be asked to do**

Participate in a 20-minute online survey pertaining to your knowledge, experiences and opinions on climate change risks and climate actions.

#### **Why is the research being conducted?**

This study is commissioned by Tweed Shire Council (TSC) and is being conducted to inform subsequent community engagement and further research activities. This project received grant funding from the Australian Government. This research project seeks to better understand Tweed Shire residents' climate change knowledge, experiences, and actions and impacts on the community. The data collected in this study will inform community-based strategies and planning, that aim to better support and build capacity within the Tweed Shire to mitigate and adapt to climate change and be prepared for climate impacts. This is the first of the three parts of this study to work with community members to develop climate strategies and activities to support communities take climate action. This study is funded by TSC.

#### **The expected benefits of the research**

This research aims to provide new strategies for more effective communication and to support the Tweed Shire Council region to take action to prepare for the effects of flooding and bushfires in the built, social, and natural environments. It also aims to help the Tweed Shire Council community reduce their greenhouse gas emissions and contribute to climate change. It is intended that the overall results and findings will be reported to Tweed Shire Council, and research results will be disseminated via published journal articles.

#### **Risks to you**

There are minimal foreseeable risks involved in participation. However, if questions in this survey (e.g., how important is the issue of climate change to you personally?) lead to negative thoughts and feelings regarding past climate events and their impacts, there are many local support services that you can contact: • In a life-threatening situation, call Triple Zero on 000 • Mental Health Line open 24/7 on 1800 011 511 • Lifeline on 13 11 14 • Beyond Blue on 1800 51 23 48

#### **Your confidentiality**

The default is that you will not be personally identified by participating in this research. You will not be able to withdraw once you have submitted your questionnaires, as it will not be possible to identify individual responses. Any identifying information unique to you will be removed, ensuring your anonymity. De-identified data will be retained in a Griffith University Research Storage platform for five years before being destroyed, and only authorised researchers will have access to it.

However, there is the option to enter your name and contact details at the end of the survey and to identify whether you would like to receive a summary of the community responses from the survey and/or participate in follow up interviews. By entering your name and contact details, you will be entered in a lucky draw prize to win one of five \$100 gift cards to spend locally within the Tweed Shire (participating outlets) or one gift basket. Although sharing your contact details will allow us to identify you for the above purposes, we will not make public or publish survey results that associate any responses to individuals.



By electing to participate, you accept the terms and conditions as governing the prize draw. Instructions on how to enter the prize draw and details advertising the survey form part of the conditions. Any personal information you provide to us while entering the prize draw will be dealt with by us in accordance with our privacy policy (published at: <http://www.griffith.edu.au/about-griffith/governance/plans-publications/griffith-university-privacy-plan>).

### **Your participation is voluntary**

Participation is voluntary. Your decision to / not to participate will in no way impact your relationship with Griffith University. Due to the anonymity of the survey, once information is collected, we will not be able to delete your information.

### **The ethical conduct of this research**

Griffith University conducts research in accordance with the *National Statement on Ethical Conduct in Human Research*. Any concerns or complaints about the ethical conduct of the research project can be addressed via the Research Ethics Manager on 3735 4375 or [research-ethics@griffith.edu.au](mailto:research-ethics@griffith.edu.au).

### **Feedback to you**

Reports of the findings of the research project can be obtained from Social Marketing @ Griffith. If you wish to receive a summary of our findings, please note your email at the end of the study. We will de-link your email from your results before analysing your responses.

Please save or print this sheet and retain it for your later reference.

## **7 Appendix 2: Survey Consent Form**

### **The Consent form for the Community Climate Action and Readiness Survey for the Tweed Shire**

Griffith University requests your consent to indicate your agreement to participate in this research. You are participating in an online survey. Your participation involves responding to a few survey questions on your knowledge, experiences and opinions on climate change risks and climate actions. The ethics reference number for this project is: GU ref no: 2022/776

In giving my consent, I acknowledge that:

1. The research project and the time involved have been explained to me by the project team, and information has also been provided in the Information Sheet
2. I have read the Information Sheet and/or listened to the project team, and I have been given the opportunity to discuss the information and my involvement in the project with the researchers
3. I understand that if I have any additional questions, I can ask the research team
4. I understand that my participation in the research project is voluntary. I can withdraw from the research project at any time without explanation before pressing submit. If I withdraw from the research, it will not affect other activities or relationships with Griffith University, Tweed Shire Council, or any external organisation.
5. I understand that my involvement in the research is strictly confidential and that no information about myself will be used in any way that reveals my identity.
6. I understand that I can contact the Manager, Research Ethics at Griffith University Human Research Ethics Committee at 3735 4375 (or [research-ethics@griffith.edu.au](mailto:research-ethics@griffith.edu.au)) if I have any concerns about the ethical conduct of the project

I understand that by clicking next to start the survey, I give my consent to participate.

## 8 Appendix 3: Distributed Survey

### Community Climate Action and Readiness Survey for the Tweed Shire

#### GENERAL INSTRUCTIONS

To ensure that you are eligible to participate in this survey, please answer these first two questions:

**I. What is your age (in years)?** \_\_\_\_\_

**ii. What is your current home postcode?** \_\_\_\_\_

**Please read all questions carefully because no two questions are identical. Sometimes two questions may seem similar, but this is essential for reliability purposes.**

To make sure that we are all referring to the same thing, please have in mind this definition of climate change when answering all remaining questions in this survey:

*Climate change refers to changes in the world's climate that are due directly or indirectly to human activity and are in addition to natural climate cycles or variability.*

In the questions, when we refer to environmental issues and pro-environmental behaviours, this includes issues related to climate change and the social and economic risks.

#### **SECTION A: How You Live Your Life**

**This first main section asks about your lifestyle, life situation, and everyday behaviours – especially those that might have an impact on the environment.**

**A6. Below are listed several actions that people might take. You may, or may not, engage in these actions. Please indicate whether you are taking each action by responding in one of the following four ways:**

*Please select one response for each type of behaviour.*

Behaviour	1. No, because there is no opportunity to do so	2. No, I for another reason	3. Yes, but not because of environmental concerns	4. Yes, because of environmental concerns
Do you <u>always</u> or nearly always:				
wash your clothes in cold (rather than hot) water?				
turn off 'at the wall' appliances like TVs and computers when not in use?				
carry your own re-usable drink container?				
refuse to use non-biodegradable plastic products (e.g., bags, containers, straws, utensils)				
Have you in the <u>last two weeks</u> :				
used public transport?				
eaten fewer than two serves of red meat?				
pointed out to other people that their behaviour is harming the environment?				
Have you in the <u>last three years</u> ever:				

signed a petition, written a letter, posted on social media, or similar, in support of an environmental issue?				
donated money to a group that aims to protect the environment?				
attended a pro-environmental rally, meeting, march, or protest?				
participated in a litter clean-up, beach clean-up, land-care project, or similar?				
	1. No, because there is no opportunity to do so	2. No, I for another reason	3. Yes, but not because of environmental concerns	4. Yes, because of environmental concerns
voted in an election for a candidate or party because of its/their pro-environmental policies?				
taken any of your money/savings/superannuation funds out of institutions that invest in industries that are bad for the environment (e.g., coal, gas and oil companies)?				
contacted a government member about an environmental or climate change issue?				
Do you <u>currently</u>				
grow some of your own fruit, vegetables, and/or herbs?				
belong to an 'environmental' group (e.g., Friends of the Earth, World Wildlife Fund, Greenpeace)?				

**A7. Compared to the average Australian's engagement in pro-environmental behaviours like those listed in the previous question, I think I am: (circle one)**

Not involved at all                                      A little less involved                                      A little more involved  
A lot less involved                                      About the same as other people                                      A lot more involved

**A-TSC-1. Rate your knowledge about climate change (circle one)**

Fair                                      Good                                      Very Good                                      Excellent

**A8. Almost all of us can do more to maintain the quality of our environment. Which of the following limit your involvement in further pro-environmental actions? (Please tick all those that apply for you)**

<input type="checkbox"/>	These actions are not going to stop or solve environmental problems
<input type="checkbox"/>	I don't think we are currently facing environmental problems worth addressing
<input type="checkbox"/>	I am not particularly interested in environmental issues
<input type="checkbox"/>	I am too busy/I do not have enough time
<input type="checkbox"/>	I have my own routines, habits, and ways of doing things that are different from these
<input type="checkbox"/>	I have health concerns/reasons, or believe these behaviours are not suitable for my health
<input type="checkbox"/>	These actions are too expensive
<input type="checkbox"/>	These actions are too inconvenient/too much effort
<input type="checkbox"/>	These actions are not a high priority, so I never seem to get around to them

	Environmental problems are too great for me/for one individual to have any impact
	I did not cause any environmental problems, so I have no responsibility to fix them
	I do not know what to do
	I do not know whom to talk to, contact, or engage with on environmental issues
	The environmentally friendly product or service is not available
	The environmentally friendly product or service that is available is not of satisfactory quality
	I am not aware of the benefits of these behaviours for the environment
	I can't do these things because of my age, ill health, or disability
	These behaviours do not benefit me
	These behaviours do not suit the lifestyle of my family or friends – that's not the way we do things
	I do not trust the authorities that give out information about environmental issues
	I do not believe climate change is happening
	Other reason/s - <i>please specify</i> :
	None of the above

**A9. Thinking ahead to the next three years, we would like to know how interested you are in doing each of the following. If you are not sure about any of them, please say so. What is your level of interest in each of these actions in the next three years? Please mark an 'X' on what your views are of each statement.**

	Already doing this	Not at all interested	Not very interested	Somewhat interested	Very interested	Not applicable/ Not sure/ Prefer not to say
Purchasing more of your household's energy through a green power supplier.						
Generating your own energy to meet your household's needs and feeding excess energy back into the network/grid.						
Getting an electric car or a hybrid engine car.						
Installing solar energy battery storage systems for your home						
Participating in local community projects relating to renewable energy						

## **SECTION B: How You See Yourself, and How You See Various Social, Political, and Environmental Issues**

**B-TSC-1. To what extent would you support or oppose the following initiatives if/when proposed by the government as policies? Please mark an 'X' on what your views are of each statement.**

	Strongly Oppose	Somewhat Oppose	Somewhat Support	Strongly Support	Do not Know/ Do not Understand
Set a national net zero-carbon emission target by 2050 at the latest					
Put a tax on carbon emissions, with the money raised being invested in clean, renewable energy					
Stimulate public/private investment in a national clean energy power system to replace all coal power					
The new flood package announcement from the NSW government in October 2022.					
Establish a community voice to local and state governments for developing climate action strategies.					
Establish a climate risk rating map to guide the development and assessment of new buildings.					

A policy prioritising ecosystem-based adaptation strategies such as tree and vegetation planting.					
Government to work with landholders to key connectivity corridors in the region to strengthen ecosystem health and wildlife diversity by.					
Use post-COVID government stimulus funding to kick-start the transition to a low carbon and climate-resilient national future					
Remove government subsidies for fossil fuel-based mining and exploration.					
Invest in a national electric vehicle (EV) infrastructure network, including charging stations.					
Strengthen construction and building sustainability requirements for all new builds.					

**B9a. The Australian Federal Government is committed to reducing greenhouse gas emissions by 43% by 2030. Do you think this is enough? (Circle one)**

I support the target: 43% emissions reduction by 2030 is about right

The target is too low: we should reduce emissions by more than 43% by 2030

The target is too high: we should reduce emissions by less than 43% by 2030

I do not think we should have a target at all

No opinion/ Don't know

I don't really understand emission targets

### **SECTION C: Your Experiences of Extreme Weather and Natural Disasters**

**C9. During the recent flooding events in the Tweed Shire and Northern NSW region did you: (Circle one per line)**

experience any property damage/loss?	Yes	No
experience any financial loss?	Yes	No
suffer any physical injury?	Yes	No
experience psychological distress or trauma?	Yes	No
get physically 'cut-off' or 'trapped' in some place?	Yes	No
lose the capacity to perform your usual work in your usual way?	Yes	No
need to spend one or more nights somewhere other than your home?	Yes	No
witness other people directly impacted by the flooding?	Yes	No
observe damage to other people's property?	Yes	No
have a family member or close friend impacted by the flooding?	Yes	No
have any other person/s needing to become dependent on you?	Yes	No
get involved in rescue work associated with the flooding?	Yes	No
help clean up after the flooding?	Yes	No

**C10. Did you apply for government relief funding to help you with the impacts of the flooding? (Circle one)**

Yes

No

**C11. If yes to C10, was your application for relief funding successful? (Circle one)**

Yes

No

### **SECTION D: Your Experiences and Views about Climate Change**

**D3. To what extent do you agree or disagree with this statement? Please mark an 'X' on what your views are.**



Any other (please specify)					
----------------------------	--	--	--	--	--

**D-TSC-2. If you indicated 2-5 for any of the situations in D-TSC-1, did you use any guidance or support from organisations on how to prepare? Circle one**

Yes

No

**D-TSC-2a. If 'yes', list the guidance or support used:**

**D-TSC-3. If 'yes' to D-TSC-2, where do you get your information on the following primarily from: Please mark an 'X' for each category**

	Tv News	Neighbours and community leaders	Emergency services organisations	Social media	Local community webpage	Council newsletter and website	Other government agency websites	Scientific organisations	N/A
Climate change									
Extreme weather events									
Emergencies in the Tweed									
Other? Please specify									

**D-TSC-4. If 'yes' to D-TSC-2, during the event/s you experienced – what were your most trusted sources of information: Please mark an 'X' for each category**

	Tv News	Neighbours and community leaders	Emergency services organisations	Social media	Local community webpage	Council newsletter and website	Other government agency websites	Scientific organisations	N/A
To keep up to date on the event during it?									
In the days that followed the event?									
In the weeks and months that followed?									

**D-TSC-4O. If 'social media' was marked in D-TSC-2 or D-TSC-3 please indicate which social media platform:**

Twitter

Instagram

Other: \_\_\_\_\_

Facebook

YouTube

TikTok

Snapchat

**D-TSC-5. If 'yes' to D-TSC-2, was there anything that could be improved about the information you had access to or communications around these events?**

<b>Particular types of information</b>	
<b>Methods of communication</b>	

**D14. When, if at all, do you think Australia will start feeling the effects of climate change? Circle one**

We are already feeling the effects	In the next 50 years	Never
In the next 10 years	In the next 100 years	Don't know/No opinion
In the next 25 years	Beyond the next 100 years	

**D23. To what extent do you agree or disagree with each of the following statements about climate change? Please mark an 'X' on what your views are of each statement.**

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree
I have felt pressure to think a certain way about climate change							
I feel others are trying to force their opinions on me about climate change							
I am being manipulated to form a certain view on climate change							
Concerns about climate change are exaggerated							

**D25. Please click the response that best indicates your level of agreement with each statement below. Please mark an 'X' on what your views are of each statement.**

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree
I believe my actions can slow the pace or negative effects of climate change.							
My actions have a positive influence on how I am feeling and thinking about climate change and environmental problems generally							
I feel that I can make a difference with regard to climate change							

**D26. To what extent do you think climate scientists... Please mark an 'X' on what your views are of each statement.**

	Not at all	A little	A moderate amount	More than moderately	A great deal
agree about the danger of climate change					
feel a responsibility to provide accurate information					
are knowledgeable about the risks					
are concerned about public welfare					



**D27. To what extent do you agree or disagree with each of the following statements? Please mark an 'X' on what your views are of each statement.**

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree
If we collaborate, we will be able to minimise the consequences of climate change							
By working together, we can make a difference to climate change							
There is little point in me taking action against climate change because many others will not ( <i>item reversed</i> )							
If people all pull together, we can reduce the impacts of climate change							

**D8. In your view, how likely is it that over the next few decades, problems associated with climate change can be solved through ... Please mark an 'X' on what your views are of each statement.**

	Not at all likely	Slightly likely	Likely	Very likely	Extremely likely
Natural processes (e.g., changes in natural weather cycles)					
New technology					
Government actions (e.g., new environmental laws or policies)					
The actions of business corporations					
Collective community actions					
The actions of other individuals					
My own actions					
Other ( <i>please specify</i> ): _____					

**D29. To what extent do you agree or disagree with this statement: Please mark an 'X' for your view**

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree
Climate change is an issue that requires urgent action NOW.							

### **SECTION E: Your Feelings about Climate Change**

**E1. How concerned, if at all, are you about climate change? Circle one**

Not At All Concerned

Fairly Concerned

Not Very Concerned

Very Concerned

**E2. Has your level of concern about climate change increased, decreased, or remained the same over the past year (i.e., since November 2021)? Circle one**

Decreased Substantially

Decreased moderately

Decreased slightly

Remained the same

Increased moderately

Increased slightly

Increased Substantially

**E6. What is/are your biggest concern(s) about climate change?**

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**E7. Some people may feel that climate change is distressing. It may or may not be like this for you. Please indicate the extent to which each of the following statements reflects your own feelings about the threat of climate change. Please mark an 'X' on what your views are of each statement.**

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree
I feel distressed when I see or read media coverage of the likely impacts of climate change.							
At times, I worry about what the world will be like in the future because of climate change.							
I feel guilty when I think of how the lifestyle of my family and friends contributes to climate change.							
	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree
It upsets me when I think that there is so little I can do about climate change and other environmental problems.							
The more I learn about the threat of climate change, the more anxious I become							
At times, I feel overwhelmed when thinking about the future impact of climate change							

**SECTION F: Your Responses to Climate Change**

**F3. Some people change aspects of their lifestyle to reduce their contribution to climate change. Which of the following aspects of your lifestyle have you changed primarily because you wanted to reduce your impact upon climate change?**

*(Tick all that apply to you)*

<input type="checkbox"/>	Plant more native plants
<input type="checkbox"/>	Used compost to improve soil health
<input type="checkbox"/>	Driven my car less
<input type="checkbox"/>	Carpooled more often
<input type="checkbox"/>	Recycled more
<input type="checkbox"/>	Consumed less red meat
<input type="checkbox"/>	Reduced the amount of food I throw out

	Become more efficient in my consumption of power (electricity, gas) from the grid/power companies
	Changed to 'green' (e.g., solar) power
	Changed my electricity supplier
	Become more efficient in my water consumption
	Reduced my use of plastic items
	Switched to products that are more environmentally friendly
	Purchased a bicycle
	Purchased more things that are locally (rather than remotely) made/grown
	Avoided making unnecessary purchases
	I have changed none of these aspects of my lifestyle over the past year due to concerns about climate change.
	Other <i>please specify</i> :

**F4. To what extent do you agree with the following statements? Please mark an 'X' on what your views are of each statement.**

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree
I feel a strong personal obligation to do whatever I can to prevent climate change.							
I feel obliged to bear the environment and nature in mind in my daily behaviour							
	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree
I feel morally obliged to use green instead of regular electricity							
I would be a better person if I behaved in more pro-environmental ways							
If you are reading this carefully, answer strongly disagree to this question							
Most people in my social network behave in ways that minimise damage to the environment							
Most members of my family behave in ways that minimise damage to the environment							
Most of my friends behave in ways that minimise damage to the environment							
Most members of my neighbourhood/local community behave in ways that minimise damage to the environment							

**F5. How likely are you to do each of the following things if a person you like and respect asked you to? Please mark an 'X' for each statement.**

	Already doing this	Definitely Would Not	Would Not	Would	Definitely Would
Join a campaign to convince elected officials to take action to reduce climate change?					
Volunteer your time to an organisation working in climate change?					
Donate money to an organisation working on climate change?					
Write letters, email or phone government officials about climate change?					
Support an organisation engaging in non-violent civil disobedience against corporate or					

government activities that make climate change worse?					
Personally engage in non-violent civil disobedience against corporate or government activities that make climate change worse?					

**F6. To what extent do you agree or disagree with the following statements?**

**To help reduce climate change, I am willing to:** *Please mark an 'X' for each category*

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree
change my lifestyle							
greatly reduce my energy (e.g., electricity) use							
pay higher personal taxes							
pay more for electricity							
pay more for fuel (petrol, diesel, etc.)							
pay significantly more for energy-efficient products							
accept cuts in my standard of living.							
take part in a community-wide climate change movement							
have renewable energy infrastructure such as a solar farm in my local area							
work with my local community to find ways to adapt to living with climate change							

**SECTION G: Your Understanding of Climate Change**

**G1. Please indicate whether you think the following statements are true or false. If you do not know, just tick under “Do not know”.** *Please mark an 'X' for each category*

	True	False	Do not know
Climate change will increase the risk of waterborne diseases			
Climate change is caused by the build-up of greenhouse gases (e.g., carbon dioxide, methane) in the atmosphere			
Climate change can be slowed down if more trees were planted			
Climate change is mainly caused by the hole in the ozone layer			
Those who are most socially and economically disadvantaged (e.g., poorer nations/communities) experience the greatest impacts of climate change			
Climatic extremes are increasing, and are causing food shortages and food insecurity globally			
Solar (or ‘photovoltaic’) panels are now a cheaper source of new-build electricity generation than coal and gas			
The economic consequences of climate change are greater than the economic consequences of moving away from fossil fuels			
People can help reduce the rate of climate change by consuming more meat and dairy products			

**G10. Overall, how much do you feel you know about climate change?** *Circle one*

Nothing at all

A little

A great amount

Virtually nothing

Quite a lot

Just about everything

**SECTION H: About You**

*This final section asks about your demographic background*

**H1. What is your gender? Circle one**

Male	Other/Non-binary
Female	Prefer not to say

**H5. How many years have you lived in the suburb, town, or regional area in which you are now living? \_\_\_\_\_****H7. Please indicate the highest level of education you have already completed: Circle one**

Year 10 or less	College Certificate or Diploma	Postgraduate Degree/Diploma
Year 11	Trade Qualification/Apprenticeship	Other: <i>please specify</i>
Year 12	Undergraduate Degree	_____

**H9. What is your current employment status?**

Working – Full-time (35+ hours per week)	Retired	Not in paid employment due to COVID-19
Working – Part-time	Unpaid work – volunteering/looking after house/children/dependants	Student - not in paid employment
Working on a Casual Basis	Not in paid employment due to a disability	Other - <i>please specify</i> _____
Unemployed – seeking work		

**H14. Please indicate your approximate combined household income (from all sources, before tax) during the 2021-2022 financial year:**

\$40,000 or less	\$80,001-\$100,000	Greater than \$200,000
\$40,001-\$60,000	\$100,001-\$150,000	Prefer not to say
\$60,001-\$80,000	\$150,001-\$200,000	

**H17a. Do you identify as (that is, see yourself as) a member of a culturally and linguistic diverse (CALD) community?**

Yes  No  Prefer not to say

**H17b. Do you identify as an Aboriginal and/or a Torres Strait Islander?**

Yes  No  Prefer not to say

**H21. What is the main language spoken in your household? Circle one**

English	Other: <i>please specify</i>	Prefer not to say
	_____	

**H-TSC-1. What is your home tenancy:**

Rent  Own  Prefer not to say

**H32. Is there anything else you would like to say about your views on climate change or natural disasters?**

