



National Coral Reef Monitoring Program (NCRMP)

Socio-economic Monitoring for US Coral Reef Jurisdictions



American Samoa Survey Results - 2014

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NOAA Coral Reef Conservation Program

for more information on NCRMP visit :

http://www.coris.noaa.gov/activities/projects/ncrmp_socio/

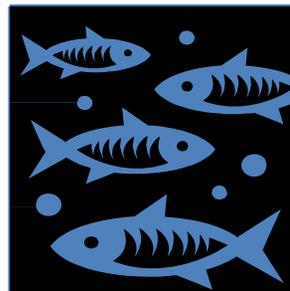




National Coral Reef Monitoring Program (NCRMP)

- ❖ The National Coral Reef Monitoring Program gathers information to track the health of coral reefs and dependent human communities to assist in developing effective management plans and actions for coral reef conservation

National Coral Reef Monitoring Program (NCRMP)



Biological
Indicators

Climate
Indicators



Socioeconomic
Indicators



Indicators for NCRMP Social Monitoring

Participation in reef activities

Attitudes towards coral reef management strategies and enforcement

Awareness and knowledge of coral reefs

Human population changes near coral reefs

Economic impact of coral reef fishing to jurisdiction

Economic impact of dive/snorkel tourism to jurisdiction

Community well-being

Cultural importance of reefs

Participation in behaviors that may improve coral reef health

Physical infrastructure

Awareness of coral reef rules and regulations

Governance



Resident surveys

- ❖ The resident surveys will assist in collecting indicators for the socioeconomic monitoring component of NCRMP
- ❖ Surveys collect information on:
 - ❖ Use of coral reef resources
 - ❖ Knowledge, attitudes, and perceptions of coral reefs and coral reef management
- ❖ In American Samoa, resident surveys were conducted during February 2014
- ❖ Surveys will be repeated every 3-4 years in each jurisdiction

Survey Methodology

- ❖ Surveys were done in-person (house to house) on weekday afternoons and weekends
- ❖ Confidential (no names or personally identifiable information was collected)
- ❖ Survey was conducted in Samoan or English (depending on respondent preference)



Survey Methodology

❖ Sample:

- ❖ 448 American Samoan residents over the age of 18
- ❖ Stratified random sample of villages on Tutuila:
 - ❖ Urban / Semi-urban / Rural
 - ❖ North, South, East, and West

Representative sample of population:

- 95% confidence level
- 4.6% confidence interval



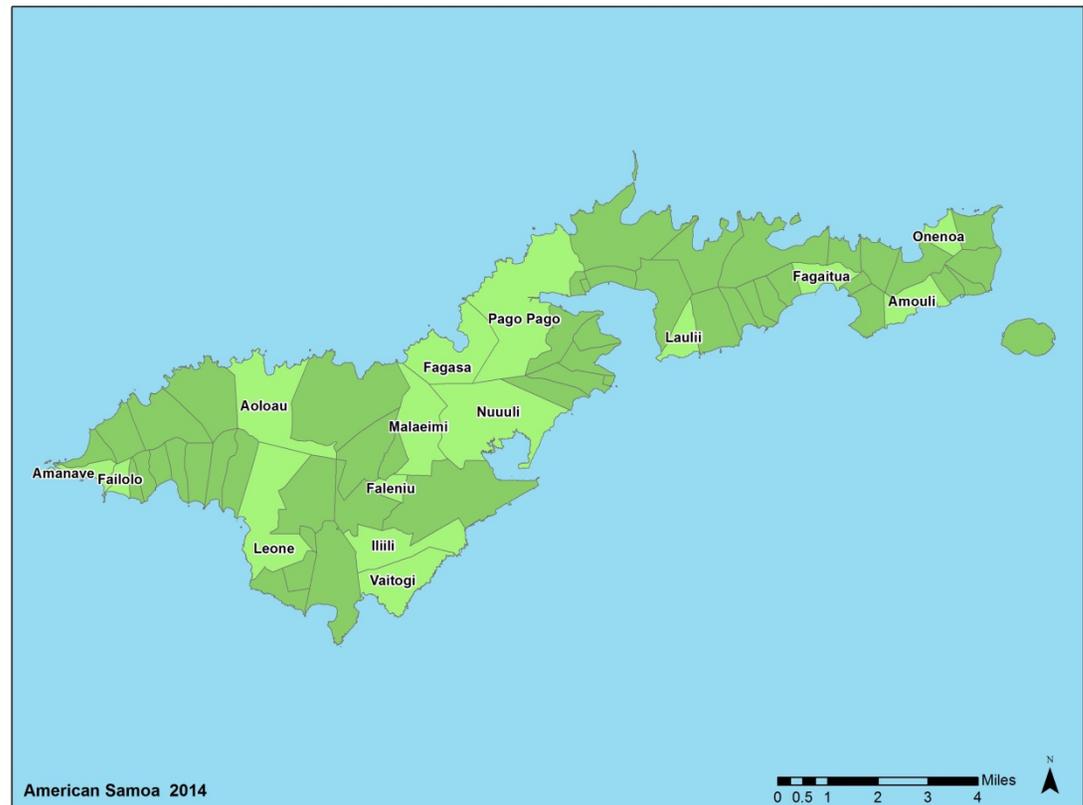
Survey Methodology

- ❖ Sample:
 - ❖ 448 American Samoan residents over the age of 18
 - ❖ Stratified random sample of villages on Tutuila:
 - ❖ Urban / Semi-urban / Rural
 - ❖ North, South, East, and West
- ❖ Survey conducted by:
 - ❖ Trained surveyors from local agencies, supervised by San Diego State University

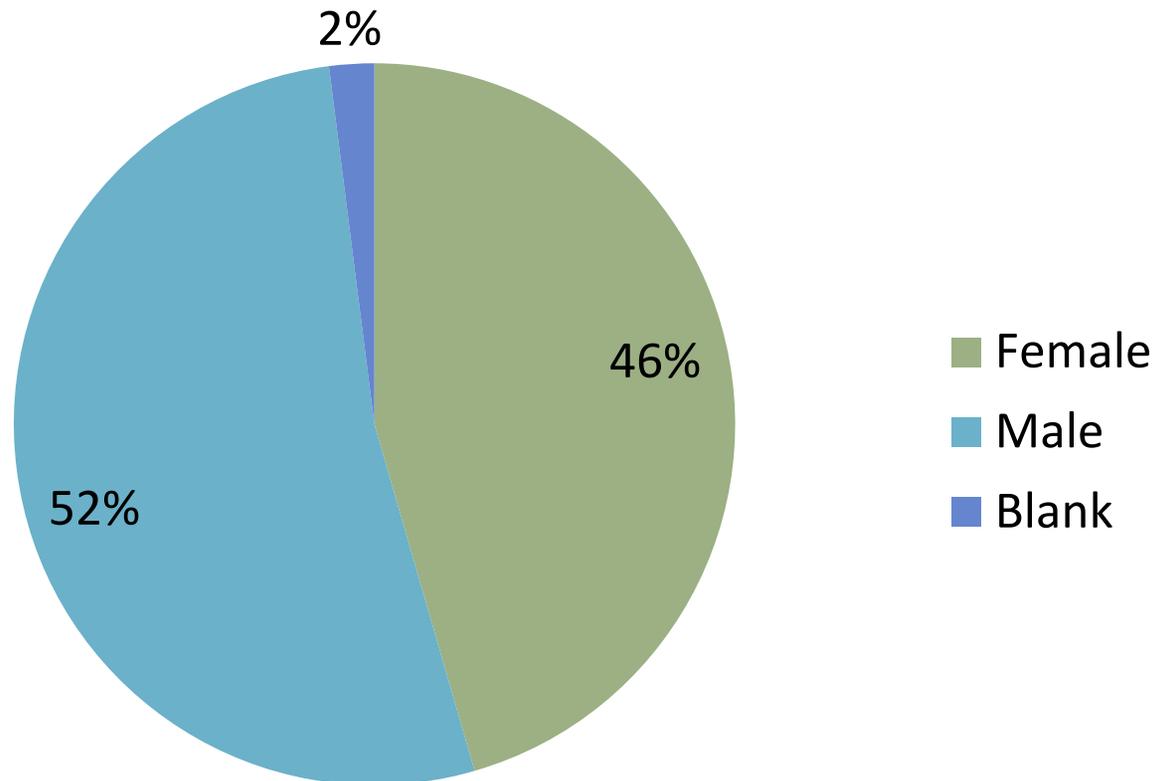


Survey village locations:

Amanave	Lauli'i
Amouli	Leone
Aoloau	Malaeimi
Faga'itua	Nu'uuli
Fagasa	Onoea
Failolo	Pago Pago
Faleniu	Vaitogi
Ili'ili	



Results – Demographics – Gender



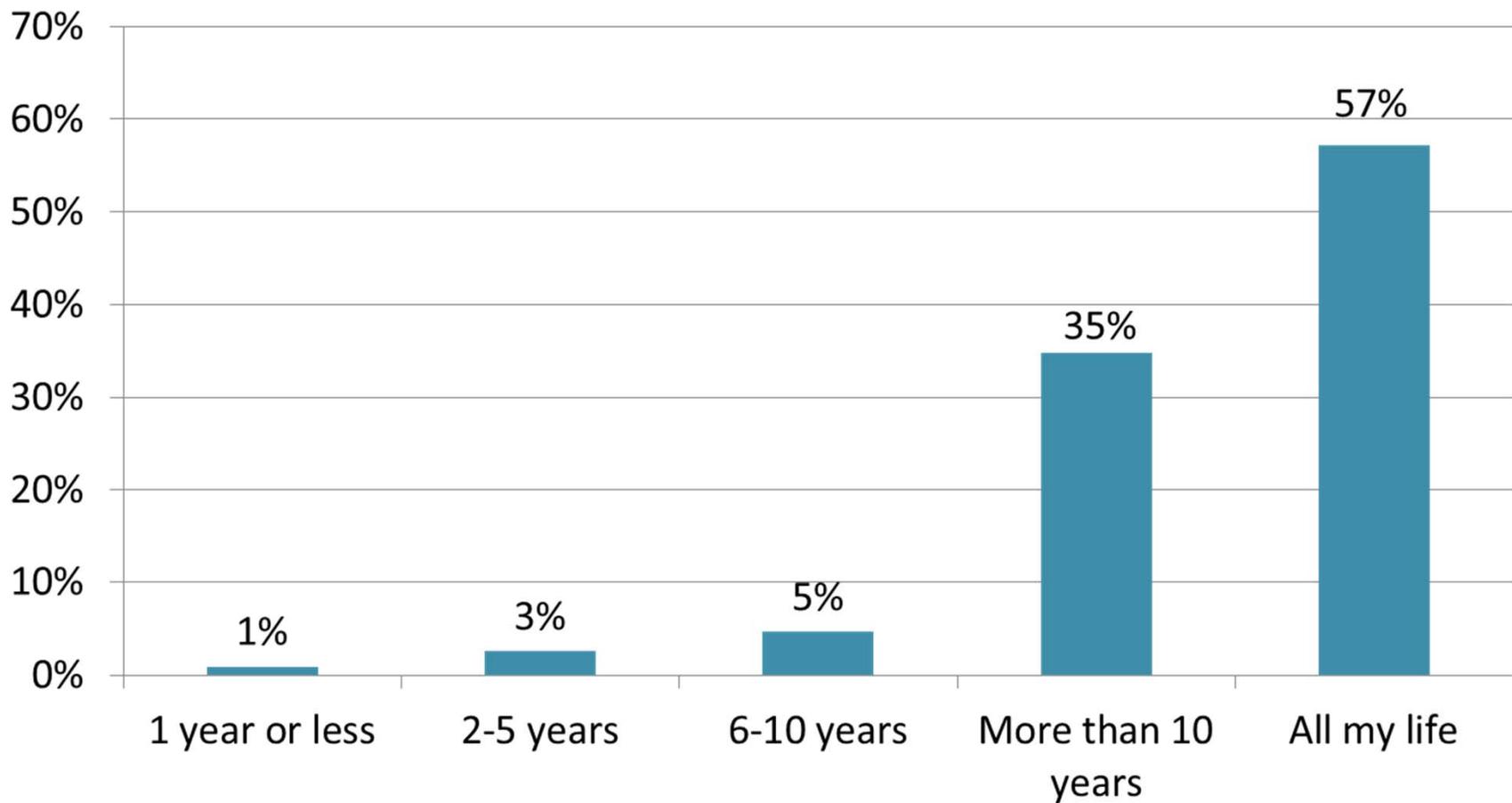
*Gender distribution in American Samoa is 50/50 according to 2010 census



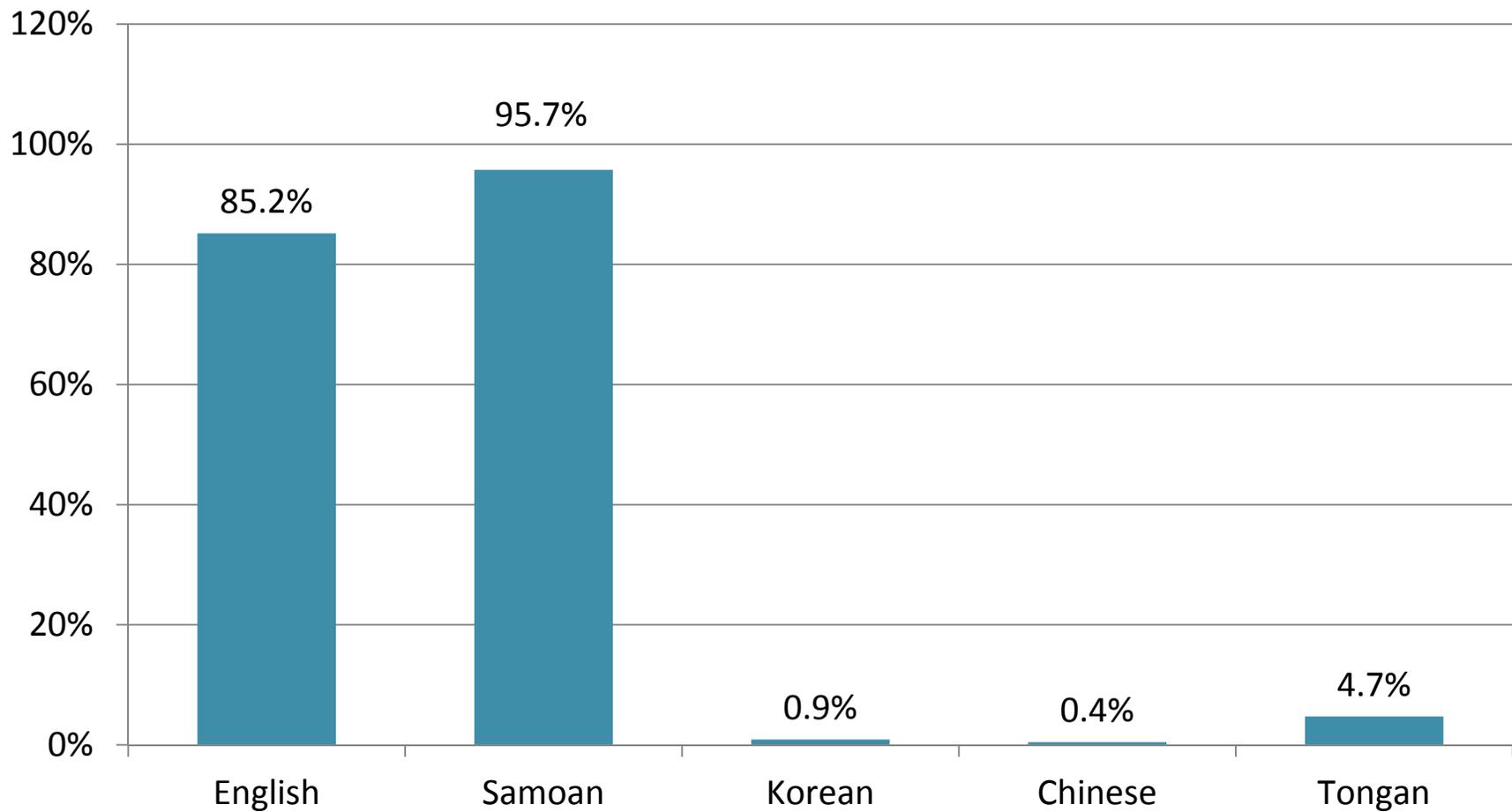
Results – Demographics – Age

Age	Survey	2010 Census
18-29	26.2%	29.6%
30-39	24.7%	22.2%
40-49	22.4%	21.8%
50-59	13.7%	14.8%
60-69	10.5%	7.6%
70 +	0.0%	4.1%
no response	2.5%	-

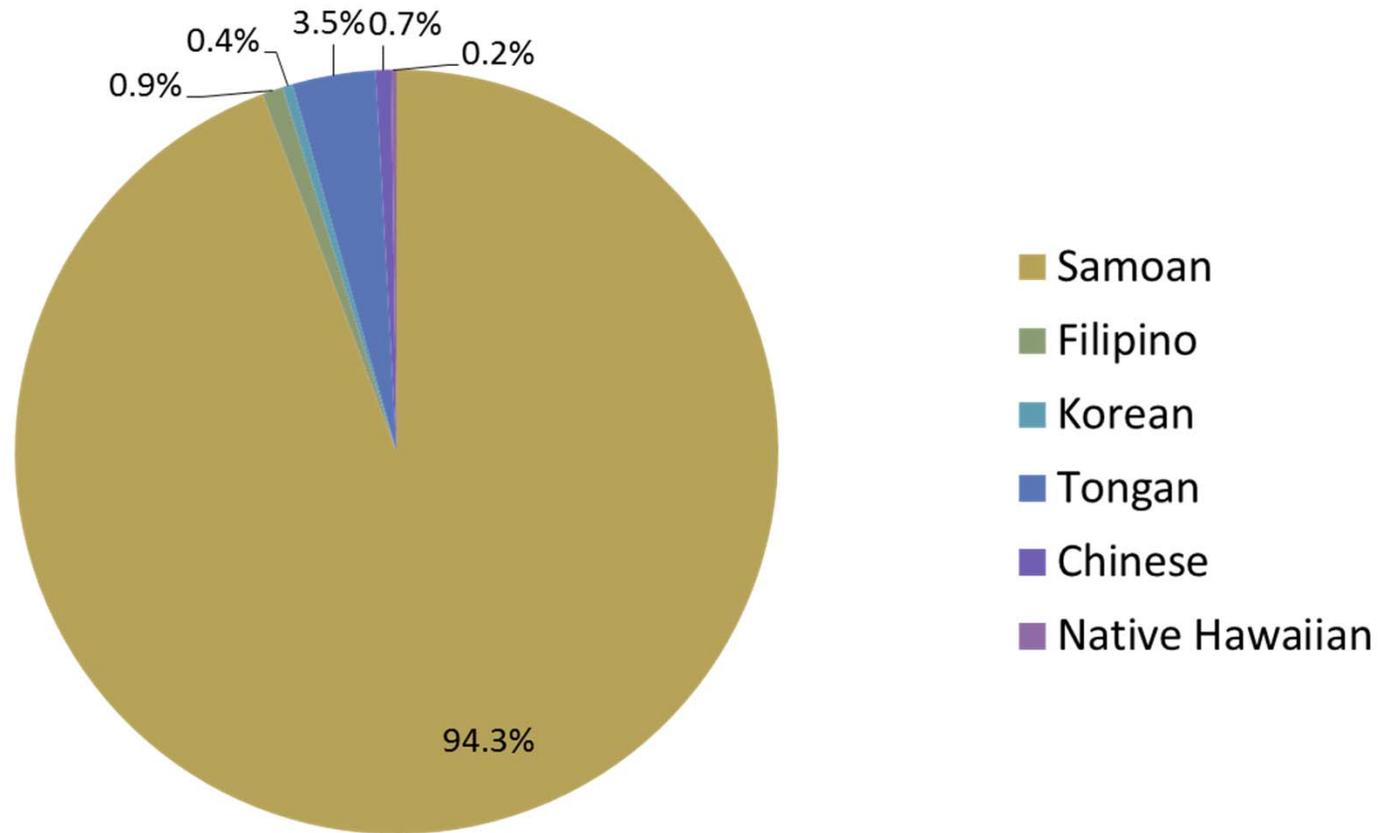
Results – Demographics – Length of time in AS



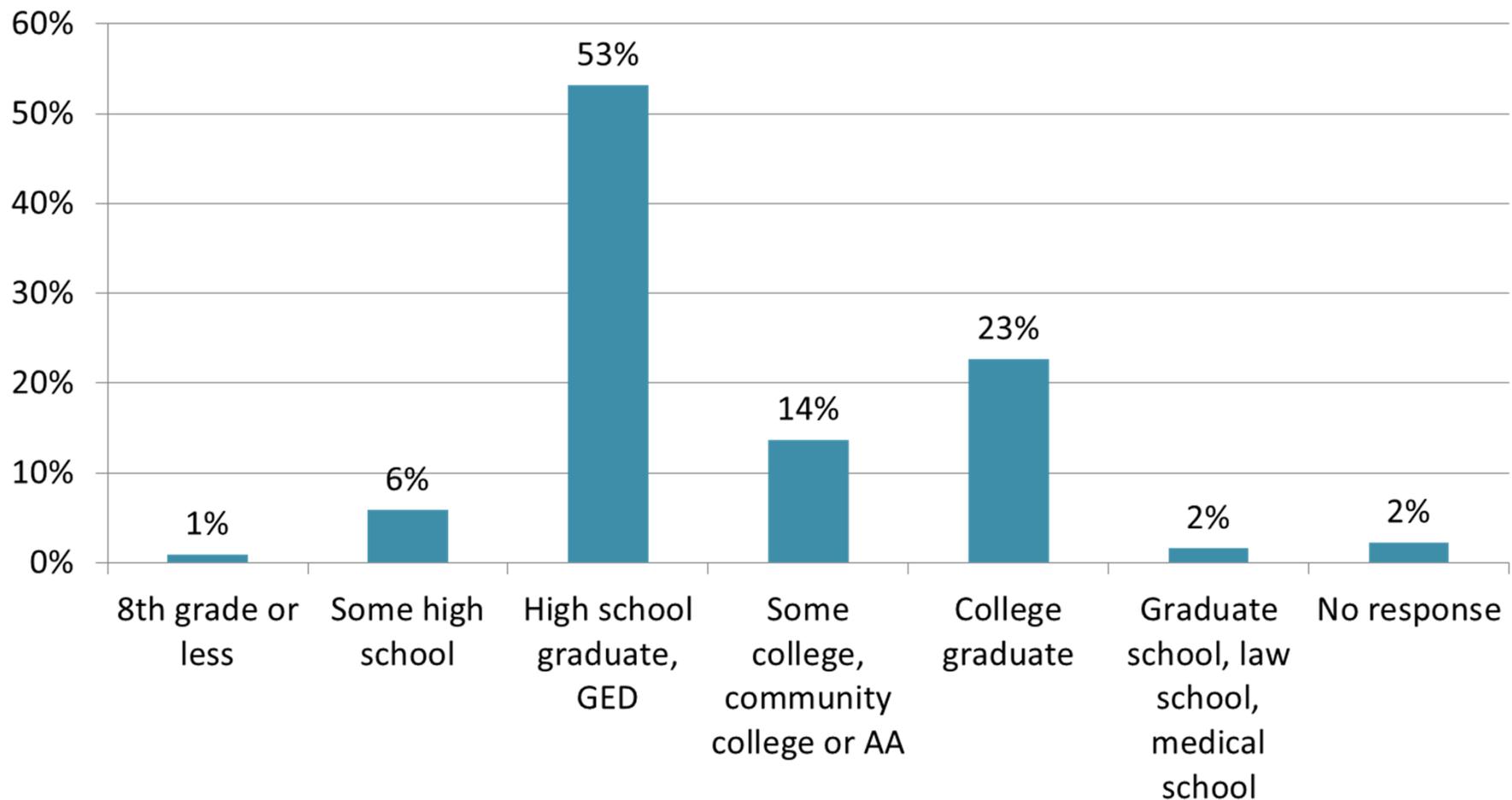
Results – Demographics – Languages spoken



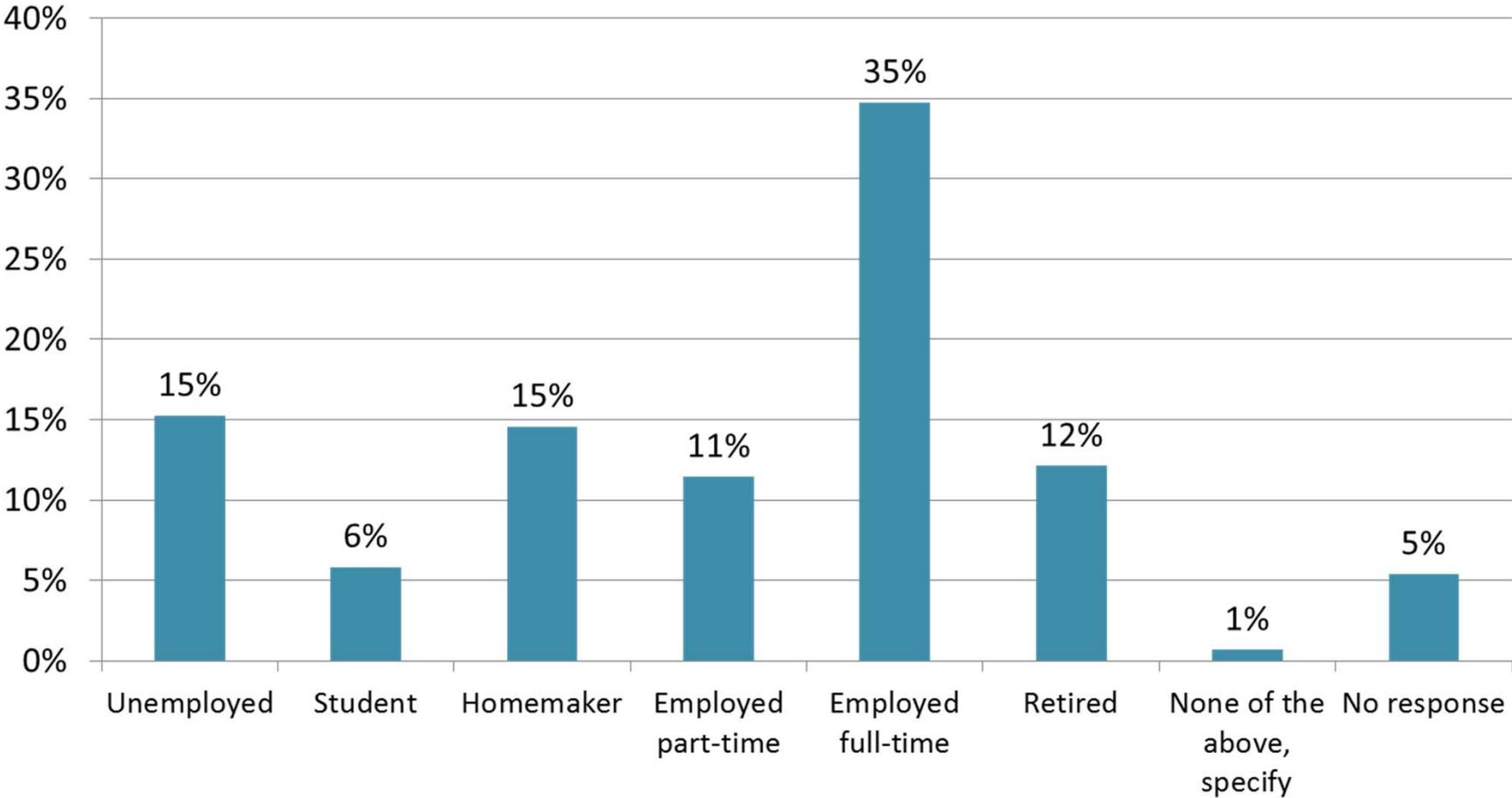
Results – Demographics – Race/ethnicity



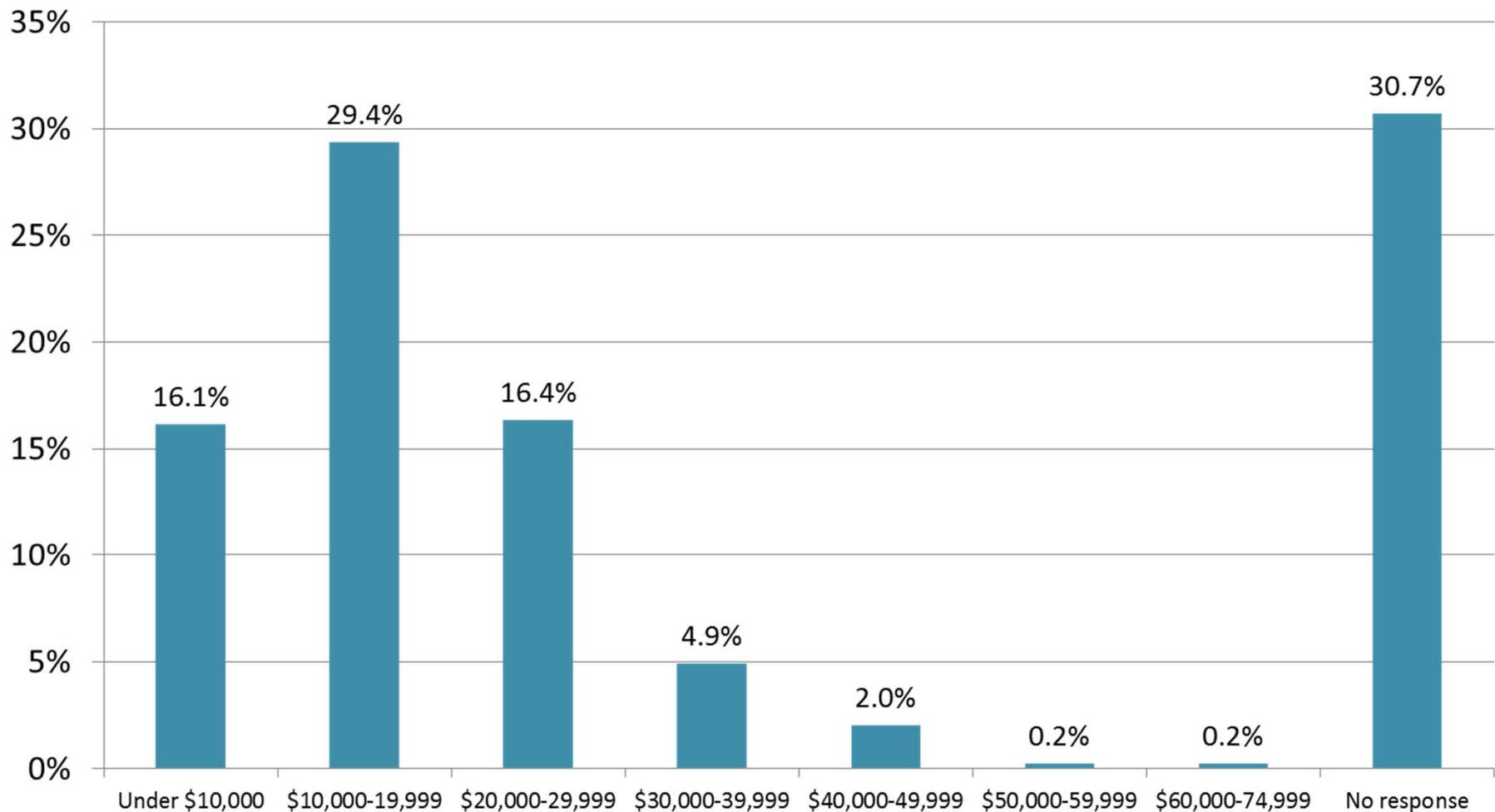
Results – Demographics – Highest level of education completed



Results – Demographics – Employment status



Results – Demographics – Annual income

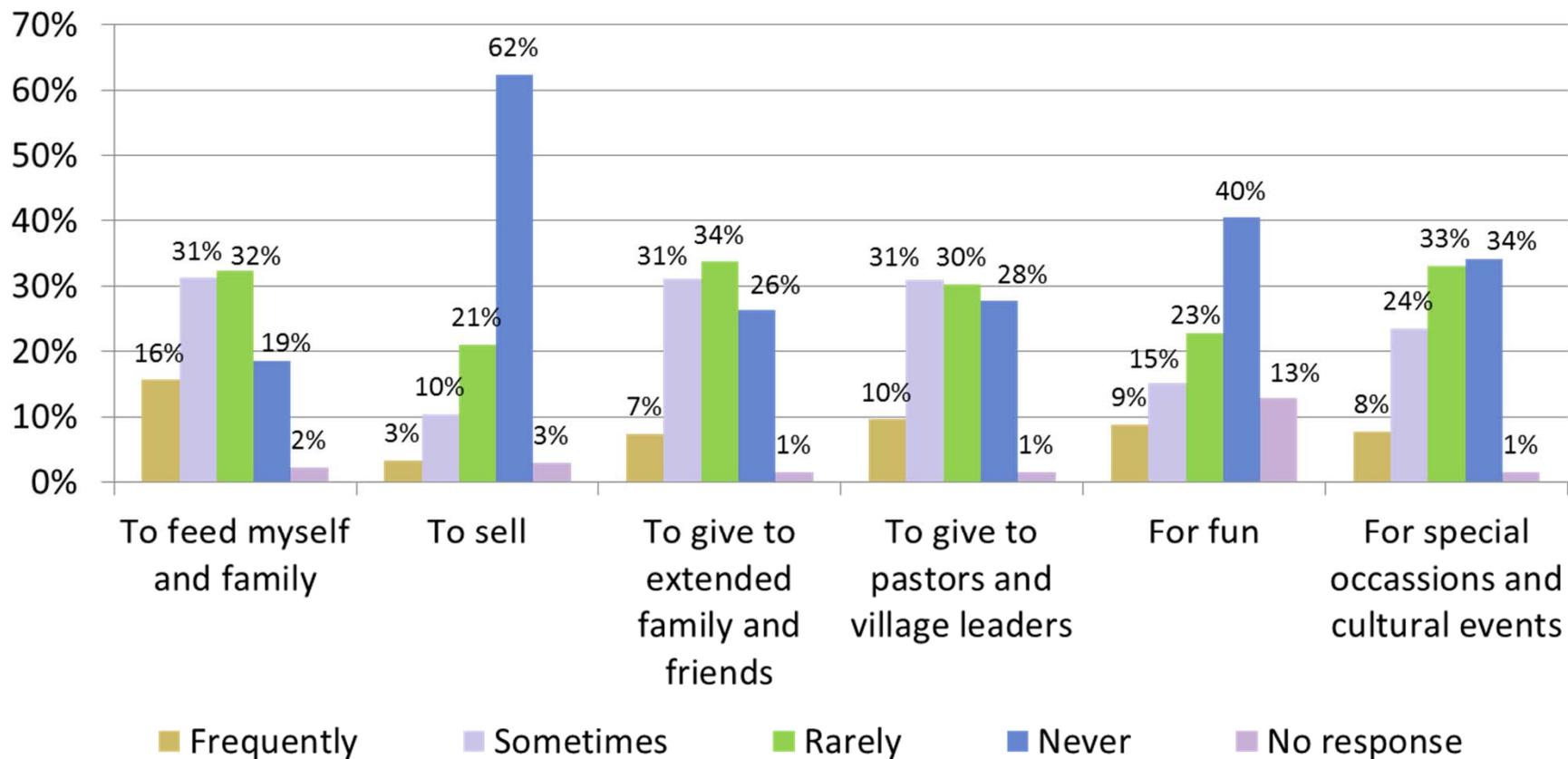




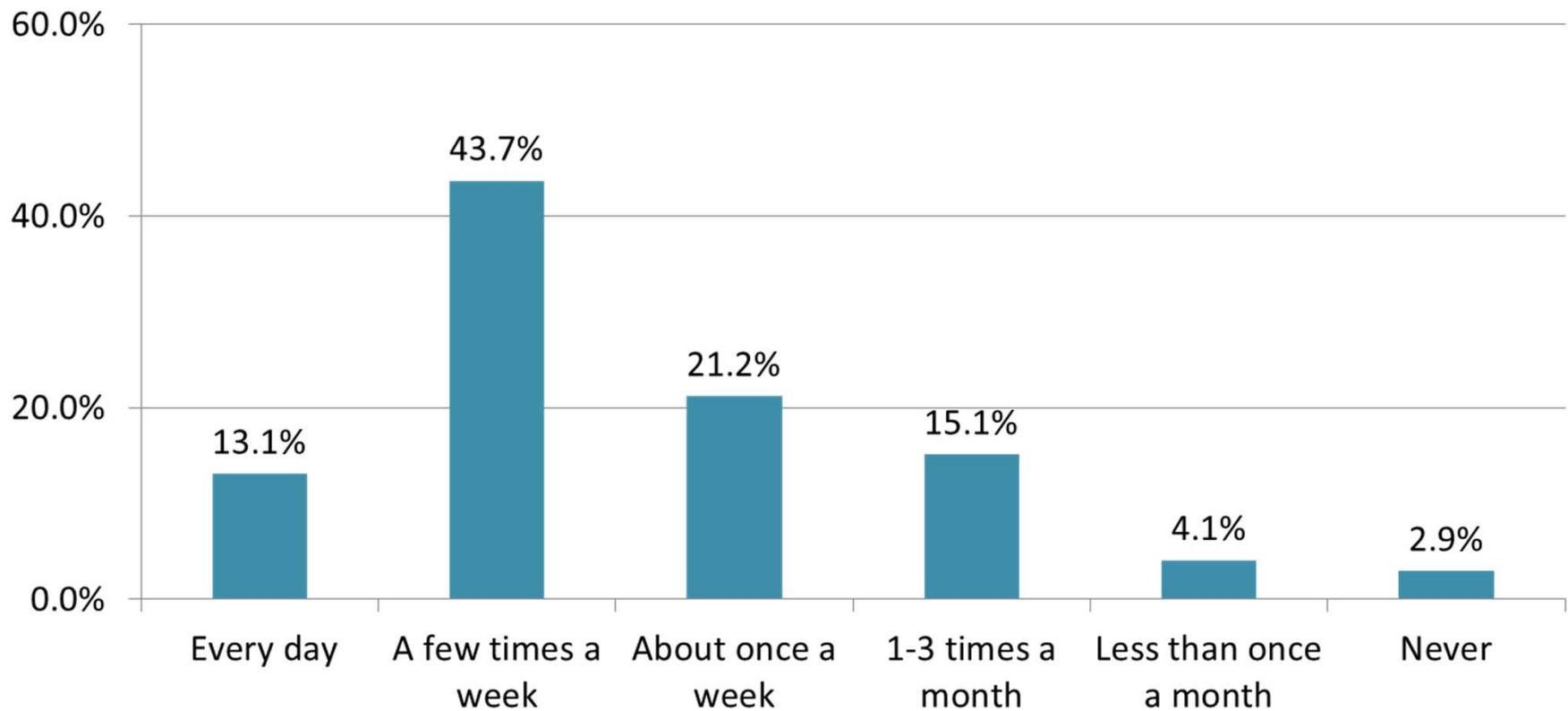
Results – Q1 How often do you participate in each of the following activities?

	Swimming	Snorkeling	Diving (SCUBA or free)	Waterside / beach camping	Beach recreation	Boating	Outrigger canoe/ Fautasi	Surfing	Fishing	Gathering of other marine resources
Never	20%	70%	93%	55%	39%	75%	82%	86%	47%	56%
Once a month or less	32%	14%	3%	29%	29%	13%	7%	5%	21%	23%
2-3 times a month	20%	7%	2%	10%	16%	5%	3%	2%	16%	7%
4 times a month or more	23%	5%	2%	5%	13%	5%	3%	3%	15%	6%
No response	4%	3%	1%	1%	2%	3%	5%	4%	1%	7%

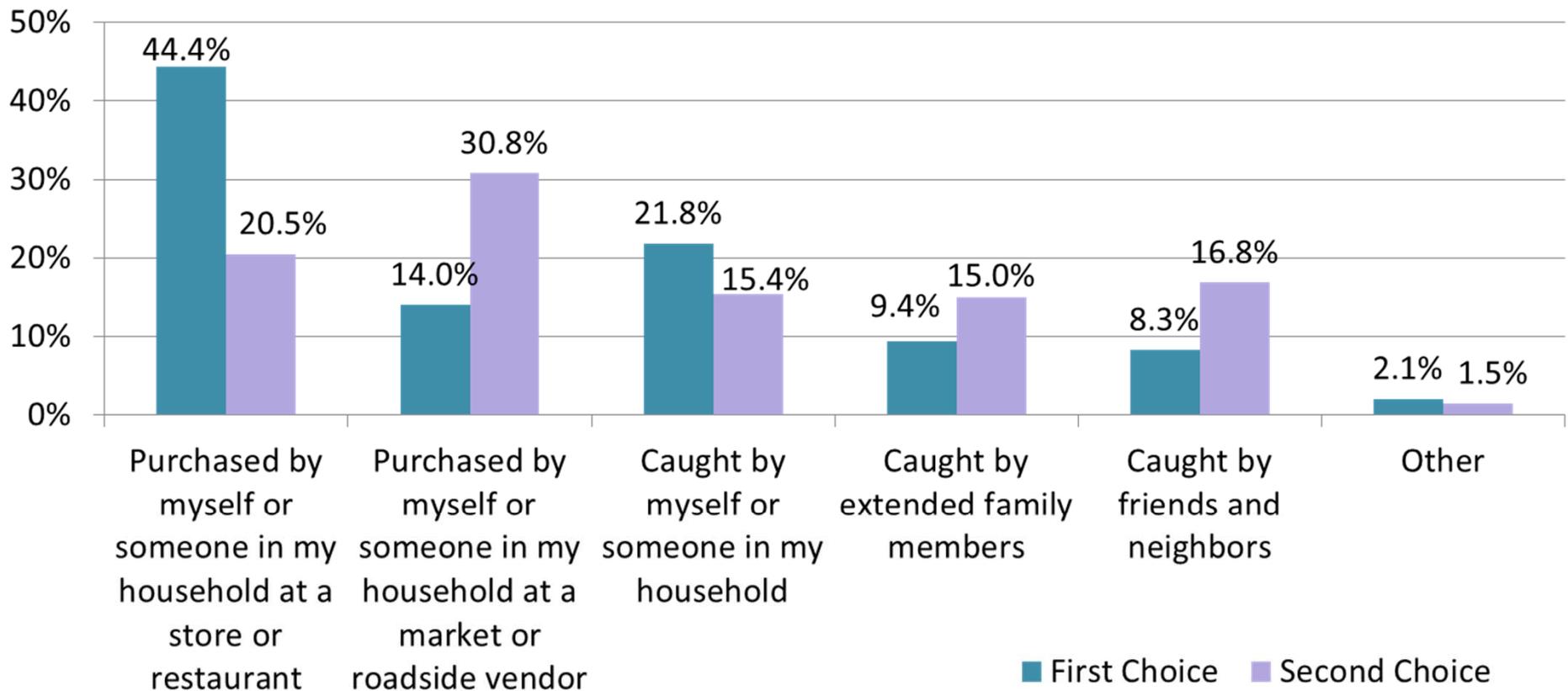
Results – Q2 (Fishers only) How often do you fish or harvest marine resources...?



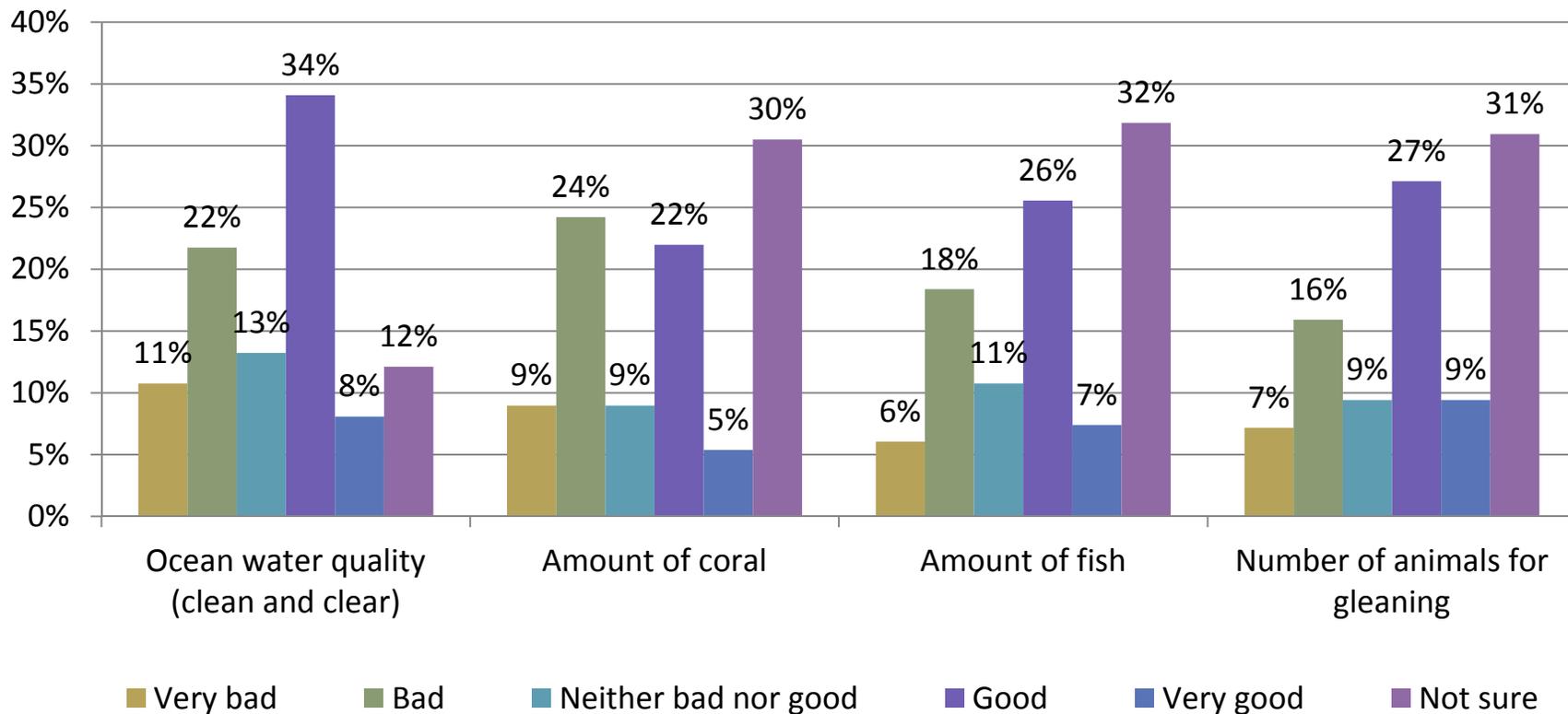
Results – Q3 How often does your family eat fish/seafood?



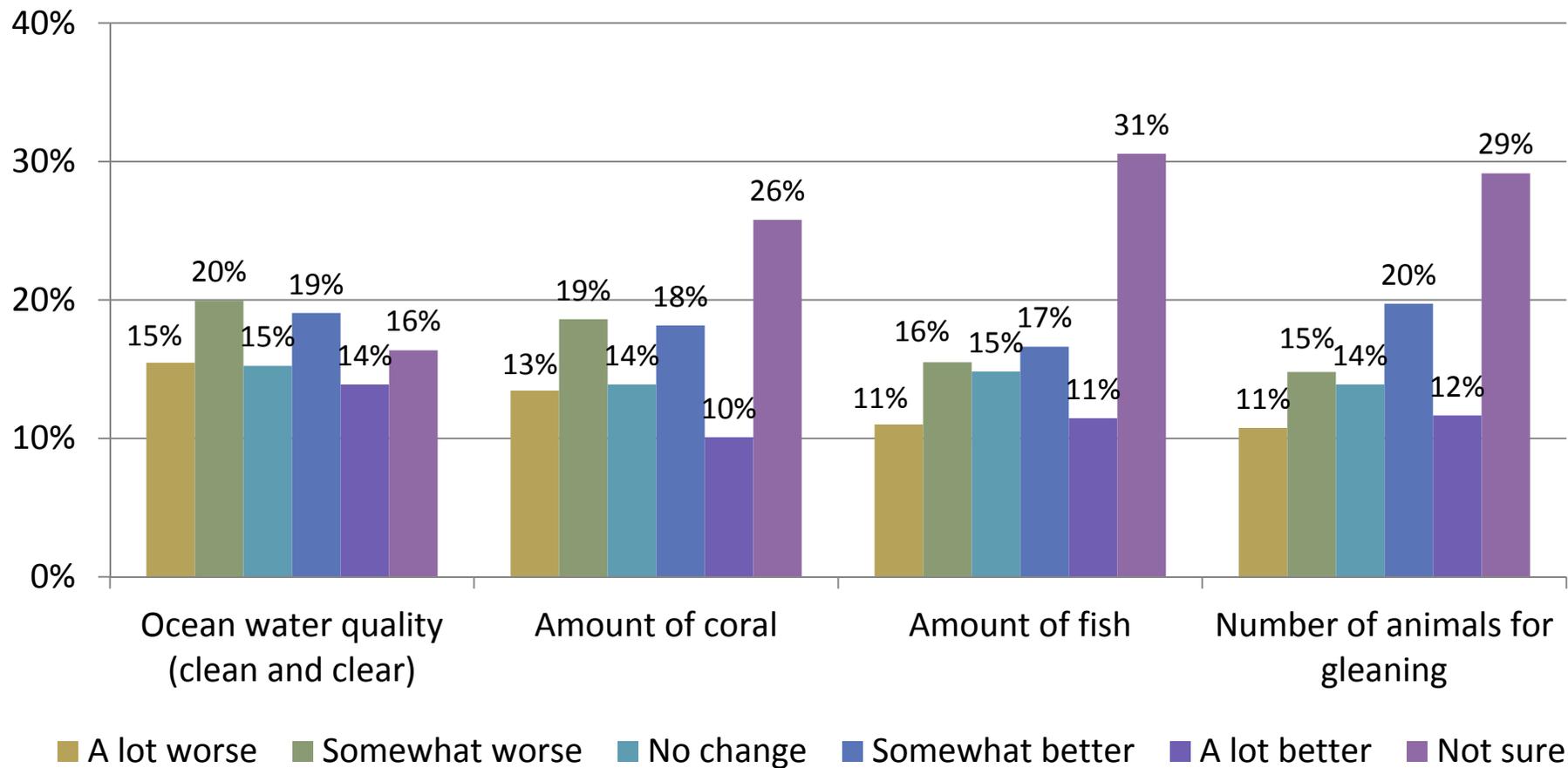
Results – Q4 Where do you get the fish or seafood your family eats?



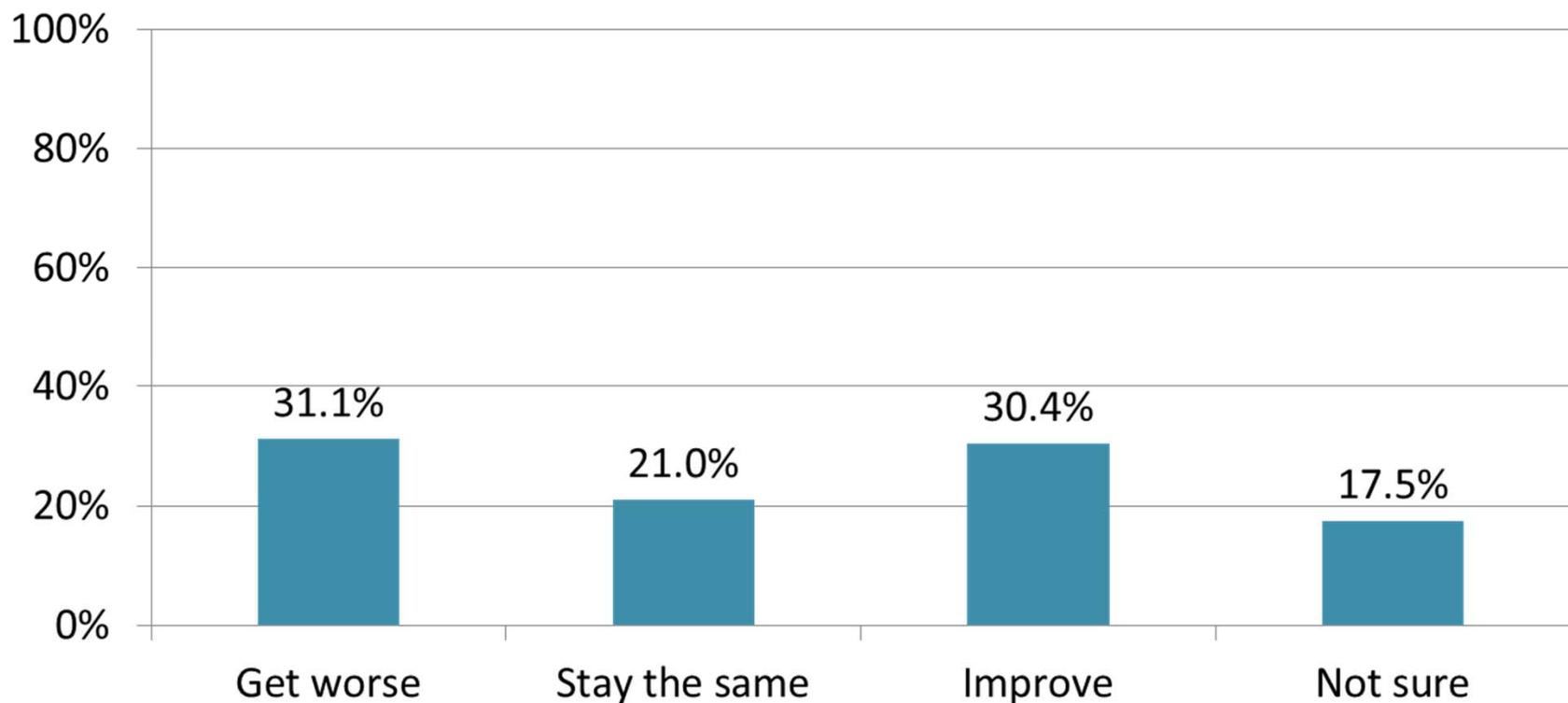
Results – Q5 How are American Samoa’s marine resources currently doing?



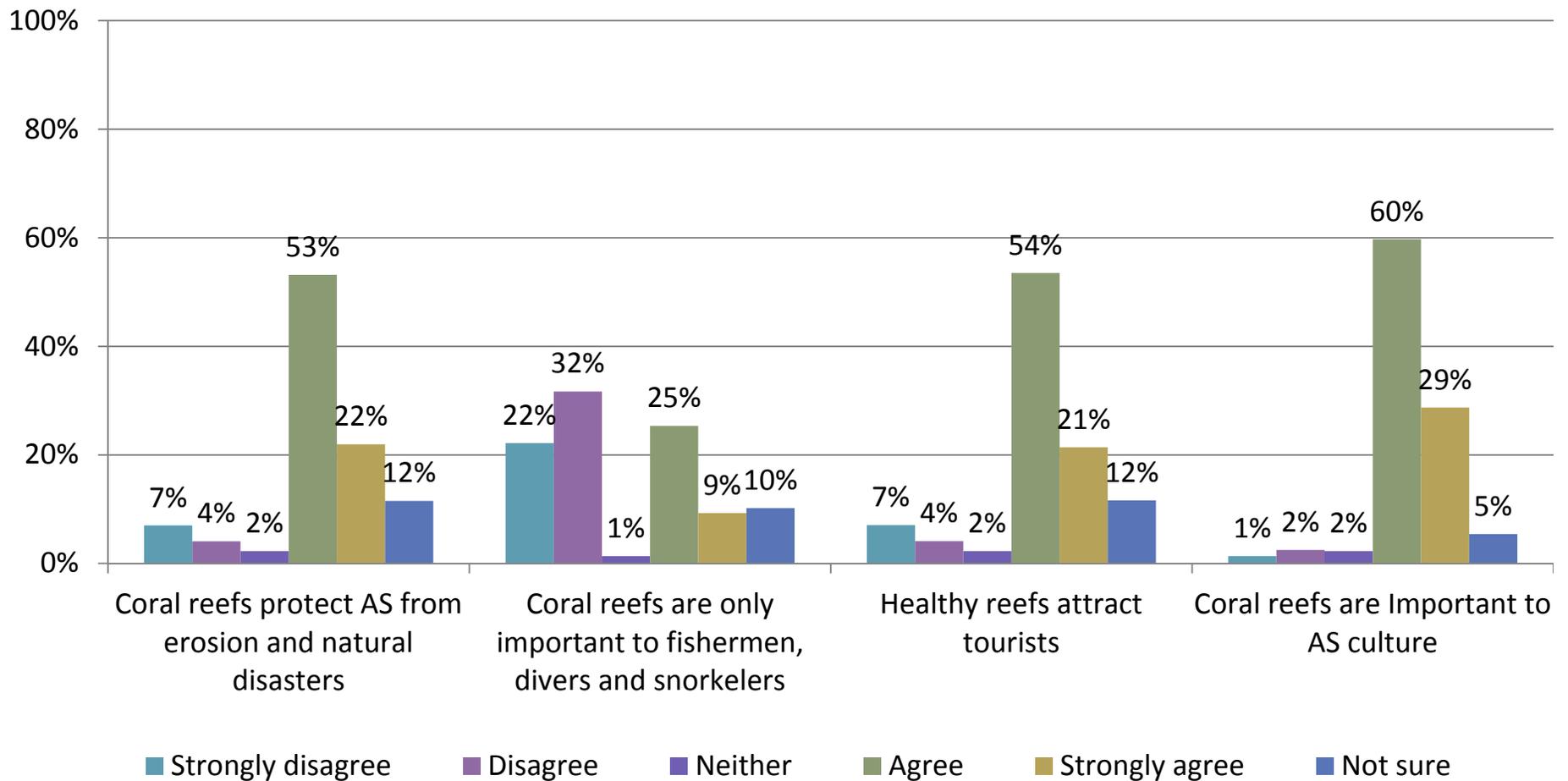
Results – Q6 How have the conditions changed over the last 10 years?



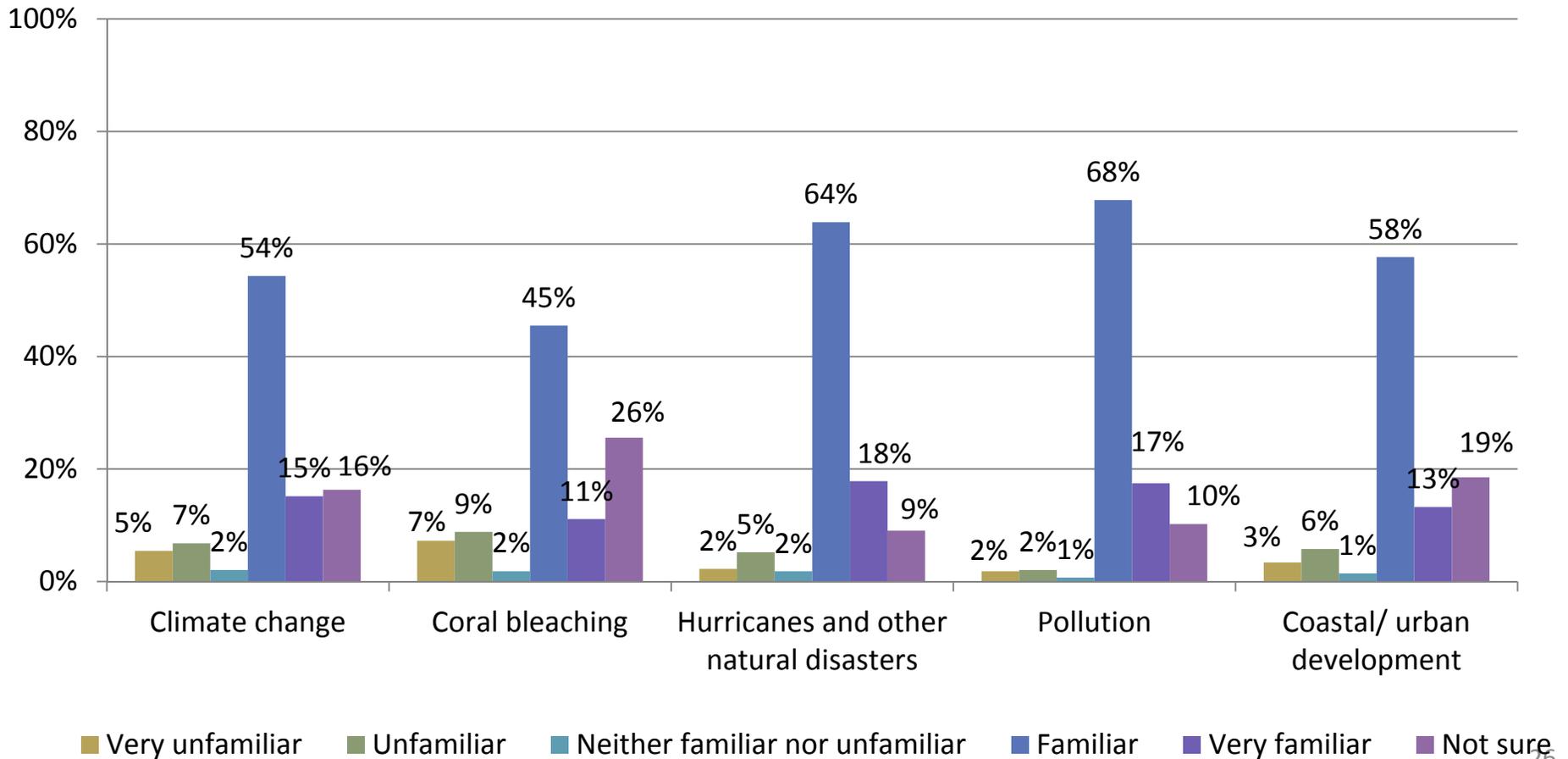
Results – Q7 In the next 10 years, will the condition of the marine resources get worse, stay the same or improve?



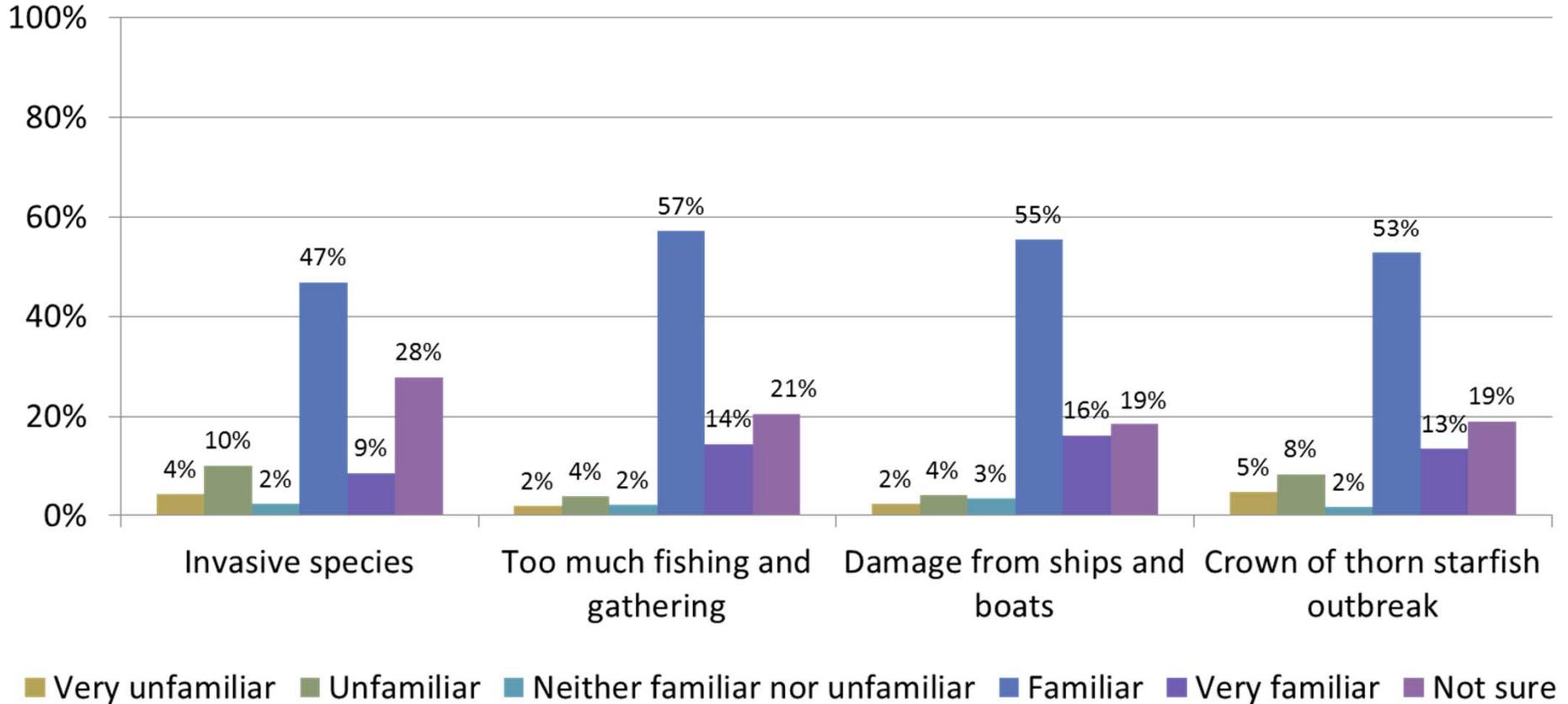
Results – Q8 Disagree/Agree



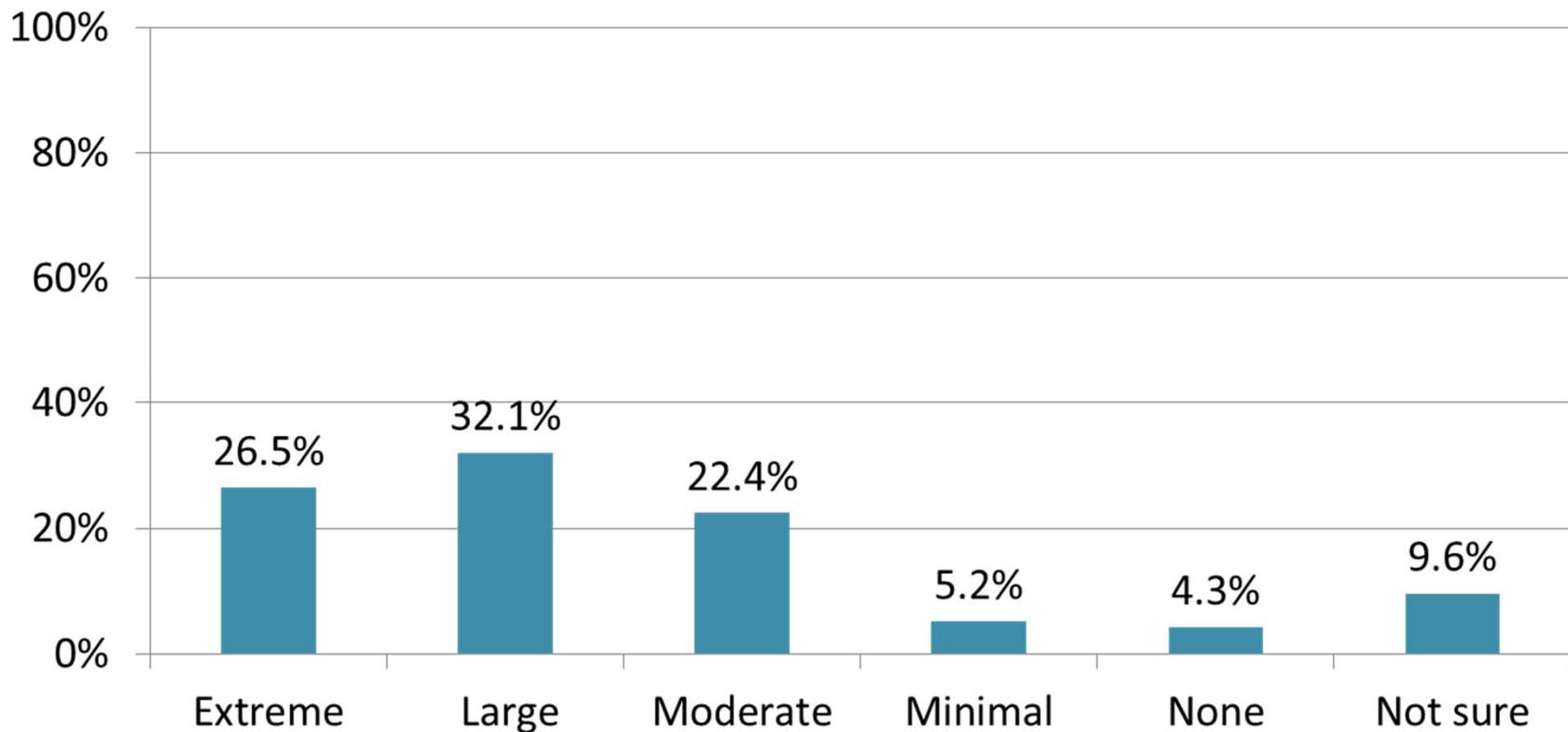
Results – Q9 Familiarity with potential threats facing coral reefs in American Samoa



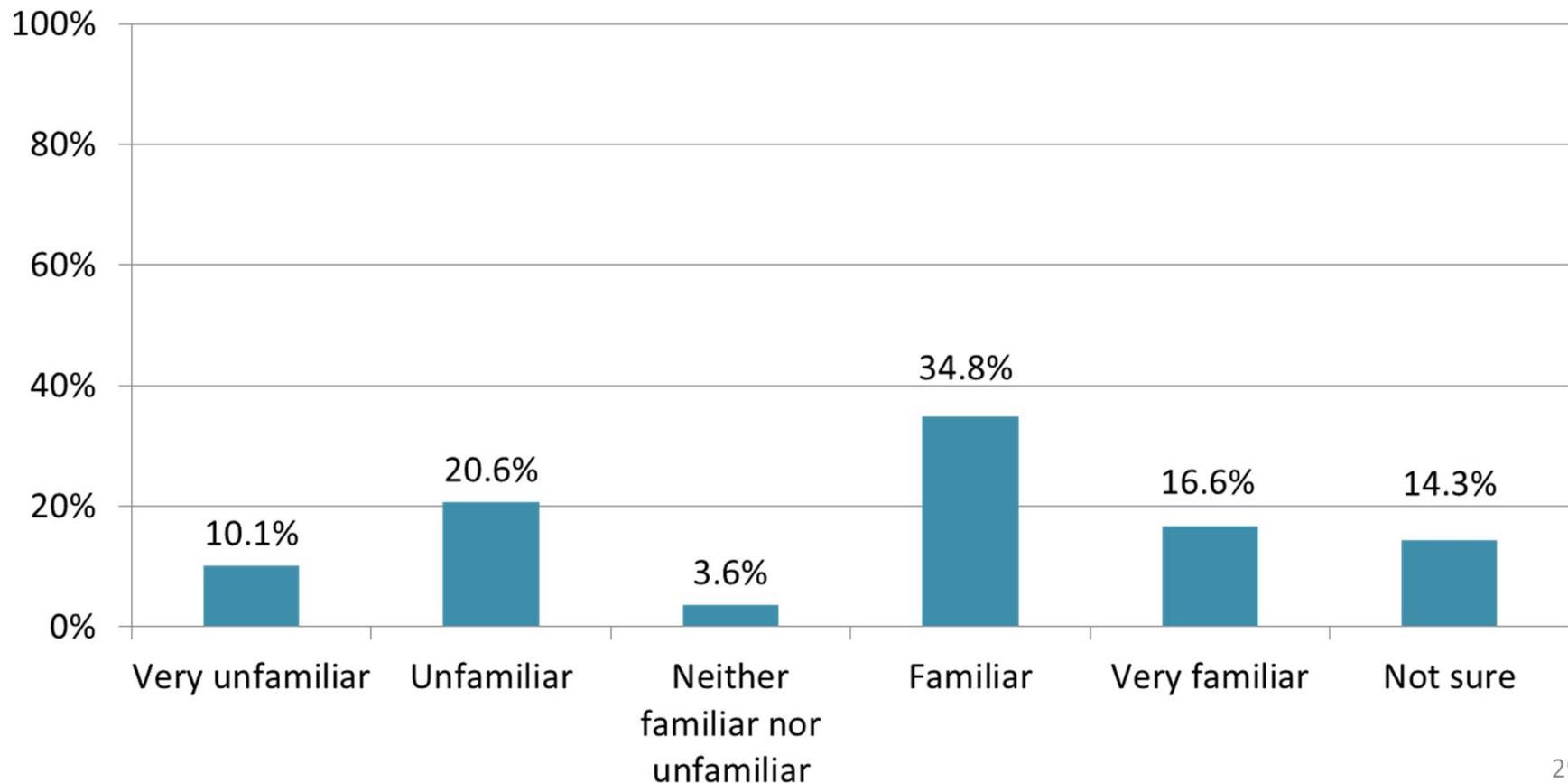
Results – Q9 Familiarity with potential threats facing coral reefs in American Samoa



Results – Q10 Threats to coral reefs in American Samoa are:



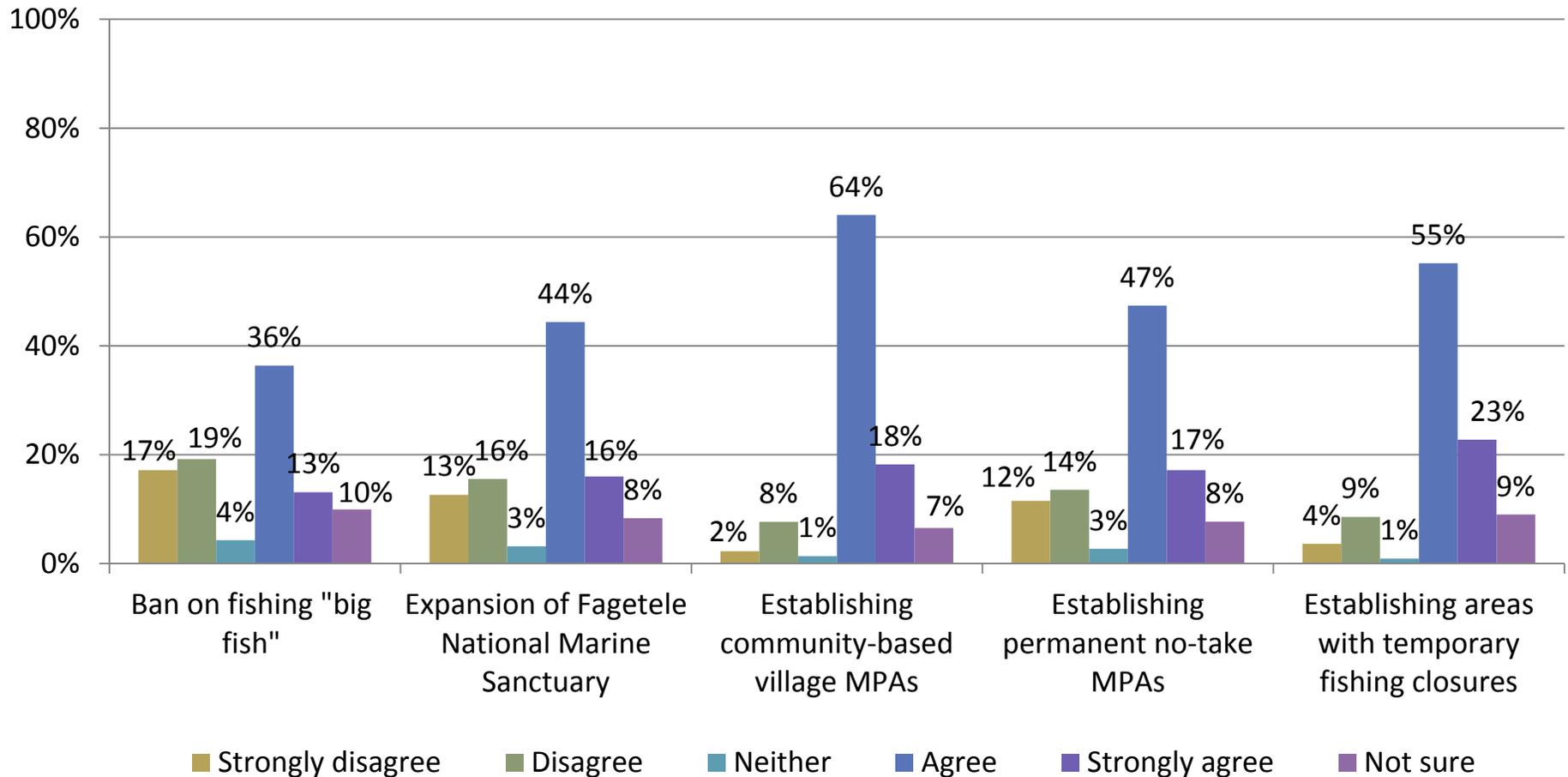
Results – Q11 How familiar are you with Marine Protected Areas (MPAs)?



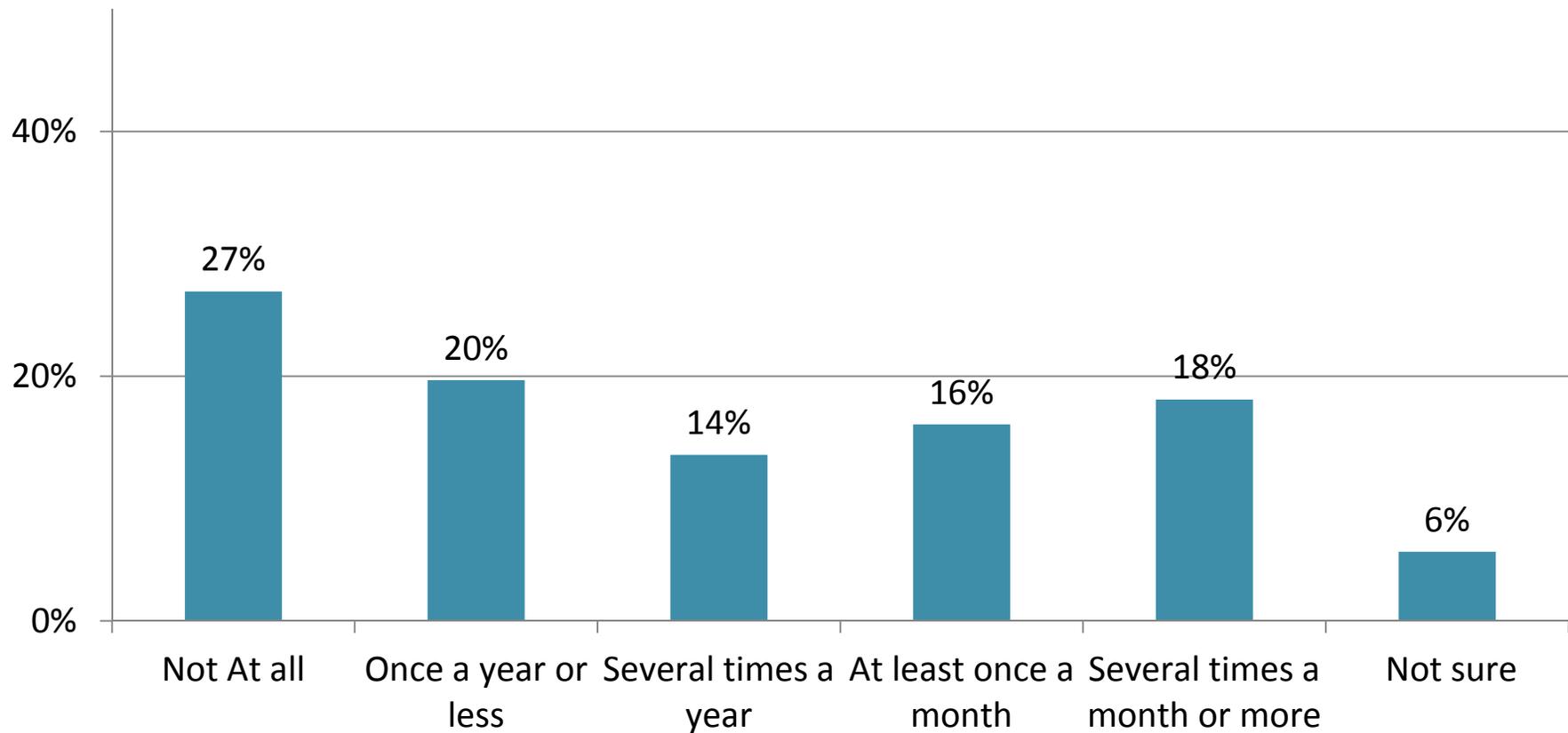
Results – Q12 (for those aware of MPAs) Disagree or agree

	MPAs protect coral reefs	MPAs increase number of fishes	There should be fewer MPAs in American Samoa	There should be more MPAs in American Samoa	There has been economic benefit to American Samoa from MPAs	Fishermen's livelihoods have been negatively impacted from MPAs in AS	MPAs help increase tourism in Am. Samoa	I would support adding new MPAs in Am. Samoa	I generally support the establishment of MPAs
Strongly agree	28%	30%	6%	26%	31%	8%	17%	30%	28%
Agree	63%	61%	18%	61%	59%	30%	68%	59%	59%
Neither	2%	0%	1%	1%	1%	5%	2%	2%	1%
Disagree	2%	3%	32%	7%	2%	23%	4%	3%	5%
Strongly disagree	0%	1%	26%	2%	2%	20%	2%	1%	0%
Not sure	5%	5%	16%	3%	5%	14%	7%	5%	7% ³⁰

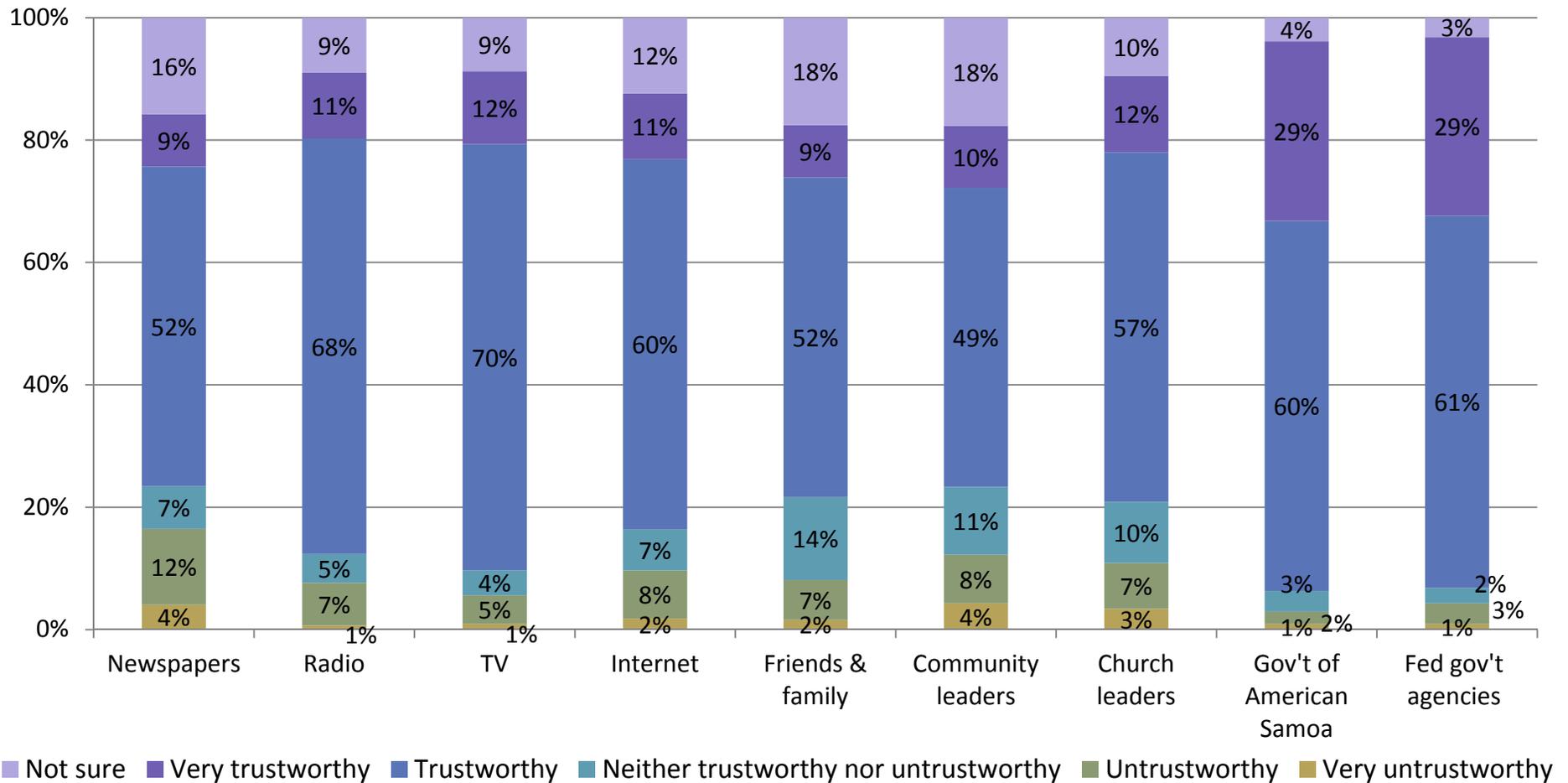
Results – Q13 Disagree or agree



Results – Q14 How often do you participate in any activity to protect the environment?

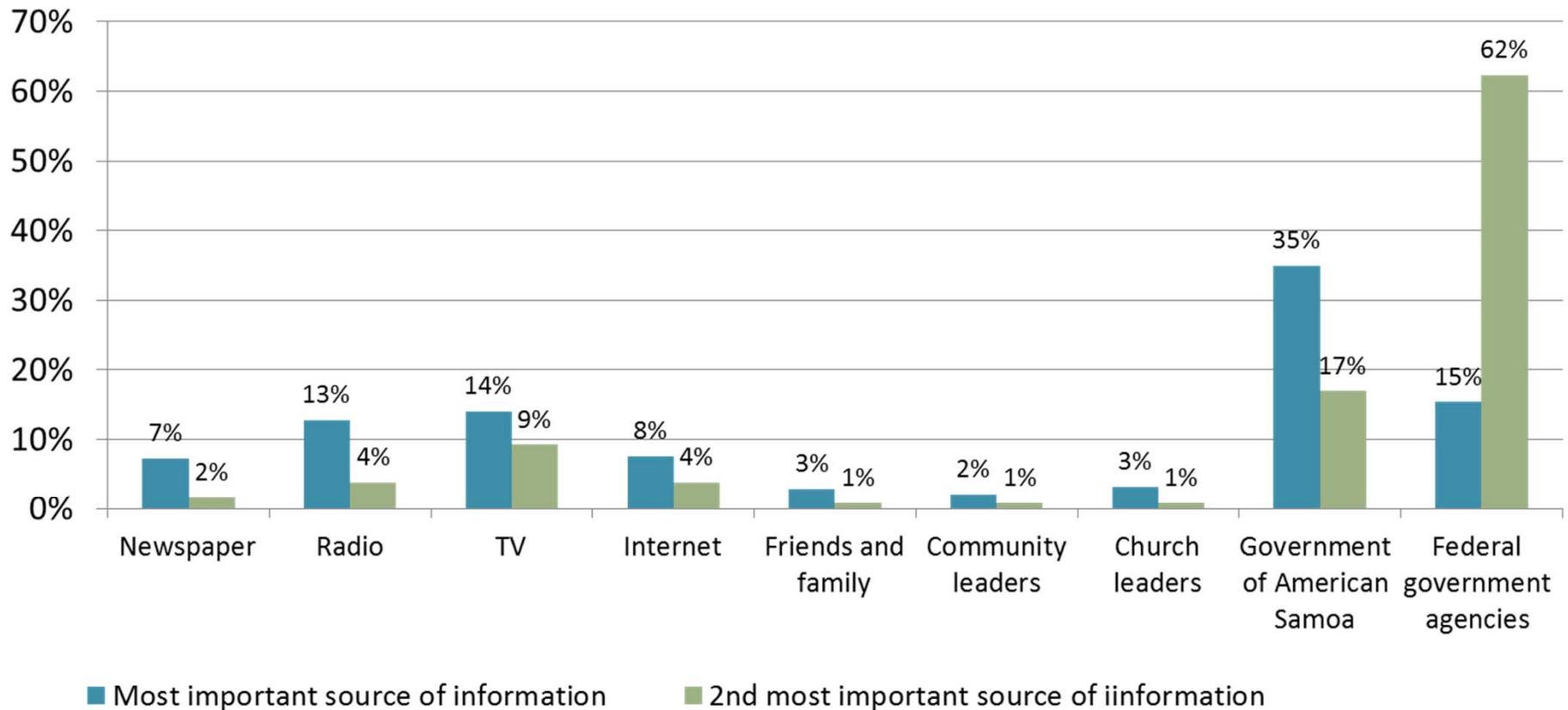


Results – Q15 To what degree do you trust each of these sources of information on coral reef related topics in American Samoa?

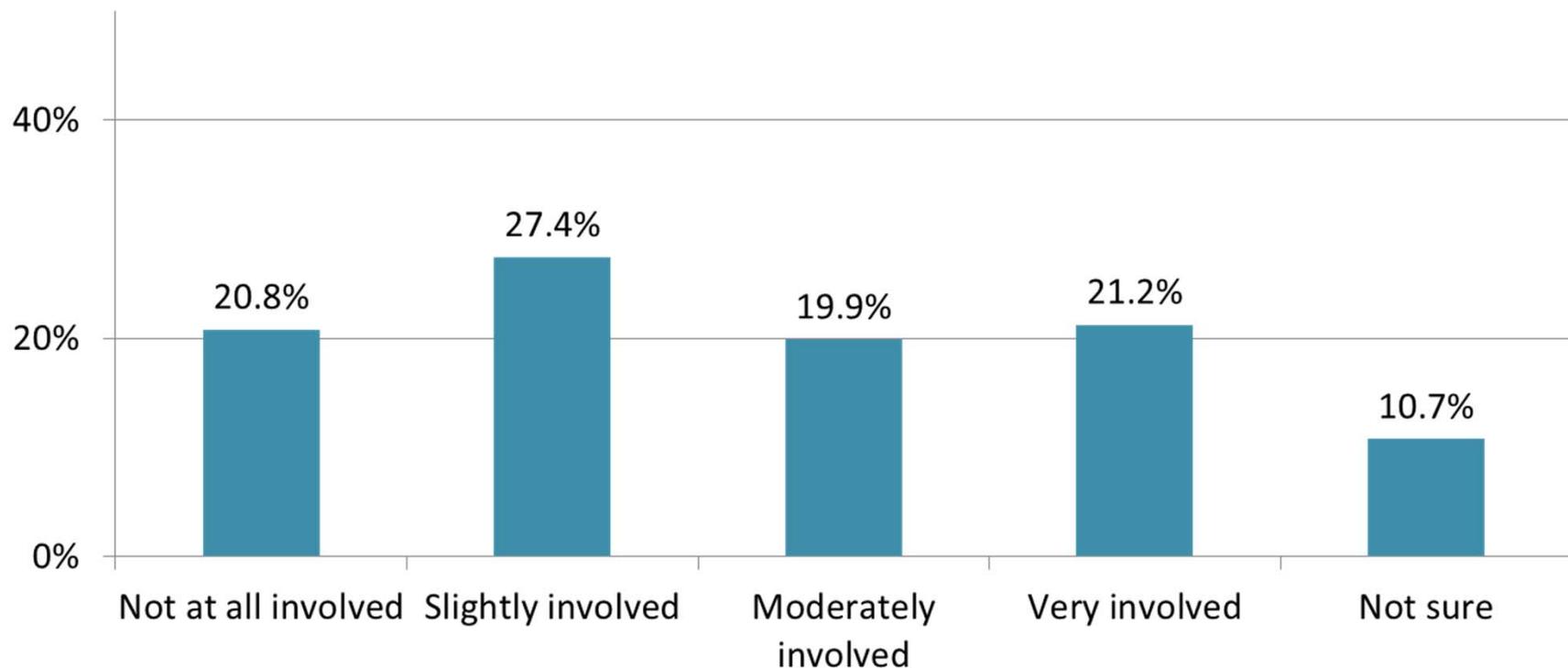




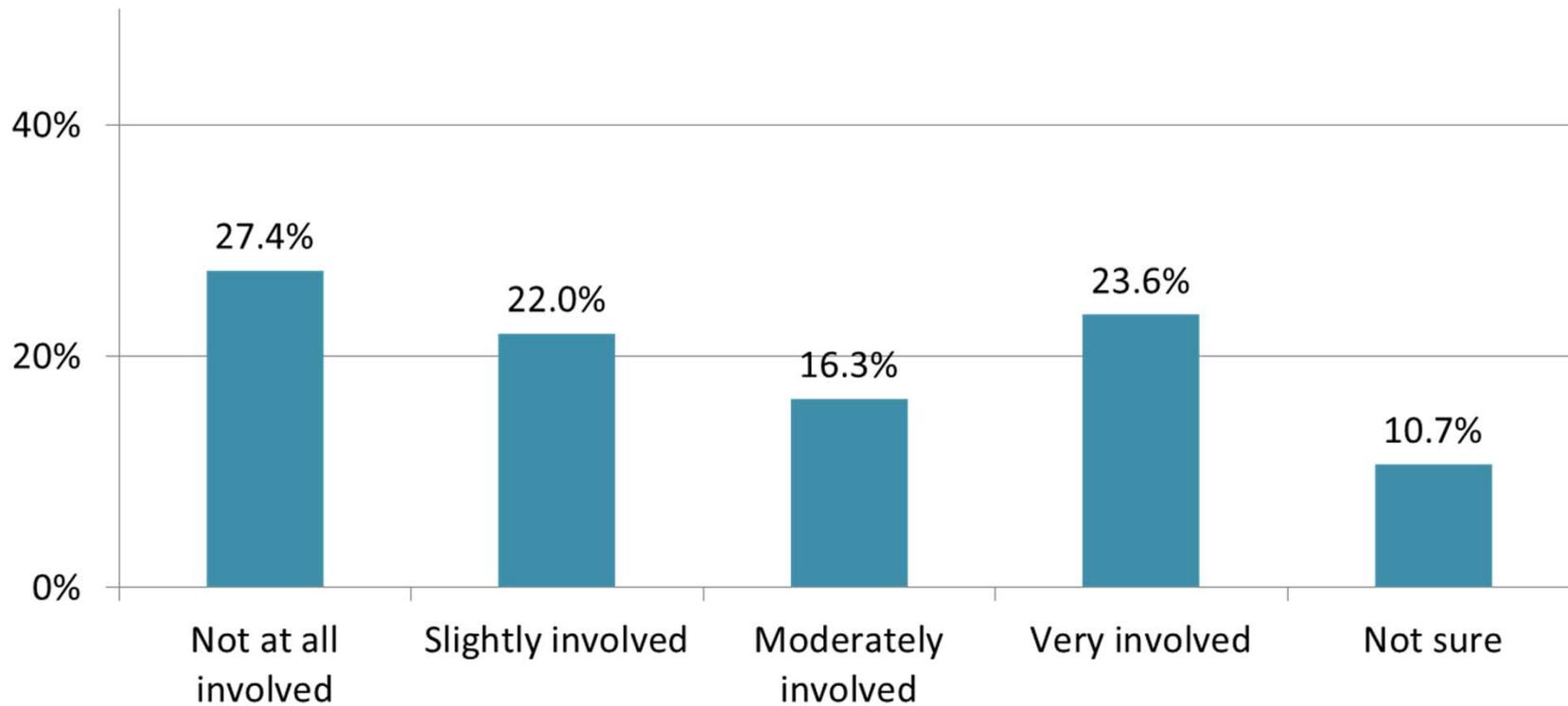
Results – Q16 Which is your 1st and 2nd most important source of information on coral reef related topics in American Samoa?



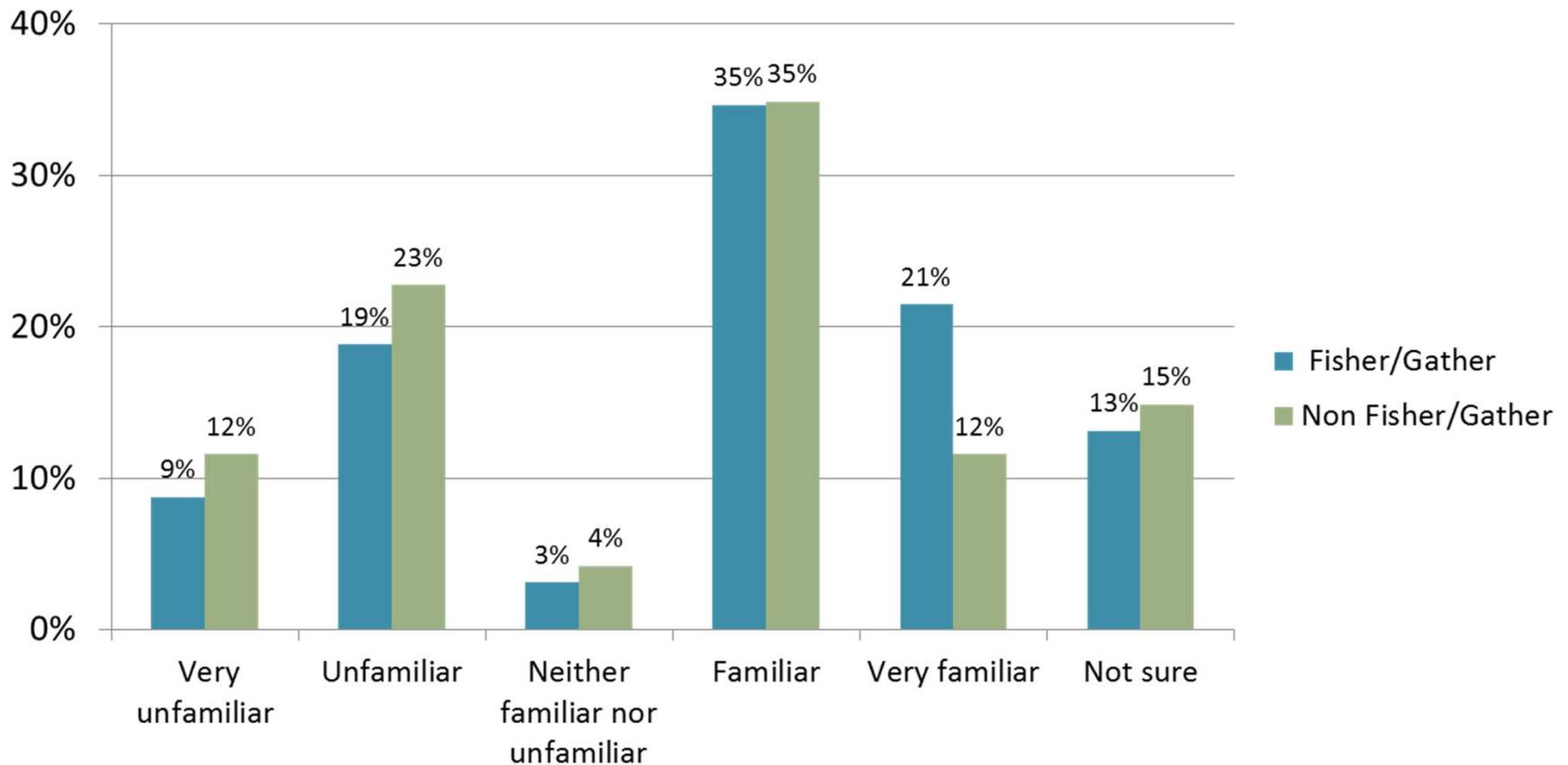
Results – Q17 How involved is the local community in protecting and managing coral reefs?



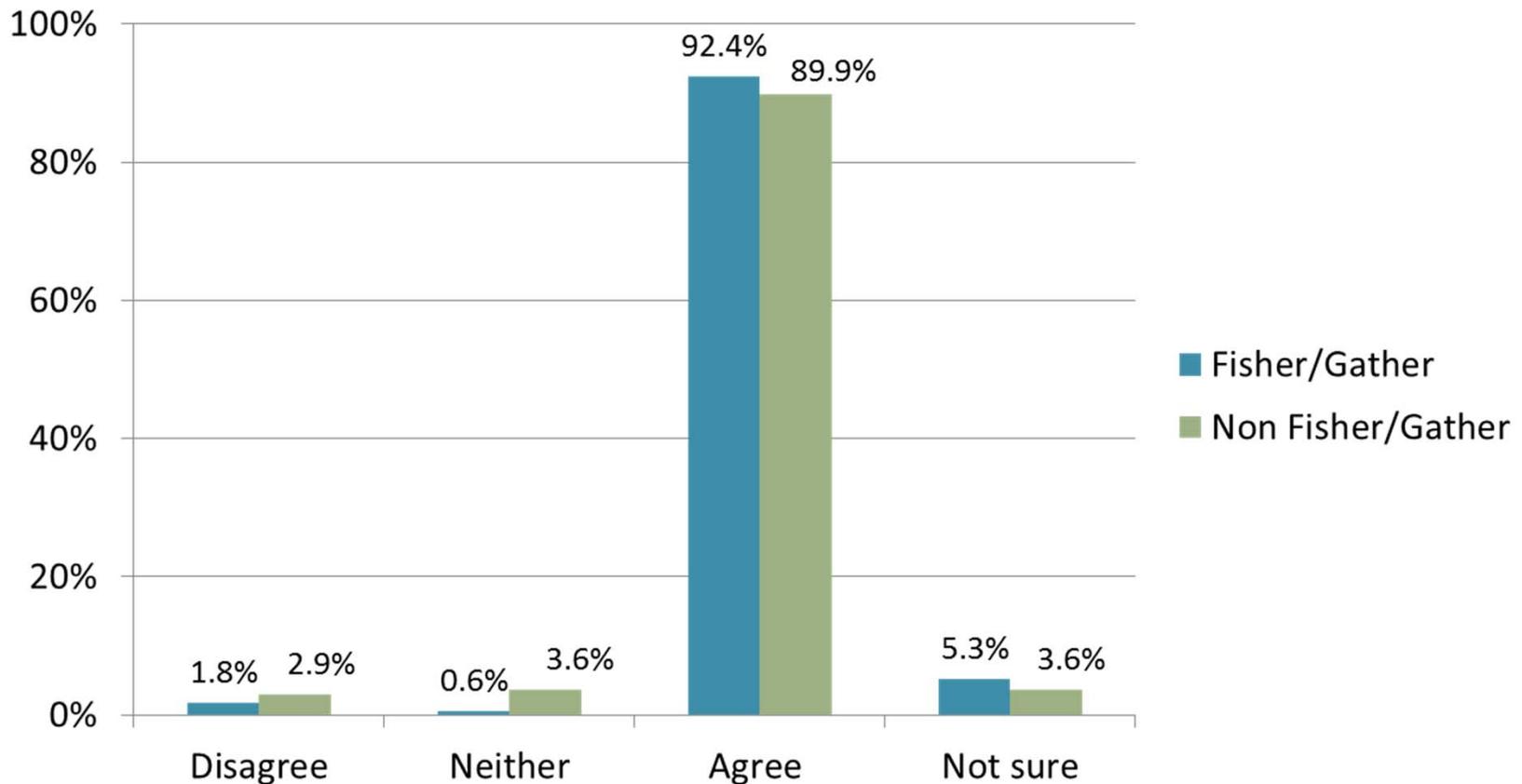
Results – Q18 How involved are you in making decisions related to the management of coral reefs in American Samoa?



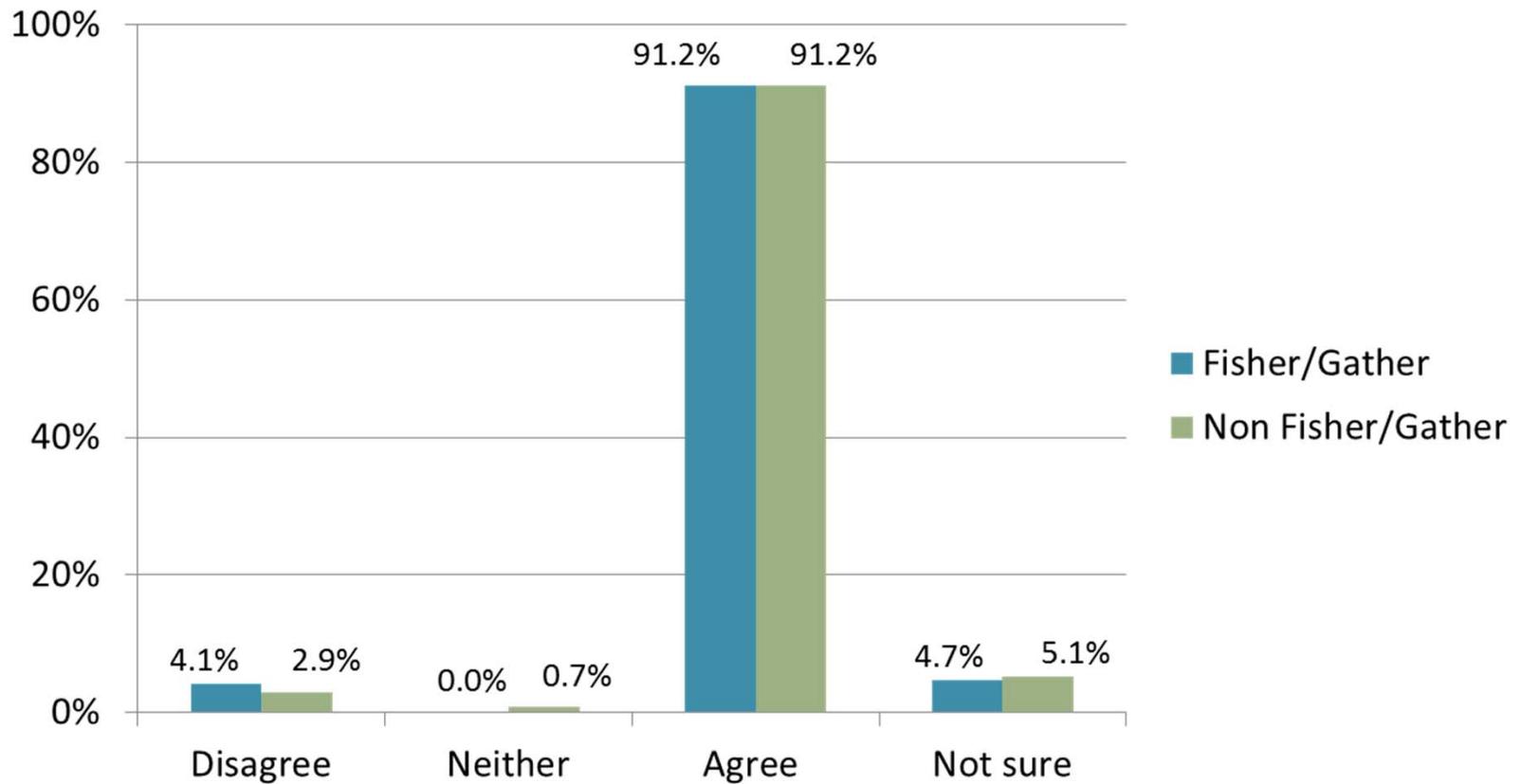
Results – Fisher vs Non Fisher Familiarity with MPA



Results – Fisher vs Non Fisher MPAs protect coral reefs

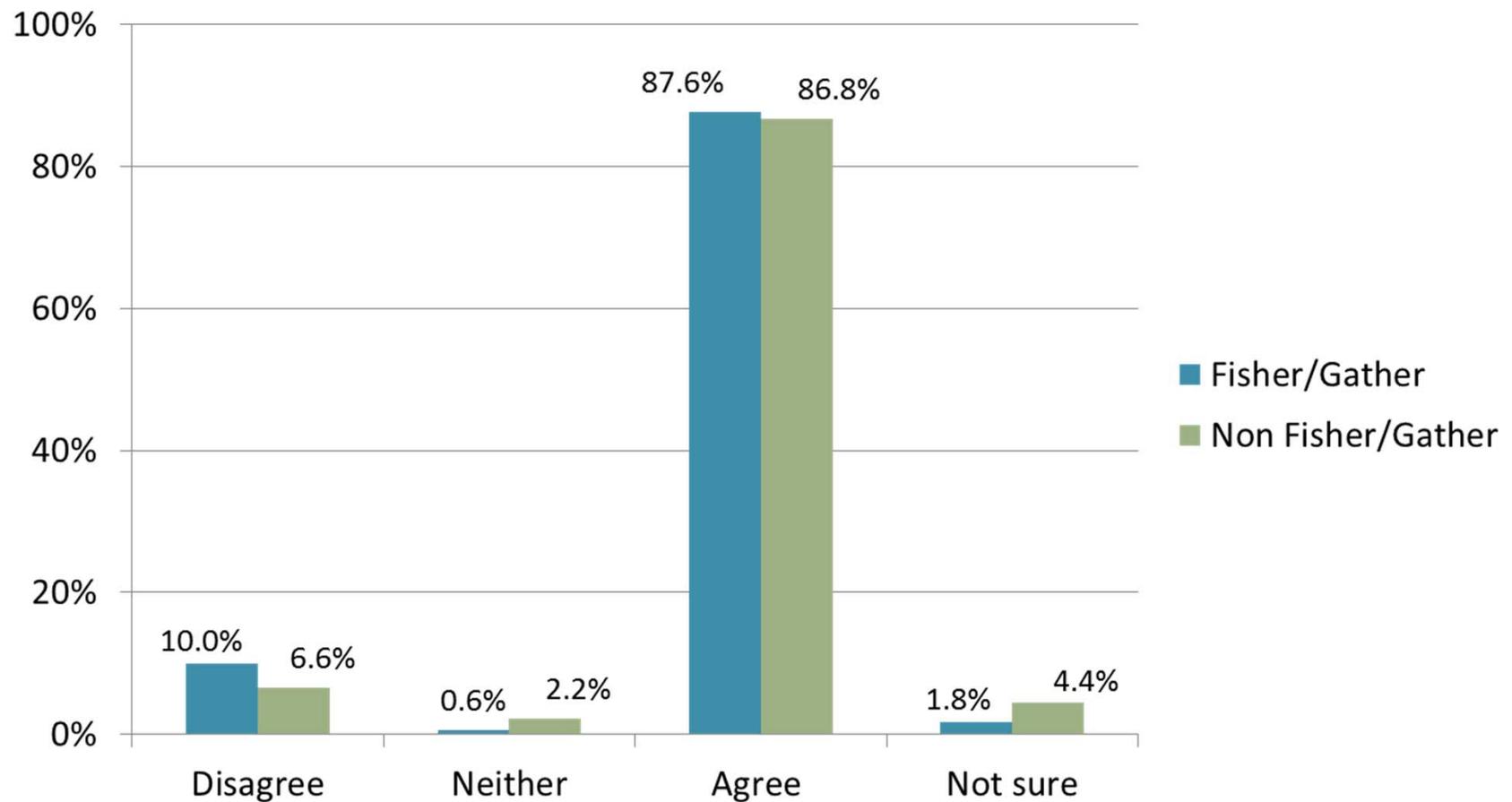


Results – Fisher vs Non Fisher MPAs increase number of fishes



Results – Fisher vs Non Fisher

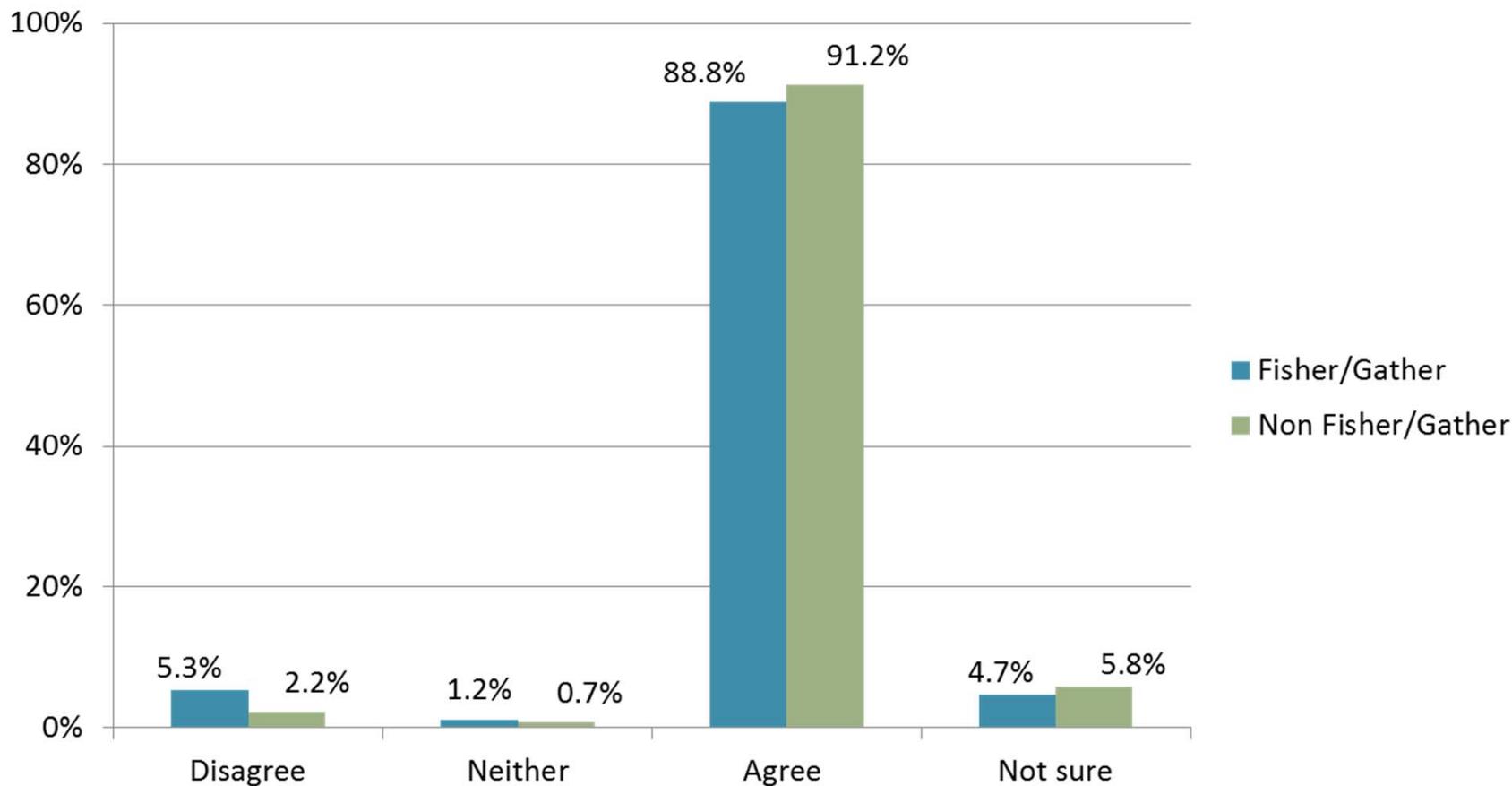
There should be more MPAs in American Samoa





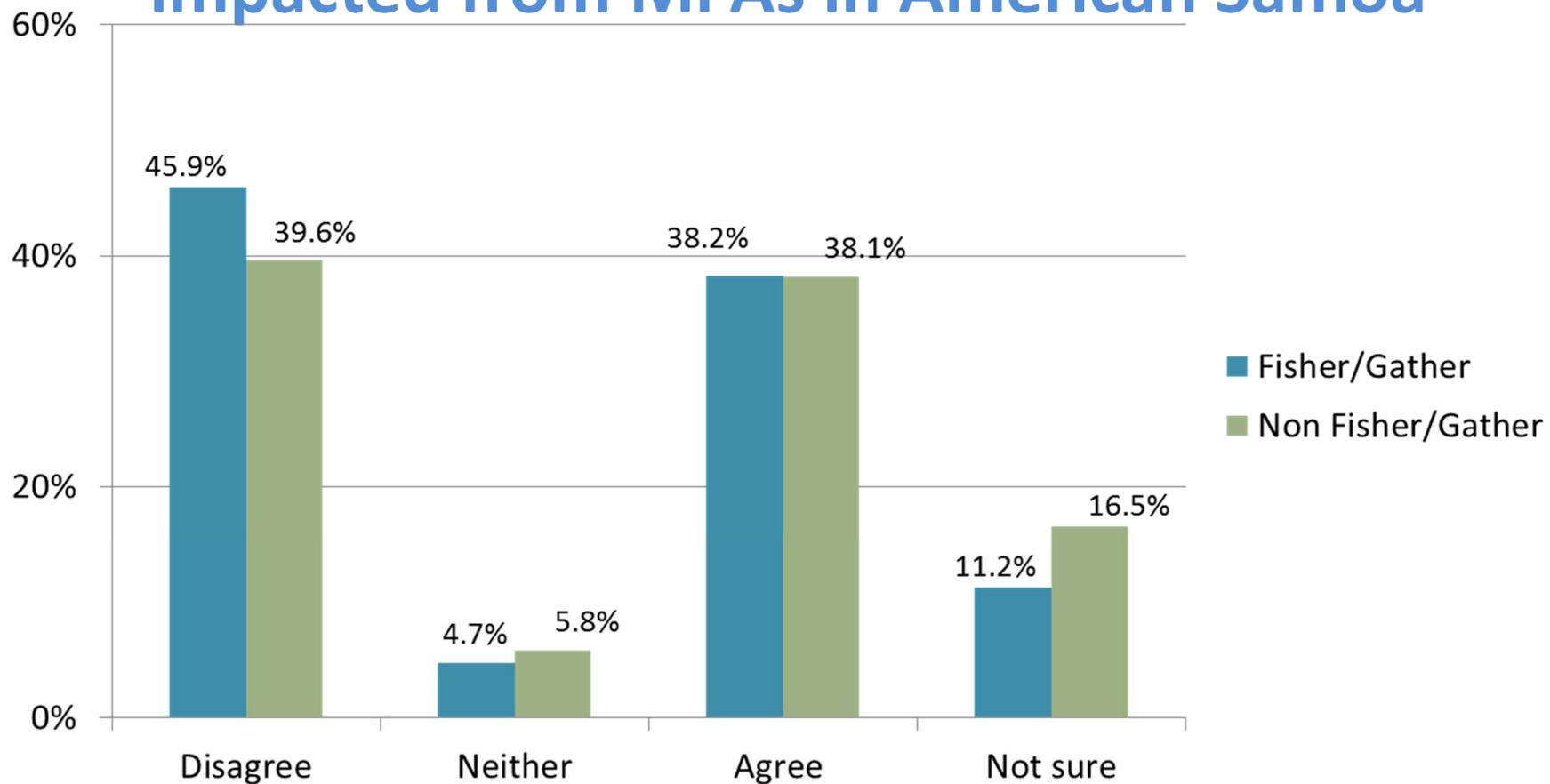
Results – Fisher vs Non Fisher

There has been economic benefit to American Samoa from MPAs



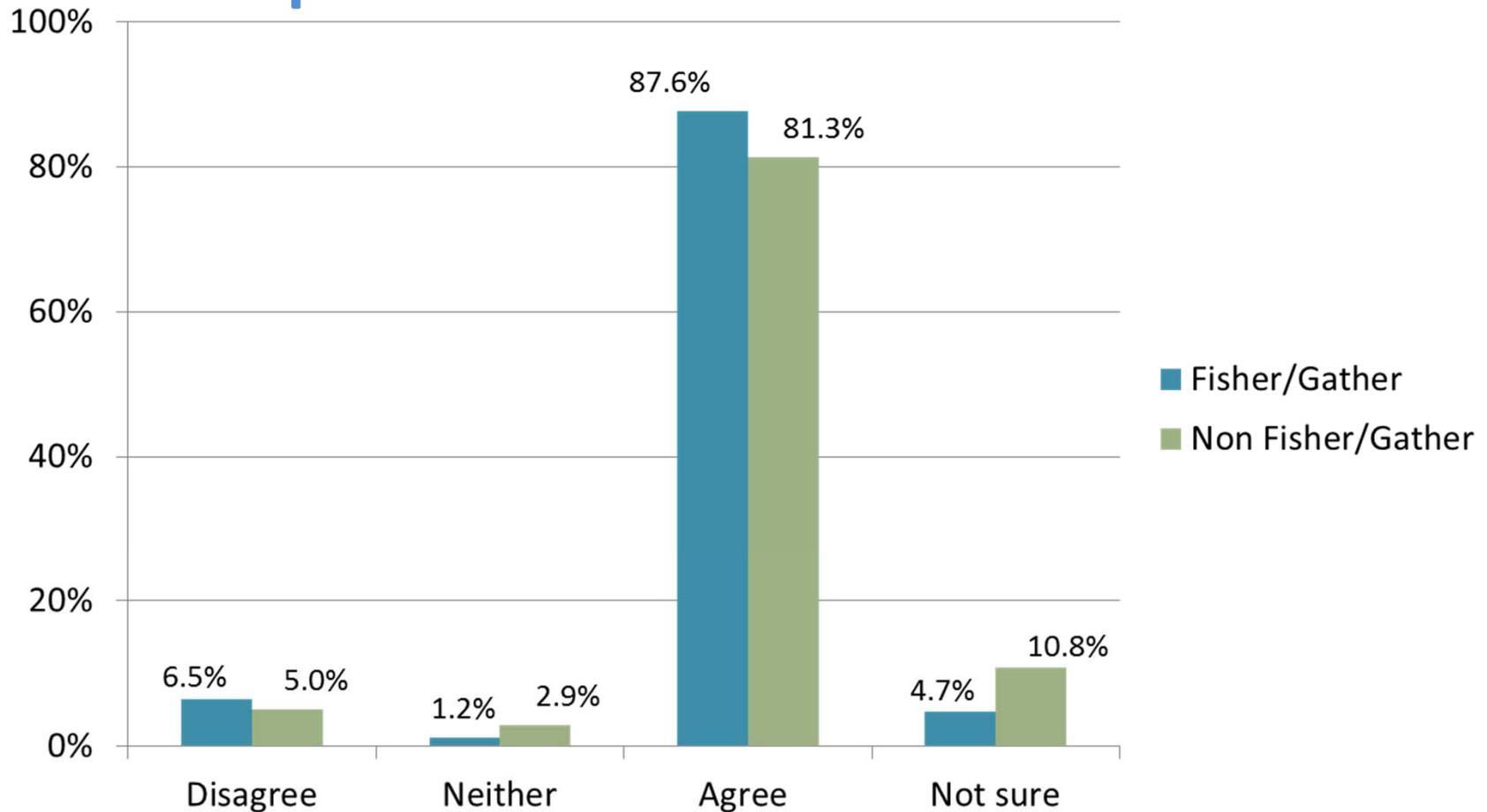
Results – Fisher vs Non Fisher

Fishermen’s livelihoods have been negatively impacted from MPAs in American Samoa

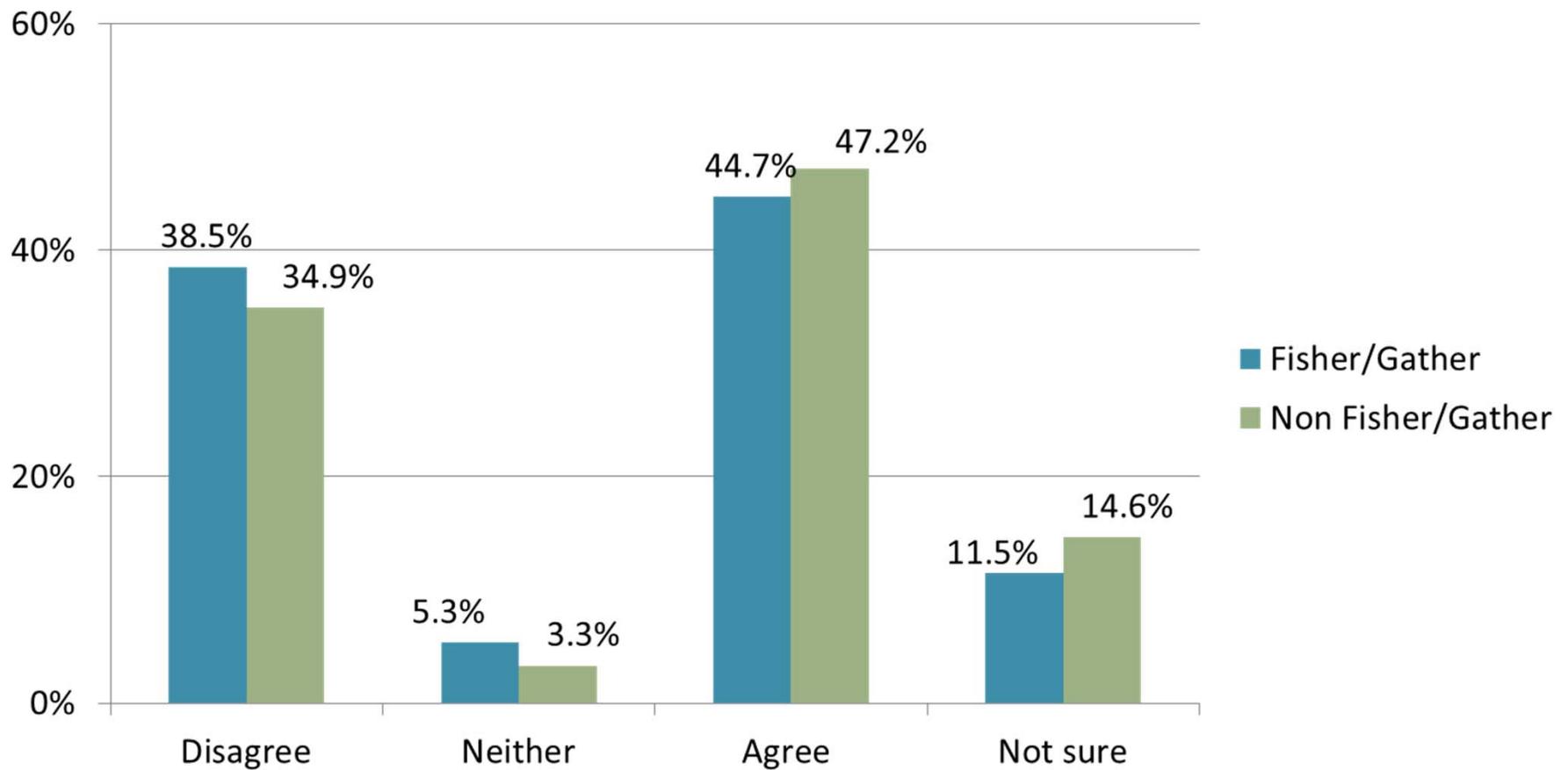


Results – Fisher vs Non Fisher

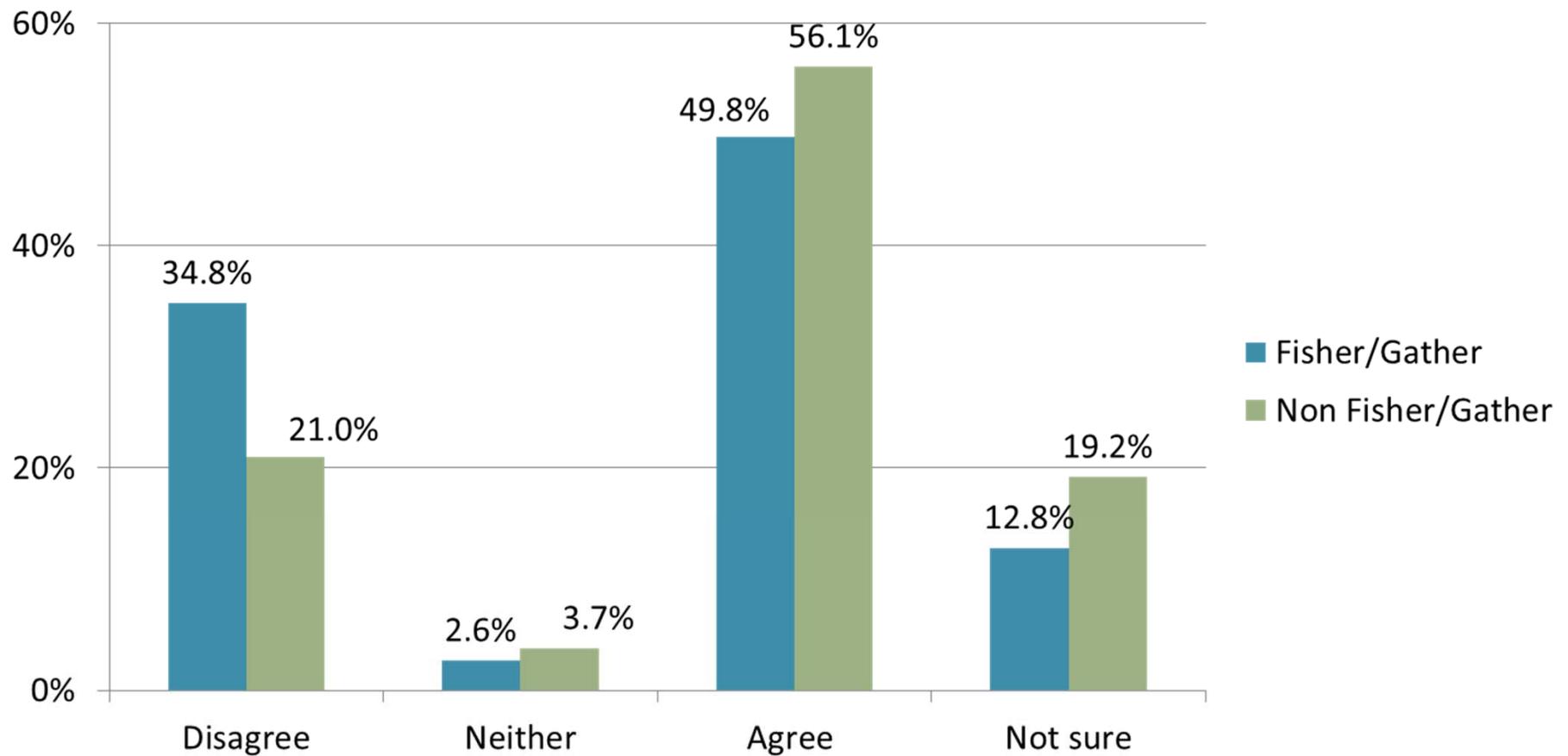
MPAs help increase tourism in American Samoa



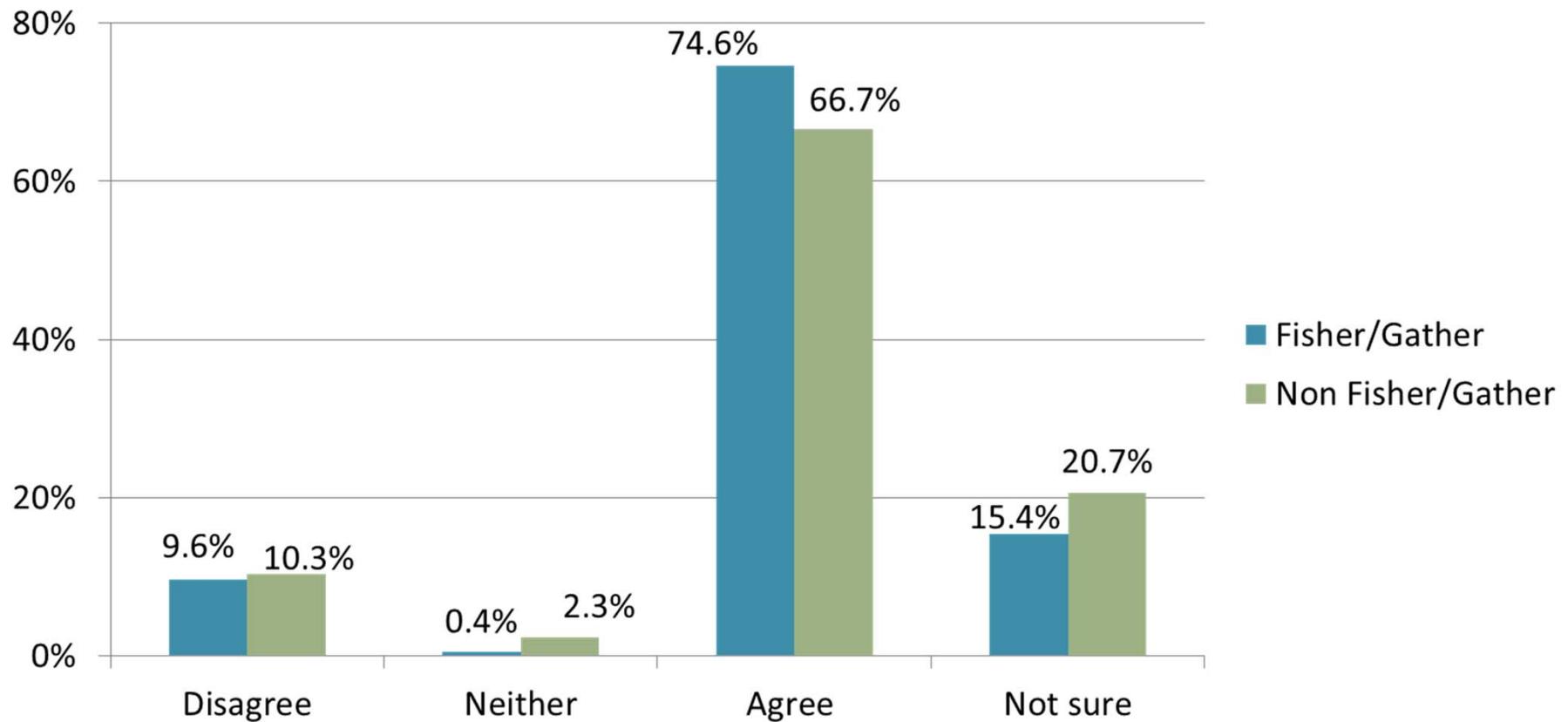
Results – Fisher vs Non Fisher Ban on “big fish”



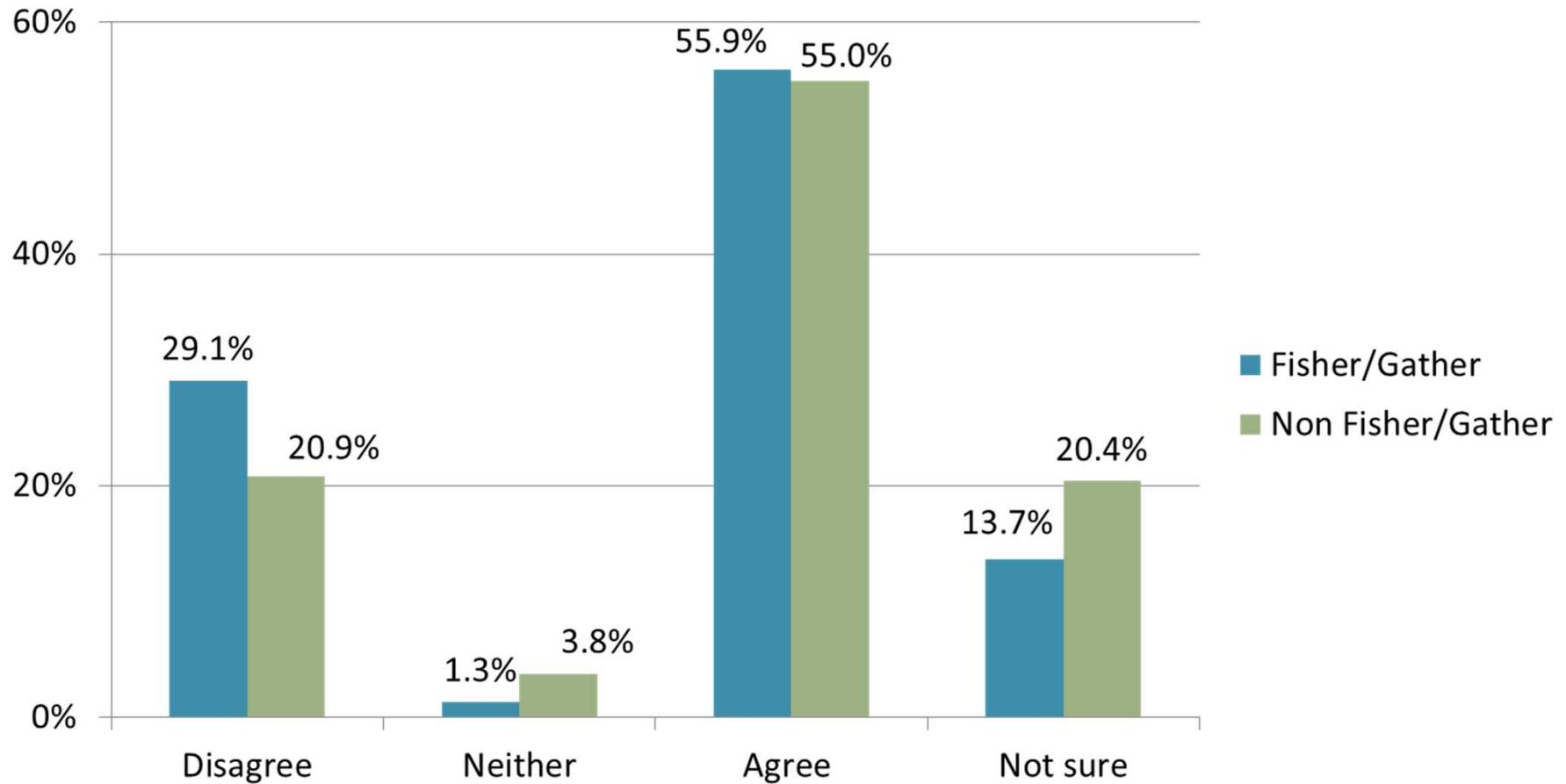
Results – Fisher vs Non Fisher Expansion of Fagatele Bay



Results – Fisher vs Non Fisher Establishing community-based village MPAs

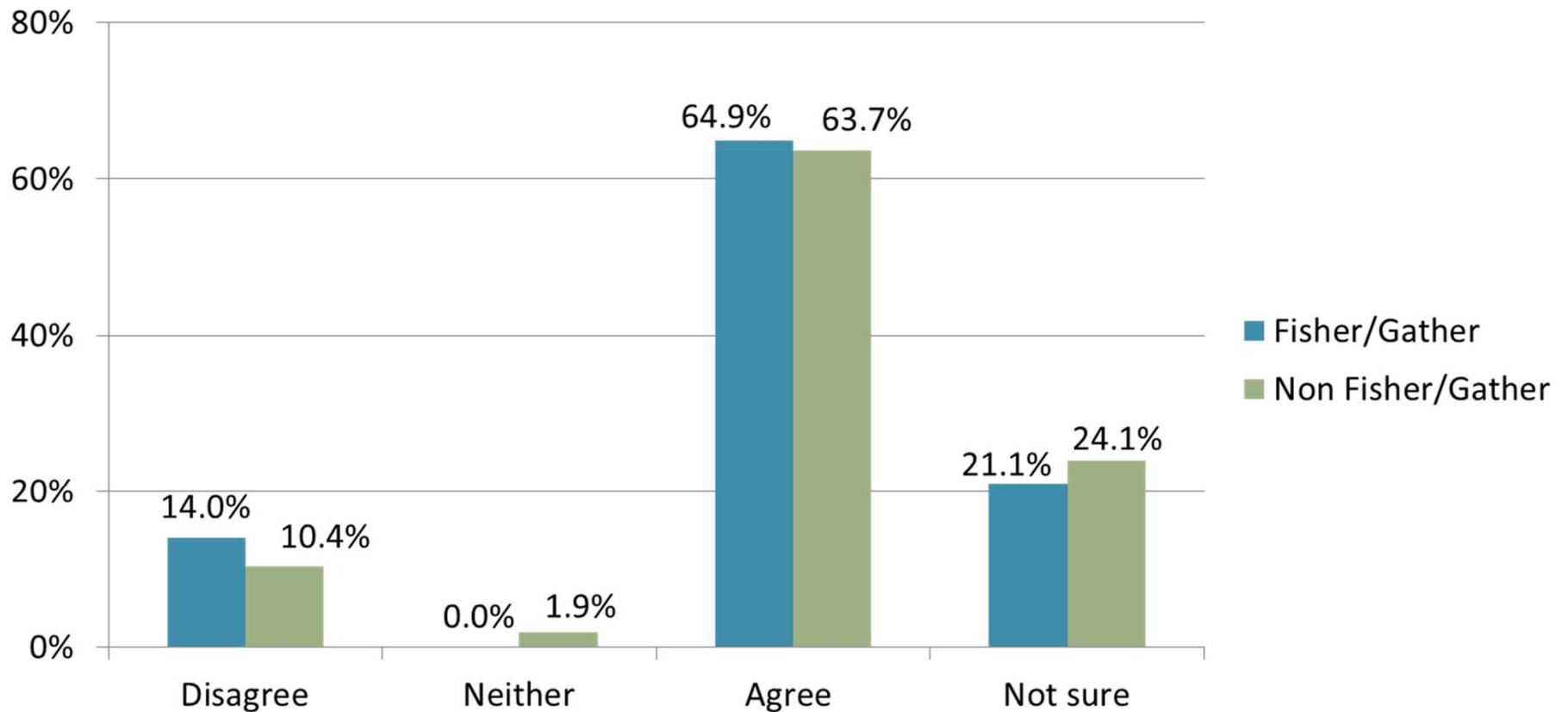


Results – Fisher vs Non Fisher Establishing permanent no-take MPAs

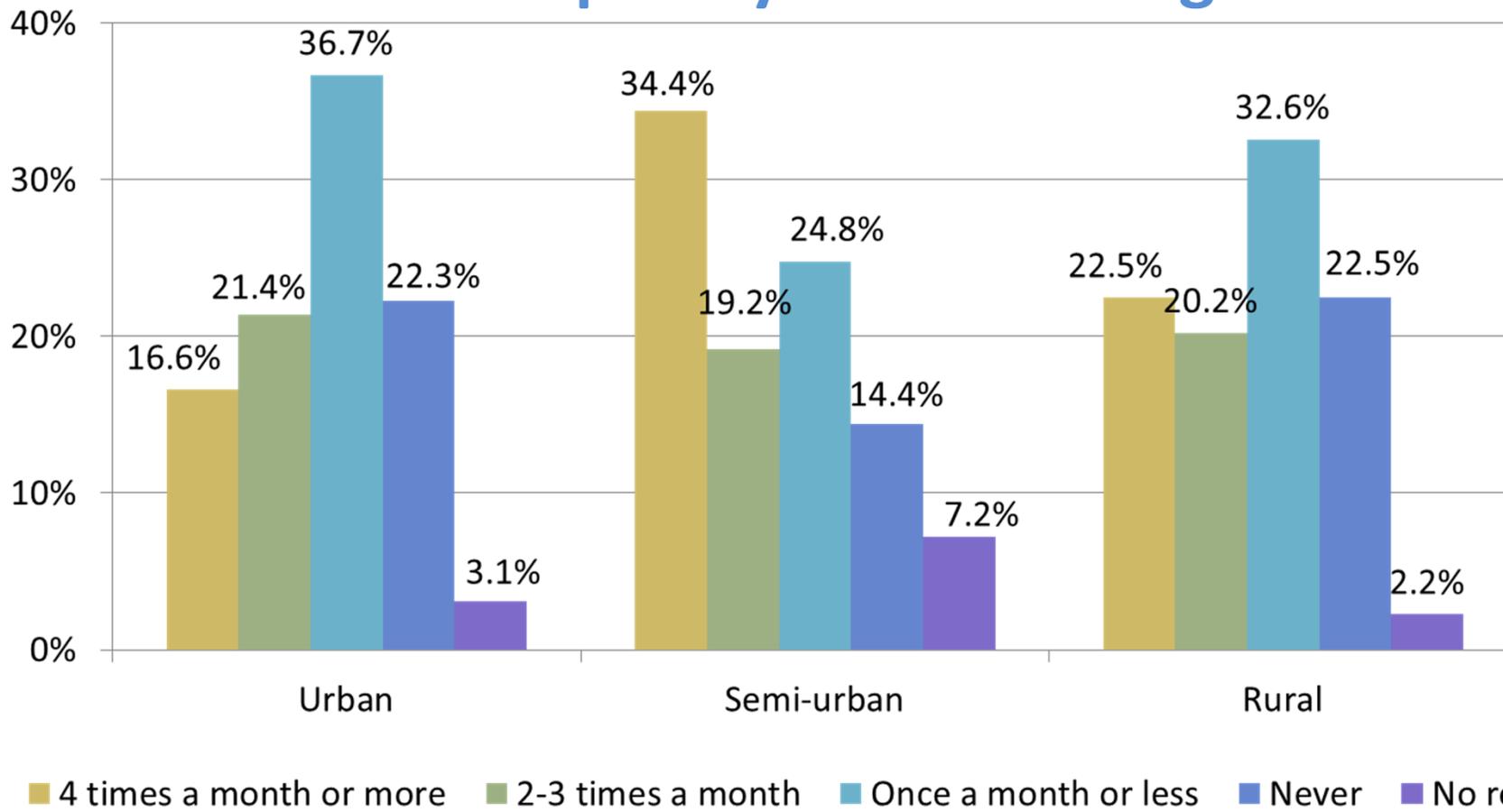


Results – Fisher vs Non Fisher

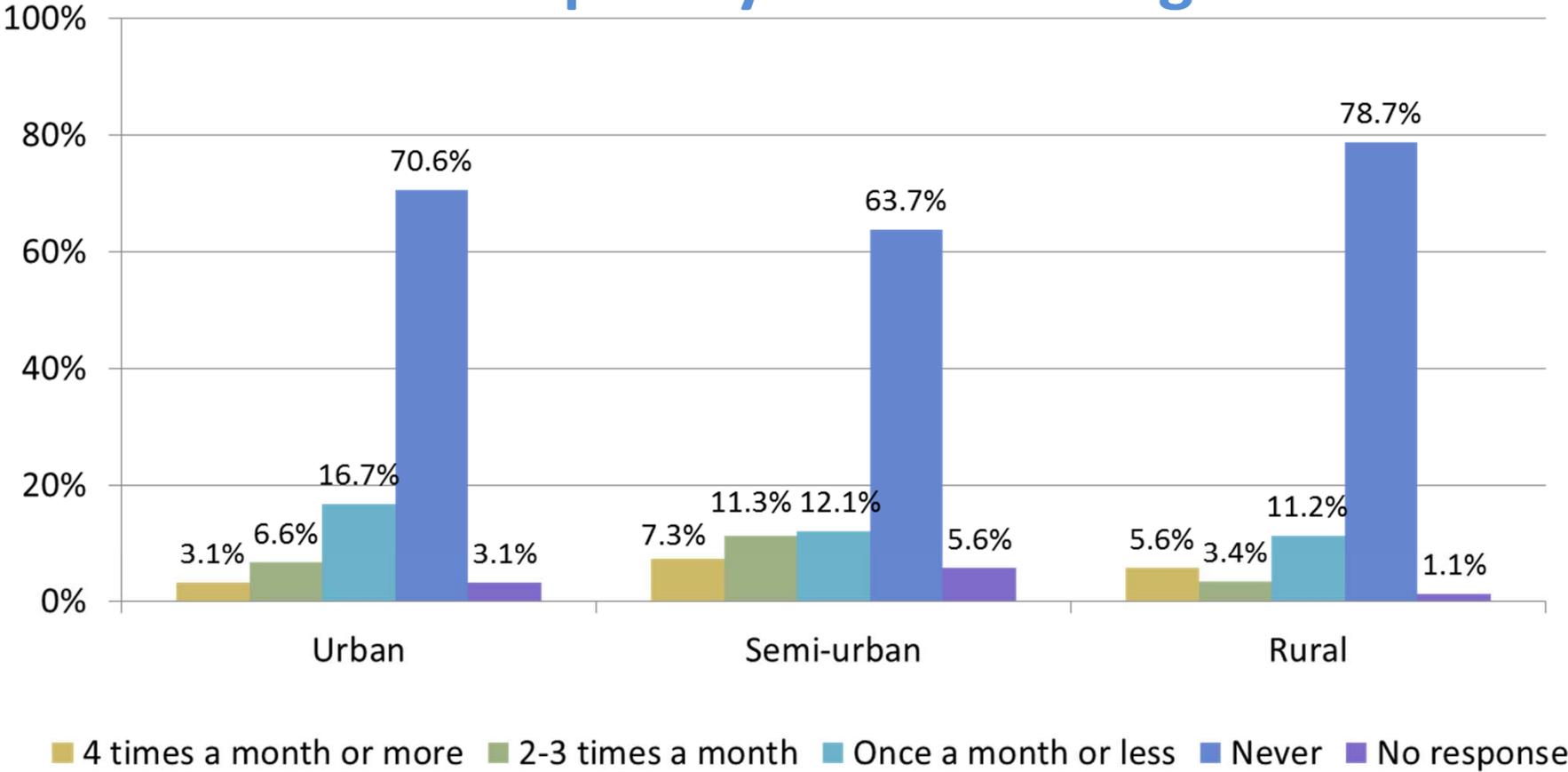
Establishing areas with temporary fishing closures



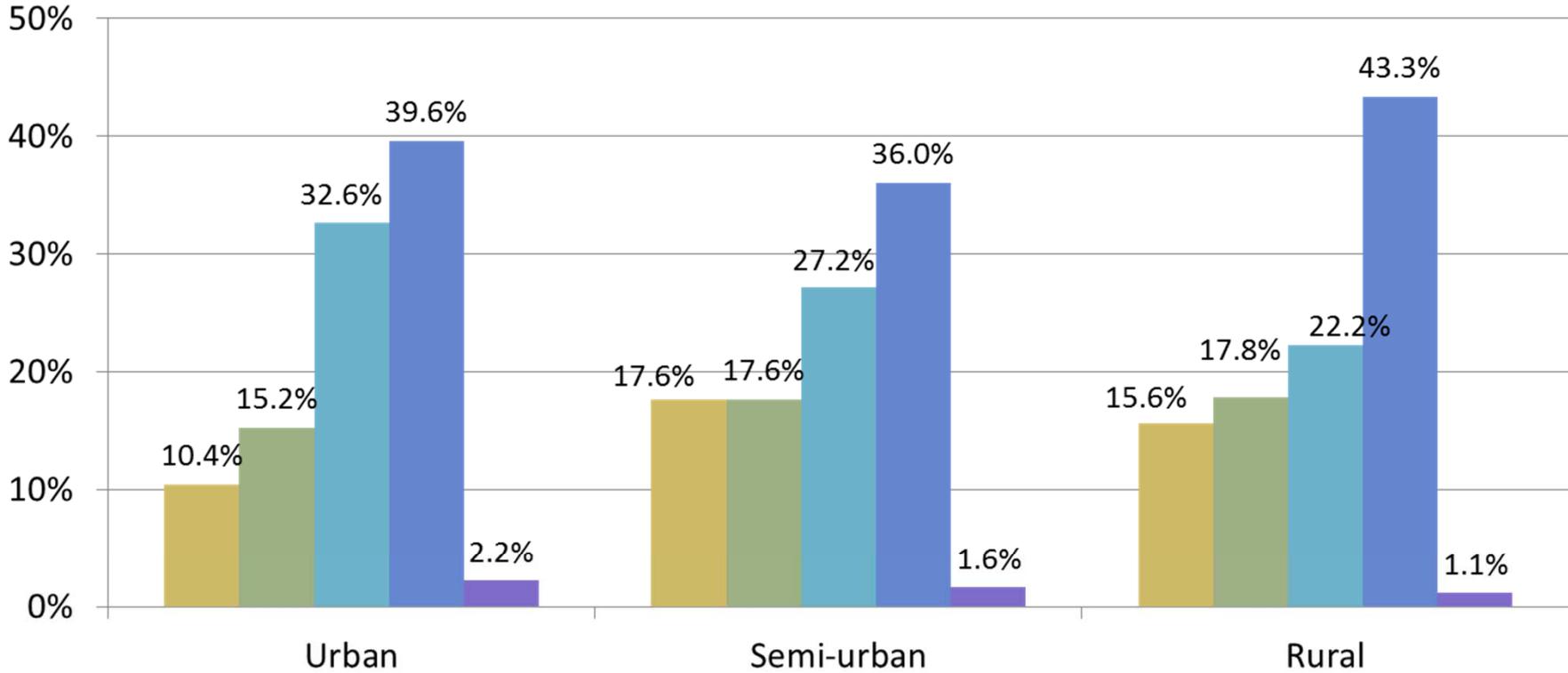
Results – Urban, Semi-urban, Rural Frequency of Swimming



Results – Urban, Semi-urban, Rural Frequency of Snorkeling



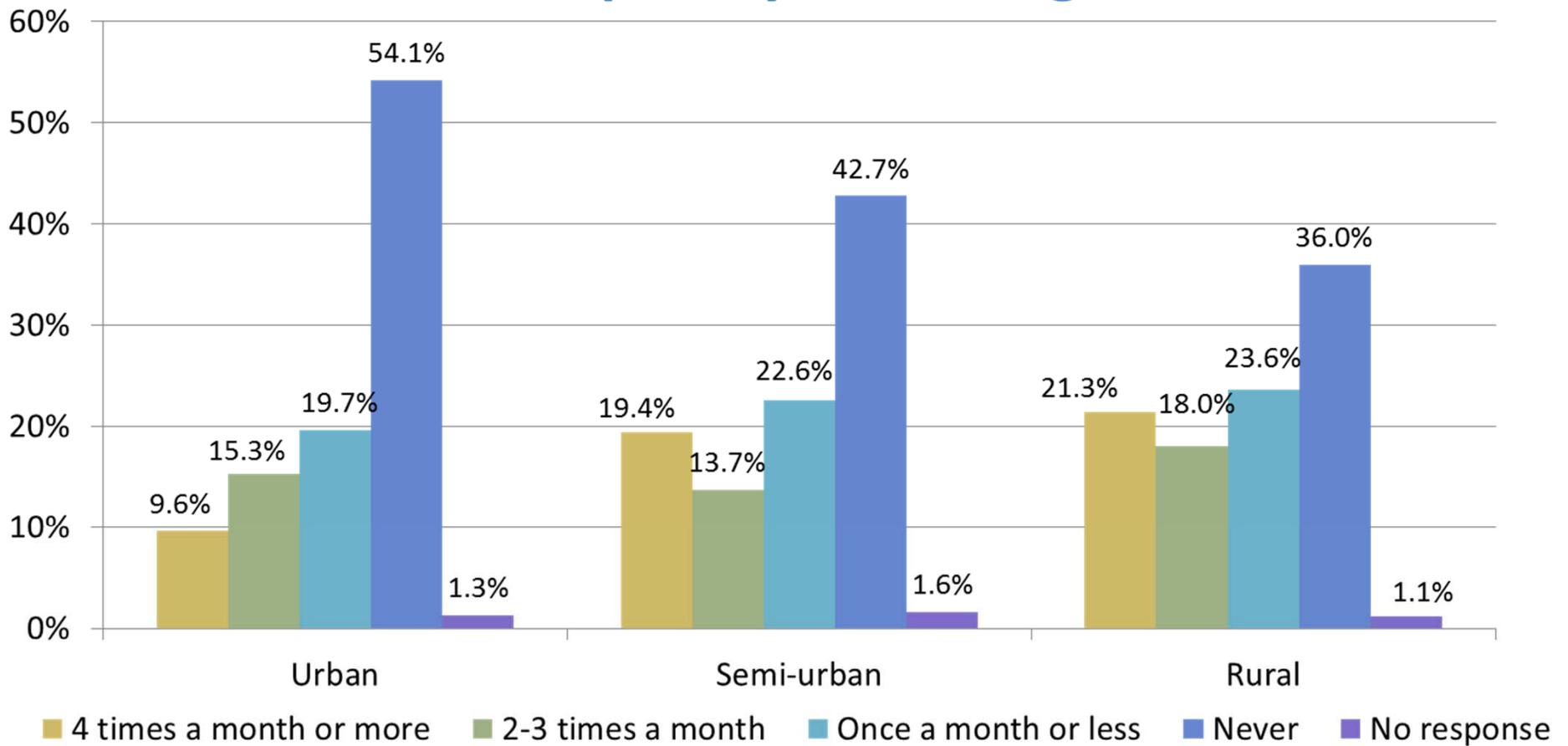
Results – Urban, Semi-urban, Rural Frequency of beach recreation



■ 4 times a month or more
 ■ 2-3 times a month
 ■ Once a month or less
 ■ Never
 ■ No response

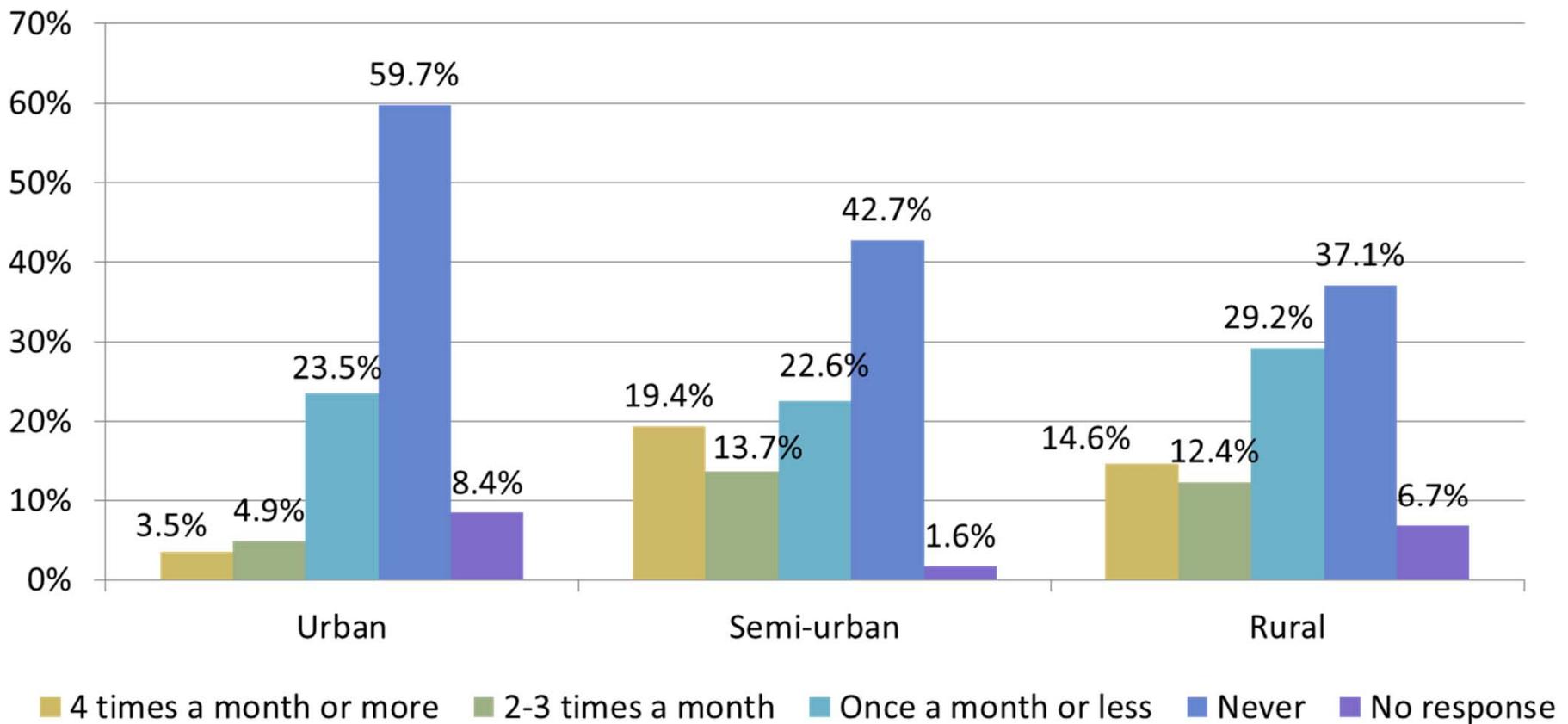
Results – Urban, Semi-urban, Rural

Frequency of fishing

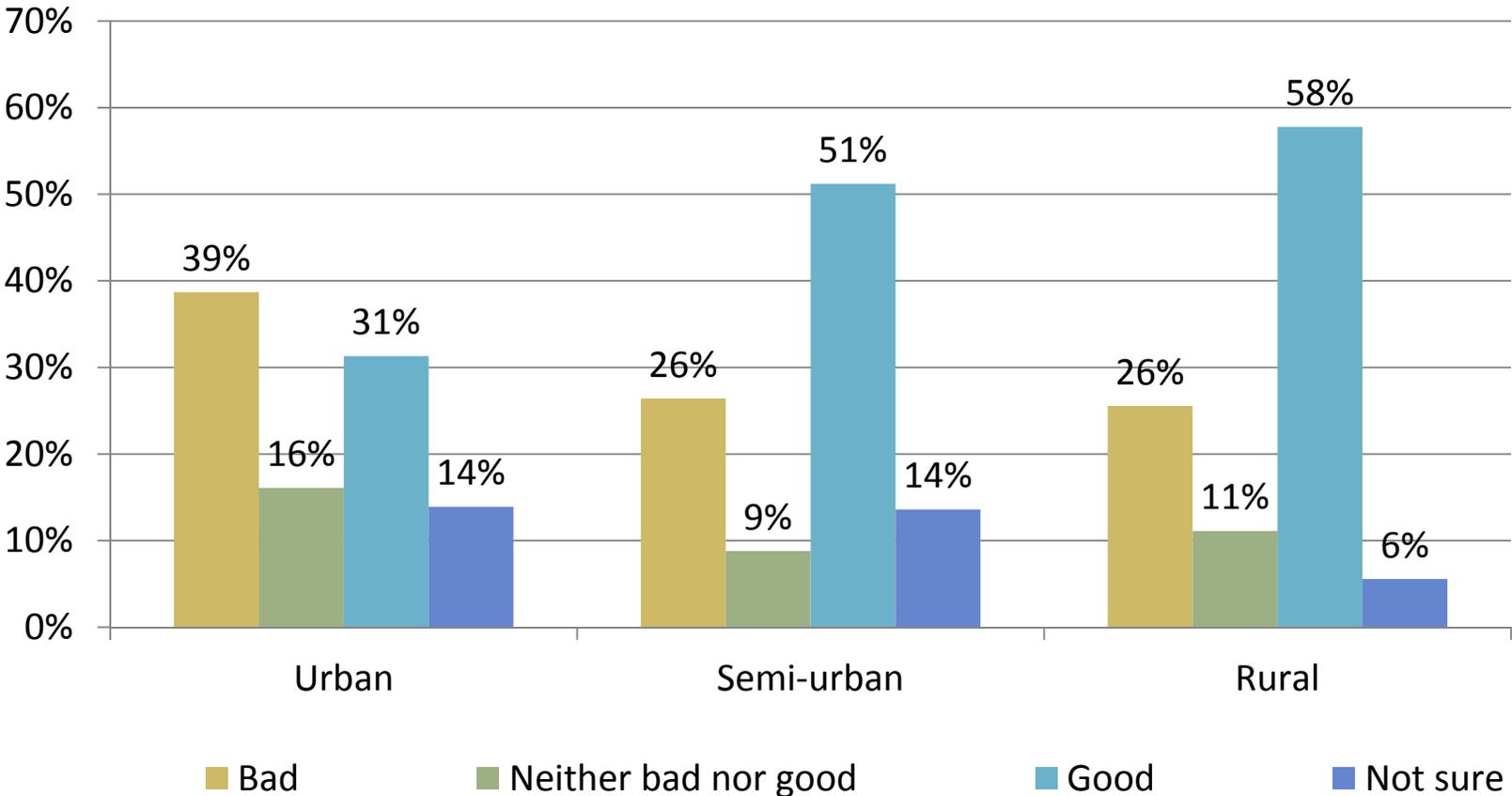


Results – Urban, Semi-urban, Rural

Frequency of gathering marine resources

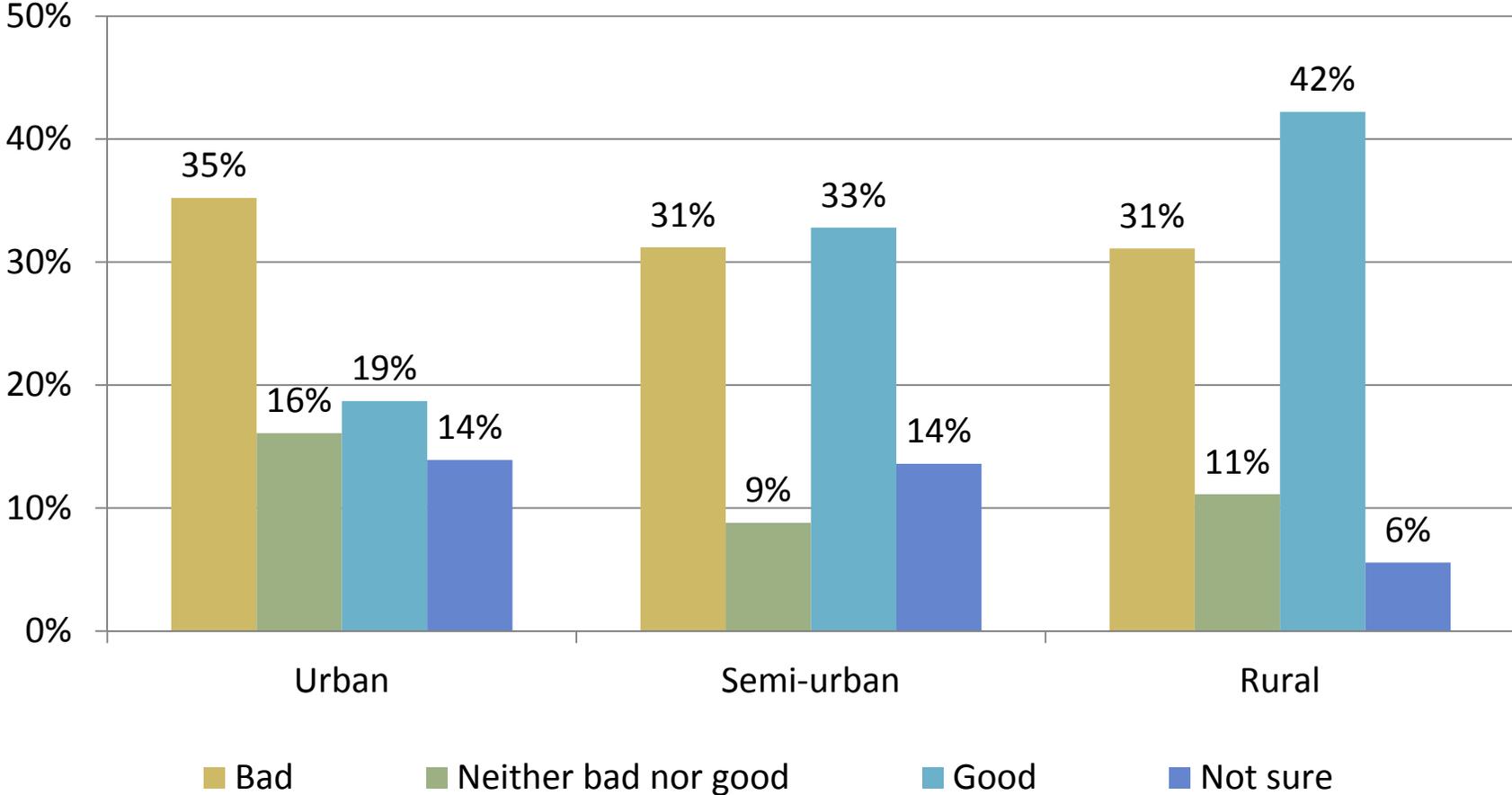


Results – Urban, Semi-urban, Rural Ocean water quality

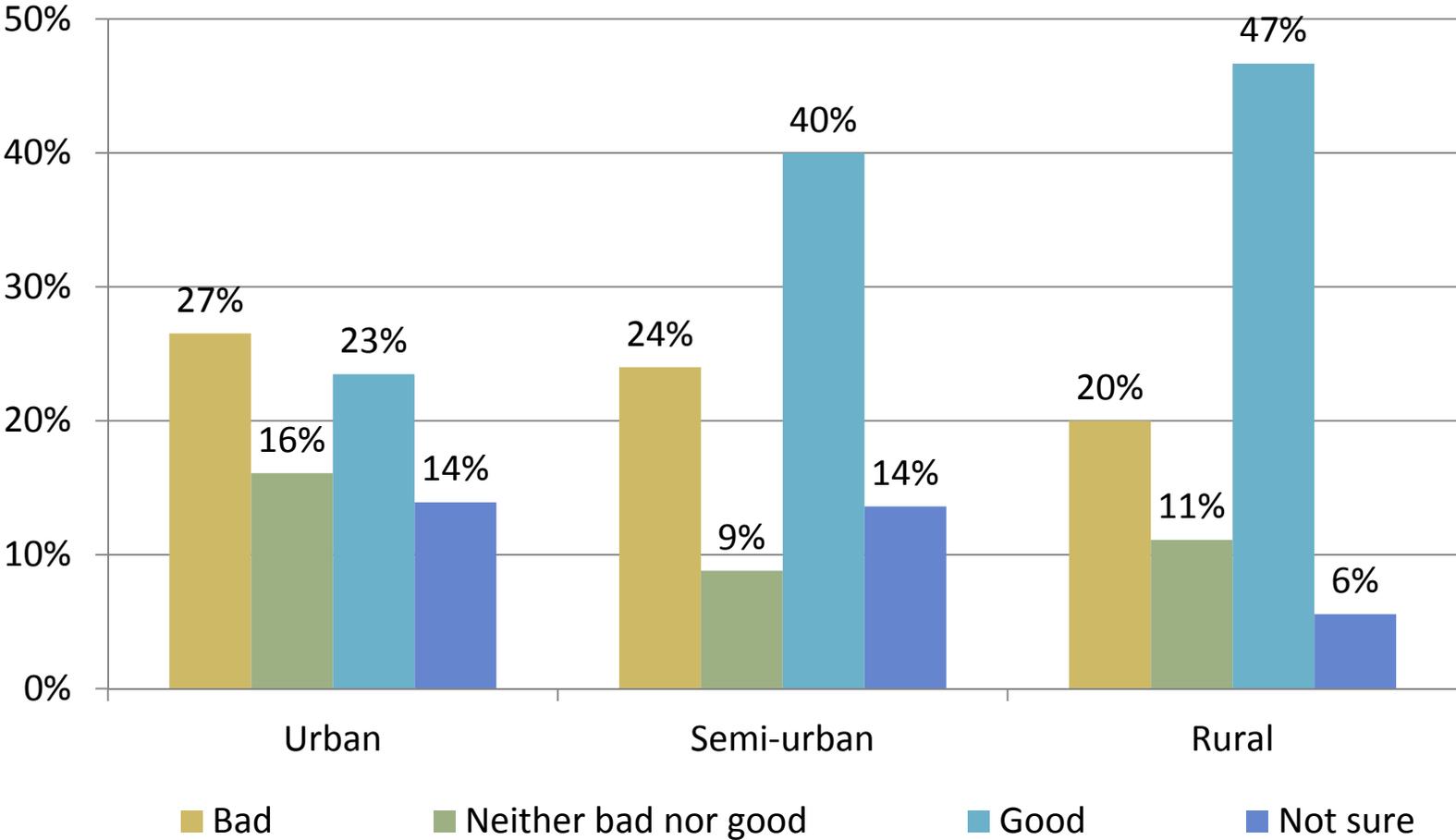


Results – Urban, Semi-urban, Rural

Amount of coral

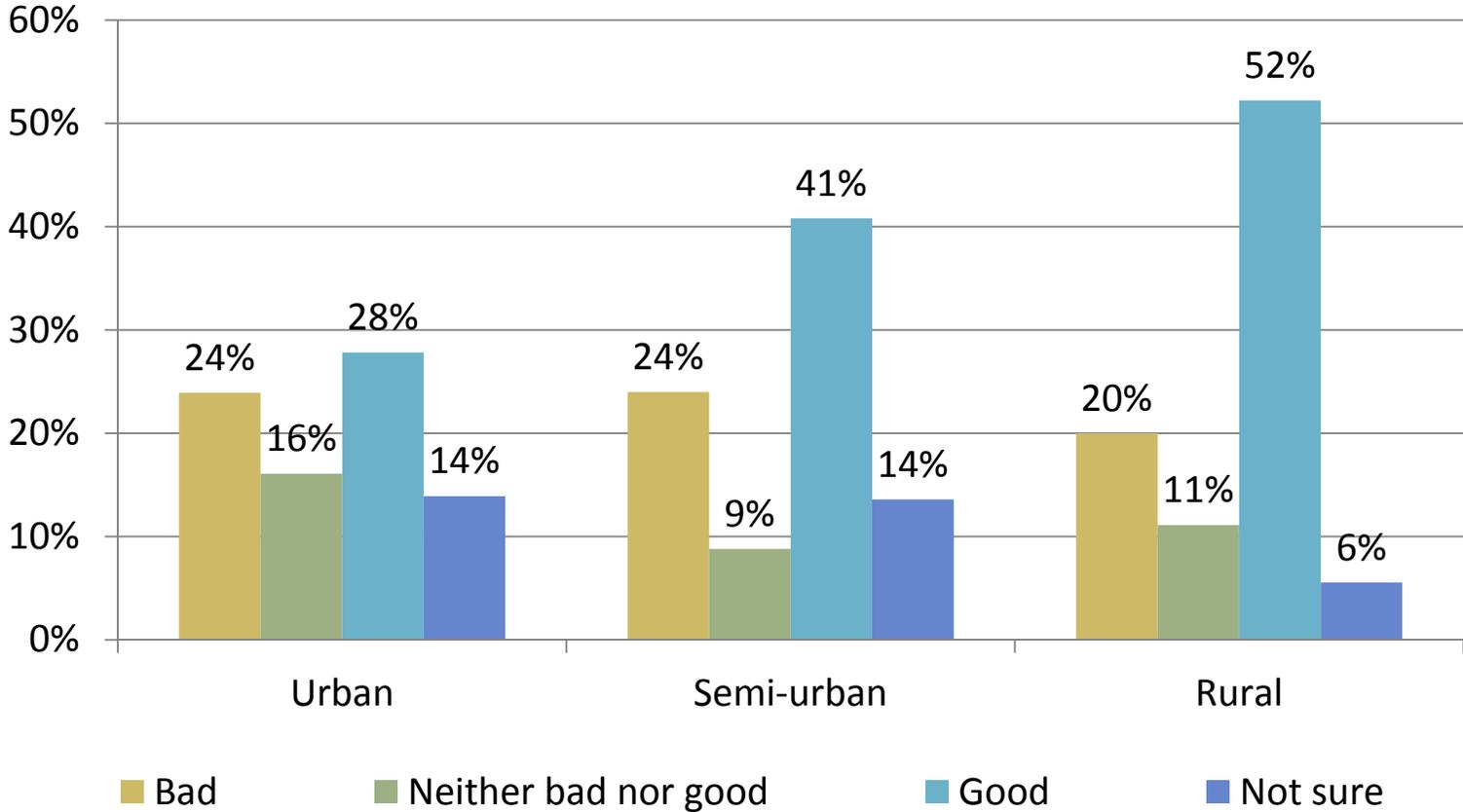


Results – Urban, Semi-urban, Rural Amount of fish



Results – Urban, Semi-urban, Rural

Number of animals for gleaning





Summary of outcomes

- ❖ 78% of American Samoans eat fish/seafood once a week or more; most fishers (87%) do not sell the fish they catch
- ❖ The majority of the population states that they are familiar with threats facing coral reefs (all threat types)
- ❖ Residents are generally supportive of current marine management measures, particularly:
 - ❖ 82% support community-based village MPAs
 - ❖ 78% support temporary fishing closures
- ❖ American Samoan residents are trusting of and reliant on government information sources regarding coral reef topics



Summary of outcomes

- ❖ There is little difference in the perceptions of those who fish vs. those who do not fish regarding MPAs and coral reef management measures
 - ❖ Exception: Fishermen are more likely to disagree with the Sanctuary expansion, but 50% still state they are supportive
- ❖ Recreational activities are more popular in semi-urban regions
- ❖ Resource extraction is more common in rural and semi-urban regions
- ❖ Perceptions of resource condition are worst in urban areas and best in rural areas



Thank you



For more information, please contact:

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http://www.coris.noaa.gov/activities/projects/ncrmp_socio