SURVEY REPORT:

Community Insights on Single-Use Plastics in the Cook Islands 2024

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UNEP

NATIONAL ENVIRONMENT SERVICE
TU'ANGA TAPOROPORO
COOK ISLANDS

RESPONSE Project

CONTENTS

1. INTRODUCTION

Single-use plastics (SUPs) are disposable plastic products that are designed for one-time use before being discarded. These include plastic bags, straws, cutlery, and packaging materials. SUPs are a significant environmental concern due to their contribution to plastic pollution, persistence in ecosystems, and challenges in waste management. Globally, governments and industries are working to reduce SUP consumption through bans, incentives for alternatives, and constantly improving the recycling systems.

The Cook Islands is an importer and end-user of products packaged in SUPs. However, waste management infrastructure is limited and the impact of SUPs are noticeable. The primary waste management system for non-recyclables is a single landfill on the main island of Rarotonga, which is nearing capacity, with no viable secondary site due to limited land availability (Cook Islands National Waste Management Strategy, 2018). In the outer islands, waste disposal is often managed through burial or burning, raising both environmental and health concerns.

2. SUPS IN THE COOK ISLANDS ECONOMY

Tourism, the primary economic driver of the Cook Islands, plays a major role in the importation and distribution of SUPs. A 2020 national waste audit found that approximately 1.5 million plastic bottles were imported into the country in a single year (Cook Islands Waste Audit Report, 2020). Additionally, plastic pollution has been identified as the second biggest threat to coral reefs, further endangering marine ecosystems, the economic sustainability of tourism as well as fisheries. Given the Cook Islands' reliance on a limited landmass and the marine environment for food security, water quality, and economic stability, the increasing volume of plastic waste poses a direct threat to livelihoods and long-term sustainability.

Despite growing awareness of the risks associated with plastic pollution, transitioning away from SUPs presents challenges for the private sector. There is a current lack of viable market alternatives to SUPs, and the policy and economic environment does not yet incentivize businesses to shift towards sustainable options. On top of this, plastic reduction is not yet a standardized, convenient, or economical choice for consumers. A significant challenge also lies in ensuring that food and beverage (F&B) products maintain their quality and sanitary standards without conventional plastic packaging—an issue illustrated by past cases of weevil infestations in rice and other bulk food supplies (Ministry of Health, 2019).

3. THE RESPONSE PROJECT AND SURVEY OBJECTIVES

RESPONSE (**Re**ducing **S**ingle-use **P**lastics **On S**mall island **E**conomies) is a Global Environment Facility (GEF) funded project, supported by United Nations Environment Programme (UNEP). This survey was conducted to inform the planning of the project and establish baseline understandings of SUPs in the Cook Islands. The project runs for 5 years from 2025-2030 and aims to:

- **Reduce the amount of plastics entering the Cook Islands, via the food and beverage industry, including tourism-related supply chains.**
- **Support enabling environments for reuse options and circular economy solutions to alleviate pressure on waste management systems.**
- **Reduce pollution and mitigate the harmful impacts of plastic on the environment and public health.**

To support this initiative, the National Environment Service (NES) conducted a survey to collect preliminary results on community attitudes towards SUPs. NES also sought to identify the needs of retailers and consumers to transition to sustainable alternatives. The insights gained from this survey will help inform policies, programs, and industry-led efforts to minimize SUP reliance. While also serving as a reference point for longitudinal research (future SUPs surveys) and providing base information for the continuation of the RESPONSE project.

This report presents an analysis of the survey results, summarizing key themes and findings relevant to SUP reduction strategies in the Cook Islands.

4. KEY FINDINGS

4.1. Survey Participation & Demographics

A total of 259 valid responses were analyzed after removing incomplete and duplicate entries. Most respondents (74%) were women, and the most common age group was 21–29 years old. 77% of participants were based in Rarotonga, with a smaller proportion from the outer islands (20%) and overseas (3%).

4.2. Single-Use Plastic (SUP) Usage & Awareness

- Frequency of Use: 24% of respondents reported using SUPs daily, while 42% used them a few times a week. Women reported higher usage frequency overall.
- Awareness of Impacts: Respondents were aware of SUPs' effects on marine life, landfill capacity, and microplastics entering the food chain.
- Problematic Plastics: The most problematic SUPs identified were plastic bottles, plastic bags, and plastic packaging.

4.3. Government Regulation & Community Action

- Effectiveness of Regulations: Only 13% of respondents found existing government regulations effective in reducing SUP usage, while 58% rated them as ineffective. (Note: If specific regulations were referenced in the survey, they should be outlined earlier in the report.)
- Community Efforts: 90% of respondents reported actively taking steps to reduce their personal SUP usage, yet barriers such as lack of alternatives, high costs, and convenience hindered further reduction.
- Willingness to Pay: 56% of respondents were willing to pay more for eco-friendly packaging, with men showing slightly higher willingness than women.

4.4. Industry-Specific Challenges & Perspectives

- Tourism Sector: 72% of respondents working in tourism considered plastic pollution a significant issue, with 67% willing to invest in eco-friendly alternatives.
- Retail Sector: Retailers identified high costs of biodegradable options, limited availability, and consumer resistance as key challenges in transitioning away from SUPs.

5. FULL SURVEY RESULTS

5.1. Survey Method

The National Environment Service (NES) designed and conducted an online survey to assess community awareness, attitudes, and behaviors regarding single-use plastics (SUPs) in the Cook Islands. The survey targeted the general Cook Islands population, including both local residents and Cook Islanders living overseas. It was delivered in English and promoted through social media, the NES website, and Cook Islands media outlets. To encourage participation, incentives included prizes such as a two-night stay at the Pacific Resort, Rarotonga. The survey was open for two weeks, running from April 2 to April 17, 2024.

The survey collected both quantitative and qualitative data. Closed-ended questions provided measurable insights into public awareness and behaviors, while open-ended responses captured participants' perspectives, concerns, and suggestions regarding SUP reduction.

5.2. Survey Structure & Respondent Groups

The survey included questions from the public, as well as sector-specific questions for respondents in the tourism and retail industries. All respondents answered general questions about their awareness, attitudes, and behaviors related to SUPs. However, additional targeted questions were asked depending on the respondent's background:

- The Tourism Industry respondents (e.g., hotel, restaurant, and tourism operators) were asked about the role of SUPs in their operations, their views on reducing plastic waste, and challenges in adopting sustainable alternatives.
- Retail Industry respondents (e.g., shop owners, suppliers) answered questions on SUP availability, consumer preferences, and the feasibility of switching to eco-friendly packaging.
- General Public respondents answered questions about their individual plastic use, willingness to adopt alternatives, and barriers to reducing SUP consumption.

5.3. Data Cleaning and Analysis

A total of 373 responses were received. However, after cleaning the data only 259 were valid. This is due to the deleted responses being incomplete submissions or duplicate entries. Age analysis was not conducted due to insufficient data, out of 259 responses only 49 answered the Age question, as well as the responses are largely skewed towards the 21–29 age range.

- Quantitative Analysis: Descriptive statistics were used to summarize key trends. Responses from the tourism and retail sectors were analyzed separately to identify sector-specific trends.
- Qualitative Analysis: Open-ended responses were thematically coded to capture key themes and insights, particularly regarding the challenges and opportunities related to SUP reduction.

6. RESULTS

6.1. Demographic Overview

Most respondents were women (74%), most were between 21–29 years old (67%). This high representation of younger respondents may be attributable to the survey being promoted primarily through online platforms.

In terms of location, 77% of respondents were based in Rarotonga, with 17% from the Southern Group, and a small percentage from the Northern Group (3%) or overseas (3%).
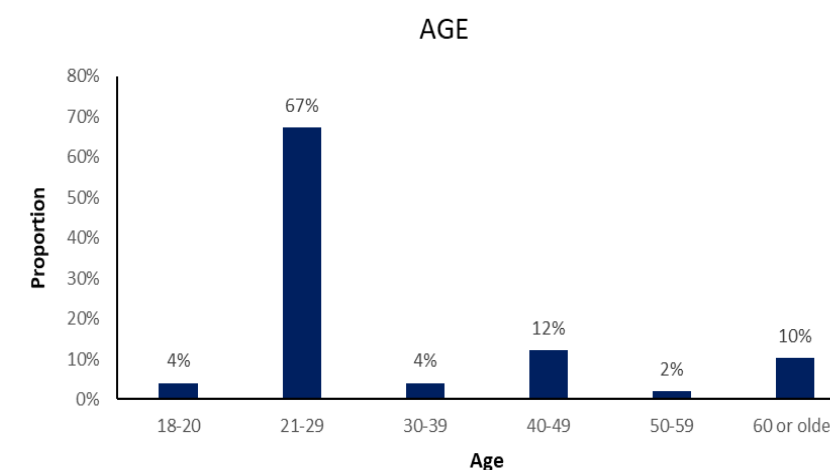
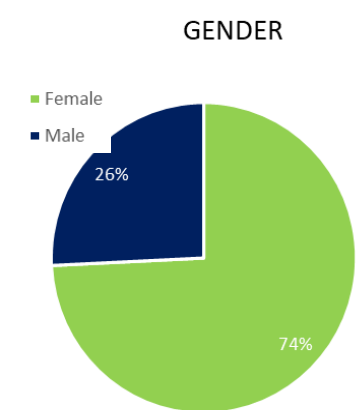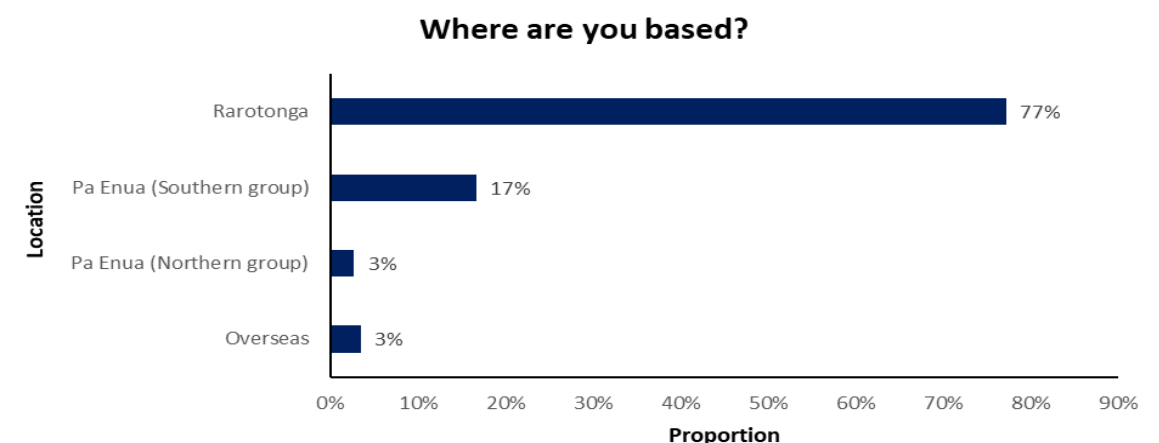Figure 1: Age distribution

Figure 2: Gender

Figure 3: Location

7. SINGLE-USE PLASTIC (SUP) USE

Most respondents reported frequent use of single-use plastics (SUPs), with 42% using them a few times a week and 24% using them daily. Less frequent usage was reported by 11% using SUPs a few times a month, while only 5% used SUPs less than once a month. A Chi-Square test (χ^2 = 130.39, p < .001) confirms a significant difference in usage patterns, indicating that SUP consumption is not evenly distributed across frequency groups

Figure 4: Community SUP Usage
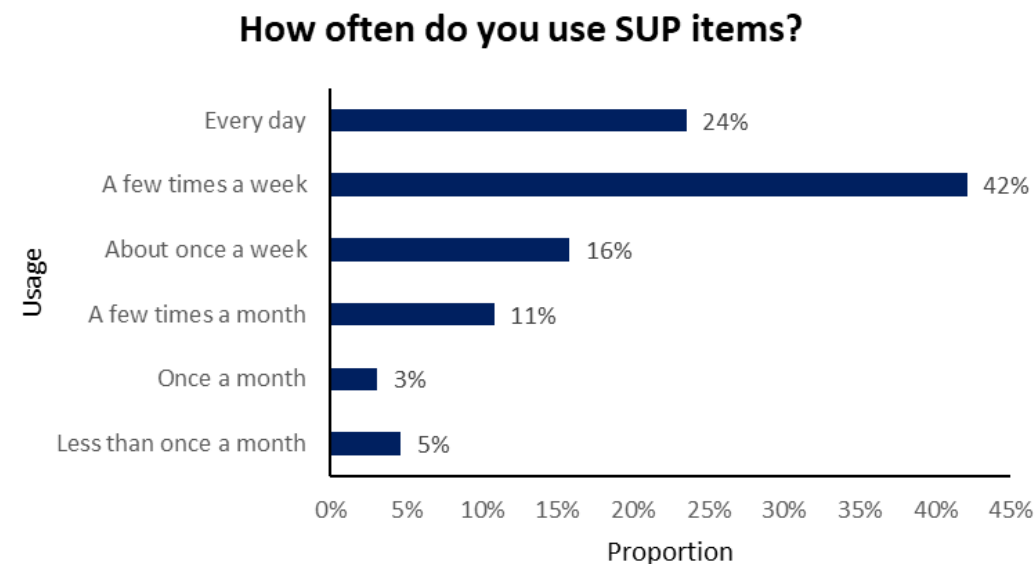
7.1. Gender Analysis

When adjusting for sample size, single-use plastic (SUP) usage patterns differ significantly between men and women (χ^2 = 370.939, df = 12, p < 0.001). Men were more likely to be daily users (31% vs. 21%), while women had a higher proportion using SUPs a few times a week (43% vs. 39%) or a few times a month (14% vs. 3%). Men also had higher rates of occasional use, with 6% using SUPs less than once a month compared to 4% of women. The Chi-Square test confirms that these gender differences in SUP usage are statistically significant, meaning they are unlikely to be due to chance.

Figure 5: SUP Daily Usage by Gender
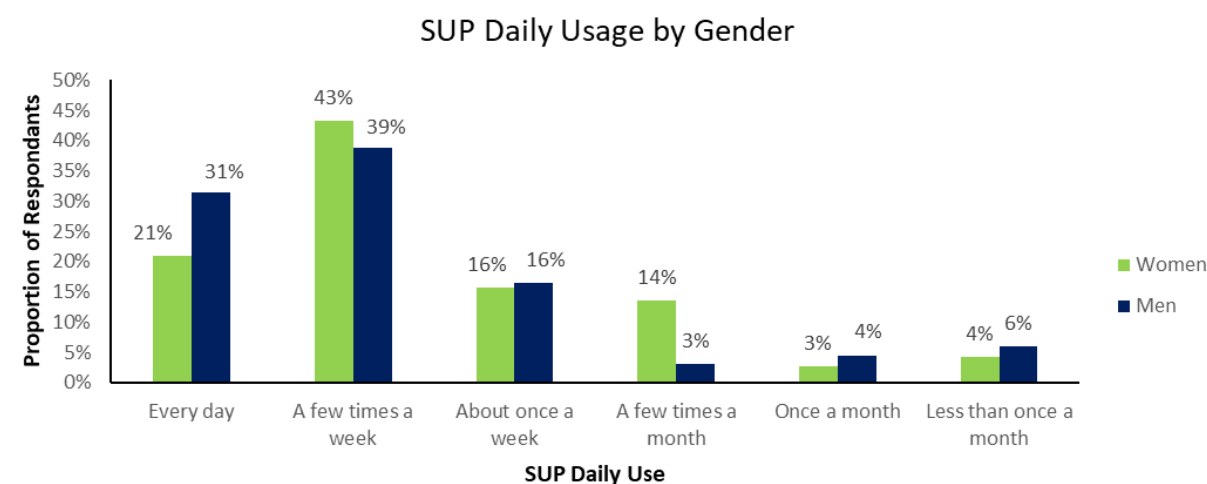
8. COMMUNITY ATTITUDES TOWARDS SINGLE-USE PLASTICS

8.1. Awareness of the Environmental Impacts of Single-Use Plastics

Respondents demonstrated strong awareness of the environmental impacts of single-use plastics, with qualitative data revealing several recurring themes. The most commonly discussed issue was the impact on the marine environment and marine life, followed by concerns about land pollution and waste management.

A significant number of participants highlighted the detrimental effects of plastics on marine ecosystems, particularly their persistence in the ocean and harm to marine species. Many respondents emphasized that plastics are non-biodegradable and can take centuries to degrade. One respondent noted, "1. They are not biodegradable. 2. Most disposable plastics can last for hundreds of years in the environment without breaking down. 3. They damage ecosystems. 4. Harms wildlife on land and in oceans. 5. Microplastics also enter food chain" (female, P230). Others linked plastic pollution directly to threats to wildlife, with one participant stating, "Plastic harms wildlife on land and ocean" (female, P181).

The second major theme was land-based environmental degradation, including overflowing landfills and inadequate waste management systems. Several respondents expressed concern about the accumulation of plastic waste, particularly in landfills, and its slow decomposition. One participant remarked, "Managing and disposing of single-use plastics is a significant challenge, particularly with inadequate waste infrastructure." (female, P148).

Awareness of microplastics was another commonly mentioned topic, with respondents discussing how plastics break down into tiny particles that persist in the environment and enter the food chain. One respondent explained, "Microplastics that end up in the ocean, in the fish, in our bodies, in our water, everywhere…" (female, P228).

While most participants focused on the environmental consequences, a smaller number were aware of human health impacts. Some linked plastic pollution to broader health and climate concerns, particularly the release of toxic chemicals through plastic burning. One respondent stated, "Slow to decompose, harmful to wild and marine life. Burning plastic creates atmospheric issues" (female, P5). Others highlighted potential links to food contamination and soil pollution, demonstrating an awareness of the interconnected impacts of plastic waste.

The qualitative responses indicate that while environmental concerns, particularly marine and land-based impacts, were the most widely discussed, there is also some awareness of human health risks. The findings suggest that community knowledge of plastic pollution is relatively strong, though deeper understanding of long-term health effects may require further awareness efforts.

9. OPINION ON THE MOST PROBLEMATIC SINGLE-USE PLASTICS FOR THE ENVIRONMENT

9.1. Plastic Bottles

The majority of respondents identified plastic bottles as the most problematic single-use plastic item for the environment. Many highlighted their widespread use, long decomposition time, and frequent presence as litter. One respondent stated, "Plastic bottles - they end up in landfills, littered in natural habitats, and ocean. Production of these bottles requires significant amounts of energy and resources, contributing to greenhouse gas emissions." (female, P110).

9.2. Plastic Bags

Plastic bags were the second most frequently mentioned problematic item. Respondents described their lightweight nature as a key issue, allowing them to be easily carried by wind and water, spreading pollution across land and marine environments. A participant explained, "Plastic Bags, because they can be blown away by the wind easily and we never know in due time these plastic bags will end up in our rivers, sea that can bring harm to all living creatures in these waters." (female, P89). Another participant emphasized their impact on marine life, noting, "Plastic bags as they often get loose in the environment and blow around out to the lagoon and sea, and are eaten by turtles and smother coral" (male, P144). Others pointed out that despite existing bans or restrictions, they continue to be used and discarded.

9.3. Plastic Packaging

Plastic packaging, including food wrappers, glad wrap, candy wrappers, and chip packets, was also identified as a major environmental concern. Respondents noted that these items are used frequently and in large quantities, contributing significantly to plastic waste. One respondent shared, "Every snack and processed food comes in plastic. It's impossible to avoid" (male, P62). Another mentioned "noodle wrapping" with the solution being "try to minimize the consumption of noodles" (male, P23). Some participants also mentioned that plastic packaging fragments into microplastics, which persist in the environment and enter the food chain.

9.4. Plastic Cutlery and Plateware

Another key theme that emerged was the issue of disposable plastic cutlery and plateware. Respondents pointed out that these items are typically used once and then discarded, creating unnecessary waste. A participant noted, "Plastic forks and plates are used for just a few minutes but stay in the environment for centuries" (female, P83).

9.5. Baby Diapers and Sanitary Products

Baby diapers and sanitary products were also cited as problematic due to their high plastic content and difficulty in disposal. Respondents highlighted that these items often end up in landfills or are improperly disposed of. One participant explained, "Diapers and pads contain plastics that don't break down, and they pile up in our waste system" (female, P23). Others mentioned the lack of sustainable alternatives as a barrier to reducing their environmental impact.

10. EFFECTIVENESS OF GOVERNMENT REGULATIONS

Data was aggregated into a 3-point scale labelled "Effective" (13%), "Not Effective" (58%) and "Somewhat effective" (30%). A Chi-Square goodness-of-fit test (χ^2 = 94.07, p < .001) indicates a significant difference in the distribution of effectiveness ratings, suggesting that respondents did not rate effectiveness equally across categories.

Figure 6: Effectiveness of Government Regulations
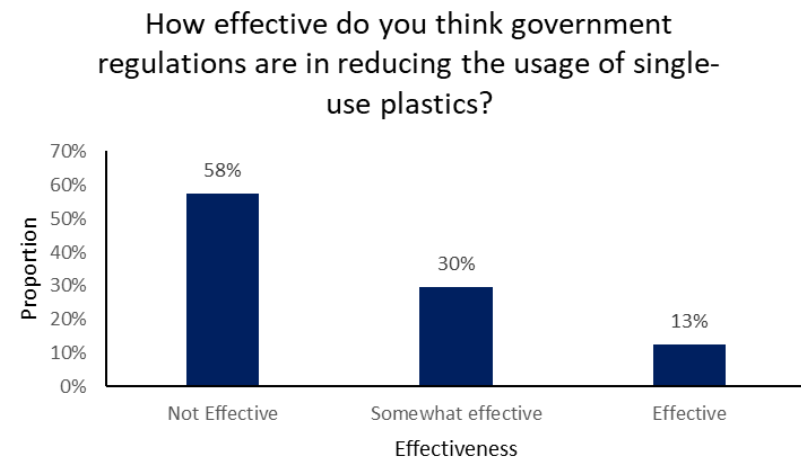
10.1. Role of Businesses in Reducing Single-Use Plastics

Respondents strongly emphasized that businesses have a crucial role to play in reducing single-use plastics, with the most common suggestion being the provision of recyclable cutlery and plateware. Many viewed this as a practical and effective step toward waste reduction, with one participant stating, "Providing recyclable paper containers and cutlery (though these still go to the landfill- next step is to compost these) or allow people to bring their own." (female, P1). Another widely supported approach was the adoption of biodegradable products, which respondents saw as a sign of corporate environmental responsibility. One participant noted, "Biodegradable options show businesses care about the environment" (male, P34).

Beyond offering alternatives, a significant number of respondents advocated for businesses to eliminate plastic products entirely, arguing that this was the only true solution. One participant asserted, "Getting rid of plastics entirely is the only real solution" (male, P36). Others highlighted the need for businesses to take responsibility beyond their own operations by developing systems to export waste to regions with appropriate recycling infrastructure and by pushing for stronger policies and legislation. A respondent remarked, "Businesses should take the lead in driving stricter regulations" (female, P26).

While less frequently mentioned, some respondents also supported initiatives such as labeled rubbish bins, reusable bags, and encouraging customers to bring their own items. However, many felt these measures placed too much responsibility on individuals rather than businesses. As one participant explained, "Consumers can only do so much—it's up to businesses to lead the way" (female, P59).
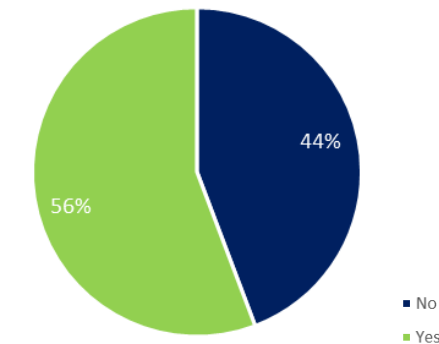
10.2. Willingness to Pay More for Eco-Friendly Packaging

Fifty-six percent of respondents indicated they were willing to pay more for products with eco-friendly or plastic-free packaging, while 44% were unwilling to do so. Among female respondents, 53% expressed a willingness to pay more, compared to 63% of male respondents. Although women constituted many survey participants, a higher proportion of men reported willingness to pay additional costs for sustainable packaging. However, a Chi-Square test (χ^2 = 2.19, p = 0.139) shows that this difference is not statistically significant.

Figure 7: Pay More for Eco-Friendly Packaging

10.3. Location vs Willingness to pay

A Chi-Square test (χ^2(8) = 125.753, p < .001) shows a strong link between location and willingness to pay for eco-friendly packaging. Rarotonga had the highest willingness (67%) suggests that making alternatives widely available may be an appropriate response on the main island, while lower willingness in the Northern (4%) and Southern (25%) groups indicates consumer subsidies for alternatives could be effective in the Pa Enua. Overseas respondents (1%) showed the least willingness. Additionally, 3% of respondents were willing to pay more but didn't specify their location. While the test confirms a significant relationship, due to missing responses, some expected values were low, which may affect reliability.

Figure 8: How willing are people to pay for eco-friendly alternatives by their location

11. COMMUNITY ACTIONS AND CHALLENGES

A substantial majority of respondents (90%) reported actively taking steps to reduce their use of single-use plastics. However, when asked about the challenges they faced in reducing reliance on plastics, many respondents identified plastic packaging as the most significant barrier to reducing single-use plastics, emphasizing its widespread presence in everyday products. One participant stated, "Everything comes in plastic, no matter what you buy" (male, P25), while another noted, "Too many plastic products in shops, hard to not use when it's available everywhere" (female, P188).

The lack of accessible alternatives was another frequently mentioned challenge. Some respondents expressed frustration over limited replacement options, with one explaining, "Sometimes there's just no choice" (male, P144). Others highlighted specific difficulties, such as replacing plastic bags in commercial settings, with one participant stating, "Finding alternatives to replace plastic bags when selling fish has been difficult. I've tried looking online, but I haven't had much success" (female, P257). Another respondent pointed out, "We do not have our own local materials to replace these" (female, P75), underscoring the dependence on imported solutions.

Cost was also raised as a major concern, with several respondents stating that eco-friendly alternatives remain financially out of reach. One participant remarked, "Eco-friendly options are just too expensive" (female, 163), suggesting that affordability is a key factor preventing broader adoption.

Some participants also cited the convenience and durability of single-use plastics as reasons for continued reliance on them. One respondent explained, "Plastic bags are durable, don't leak or break easily, and make strong shopping bags" (female, p188). Others noted the practicality of free plastic bags offered in some shops, with one stating, "Plastic bags are free in some stores, which makes it harder to stop using them" (female, P83). Another participant added, "Avoiding plastic can sometimes be inconvenient" (male, P52), highlighting how habit and accessibility contribute to the challenge.

11.1. Participation in Community Initiatives:

Only 34% of respondents had participated in community initiatives focused on reducing single-use plastics, while 66% had not. Only 35% of women and 31% of men have participated in such initiatives. The most cited initiative was the NES World Cleanup Day. The "Reduce, Reuse, Recycle" campaign, initiated by Infrastructure Cook Islands, was another widely referenced program. Other notable initiatives included school programs and advocacy efforts by Te Ipukarea Society. Respondents who had participated in these programs emphasized their role in promoting sustainable practices and increasing awareness about plastic pollution.

11.2. Suggested Alternatives and Policy Recommendations

The most common solution proposed by respondents was replacing single-use plastics with biodegradable materials, glass, paper, and natural resources such as bamboo and coconut. Some linked this to reviving traditional practices and creating economic opportunities, with one participant stating, "Locally created options support natural resources while also creating jobs" (female, P90). Many respondents supported banning plastic imports, but emphasized that affordable and accessible alternatives must be in place to avoid shifting costs onto consumers. One participant noted, "If plastic is banned, businesses need affordable alternatives, or costs will fall on consumers" (male, P87). A circular economy approach was also widely discussed, with respondents advocating for better waste management, plastic taxes or incentives, and expanded recycling infrastructure. One participant remarked, "Circular economy principles should guide product design to minimize waste" (female, P110). Behavioral change through education and awareness programs was another key theme, with many suggesting targeted initiatives for schools, the tourism industry, and the public. A small group of respondents were skeptical about alternatives, though it is unclear whether they believed none existed or simply did not provide a response. Further research could clarify their concerns.

11.3. Awareness of Environmental Impacts vs. Plastic Reduction Behaviour

The cross-tabulation between awareness of plastic's environmental impact and actions taken reveals that the majority of respondents indicated a strong awareness of the negative effects of plastic on the environment. Of those who are aware, a significant portion (90%) reported taking steps to reduce plastic usage, such as using reusable bags and bottles. However, many individuals, despite acknowledging the environmental impact, struggle to apply this awareness in practice, often citing barriers such as convenience, cost, and limited access to alternatives. A Chi-Square test (χ^2 = 646.017, df = 492, p < .001) confirms a significant association between awareness and plastic reduction behavior. This suggests that while awareness campaigns influence plastic reduction behavior, additional support in the form of accessible alternatives or incentives might be necessary to drive more widespread action.

12. TOURISM INDUSTRY AND SINGLE-USE PLASTICS

The tourism industry plays a significant role in single-use plastic consumption, particularly in food and beverage operations, where convenience and food safety often drive plastic use. Understanding the perspectives of businesses in this sector is crucial for identifying challenges and opportunities for reducing plastic waste.

Respondents to this section included representatives from hotels, resorts, restaurants, cafés, and other tourism-related businesses that interact with visitors and handle significant amounts of disposable packaging. Their insights provide a clearer picture of how the industry perceives and manages single-use plastics, as well as the barriers and solutions they identify.

12.1. Frequency of Single-Use Plastic Use in Tourism Businesses

Survey responses from participants who work in tourism businesses, including hotels, resorts, restaurants, and cafés, indicated varying levels of reliance on single-use plastics in food and beverage operations.

Figure 9: Tourism SUP Use
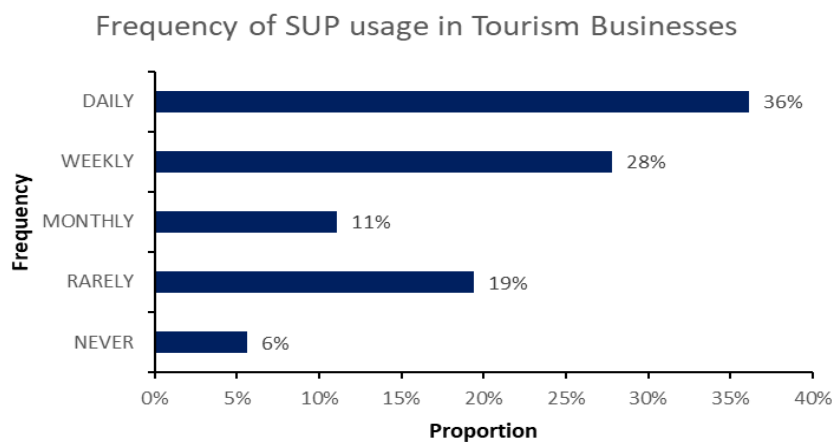
These results show that a significant portion of businesses (64%) rely on single-use plastics frequently, with more than a third using them daily. However, a notable proportion (36%) reported limited or minimal use, suggesting that some businesses have already taken steps to reduce their plastic consumption. A Chi-Square test (χ^2 = 29.90, p < .001) indicates a significant difference in the distribution of frequencies.

12.2. Tourism Industry Attitudes

A majority of respondents (72%) considered addressing plastic pollution within the tourism industry to be extremely important, while 17% deemed it very important, 8% saw it as somewhat important, and 3% considered it not so important. These results underscore the strong emphasis within industry on reducing plastic waste.

The willingness to invest in alternative, eco-friendly packaging was also assessed. A majority (67%) of respondents were in favor of investing in such packaging, while 28% expressed uncertainty, and 5% opposed the idea.

12.3. Tourism Industry Solutions

The feasibility of transitioning to alternative, non-plastic packaging was widely supported, with 47% of respondents considering it very feasible and 36% viewing it as somewhat feasible. Only 8% expressed uncertainty, and another 8% found the transition unfeasible. These findings suggest that most businesses recognize the viability of adopting sustainable packaging solutions.

The implementation of initiatives to reduce plastic usage was also examined. Among respondents, 60% reported having already implemented initiatives, 24% had initiatives in progress, and 16% had not yet taken steps to reduce plastic usage.

When asked about the use of reusable, biodegradable, or compostable packaging options, 56% of respondents confirmed they were actively exploring or using such alternatives, while 31% were considering making the shift. A smaller proportion (14%) had not yet explored these options.

A strong majority (75%) indicated that they would consider offering incentives to customers who bring their reusable containers or utensils. Only 14% of respondents were unwilling to do so, while 11% expressed uncertainty.

Efforts to communicate plastic reduction strategies to customers were also assessed, with 63% of respondents indicating that they actively informed customers about their plastic reduction initiatives, while 37% did not.

When asked about areas where they would appreciate guidance or support in transitioning to plastic-free alternatives, businesses identified key challenges, including the availability and affordability of sustainable alternatives, financial support for making changes, education opportunities, and support from suppliers and producers. Many respondents emphasized the need for government subsidies and incentives, suggesting measures such as reduced duties, VAT exemptions, or freight allowances for sustainable products. Businesses also highlighted the importance of supplier engagement, financial planning, and donor funding in facilitating a successful transition.

Collaboration within the industry was viewed favorably, with 84% of respondents indicating a willingness to work with other businesses to collectively reduce single-use plastics in the tourism sector. Only 16% opposed the idea.

12.4. Tourism Industry Challenges

When asked whether regulatory or policy changes would encourage businesses to reduce single-use plastics, the responses were insufficient to form a definitive conclusion. However, a thematic analysis conducted among those who did respond found that, common themes included calls for a complete ban on plastics, greater government intervention, and recognition that plastic waste is a global issue beyond the control of the Cook Islands.

Businesses identified several single-use plastic items that posed significant challenges in finding alternatives. Items such as tea and coffee sachets, cling wrap, and plastic water bottles were cited as particularly difficult to replace. Many respondents noted the essential role plastic plays in certain packaging needs, particularly in the hospitality industry, with some mentioning the continued reliance on cling wrap for food preservation.

The availability of alternatives and infrastructure challenges were also raised as barriers. Some respondents noted that if alternative packaging solutions were more readily available, businesses would find the transition easier. Others highlighted the need for improved recycling and reuse systems. Additionally, concerns were raised regarding the additional equipment and storage requirements associated with certain plastic-free alternatives, such as the need for sterilization equipment for reusable glass containers.

12.5. Tourism Industry SUP Usage vs Tourism Industry Support Needed

Responses indicate that financial support, such as subsidies, tax incentives, and import duty reductions, is essential to making sustainable alternatives accessible and affordable for businesses. Many respondents expressed a willingness to transition away from SUPs but noted that cost and availability were significant barriers. Without financial incentives, businesses—especially smaller operators—may struggle to make the switch.

At the same time, regulations play a critical role in setting clear expectations and ensuring widespread compliance. Some respondents supported stronger regulations, including bans on specific plastic products, but there was also concern about the feasibility of enforcement without viable alternatives in place. Regulatory measures that target importers and suppliers rather than solely placing the burden on local businesses were seen as more practical.

Ultimately, responses suggest that financial support alone may not drive significant changes without regulatory backing, and strict regulations may fail if businesses lack affordable alternatives. Therefore, an integrated approach—where financial incentives help businesses transition while regulations create accountability—would likely be the most effective solution. A Chi-Square test (χ^2 = 1239.080, df = 155, p < .001) indicates a significant association between the variables. However, it is important to note that a large proportion of cells (97.9%) have expected counts less than 5, and the minimum expected count is 0.01. Additionally, the Fisher-Freeman-Halton Exact Test could not be computed due to the complexity and size of the dataset.

These factors suggest that the test results should be interpreted with caution.

13. RETAILERS, WHOLESALERS, & SINGLE-USE PLASTICS

Understanding how retailers and wholesalers perceive single-use plastics is essential for identifying barriers to reduction and potential strategies for more sustainable practices. Respondents to this section include supermarkets, local shops, wholesalers, and other retail businesses that supply goods to consumers and businesses. Their perspectives provide insight into current plastic usage trends, challenges in adopting alternatives, and opportunities for reducing plastic dependency in the sector.

Retailers and wholesalers were surveyed on their reliance on single-use plastic bags for customer purchases. The data indicate that most retailers are transitioning from bagging goods in SUP bags. Only 13% of retailers always used plastic bags. A Chi-Square test (χ^2 = 25.10, p < .001) indicates a significant difference in the distribution of frequencies.

Figure 10: SUP for Customer Purchases

How often do you use single-use plastic bags for customer purchases?
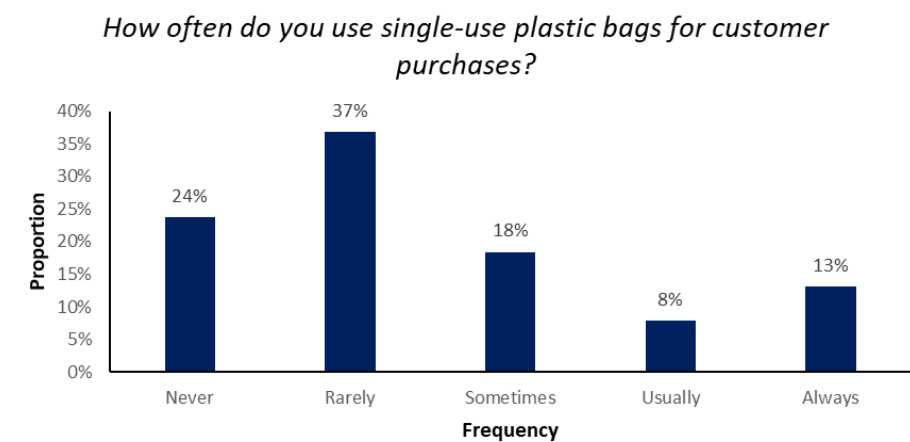
13.1. Retailers and Wholesalers Attitudes

A key question examined whether customers were increasingly seeking products with eco-friendly or plastic-free packaging. Among respondents, 49% believed that customers were actively seeking such products, while 24% were unsure, and 27% did not believe there was significant demand for eco-friendly alternatives. A Chi-Square test (χ^2 = 11.18, p < .001) indicates a significant difference in the distribution of responses.

Exploration and implementation of alternative packaging options were also assessed. A total of 47% of respondents indicated that they had already explored or implemented alternatives such as biodegradable or reusable materials, while 42% were considering such options. A smaller proportion (11%) had not taken any steps toward transitioning to sustainable packaging. A Chi-Square test (χ^2 = 22.82, p < .001) indicates a significant difference in the distribution of responses.

Figure 11: Alternative packaging options

Have you explored or implemented alternative packaging options, such as reusable or biodegradable materials?
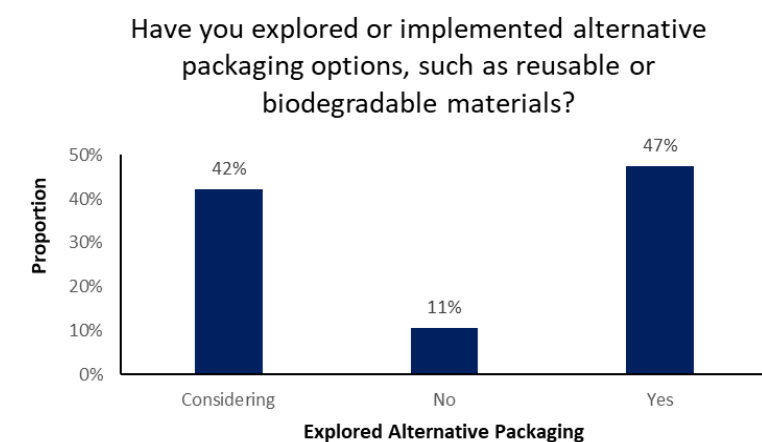
13.2. Retail Perception of Consumer Demand vs. Actions Taken

The analysis of responses regarding retail customer eco-demand by the actions taken is based on a limited sample. Due to this, the "Yes" and "Considering" responses were aggregated into "Yes". The reason behind this decision is to simplify the analysis and reflect the overall positive perception of demand for eco-friendly alternatives. This aggregation helps to avoid underestimating the level of demand, as respondents who are "Considering" eco-friendly options can still be seen as potential proponents of such changes in the future. Out of 259 total respondents, a small portion (10%) were valid answers, which may not accurately represent the broader trends. Of that 10%, 89% are providing/looking into providing eco-friendly alternatives. Whereas 11% are not. Of those who were unsure about the demand for eco-friendly alternatives, 88% are opting to provide eco-friendly alternatives. Of those who responded "No" to customers seeking eco-friendly alternatives, 67% are looking into providing eco-friendly alternatives. The Chi-Square tests show highly significant results ($p <$ .001), indicating a statistically significant association between the variables. However, the low response rate could affect the reliability of the results. While a few respondents acknowledge the demand for eco-friendly options, the small sample size makes it difficult to draw concrete conclusions about the overall retail sector's alignment with consumer preferences.

13.3. Retailers and Wholesalers Solutions

Supplier engagement emerged as a critical factor in reducing single-use plastic packaging. A majority (55%) of respondents reported that they had communicated with suppliers about reducing plastic packaging in delivered goods, while 45% had not yet addressed this issue. A Chi-Square test ($\chi^2 = 0.0$, $p = 1.0$) indicates that there is no statistically significant difference between the two groups.

Retailers and wholesalers were also asked whether they would consider offering reusable bags as an alternative to single-use plastic bags in their stores. A total of 46% indicated that they already offer reusable bags, while 43% stated they would consider doing so. A small proportion (11%) did not support offering reusable bags. A Chi-Square test ($\chi^2 = 0.0$, $p = 1.0$) indicates that there is no statistically significant difference among the frequencies, suggesting that the observed differences may be due to chance.

13.4. Retailers and Wholesalers Challenges

Respondents highlighted several key challenges in reducing the use of single-use plastic packaging in food and beverage products. The high cost of biodegradable options was identified as a major barrier, with some respondents reporting that they had to import such products from overseas at significant expense. The limited availability of biodegradable packaging locally was also frequently mentioned, with respondents noting that such products were often in short supply or unavailable in stores.

Consumer resistance to change was another commonly cited challenge. Some respondents indicated that customers continued to prefer plastic bags and were reluctant to adopt alternatives. A lack of awareness, particularly in the Pa Enua, was also identified as a barrier, with calls for greater education efforts to promote sustainable packaging.

Supply chain dependence on overseas suppliers was raised as a concern, with respondents emphasizing that foreign manufacturers largely determine the availability and affordability of packaging options. Additionally, practical challenges such as storage constraints and concerns over the durability of eco-friendly alternatives were mentioned.

To address these challenges, respondents suggested government incentives such as subsidies for biodegradable packaging, reduced import duties on sustainable products, and support for refill-based retail models to reduce packaging waste.

14. DISCUSSION

This survey found that the community is highly aware of the environmental impacts of single-use plastics and is willing to change behaviors if the right systems and alternatives are in place. The majority of respondents have already taken steps to reduce their plastic use, with more than half expressing a willingness to pay more for eco-friendly packaging. However, there is skepticism regarding the effectiveness of government regulations, with many respondents stating that current policies have not significantly reduced plastic use. While the Cook Islands Single-Use Plastic Ban Policy (2018–2023) provides a framework for reduction, enforcement remains a challenge, as reflected in the Secretariat of the Pacific Regional Environment Programme's (2024) findings that the Cook Islands has struggled with plastic ban implementation. Participants emphasized that businesses have a key role to play in offering alternatives, but the nation's reliance on imports—particularly from New Zealand—limits local control over the availability of sustainable products. The ban on polystyrene takeaway containers in New Zealand, for example, resulted in a corresponding reduction in their use in the Cook Islands, illustrating how supply chain policies from larger markets shape plastic consumption patterns.

Across the tourism, retail, and community sectors, the most cited challenges in reducing plastic use were the availability and cost of alternatives, the necessity of plastic in packaging, and logistical difficulties in transitioning to sustainable materials (Kibria, M. G et al 2023). Tourism businesses reported that replacing items such as tea, coffee, sugar sachets, cling wrap, and plastic water bottles remains difficult, reflecting global trends in the food and beverage sector's dependence on plastic (Phelan et al., 2022). In the retail sector, plastic packaging remains widespread, and the cost of biodegradable alternatives continues to be a significant barrier. Supplier control over packaging limits retailer choices, and some respondents noted that consumers resist change when plastic-free alternatives are introduced. The community perspective emphasized that plastic is unavoidable due to its widespread use in everyday packaging, with few viable and affordable alternatives available. Cost concerns were often raised, though the Cook Islands single use band policy found that price differences between plastic and sustainable products were often minor (around 13 to 20 cents), suggesting that perceptions of affordability may require further investigation. Overcoming these challenges will require a combination of policy interventions, improved consumer education, and better access to sustainable alternatives.

A range of solutions were identified, with community initiatives, business partnerships, government regulations, and supply chain improvements being the most frequently suggested. Public awareness campaigns such as World Clean-Up Day and the Reduce, Reuse, Recycle initiative were widely recognized as effective, reinforcing the role of education in shaping consumer behavior. Research suggests that long-term solutions will require integrating sustainability education at all levels, from schools to national awareness programs (Liu 2023, p. 1). Beyond education, improving access to biodegradable products, glass, paper, and natural resources such as bamboo and coconut was seen as essential, though many respondents noted that affordability remains a key concern. Many also supported stronger regulatory measures, including a complete ban on plastics and greater government intervention to support businesses in transitioning to alternatives. A regional review of Pacific Island plastic policies found that national frameworks remain weak, with recommendations to align them more closely with regional and global commitments to drive meaningful change.

The private sector, particularly the tourism industry, plays an important role in reducing plastic consumption. The survey found strong support among tourism businesses for tackling plastic pollution, with many already implementing reduction initiatives and others in the process of transitioning. Businesses also have an opportunity to educate consumers, with many already providing incentives for reusable products and communicating their plastic reduction efforts to customers. However, a recurring challenge remains the limited availability and affordability of alternatives, suggesting that addressing plastic waste within the private sector will require coordinated supply chain adjustments and policy support to ensure a viable transition to sustainable products.

The data shows strong awareness of plastic's environmental harm, yet this awareness doesn't always translate into action. Some respondents actively reduce plastic use by opting for reusable items and sustainable alternatives, suggesting integration of awareness into their routines. However, many others acknowledge the issue but face barriers like convenience, cost, and limited availability of alternatives. While awareness campaigns have some impact, they appear more effective when accompanied by clear personal benefits or accessible, affordable alternatives. Without these incentives, awareness alone often fails to drive consistent behavior change.

While the survey provided valuable insights, several limitations should be acknowledged. Some questions originally designed for businesses, or the tourism industry were included in the general public survey, which may have affected the relevance of responses. Additionally, participation was voluntary, introducing self-selection bias, as individuals with strong opinions on plastic waste may have been more likely to respond. The incentive-based prize draw may have further influenced participation, leading some respondents to rush through answers rather than provide thoughtful input.

Several data limitations also emerged. Open-ended responses often lacked detail, reducing their usefulness for deeper analysis. The absence of mandatory questions resulted in gaps in responses, while some vague or repetitive questions caused confusion, with some participants referring to previous answers instead of providing new insights. Resulting in plenty of blanks. Furthermore, the lack of skip-logic led to similar questions appearing across different sections, making the survey feel repetitive and potentially affecting engagement. As an age analysis was not conducted due to insufficient data for future surveys, it may be useful to compare the demographics of NES Facebook followers with the survey sample. Analyzing the age of individuals who liked, commented, or shared the post could offer further insights.

Lastly, there was no verification process for responses, meaning the accuracy and reliability of self-reported data could not be confirmed. Addressing these issues in future surveys will help improve data quality and ensure more representative findings.

15. CONCLUSION

The survey highlights strong public awareness of single-use plastic (SUP) impacts but identifies cost, convenience, and limited alternatives as key barriers to reduction. While many individuals and businesses are taking steps to minimize plastic use, broader progress requires stronger policies, affordable alternatives, and industry collaboration. Government action, consumer education, and improved supply chains will be essential in making sustainable choices more practical. By addressing these challenges and building on existing initiatives, the Cook Islands can reduce plastic waste and move towards a more sustainable future.

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17. ACKNOWLEDGEMENTS

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