

Highlights of the Public Relationship with Science 2022 Survey Results: *Cofimvaba town in the Eastern Cape Province*



science, technology
& innovation

Department:
Science, Technology and Innovation
REPUBLIC OF SOUTH AFRICA



Produced by the Human Sciences Research Council (HSRC) on behalf of the Department of Science, Technology and Innovation (DSTI).

The DSTI has published two reports, prepared by the Human Sciences Research Council (HSRC) on the South African Public Relationship with Science 2022 Survey:

Department of Science and Innovation (2024) *The South African Public Relationship with Science 2022 Survey Results*. Prepared by the Human Sciences Research Council for the Department of Science, Technology and Innovation. Pretoria. Available at www.hsrcpress.ac.za/saprs-2022 and <https://www.dsti.gov.za/index.php/documents/strategies-and-reports/203-saprs-2022-survey-results-web-12-03-2024>.

Department of Science and Innovation (2024) *Highlights of the South African Public Relationship with Science 2022 Survey Results*. Prepared by the Human Sciences Research Council for the Department of Science, Technology and Innovation. Pretoria.

Available at www.hsrcpress.ac.za/saprs-2022 and <https://www.dsti.gov.za/index.php/documents/strategies-and-reports/205-highlights-of-south-african-public-relationship-with-science-2022-survey-results>.

In addition to the national survey, we included two supplementary samples, to measure the public relationship with science and technology in specific areas in two provinces:

- Four main towns in the Square Kilometre Array (SKA) Telescope area in the Northern Cape (Carnarvon, Brandvlei, Vanwyksvlei and Williston),
- The town of Cofimvaba and environs in the Chris Hani Municipality District in the Eastern Cape, which houses the Albertina Nontsikelelo Sisulu Science Centre (ANSSC).

This report provides the results for the public relationship with science for the Cofimvaba town.

To cite this report:

Department of Science, Technology and Innovation (2025) *Highlights of the Public Relationship with Science 2022 Survey Results: Cofimvaba town in the Eastern Cape Province*. Prepared by the Human Sciences Research Council for the Department of Science, Technology and Innovation. Pretoria.

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Contents

1. Introduction.....	5	11.3 Exposure to, and consumption of, S&T information.....	25
2. Study methodology.....	7	11.4 Trust in news content and information sources.....	26
3. Demographic characteristics of the public in Cofimvaba and the Eastern Cape province.....	8	12. Science engagement outcomes: Activities and behaviours.....	28
4. When you hear the words science or technology, what comes to mind?.....	10	12.1 Academic engagement: Exposure to formal secondary school STEM and Social Science knowledge.....	28
5. Awareness and knowledge about, and interest in, science and technology.....	11	12.2 Attraction-based engagements: Availability of, and attendance at, S&T sites and events.....	29
5.1 Awareness of, and interest in, South African S&T and creative arts achievements.....	11	12.3 Community-based S&T engagement.....	30
5.2 Formal science knowledge.....	12	12.4 S&T Information sharing engagement.....	30
5.3 Knowledge about, and interest in, priority scientific areas.....	13	12.5 Personal engagement with select online technologies.....	31
6. Knowledge of, and concern about, natural and environmental events.....	16	13. Views of pride, promise, and priorities about the national system of innovation.....	32
7. Promise and reservation attitudes towards modern and traditional S&T.....	17	13.1 Pride in South Africa's S&T and creative arts achievements.....	32
7.1 Promise and reservation attitudes about modern S&T.....	17	13.2 Promise of S&T skills for young people.....	33
7.2 Promise and reservation attitudes towards traditional S&T.....	18	13.3 Value of S&T experiences in daily life.....	34
8. Trust in the work of scientists and science information from institutions.....	19	13.4 Public support for R&D spending.....	35
8.1 Promise and reservation attitudes towards the work of scientists.....	19	13.5 Research priorities for South Africa.....	36
8.2 Confidence in information from science organisations.....	20	14. The fingerprint of the EC and the Cofimvaba public relationship with science.....	38
9. Confidence in government's decision-making processes.....	21	15. Key findings and recommendations for Cofimvaba and the EC province.....	40
10. Views on the transformation of cultures within science organisations.....	22	References.....	43
11. Access to and trust in scientific information.....	23		
11.1 Availability of digital assets and internet access.....	23		
11.2 Frequency and patterns of internet usage.....	24		

1. Introduction

In 2022, the Department of Science, Technology and Innovation (DSTI) opened the Albertina Nontsikelelo Sisulu Science Centre (ANSSC) in Cofimvaba town in Chris Hani municipality in the Eastern Cape Province. The Centre originated from the collaboration between the DSTI, Department of Basic Education and the Eastern Cape Department of Education (SAASTA, n.d.).

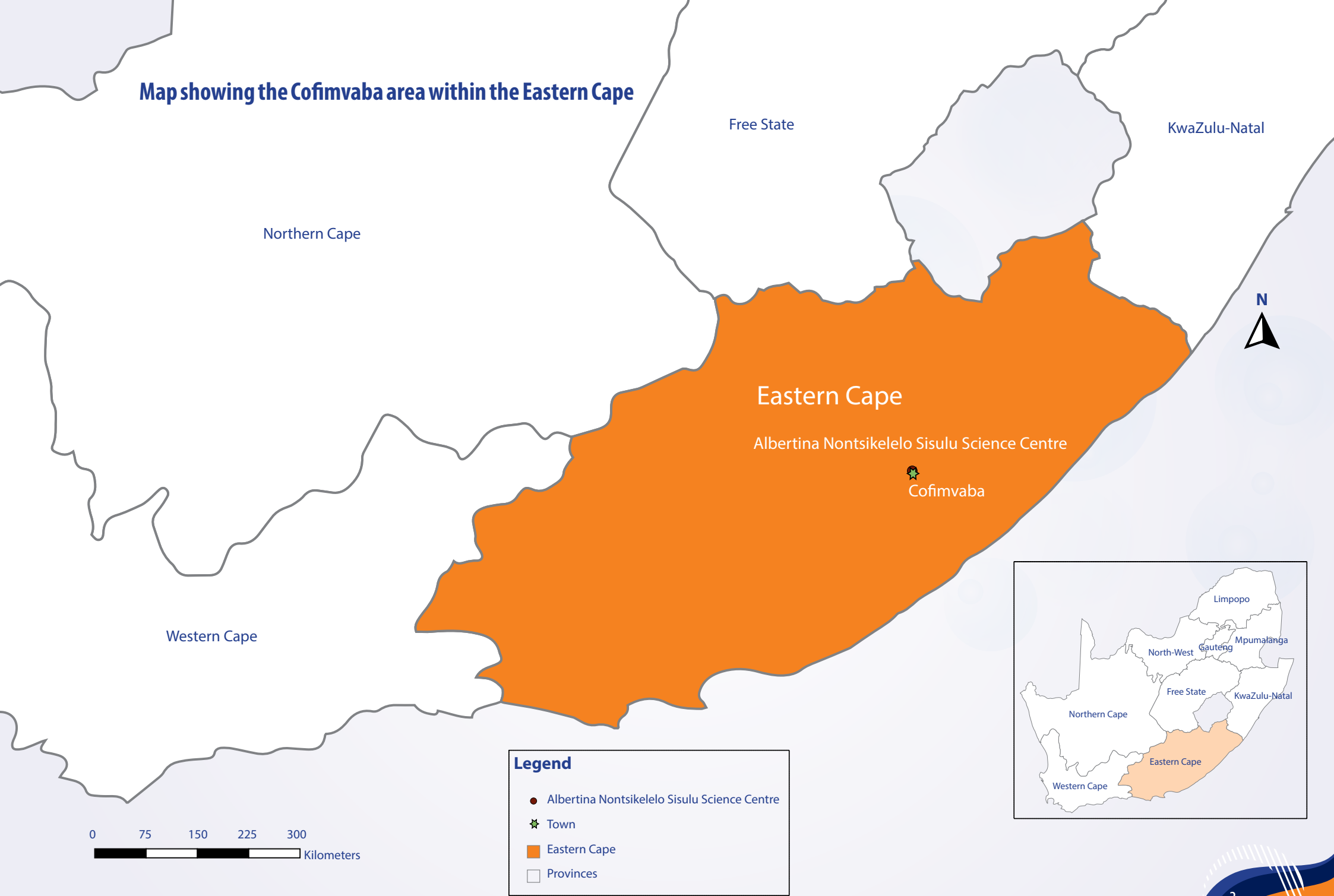
Drawing from the South African Agency for Science and Technology Advancement (SAASTA) and ANSSC websites, the ANSSC is described as a state-of-the-art science centre equipped with advanced green technologies. The facility is designed to be net-zero water (balance between amount of water consumed and amount of water returned to the environment) and net-zero energy (balance between amount of greenhouse gases produced and amount that is removed from the atmosphere). The ANSSC contains multi-purpose classrooms, and both Information and Communication Technology (ICT) and science laboratories. It offers science awareness programmes, activities, and exhibits which learners, educators and the public can visit. The hub has the potential to be a catalyst for improving science and technology (S&T) knowledge and interest, thus promoting more positive attitudes towards S&T and greater engagement with it.

The South African Public Relationship with Science (SAPRS) sample included 701 interviews in the Eastern Cape (EC) province. We extended the SAPRS survey by including an additional sample comprising 233 interviews with young people and adults aged 16 years and older, randomly selected from the Cofimvaba town. The purpose of measuring the science knowledge, attitudes and engagements for this special sample was to gain insight into whether the high intensity science activities at the ANSSC influenced knowledge, attitudes and engagement in relation to S&T in the surrounding area.

This report presents the descriptive statistics for the 33 measures fielded in the survey, benchmarking the statistics for the Cofimvaba area against the EC province. These measures provide the baseline information for the levels of S&T knowledge, attitudes and engagements in the Cofimvaba area and the province.

The map on the next page shows the location of Cofimvaba in the Eastern Cape, as well as the site of the ANSSC.

Map showing the Cofimvaba area within the Eastern Cape



Legend

- Albertina Nontsikelelo Sisulu Science Centre
- ★ Town
- Eastern Cape
- Provinces



2. Study methodology

Sample	Representative sample of the Cofimvaba town and Eastern Cape province, aged 16 years and older, which we refer to as adults in the SAPRS reports.
Sample size	We drew two independent samples: 701 respondents for the Eastern Cape and a further 233 respondents from the Cofimvaba town.
Survey instrument and reporting framework	The Science Engagement Monitoring and Evaluation Impact Indicator Framework (SEMEIF) informed the development of the survey instrument. We report on measures associated with the following indicators: S&T knowledge and interest, promise and reservation towards modern and traditional S&T, trust in science and science institutions, access to S&T information as well as science engagement outcomes relating to activities, behaviours and views (see SAPRS 2022 main report).
Survey interviews	Between November 2022 and January 2023, we conducted one-hour face-to-face interviews with adults 16 years and older. The interviews were conducted in one of the 11 official languages, based on respondents' preferences.
Capturing the interview information	Using a computer-assisted personal interviewing (CAPI) approach, the information was captured onto personal digital assistants (PDA) by trained administrators.
Weighting of data	All data was weighted to the Cofimvaba town and EC population aged 16 years and older.
The term 'science' refers to	Knowledge production in the academic disciplines: natural and life sciences, engineering, social sciences, and humanities.
The term 'public' is both singular and multiple	There are multiple 'publics' in South Africa based on the diverse nature of the society. The term 'public' encompasses both the singular and multiple publics.
Index creation	We computed an index score, for multiple item measures, by averaging the scores that make up each measure. For single item measures, we used the average score for that measure. The scores for single and multiple item indices were converted to a 0-100 scale. Average scores are reported out of a total of 100.

3. Demographic characteristics of the public in Cofimvaba and the Eastern Cape province

The Eastern Cape (EC) province is the second largest province in the country, with a population of 7.2 million people. The median age of the population is 27 years old, with 86% of the population being Black African, 8% Coloured, 6% White and 0.5% Indian/Asian. The first language of the EC population is IsiXhosa which is spoken by 82% of the population, followed by 10% Afrikaans, 5% English and 2% Sesotho (StatsSA, 2023). Almost all (96%) respondents in Cofimvaba town reported mostly speaking IsiXhosa at home.

The EC is the poorest of the nine South African provinces and has the highest unemployment rate in the country. Large sections of the population are involved in subsistence agriculture. Overall, the province contributes 8% to the national Gross Domestic Product (GDP), despite making up 13.5% of the population (StatsSA, 2023).

Science knowledge attitudes, views and engagements are shaped by demographic characteristics and the context in which people live. The infographic on the next page describes the social and demographic characteristics of the Cofimvaba and EC populations. On most measures the characteristics of the Cofimvaba and EC populations were fairly similar, except for the age profile: two thirds of Cofimvaba adults, compared with just over one third of EC adults (37%), were between the ages of 16 to 34 years.

Social and demographic characteristics of the Cofimvaba town and Eastern Cape population (%)

■ Eastern Cape ■ Cofimvaba

Educational attainment

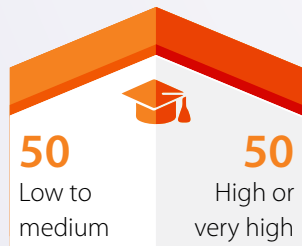
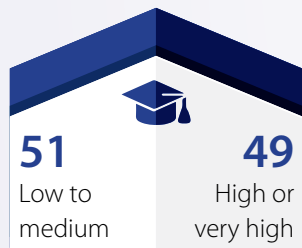
Less than matric



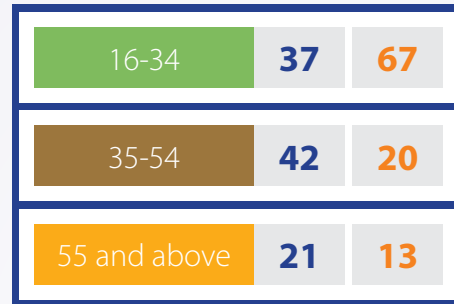
Matric or higher



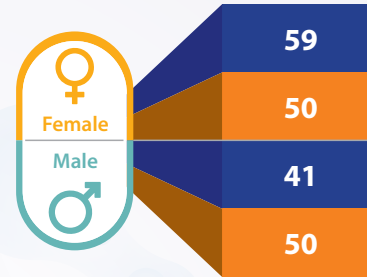
Home educational support



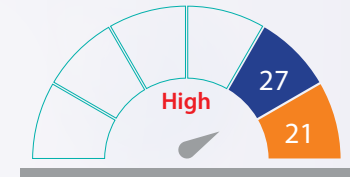
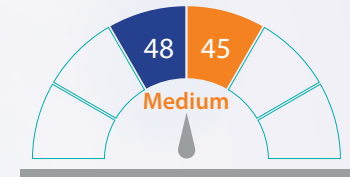
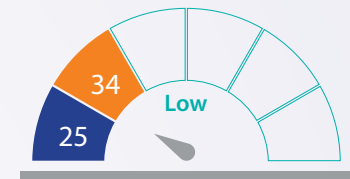
Age



Sex



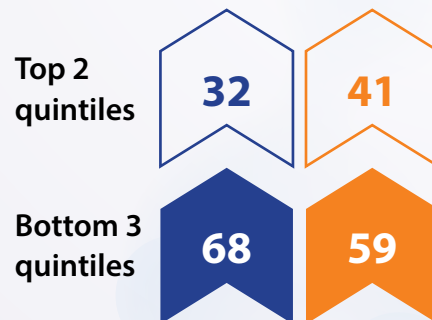
Religiosity



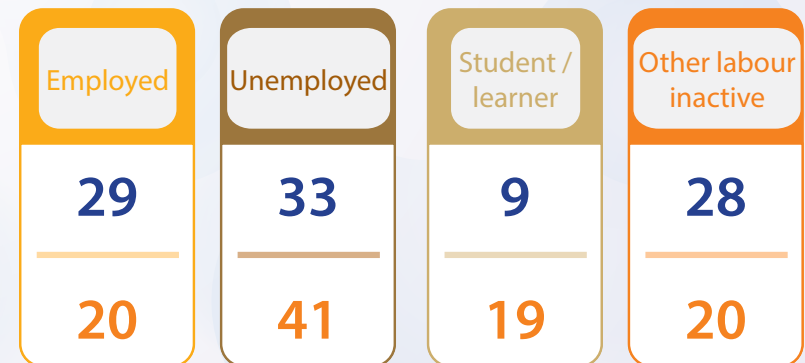
Population group



Socio-economic status



Labour market status



4. When you hear the words science or technology, what comes to mind?

At the start of each survey interview, we asked: (i) “When you hear the word SCIENCE, what comes to mind?” and (ii) “When you hear the word TECHNOLOGY, what comes to mind?” These questions were asked to capture respondents’ personal understanding and appreciation of these terms, as expressed in their own words.

The most common associations that respondents made with the word science were related to nature, plants, knowledge, animals and water. For technology, the most common associations were phones, advancement, computers and electricity.

The word clouds for both science and technology revealed the breadth of understanding of both terms among the Cofimvaba public, which provides an important starting point to explore the relationship between science and the public.

When you hear the word SCIENCE, what comes to mind?



When you hear the word TECHNOLOGY, what comes to mind?



5. Awareness and knowledge about, and interest in, science and technology

Awareness and knowledge about, and interest in, S&T provide insights into the nature of the relationship between the public and science. We report on: (i) awareness of, and interest in, South African S&T, as well as creative arts achievements, (ii) formal science knowledge, and (iii) interest in, and knowledge of, priority scientific areas.

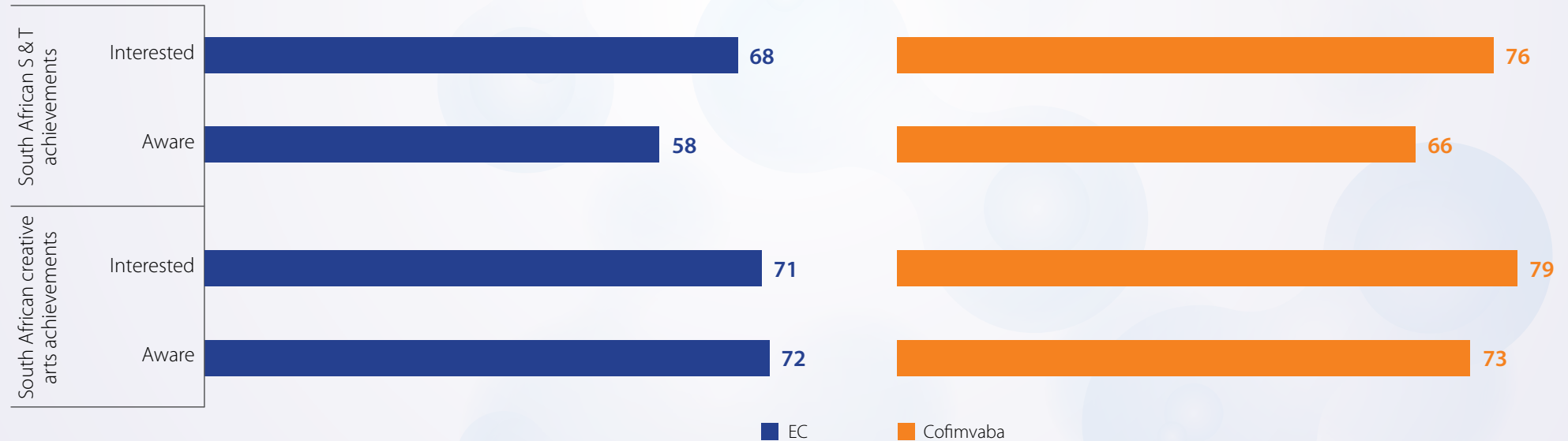
5.1 Awareness of, and interest in, South African S&T and creative arts achievements

The public responded separately about their level of awareness of, and interest in, S&T, as well as creative arts achievements in South Africa.

We contrasted S&T with the creative arts as they represent two different ways of knowing.

There were moderate levels of awareness (58%), and interest in (68%), South African S&T achievements in the EC, while the corresponding levels for Cofimvaba were higher for both awareness (66%) and interest (76%). Seven in ten adults in the EC (72%) and Cofimvaba (73%) were aware of South Africa's creative arts achievements, while 71% of EC adults and 79% of Cofimvaba adults were interested in these achievements.

Awareness of, and interest in, South African S&T and creative arts achievements (% 'very' or 'quite')



5.2 Formal science knowledge

The Cofimvaba and EC sample answered a science knowledge quiz consisting of nine statements. The average percent correct for the EC public was 59%, compared with a similar 60% for the Cofimvaba public. For five of the statements, the EC public had more correct responses, while the Cofimvaba public scored higher on the other four statements.

The two most correctly answered questions 'The petrol price in South Africa is determined by the prices of world oil' and 'The Covid-19 vaccine reduces illness but won't prevent you from getting the virus)' were the ones that featured in news cycles and public discussions ahead of the survey. There were fewer correct answers for the more cognitively demanding items, such as 'Antibiotics kill viruses and not bacteria.'

Percent correct responses to True (T) and False (F) science knowledge items

The petrol price in South Africa is determined by the price of world oil (T)



The Covid 19 Vaccine reduces illness, but won't prevent you from getting the virus (T)



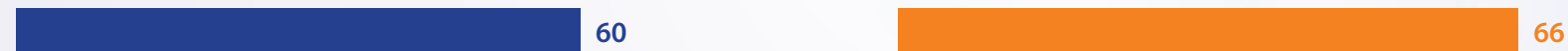
Countries in Europe have their winter season when South Africa has its summer season (T)



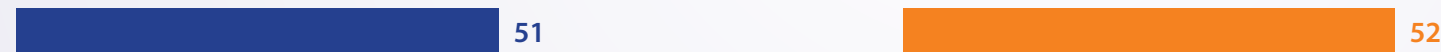
The cutting down of trees leads to increased soil erosion (T)



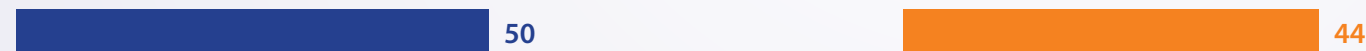
The continents which we live on have been moving for millions of years and will continue to move (T)



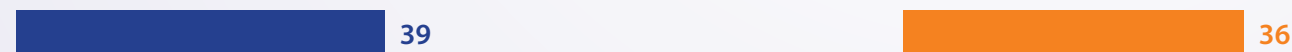
The earth's climate has not changed over millions of years (F)



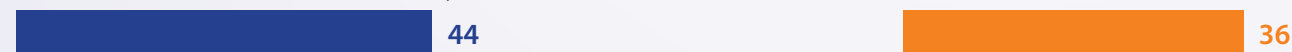
The mother's genes determine if a baby is a boy or a girl (F)



Antibiotics kill viruses and not bacteria (F)

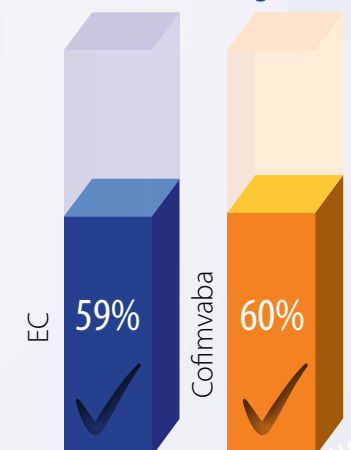


The Sun travels around the earth once a year (F)



■ EC ■ Cofimvaba

Science knowledge index



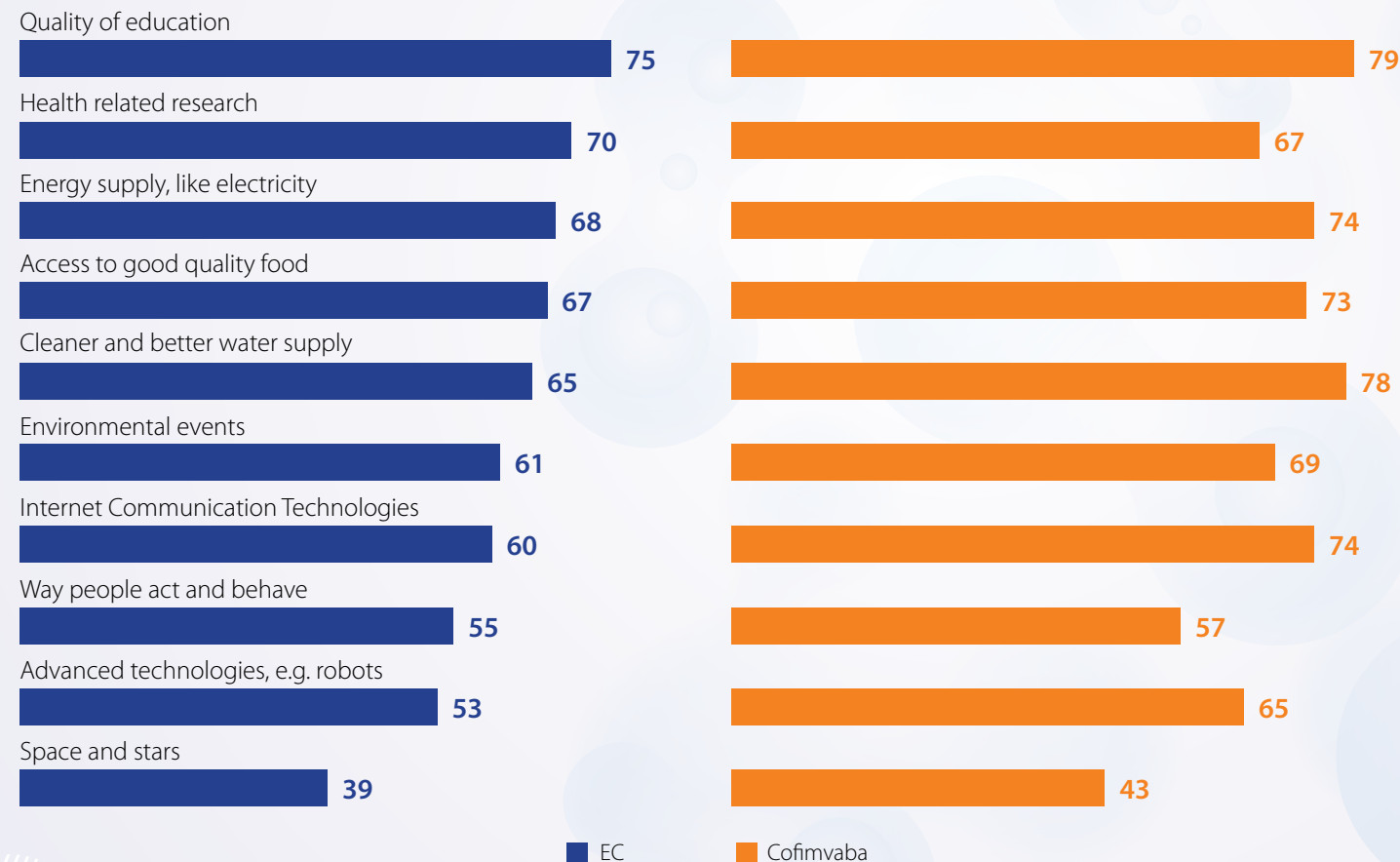
5.3 Knowledge about, and interest in, priority scientific areas

In addition to general awareness about, and interest in, S&T achievements, we explored the Cofimvaba and EC public's knowledge of, and interest in, several contemporary societal challenges that require a S&T response.

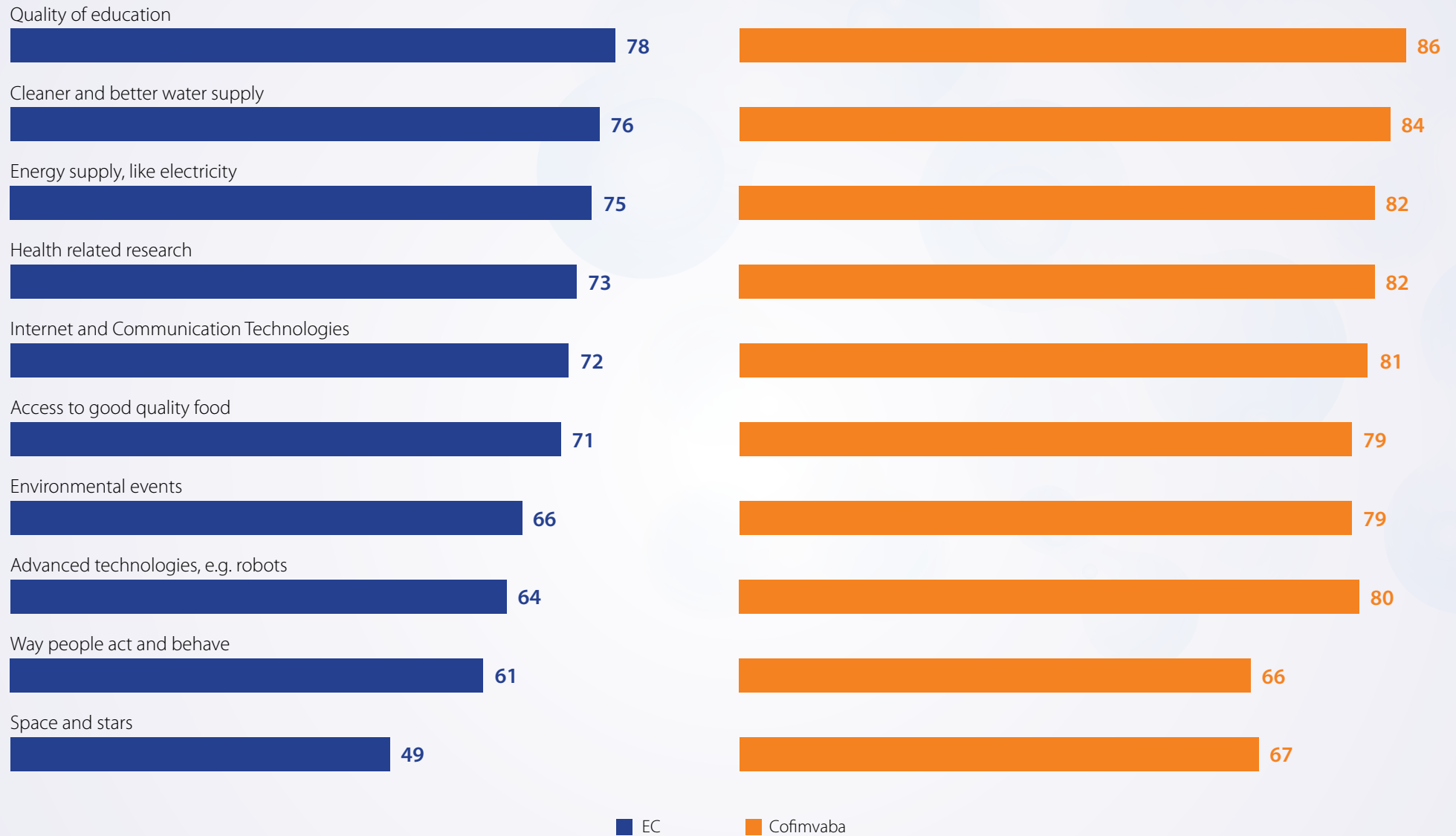
On average, across the 10 areas, 68% of Cofimvaba adults compared to 61% of EC adults were at least 'somewhat' knowledgeable about the set of priority S&T

areas. On average, the level of interest was higher than the knowledge levels, with 79% of the Cofimvaba adults compared to 69% of the EC adults, being at least 'somewhat' interested in the priority S&T areas. In summary, interest levels were higher than knowledge levels and the Cofimvaba public had significantly higher levels of knowledge and interest than the EC public.

Knowledge of priority S&T areas (% at least 'somewhat' knowledgeable) for Cofimvaba town and Eastern Cape



Interest in priority S&T areas (% at least 'somewhat' interested) for Cofimvaba town and Eastern Cape



6. Knowledge of, and concern about, natural and environmental events

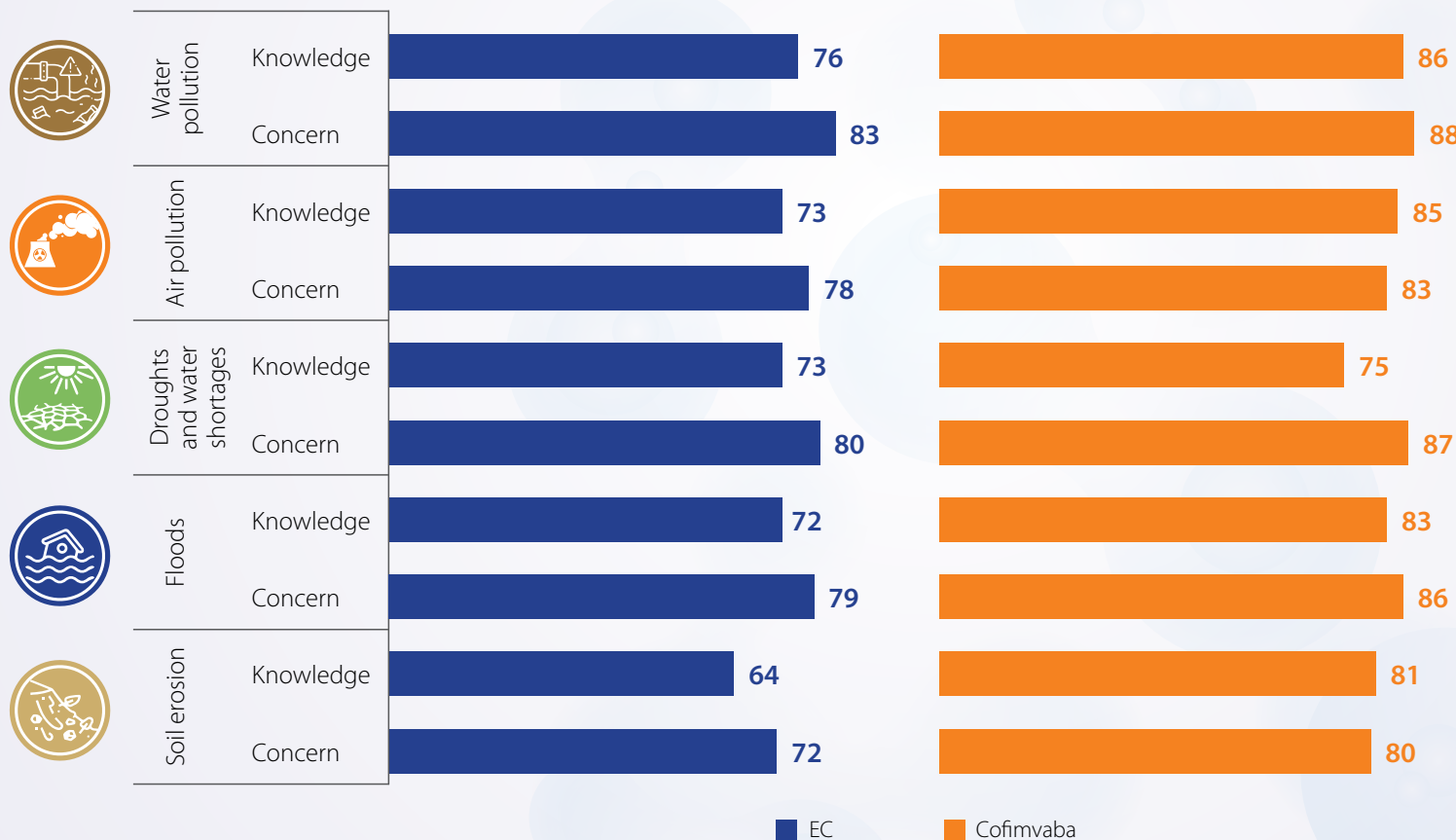
The effects of climate change and its adverse effects on weather patterns and environmental events are both a global and South African concern.

Over three-quarters of adults reported having some knowledge and concern about environmental events. Concern about environmental events was slightly

higher than knowledge with, on average, 85% of Cofimvaba adults and 78% of EC adults, reporting at least some concern about environmental events.

In both Cofimvaba town and the EC province, the highest levels of knowledge and concern were for water and air pollution as well as droughts and water shortages.

Knowledge and concern about environmental events (% at least 'somewhat' knowledgeable/ concerned)



Some knowledge of environmental events



On average
80%
 from Cofimvaba
72%
 from the EC

Some concern about environmental events



On average
85%
 from Cofimvaba
78%
 from the EC

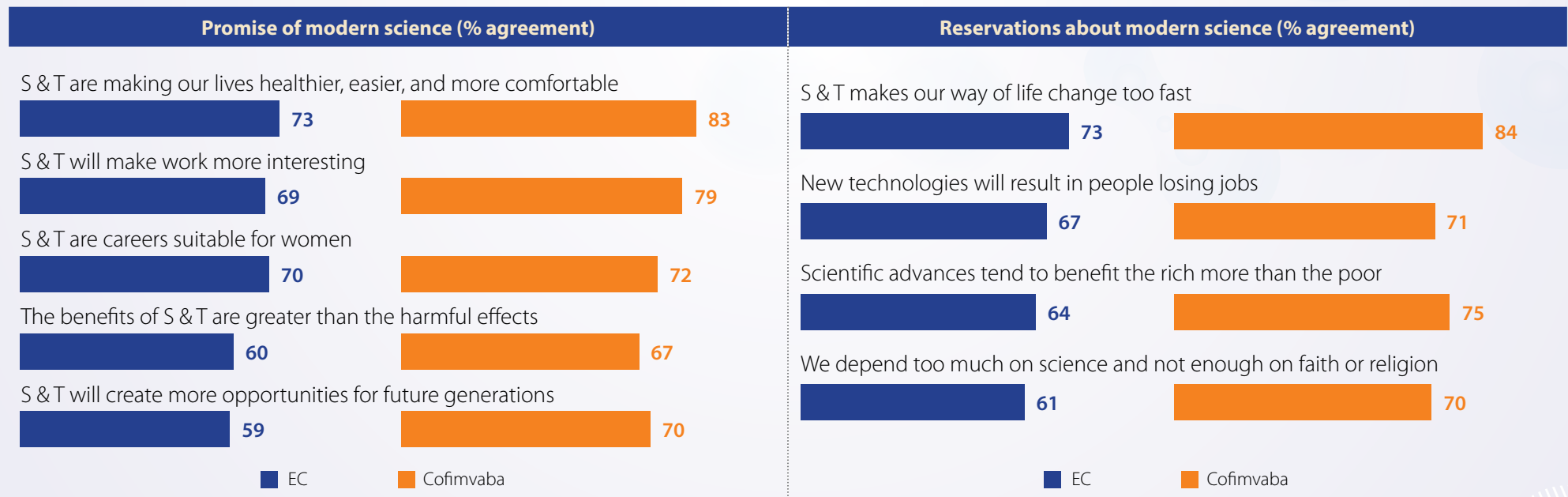
7. Promise and reservation attitudes towards modern and traditional S&T

The Cofimvaba and EC public responded to sets of items about their attitudes of promise (potential benefits) and reservation (concerns, fears and risks) related to modern and traditional science.

7.1 Promise and reservation attitudes about modern S&T

We computed the promise and reservation indices by calculating the average responses for a battery of items. The levels of promise and reservation towards modern S&T were higher for Cofimvaba than the EC province, perhaps because Cofimvaba town has a younger population.

The biggest potential benefits reported were in relation to S&T making daily life healthier, easier and more comfortable and making work more interesting; while the greatest reservations related to S&T making our way of life change too fast. It was noteworthy that seven in ten (70%) of the Cofimvaba public compared to only six in ten (59%) of the EC public felt that S&T will create more opportunities for future generations. Around two-thirds of adults were concerned that technological advancement will result in people losing their jobs (71% for Cofimvaba and 67% for EC), while three quarters (75%) in Cofimvaba compared with two-thirds (64%) in the EC, felt that S&T tended to benefit the rich more than the poor.

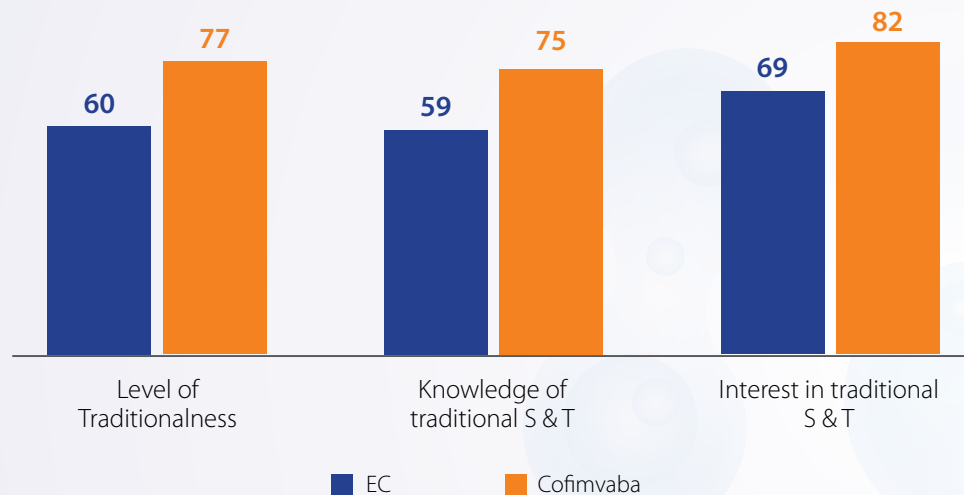


7.2 Promise and reservation attitudes towards traditional S&T

There is growing recognition that community or traditional knowledge, which favour intuitive and holistic approaches, and is passed on from generation to generation, should be valued and promoted (Masogo, 2017).

The public therefore rated their levels of traditionalness, as well as their knowledge of, and interest in, traditional S&T.

Levels of traditionalness and knowledge of, and interest in, traditional S&T (% at least 'somewhat')



Adults in Cofimvaba rated themselves as more traditional, more knowledgeable and more interested in traditional S&T than the EC adults.

Eight in ten Cofimvaba adults (77%), compared to six in ten EC adults (60%), rated themselves as, at least 'somewhat' traditional.

Three-quarters of Cofimvaba adults (75%), compared with six in ten EC adults (59%), rated themselves as knowledgeable about traditional S&T.

Eight in ten Cofimvaba adults (82%), compared with seven in ten EC adults (69%), reported interest in traditional S&T.

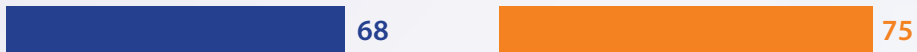
In addition to eliciting the views of the public towards modern science, we asked the Cofimvaba and EC public about their views of promise and reservation towards traditional S&T.

It is reassuring that close to seven in ten EC and Cofimvaba adults saw the value of traditional knowledge to improve small-scale farming and provide solutions to improve the quality of life. When it came to the views about traditional versus modern healthcare, both the EC and Cofimvaba public were more inclined towards modern medicine.

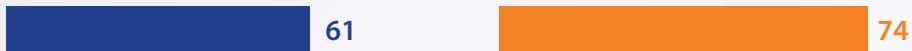
Promise of traditional science (% agreement)

Reservations about traditional science (% agreement)

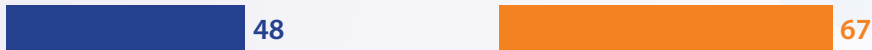
Traditional small-scale farming provides healthy food for many South Africans



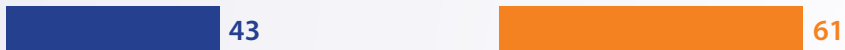
Traditional knowledge provides solutions to improve quality of life



People should visit a traditional healer in times of difficulty



Traditional medicine / home remedies provide better solutions than modern medicine

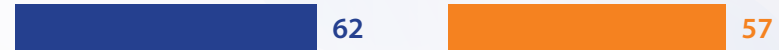


■ EC ■ Cofimvaba

I trust more in modern science than in traditional / cultural practices

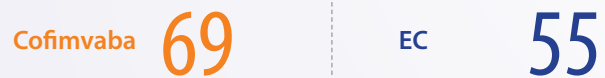


I follow the advice of medical experts over traditional healers / home remedies



■ EC ■ Cofimvaba

▶ Index of promise towards traditional S&T



Index of reservation towards traditional S&T ◀



8. Trust in the work of scientists and science information from institutions

Science and scientists produce knowledge about how to solve societal challenges. For knowledge and advice to be accepted, the public must be able to trust the knowledge produced by scientists, as well as have confidence in the institutions that produce this knowledge.

8.1 Promise and reservation attitudes towards the work of scientists

The public reported their views on several statements categorised as either promise or reservations about the work of scientists.

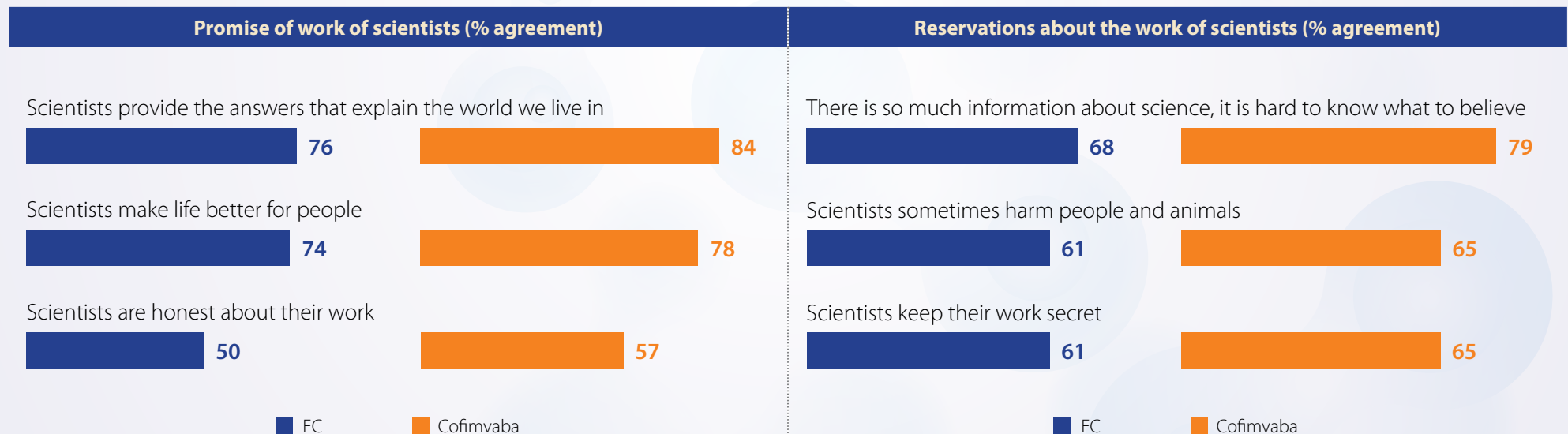
On the one hand, 84% of the Cofimvaba public felt that scientists provide the answers that explain the world we live in, whereas three-quarters (78%) felt that scientists made life better for people. On the other hand, two-thirds of the Cofimvaba public expressed concerns, reporting that scientists sometimes harmed people and animals (65%), as well as keeping their work secret (65%). Around eight in ten Cofimvaba adults (79%) lamented that there was too much information about science which makes it hard to know what to believe, more so than amongst the EC adults (68%).

73% of Cofimvaba adults recognised the promise of the work of scientists, while

70% expressed reservations.

67% of EC adults recognised the promise of scientists while

63% expressed reservations.



8.2 Confidence in information from science organisations

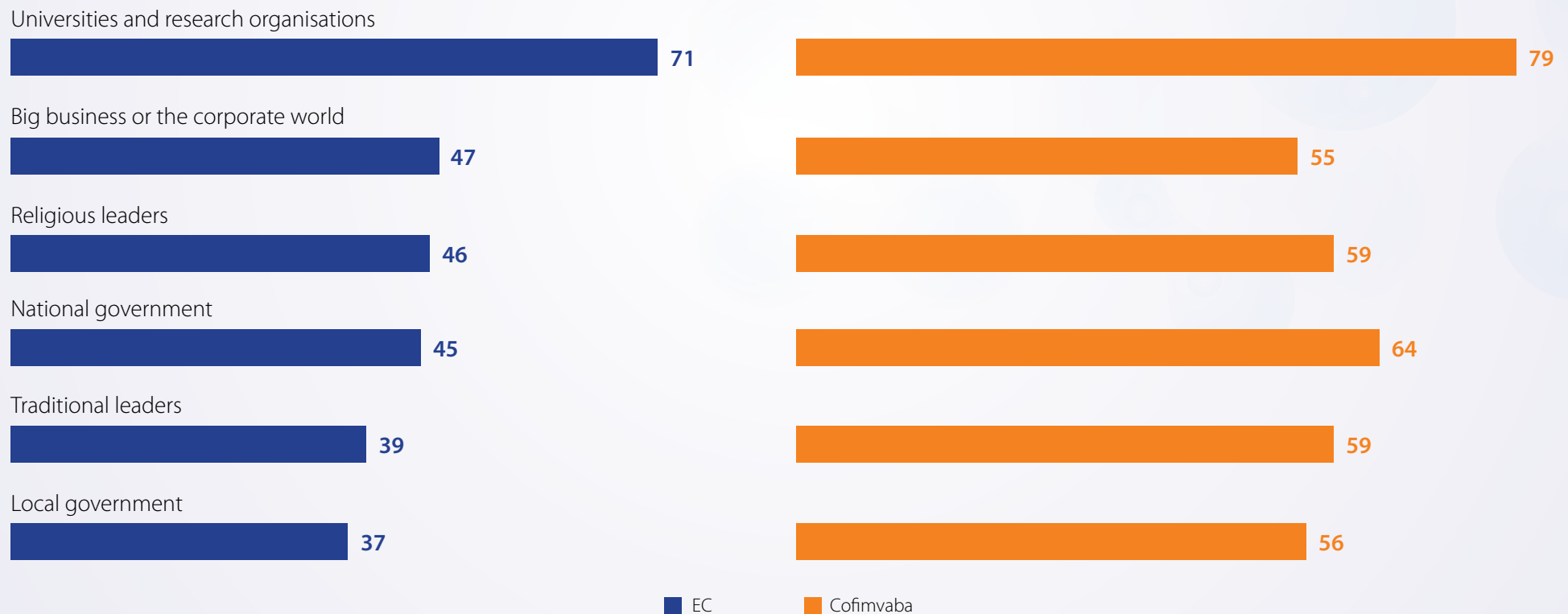
To understand confidence in institutions, we asked the public to rate the trust placed in the S&T information that emerges from these institutions.

In both the Cofimvaba area and EC, lower shares of the public trusted S&T information from non-knowledge producing organisations than from universities

and research organisations. Close to five in ten EC adults trusted S&T information from business/corporate world, religious leaders, and national government, while only four in ten adults trusted information from local government and traditional leaders. The confidence in these institutions was higher for the Cofimvaba public compared to the EC public.



Confidence in S&T information from different institutions (% agreement)



9. Confidence in government's decision-making processes

The South African government is committed to an evidence-based and public participation philosophy in its decision-making processes. Two items in the survey asked about the public's trust in government's evidence-based decision-making (E) and two items asked about their views on government's participatory decision-making processes (PP).

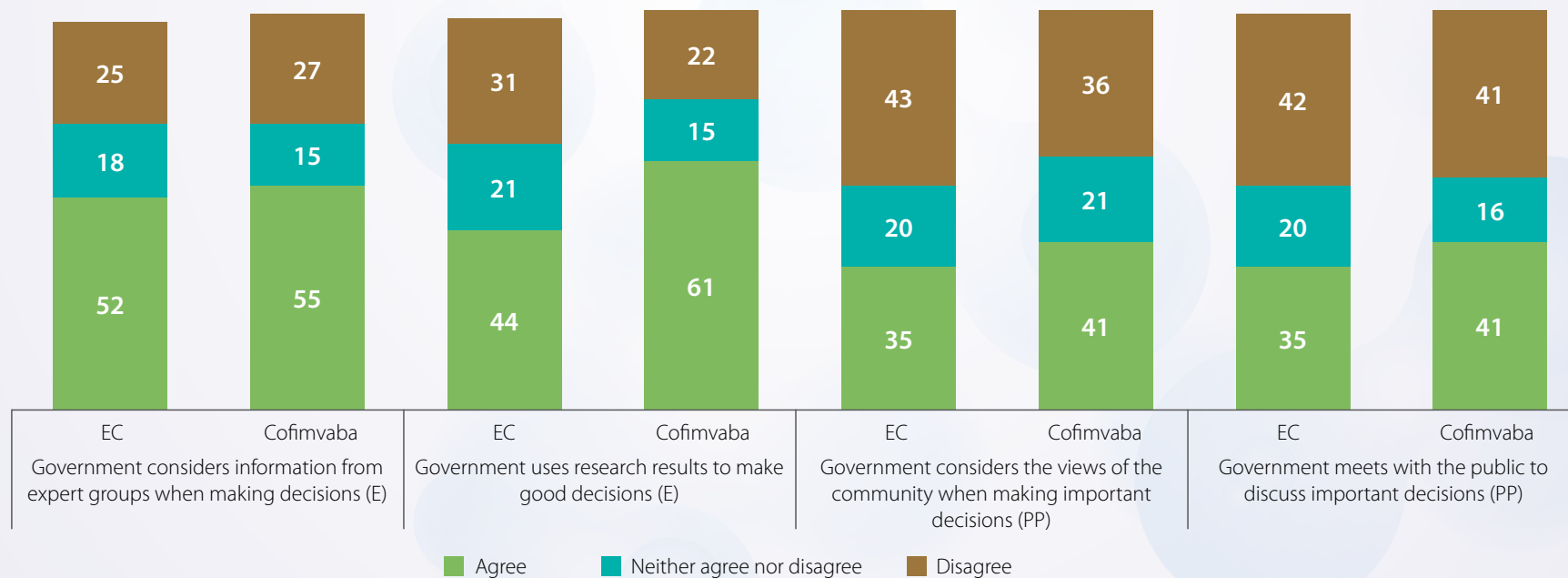
There were low to moderate levels of trust in the way government made decisions. On average, a low four in ten Cofimvaba adults (41%) and around a third of EC adults (35%) agreed that government used a participatory decision-making process. Furthermore, 58% of Cofimvaba adults, in comparison with 48% of EC adults, agreed that government used an evidence-based approach to decision-making.

Overall, there were higher levels of scepticism about government's decision-making in the EC province, compared to the Cofimvaba area. A fifth or less of the Cofimvaba and EC public reported that they neither agreed nor disagreed with the statements.

Index for confidence in government's decision-making processes



Confidence in government's evidence-based (E) and participatory decision-making (PP) processes (% agreement)



10. Views on the transformation of cultures within science organisations

South African organisations are required to: (i) make their work more relevant and responsive to the needs of the public (RR), and (ii) have workforces that are transformed and more representative of the population group and gender demographics of the country (T). We asked five questions about these two dimensions relating to the transformation of cultures within science organisations.

Three quarters of Cofimvaba adults (75%) and 58% of EC adults agreed that scientists are representative of the population group demographics of the country, whereas 57% of Cofimvaba and 45% of EC adults felt that women are well-represented in

scientific jobs. Furthermore, 66% of the Cofimvaba public and 49% of the EC public agreed that the research being conducted was inclusive of traditional knowledge, as well as relevant and responsive to the needs of the public.

However, the Cofimvaba and EC public had different views about the transformation of cultures within science organisations. Adults in Cofimvaba were more optimistic about transformation than adults in the EC.

Transformation of cultures within science organisations (% agreement)

Science organisations produce relevant knowledge about daily life in South Africa (RR)



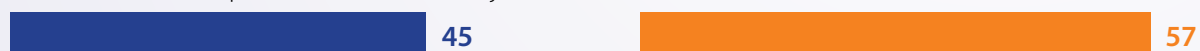
Scientists are representative of all racial groups in South Africa (T)



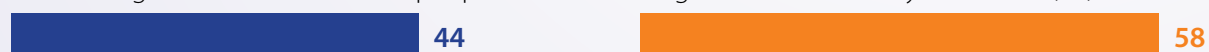
Science organisations include traditional knowledge in their work (RR)



Women are well represented in scientific jobs (T)



Science organisations listen to the people before deciding what research they should do (RR)



■ EC ■ Cofimvaba

Index for transformation of cultures within science organisations



11. Access to and trust in scientific information

A healthy relationship between science and society depends on the sharing of S&T information and ensuring that the public can access and trust this information. The EC and Cofimvaba public's access to digital devices and the internet plays an important role in enabling access to S&T information.

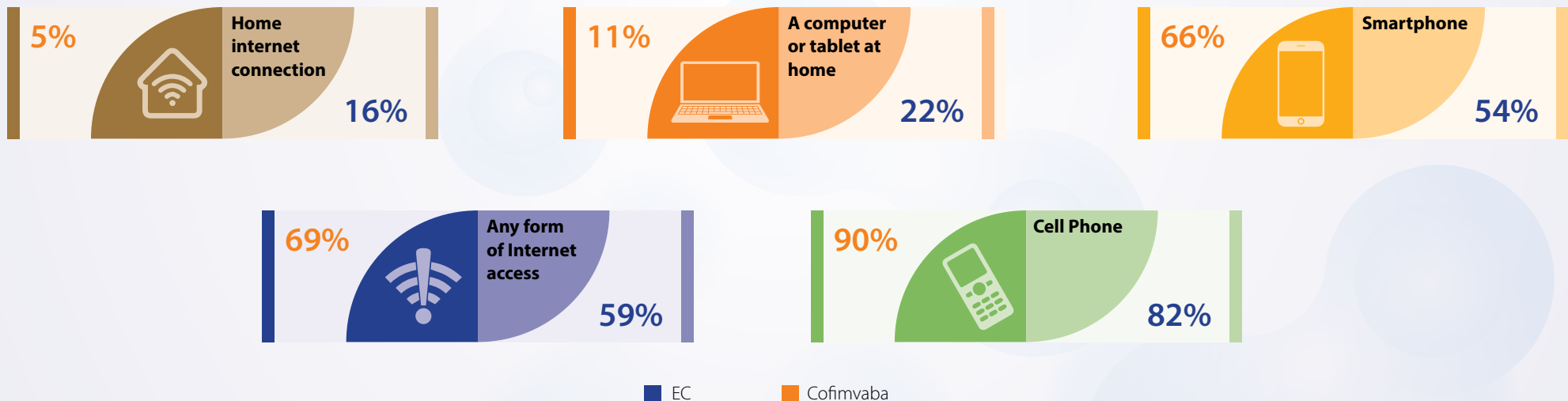
In this section, we report on the availability of digital assets and internet access, frequency and patterns of internet usage, exposure to and consumption of S&T information, as well as trust in news content and information sources.

Cofimvaba had slightly higher cell phone ownership at 90% (EC was 82%), while 69% had some form of internet access (EC was 59%). Two-thirds of the Cofimvaba public and just over half of the EC public (54%) reported having access to a smartphone.

11.1 Availability of digital assets and internet access

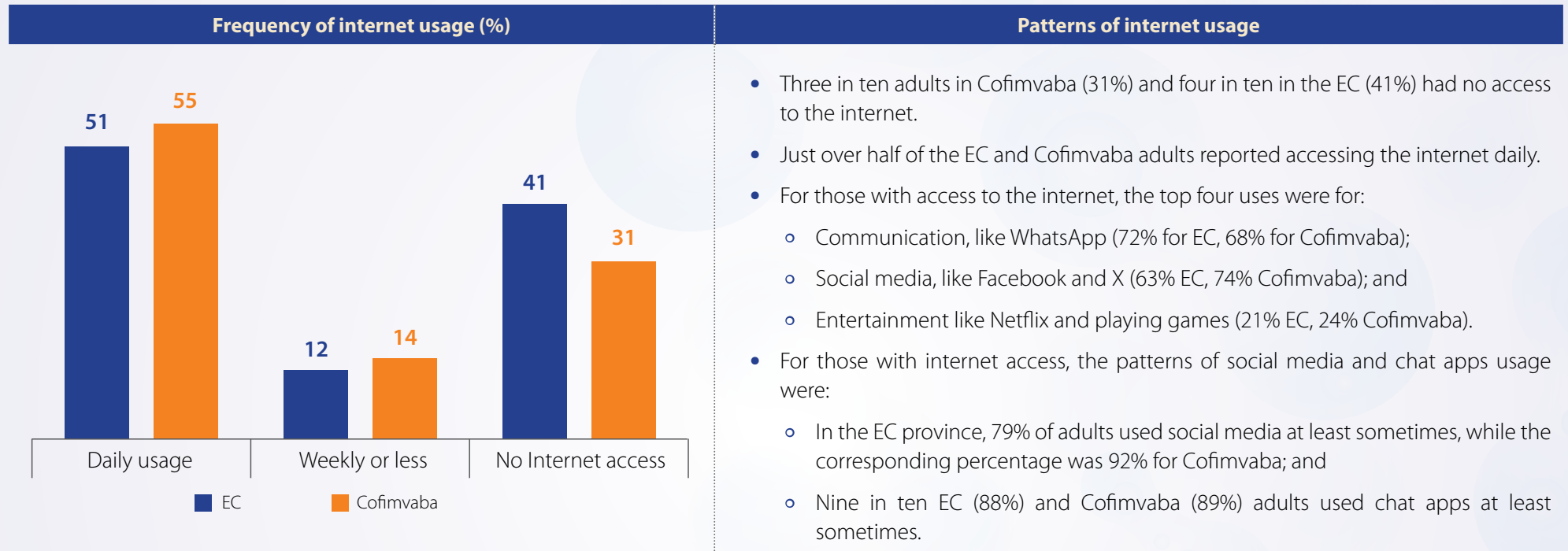
In 2022, the digital and internet access in the EC Cofimvaba town and EC was as follows.

Access to digital devices and the internet (%)



11.2 Frequency and patterns of internet usage

The public reported on how often they accessed the internet and what they used the internet for.



3 in every 10 adults in Cofimvaba



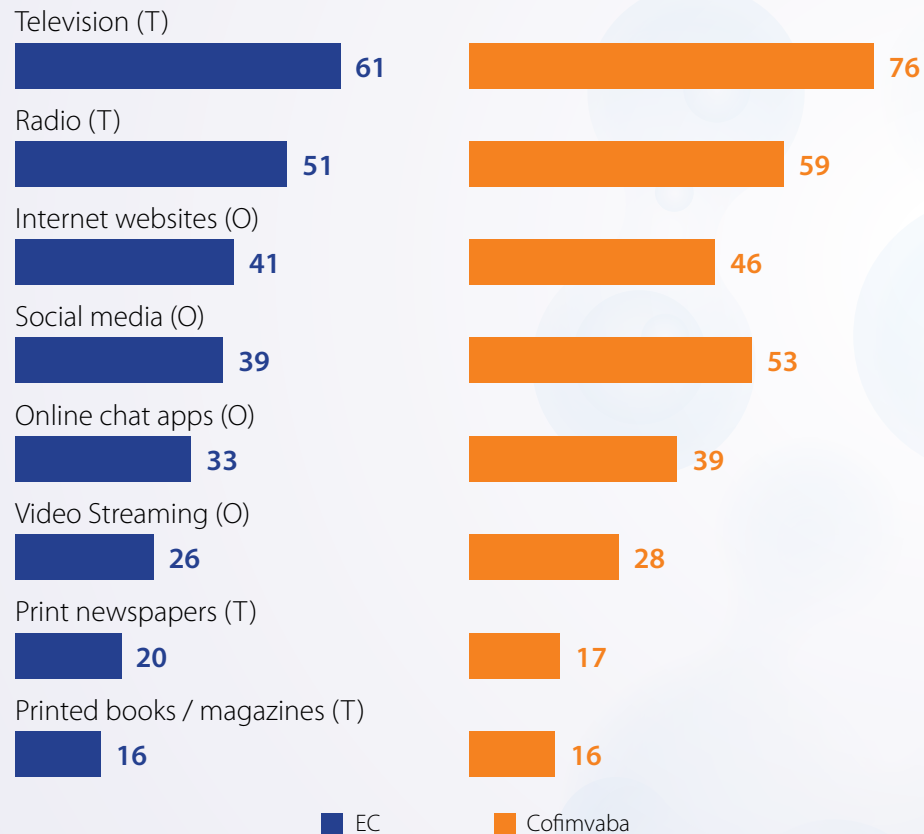
4 in every 10 adults in the EC

11.3 Exposure to, and consumption of, S&T information

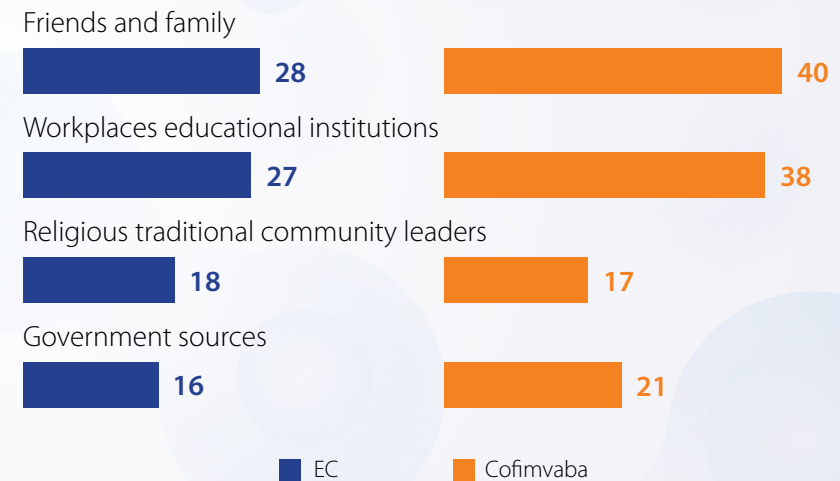
Information is key to decision-making and could subsequently influence actions and behaviours. Both the Cofimvaba and EC public reported being exposed to (receiving) and consuming (actively accessing) moderate amounts of S&T information. Four in ten Cofimvaba adults (42%) and half of the EC adults (50%) reported that the S&T information they received was 'too little' or 'none at all'.

The following two sets of figures report: (i) the sources from which the public received S&T information, and (ii) the most popular ways the public actively sought S&T news (consumption).

S&T news received from traditional (T) and online (O) sources (% at least weekly)



S&T news received from traditional social networks sources (% at least weekly)

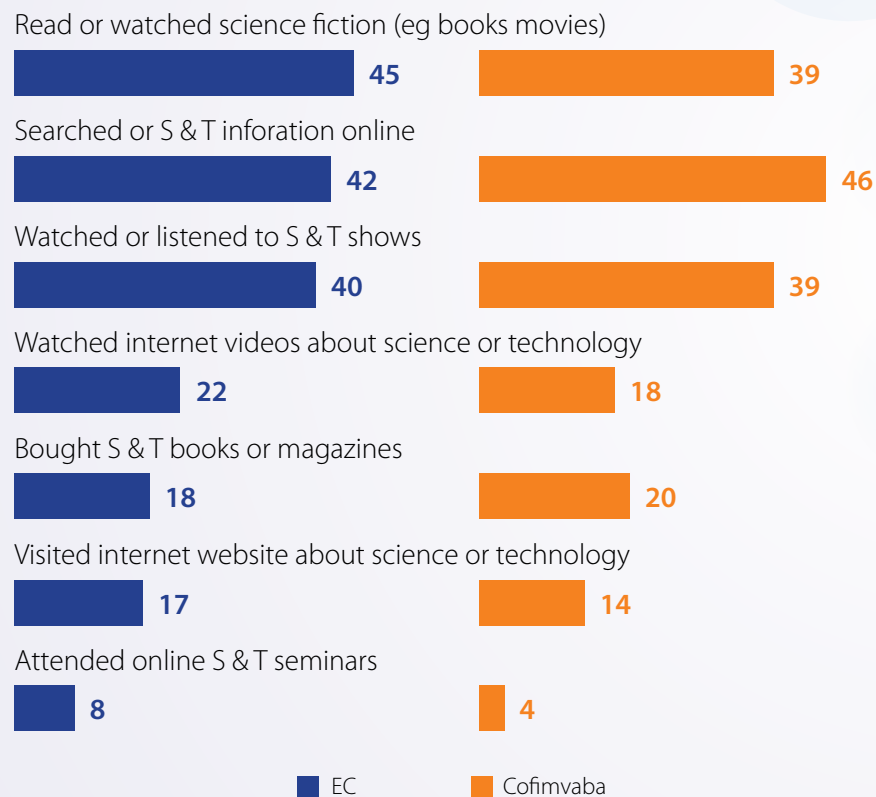


In both the EC and Cofimvaba, the most popular media sources for S&T information were television and radio, while internet websites and social media were the most common online sources. Family and friend networks, as well as chat apps, were also popular sources of S&T information. The least popular sources of information were print newspapers, printed books/magazines, and government and religious, traditional and community leaders.

Across the 12 sources mentioned, the average **index score for S&T news received**, at least weekly, was 38 for the Cofimvaba public and 31 for the EC public

The following graph reports the consumption of S&T information. Close to half the Cofimvaba (45%) adults and a slightly lower four in ten EC adults (38%) reported that they actively read, watched or listened (consumption) to S&T information, at least a few times a week.

Consumption of S&T information (% at least sometimes)



The most common method of actively accessing S&T information was through reading or watching science fiction, followed by searching for S&T information online, and watching or listening to S&T shows.

The least popular ways of accessing S&T information were through books and magazines, visiting S&T websites and attending online S&T seminars.

Overall, adults in the EC and Cofimvaba sought similar amounts of S&T information. Across the seven activities listed, the average score for accessing or consuming S&T information, at least sometimes, was 27 for the EC and 26 for Cofimvaba adults.

Index for consumption of S&T information

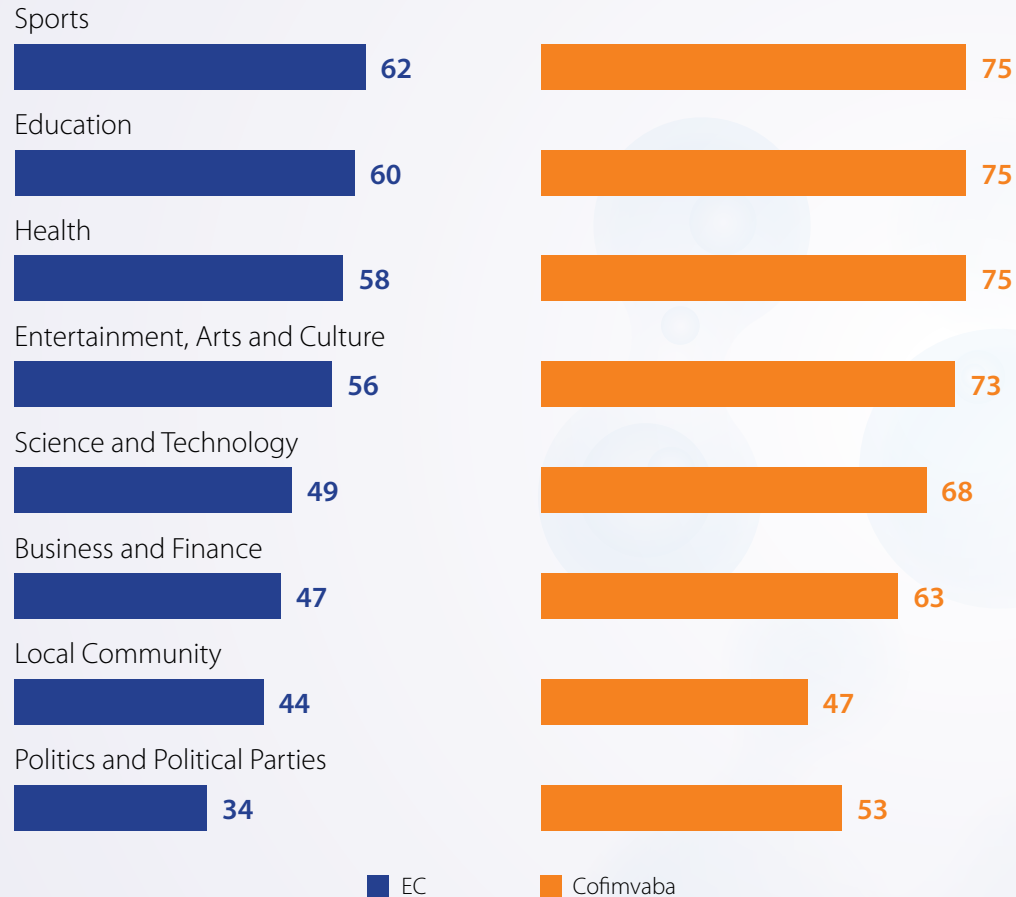


27 for the EC **26** for Cofimvaba

11.4 Trust in news content and information sources

Six in ten adults in Cofimvaba (61%) and five in ten adults in the EC (52%) were satisfied with the way the media reported S&T news. In this section we report on: (i) trust in the content areas examined, and (ii) trust in S&T information sources.

Trust in news content (%)

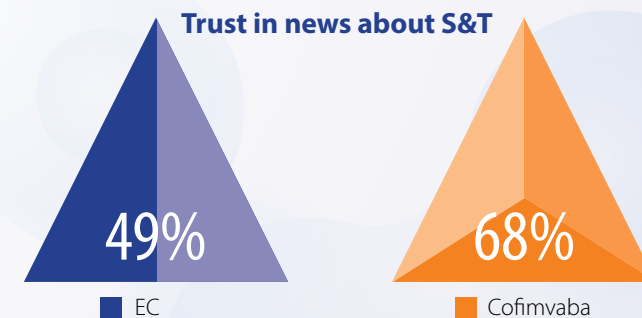


The Cofimvaba and EC public had higher levels of trust in news about:

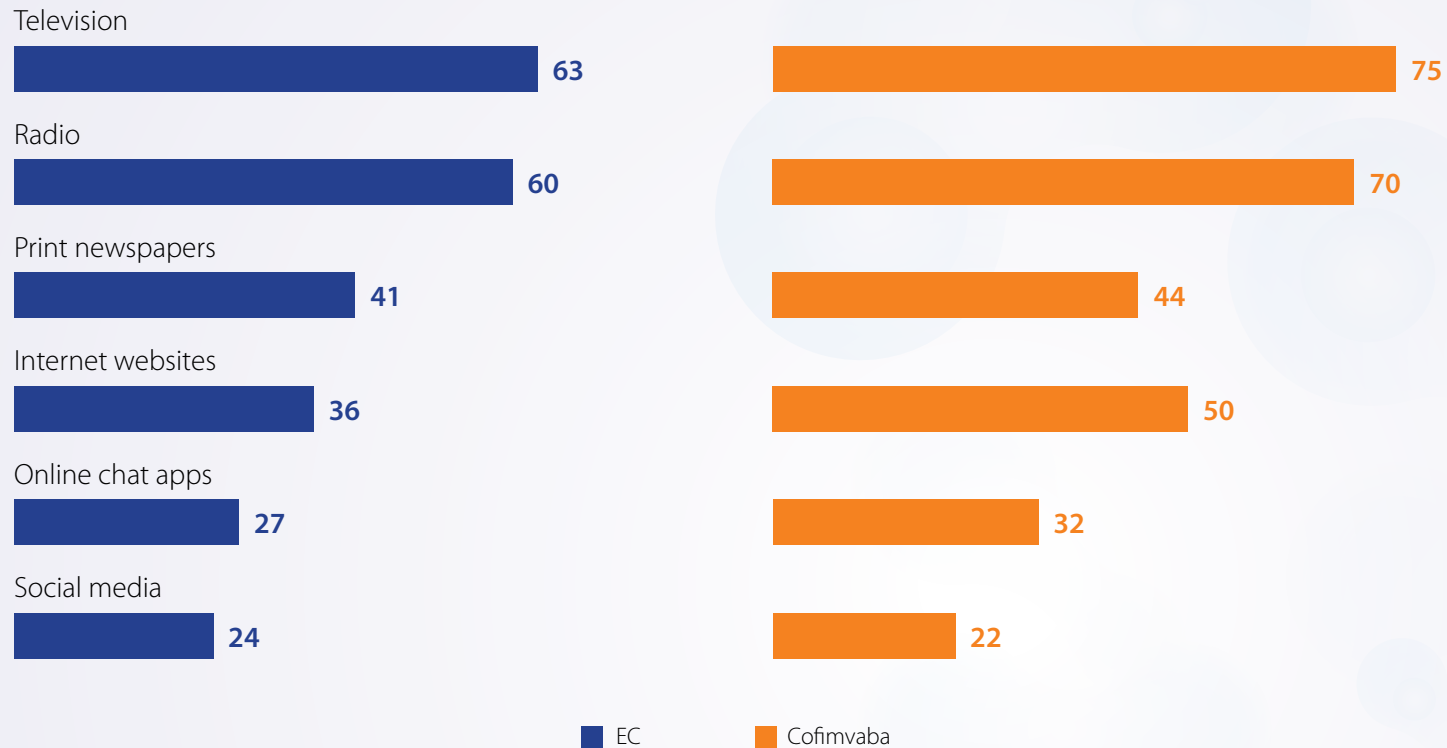
- Sports
- Education
- Health

The Cofimvaba and EC public least trusted the news about:

- Local community
- Politics and political parties



Trust in S&T information sources (%)



Index of trust of information sources



49 for Cofimvaba

42 for EC

The most trusted news sources were television and radio, with higher levels of trust reported by Cofimvaba adults compared to EC adults.

There was lower trust in information received from online sources such as internet websites, chat apps and social media.



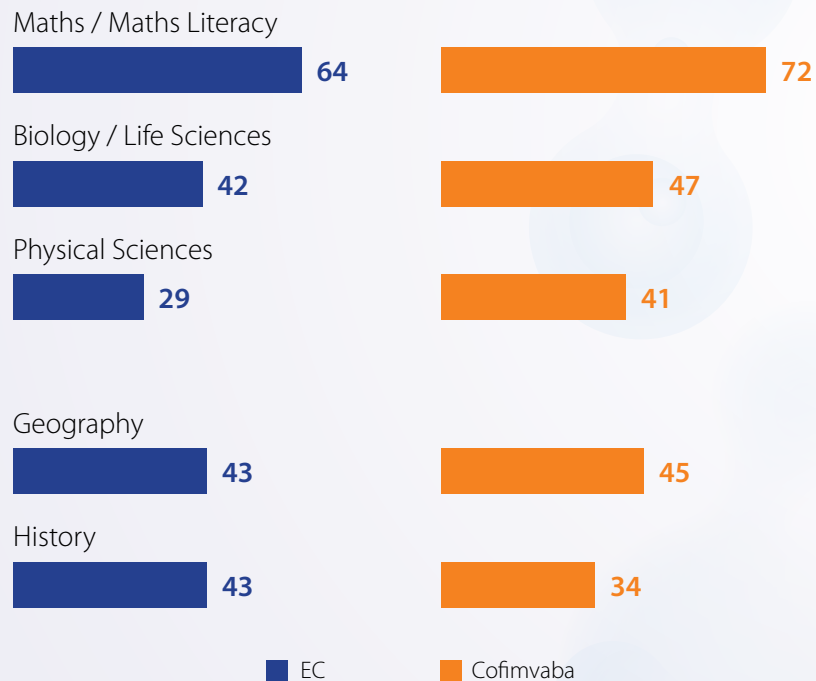
12. Science engagement outcomes: Activities and behaviours

Survey respondents were asked whether they had participated in various S&T-related activities or events, as this serves as an expression of their science engagement behaviours. The activities or events were categorised into five broad types of engagements: 1) academic engagement, 2) attraction-based engagement, 3) community-based engagement, 4) information sharing engagement, and 5) personal engagement with online apps.

12.1 Academic engagement: Exposure to formal secondary school STEM and Social Science knowledge

Science knowledge and attitudes towards science are interrelated. Three-quarters of the Cofimvaba (77%) and EC (75%) public reported that they had remained in secondary school after Grade 9. The survey respondents reported the STEM subjects they had selected to study at school post-Grade 9. As a point of comparison, we also asked about participation in social sciences and humanities (SSH) subjects.

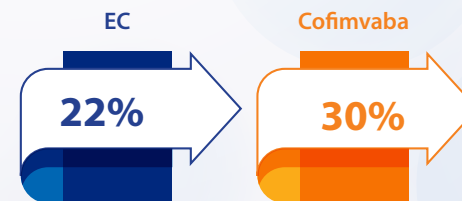
Exposure to STEM and SSH school subjects post grade 9 (%)



Adults that had no exposure to any school STEM subjects after Grade 9



Adults that had high exposure, taking all three STEM subjects



Close to half of the EC and Cofimvaba adults (46%) had no exposure to either history or geography after Grade 9, while close to a third of EC adults (32%) and a quarter of Cofimvaba adults (25%) pursued both history and geography as school subjects.

12.2 Attraction-based engagements: Availability of, and attendance at, S&T sites and events

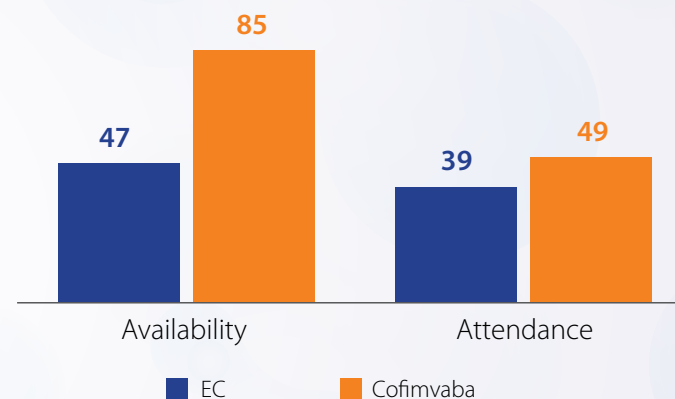
Event-based engagements are dependent on activities being conducted near where one resides. We asked the public whether a set of S&T-related sites and events were available close to their place of residence and whether they had attended any of these sites or events.

S&T Centres or Exhibitions were the most commonly available S&T site in Cofimvaba (74%), which is expected due to the presence of the ANSSC; however, the corresponding figure for the EC was only 4%. Public libraries were the next most commonly available S&T site for Cofimvaba (65%) and the EC (41%) public.

Availability of, and attendance of S&T sites and events (%)

Availability and attendance (% at least one site/event)

Science engagement space	Available in area		Attended	
	Cofimvaba	EC	Cofimvaba	EC
Public library	65	41	43	26
Museum	5	9	21	24
Public science activities e.g. community clean-ups, nature walks	6	8	7	12
S&T Centre or Exhibitions	74	4	21	12
Botanical gardens, nature or game reserve, zoo, aquarium	4	6	19	22



- We created an additive **Index of the number of S&T places available close to where one resides** as well as an **Index of attendance at S&T sites**.
- 85% of Cofimvaba adults (largely due to the library and science centre in the area) compared with half the EC adults (47%) had at least one public engagement site or event close to where they lived. Conversely, only 7% of the Cofimvaba public and 6% of the EC public reported having between three to five sites/ events in close proximity.
- Five in ten Cofimvaba adults compared with four in ten EC adults had attended at least one S&T site or event.
- It is noteworthy that although the availability of science centres and libraries was high, there was lower attendance, suggesting that these facilities are being underutilised by the public.

12.3 Community-based S&T engagement

As observed in the previous table, the availability and participation in public science activities was very low, with just 6% of Cofimvaba and 8% of EC adults reporting the availability of these activities.

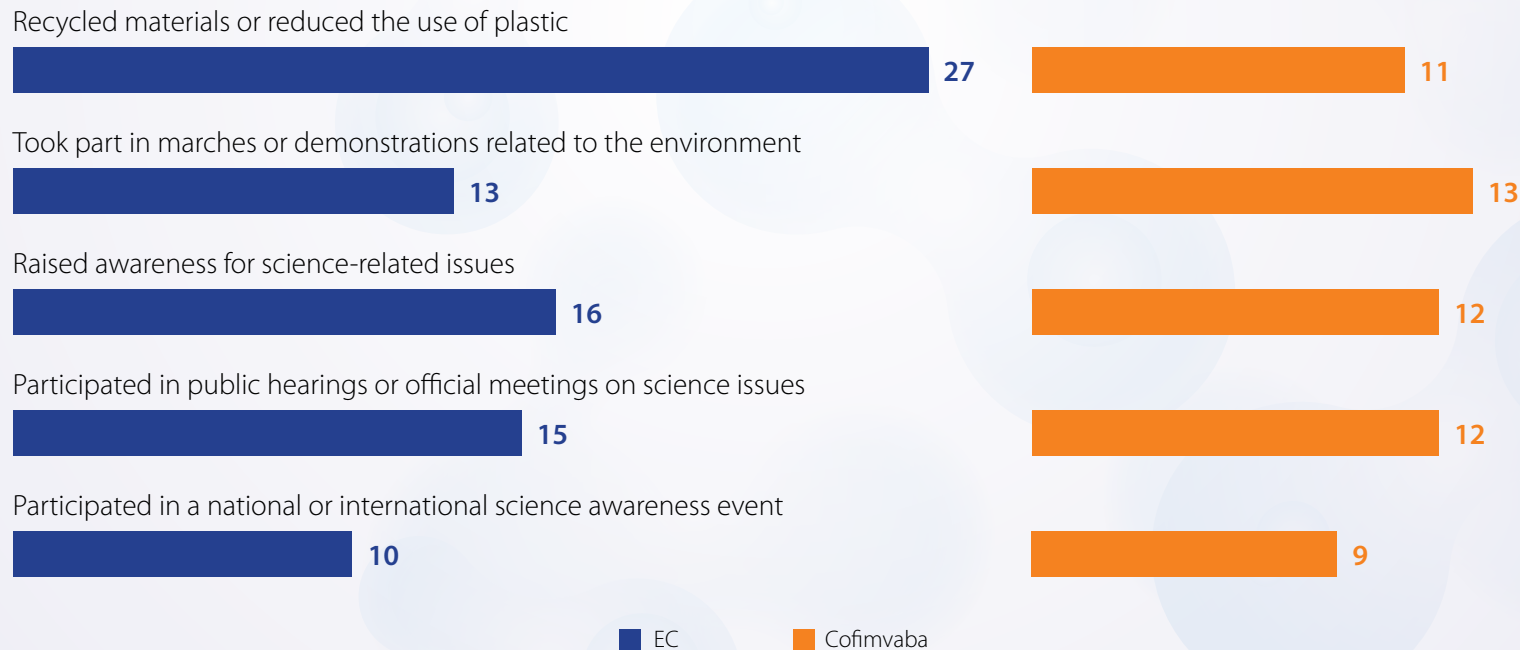
There was generally low participation in the community-based activities listed below for both Cofimvaba and EC adults, with less than 16% of adults participating in most activities. The one exception was for recycling materials or reducing plastic usage, where a quarter of the EC public (27%) reported participation.

The **Index of community-based engagement** was computed by calculating the average score for the five activities. The index score was 11 for Cofimvaba and 16 for the EC. This highlights a need for greater involvement in science activities for the betterment of communities.

Index of community-based S&T engagement



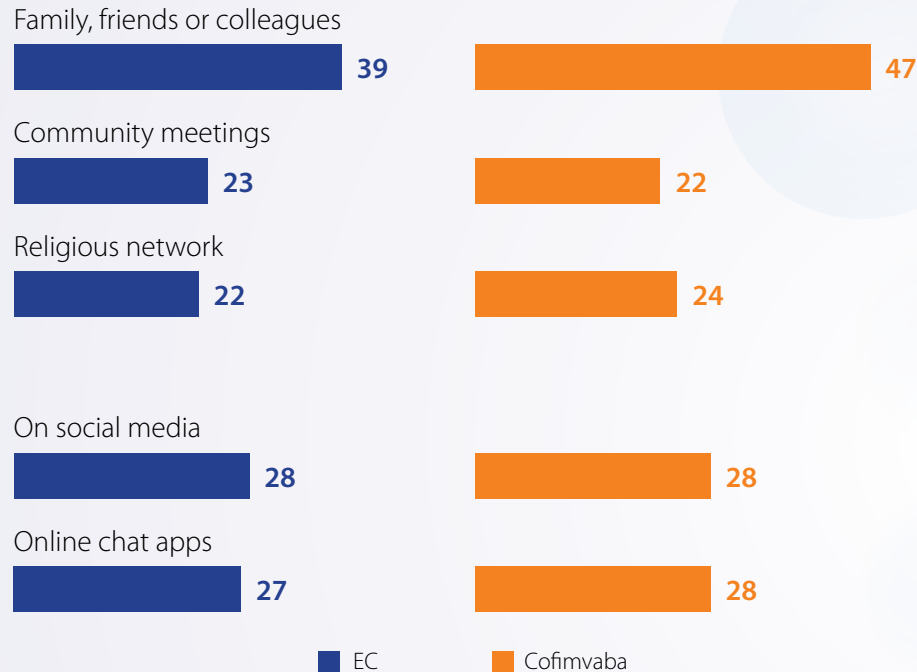
Involvement in community-based S&T activities (% at least sometimes)



12.4 S&T Information sharing engagement

In addition to receiving S&T information, the public also shared information. There were low amounts of information sharing by both the Cofimvaba and EC public.

S&T information sharing: who with and how (% at least sometimes)



The public most frequently shared S&T information with family, friends or colleagues (i.e. those in closest proximity): 47% for Cofimvaba and 39% for EC.

The **index of S&T information sharing** was computed by averaging the three items relating to who the public shared S&T information with: 30 for Cofimvaba and 28 for EC.

Three in ten adults in both Cofimvaba and the EC shared information using social media as well as chat apps.

Index of S&T information sharing

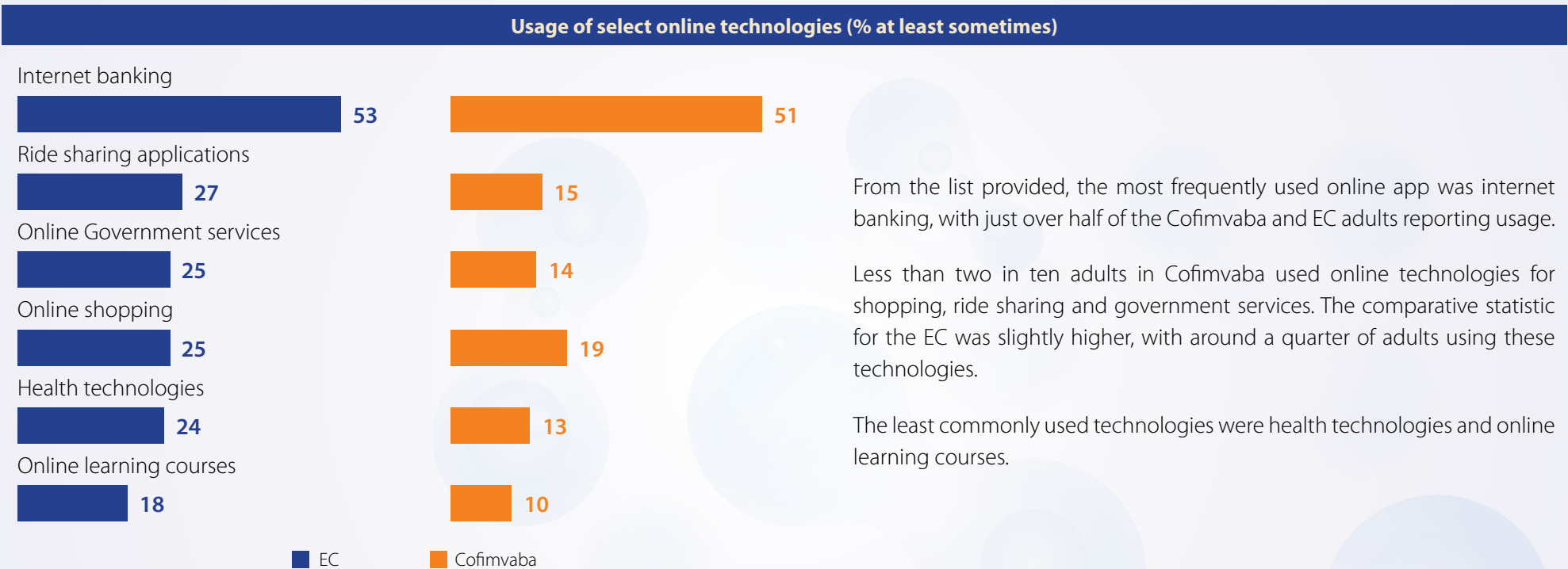


30 for Cofimvaba

28 for Eastern Cape

12.5 Personal engagement with select online apps

We asked the public about their use of select online apps. The use of online apps requires access to the internet and as we showed in the [South African Public Relationship with Science: 2022 Survey Results](#), the characteristics of those who use these apps more frequently were younger, with higher educational attainment and from higher SES homes. There was generally low usage of these apps in Cofimvaba and the EC.



From the list provided, the most frequently used online app was internet banking, with just over half of the Cofimvaba and EC adults reporting usage.

Less than two in ten adults in Cofimvaba used online technologies for shopping, ride sharing and government services. The comparative statistic for the EC was slightly higher, with around a quarter of adults using these technologies.

The least commonly used technologies were health technologies and online learning courses.



13. Views of pride, promise, and priorities about the national system of innovation

A science-aware society is one that is underpinned by values which embrace and support the national system of innovation (NSI). To obtain measures of how the Cofimvaba and EC public value and support the NSI, we surveyed their pride in, promise of, and priorities for S&T.

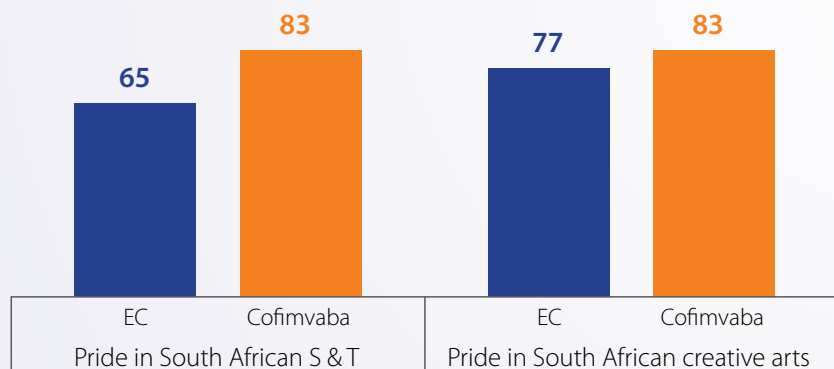
13.1 Pride in South Africa's S&T and creative arts achievements




The Cofimvaba and EC public reported on their pride in South African S&T and creative arts achievements. Eight in ten adults in Cofimvaba (83%) compared to two-thirds in the EC (65%) were, at least 'quite', proud of South African S&T achievements. In comparison, eight in ten Cofimvaba adults (83%) and three-quarters of EC adults (77%) were proud of its creative arts achievements.

While South Africans were proud of the S&T achievements, they were realistic about these achievements compared with other regions of the world, with over seven in ten Cofimvaba and EC adults agreeing that South African S&T achievements were not better than those in Europe, North America and Asia. Six in ten adults from Cofimvaba and EC felt that South African S&T achievements were, however, better than other parts of Africa.

The **index of South Africa being better than other world regions** was computed, with a result of 37 for Cofimvaba and 34 for the EC.

Pride in South African S&T and creative arts achievements (% at least 'quite') **How do South African S&T achievements compare with other world regions? (% agreed)**



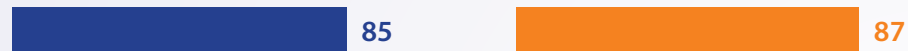
South Africa is better than.....	Cofimvaba	EC
 other parts of Africa	64	61
 Europe and North America	30	24
 Asian countries	16	18

13.2 Promise of S&T skills for young people

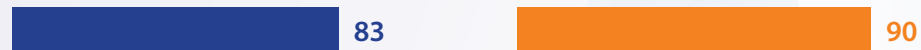
The SAPRS survey estimated that two thirds of adults in Cofimvaba (67%) and a third of adults in the EC and were between the ages of 16 and 34 years old. The youth are encouraged to acquire S&T skills, for both their personal development, as well as to participate in the modern labour market. The public provided their views of the promise of S&T skills for young people.

Promise of S&T skills for young people (% agreement)

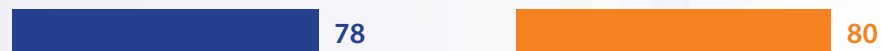
Young people should be encouraged to learn about S & T



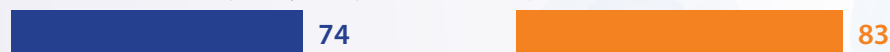
Digital and computer skills are becoming more important for young people



S & T prepare young people to respond to challenges in local communities



S & T qualification gives young people more job options

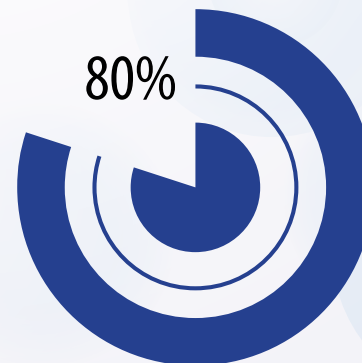


■ EC ■ Cofimvaba

The Cofimvaba and EC public rated the promise of S&T skills for young people highly, with at least three-quarters of adults agreeing with each of the statements.

These high positive views of promise send a positive message to young people about the importance and value of S&T skills.

Index of promise of S&T skills for young people

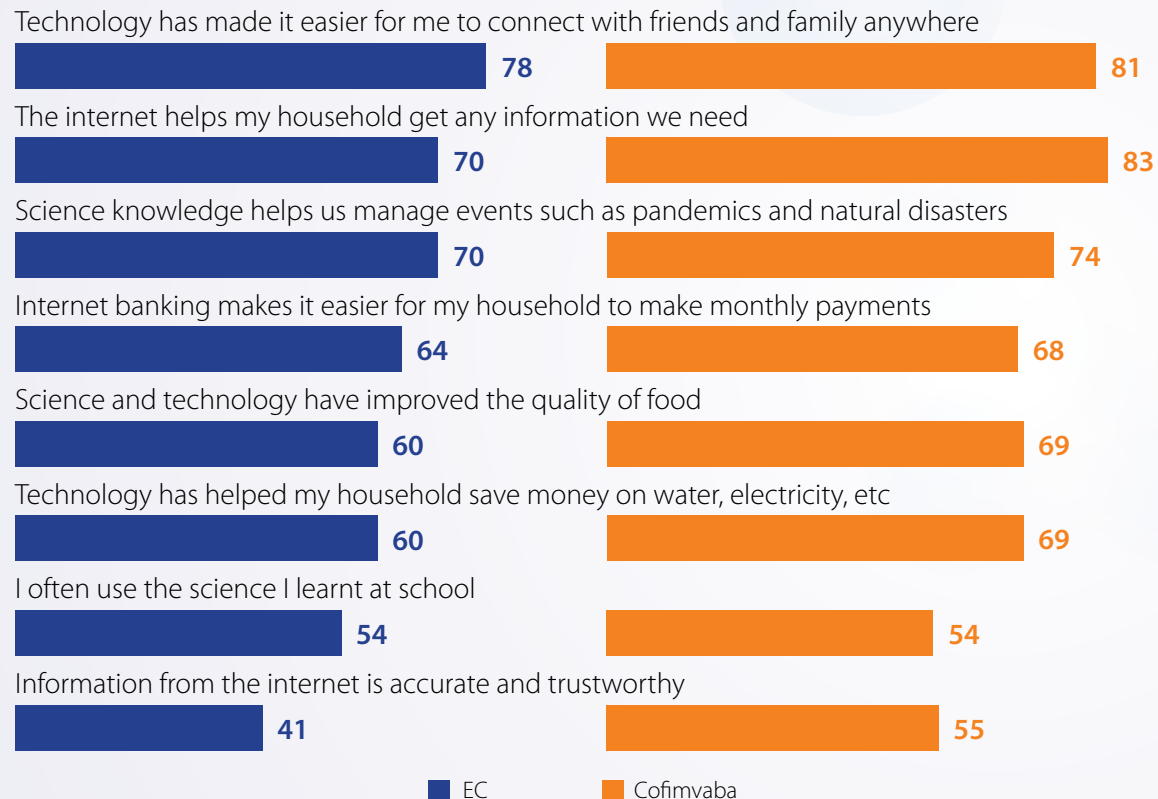


13.3 Value of S&T experiences in daily life

S&T plays an important role in everyday lives. We are more likely to value something if we consider it important in our lives. There were varied levels of agreement to the set of statements about the value of S&T experiences included in the survey.

Adults in Cofimvaba valued S&T experiences slightly more than those in the EC, with the **index of valuing S&T experiences in daily life** being 69 for the Cofimvaba public and 62 for the EC public.

Value of S&T experiences in daily life (% agreement)



Most of the public recognised the utility of S&T for daily activities:

- Over three-quarters of Cofimvaba and EC adults agreed that technology made it easier to connect with family and friends
- Just over six in ten adults valued science knowledge in managing pandemics and natural disasters, as well as improving the quality of food
- The internet was appreciated for providing access to household information and making banking easier.
- While valuing the internet, only about half of the public considered information from the internet as accurate and trustworthy.
- Disappointingly, only half of the Cofimvaba and EC adults claimed they used the science learnt at school.

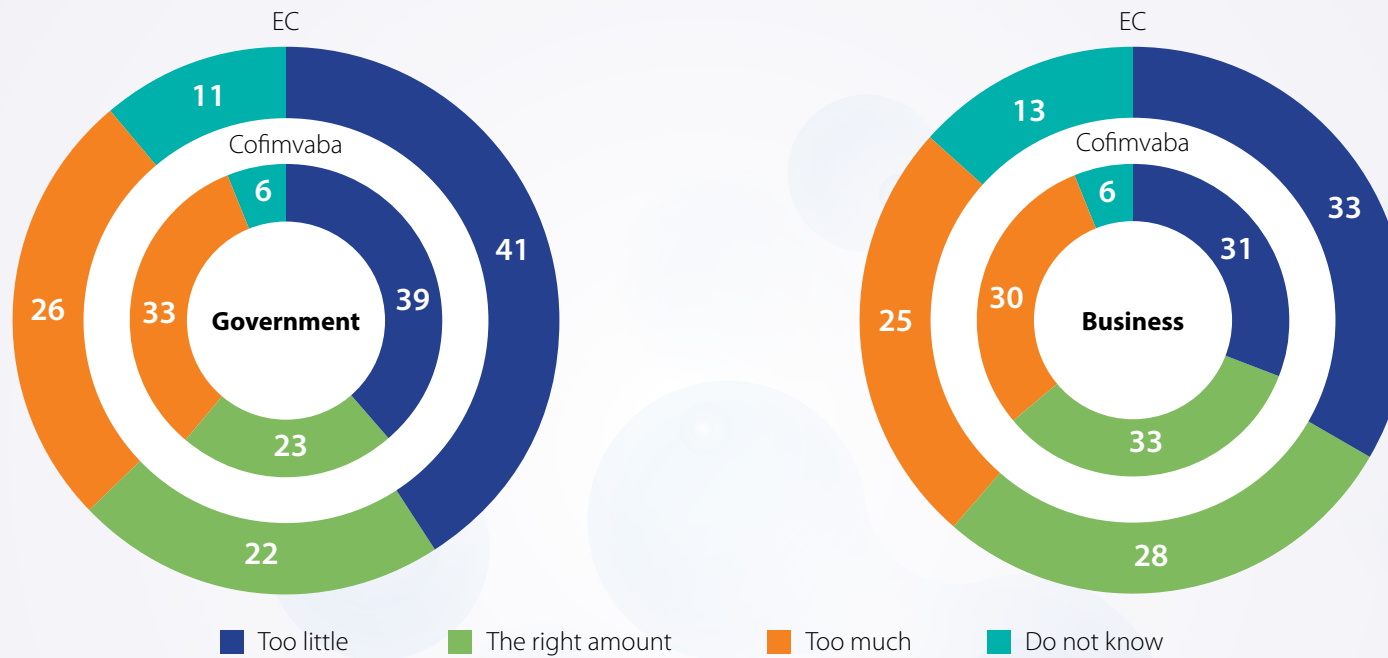
Index of valuing S&T experiences in daily life

69 for Cofimvaba and 62 for the EC

13.4 Public support for R&D spending

The public's views on the investments in research and development (R&D) can give an indication to government on how the S&T budget could be allocated.

Spending on S&T-related R&D (%)

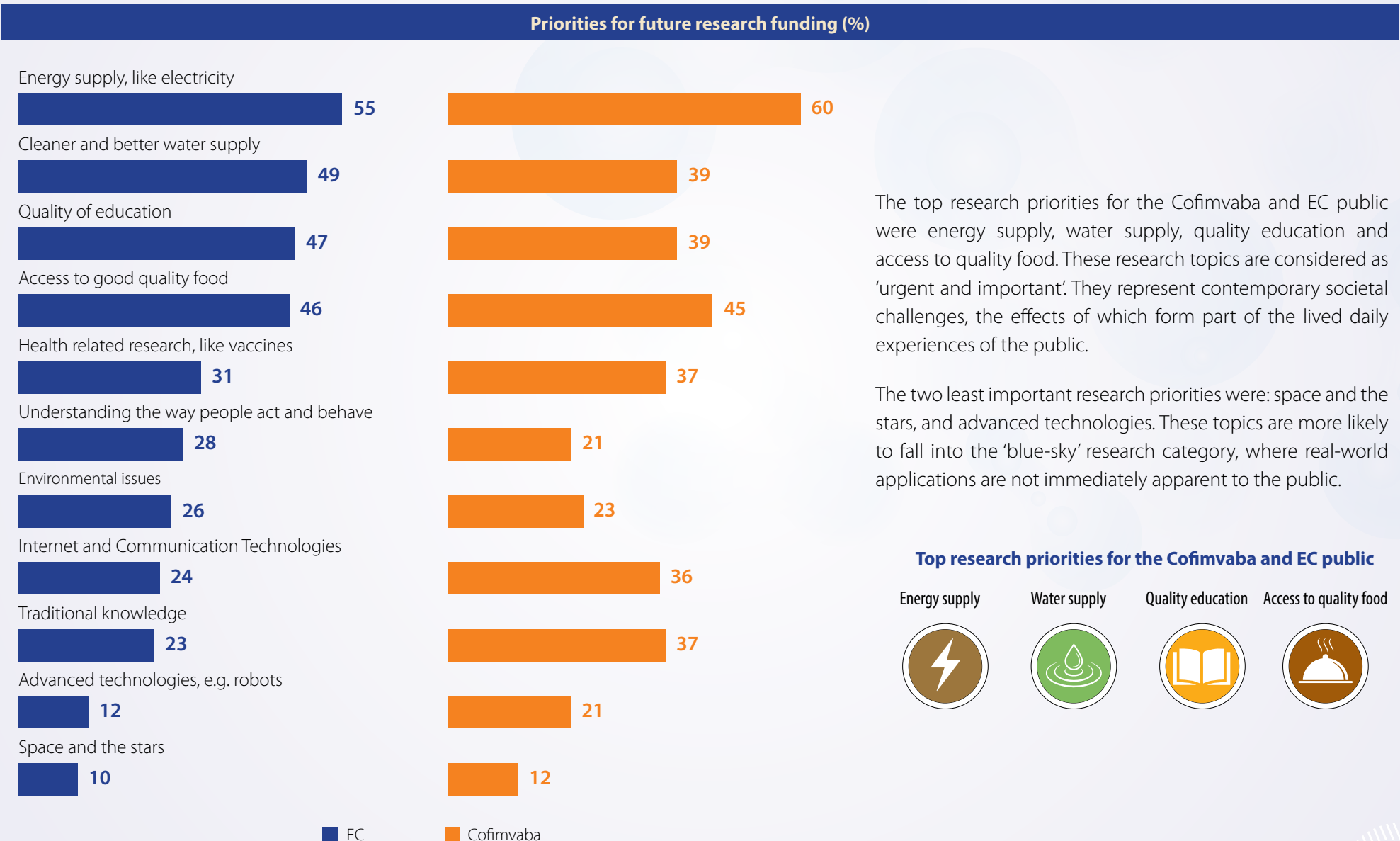


Six in ten of the Cofimvaba and EC adults were of the view that current spending by government and big business on R&D in S&T should be maintained or increased.

This provides an important signal for the allocation of R&D spending.

13.5 Research priorities for South Africa

From the list of contemporary S&T priority areas, the Cofimvaba and EC public selected the four research areas that they felt the government should continue to fund.



The top research priorities for the Cofimvaba and EC public were energy supply, water supply, quality education and access to quality food. These research topics are considered as 'urgent and important'. They represent contemporary societal challenges, the effects of which form part of the lived daily experiences of the public.

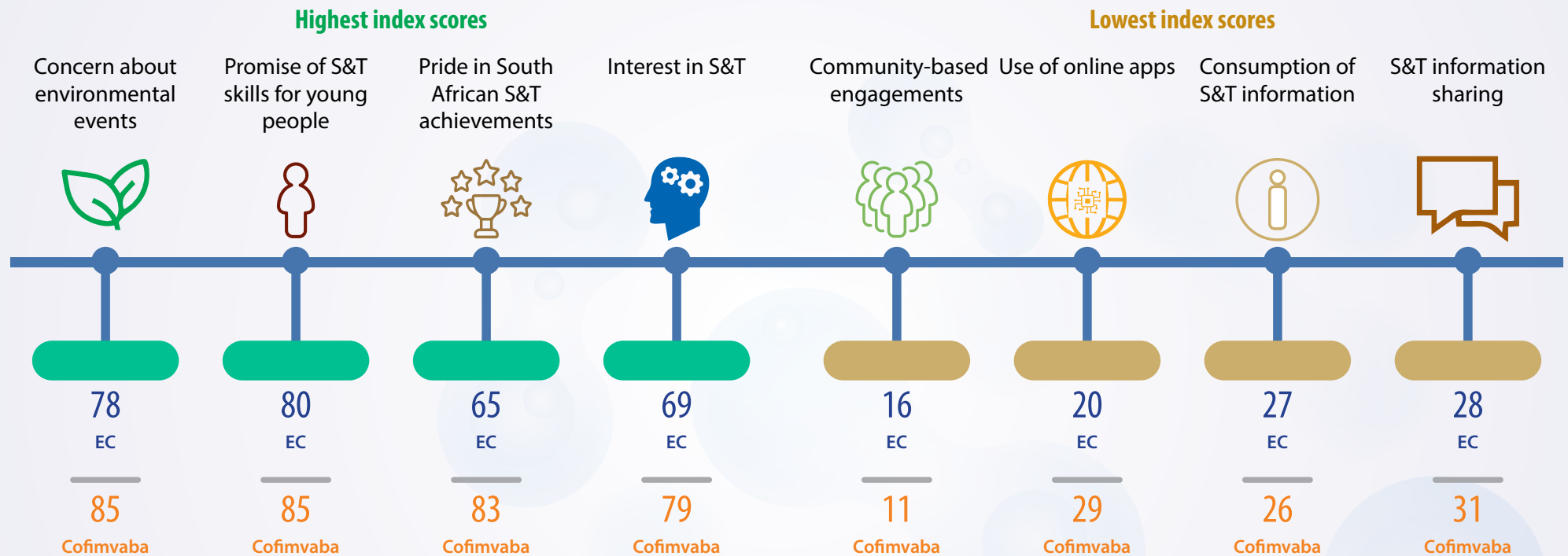
The two least important research priorities were: space and the stars, and advanced technologies. These topics are more likely to fall into the 'blue-sky' research category, where real-world applications are not immediately apparent to the public.

Top research priorities for the Cofimvaba and EC public



14. The fingerprint of the EC and the Cofimvaba public relationship with science

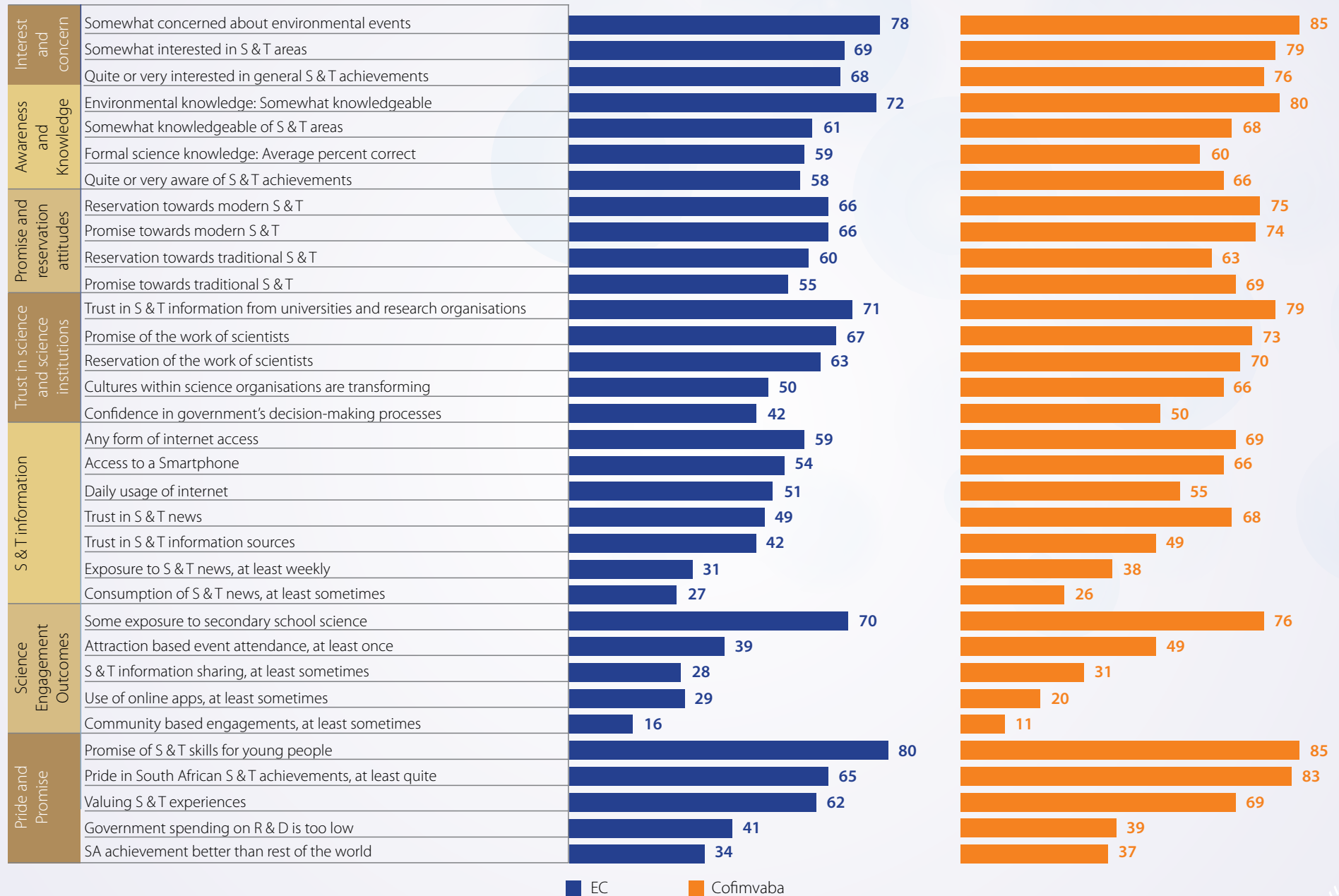
For each of the 33 identified sub-indicator measures¹, we computed the index score (out of 100). These measures were made up of either single or multiple items. For the single item measures, we report the average score, while for the multiple item measures, we created a simple index score by computing the average score (out of 100) using all items that constituted the index.



We then created the unique fingerprint for the Cofimvaba and EC public relationship with science by plotting the index scores for each measure. This captures, in a simple way, the diversity of the public's science knowledge, attitudes and engagements.

¹ The South African fingerprint reports on 27 measures. For the Cofimvaba special sample, we included additional measures, with a total of 33 measures.

The Cofimvaba town and EC fingerprint of the public relationship with science



15. Key findings and recommendations for Cofimvaba and the EC province

- 1. There are differences in the levels of science knowledge, attitudes and engagements at the national, provincial and local levels:** For most measures, Cofimvaba adults scored higher than Eastern Cape adults. At this point we are unable to explain these differences. Cofimvaba has a youthful population, and interventions should be primarily targeted to this group.
- 2. Champion the promotion of educational attainment as well as S&T and environmental knowledge:** Cofimvaba with its younger population had higher awareness and knowledge about S&T and the environment. The public reported higher knowledge for items that recently dominated news and public discussions (such as the petrol price and the value of Covid-19 vaccines), as well as those with a direct impact on their lived experiences (good quality food and education, health and energy supply). Both Cofimvaba and EC adults reported high levels of knowledge and concern about environmental events.

These findings emphasise the significance of advancing education, and in particular science and environmental knowledge, through both school-based and public education initiatives. These programmes should incorporate topics that connect with people's real-life experiences and utilise both traditional and social media platforms to engage the broadest possible audience.

- 3. Foster interest in S&T and promote a science culture within society:** Interest in S&T areas and achievements was notably higher in Cofimvaba compared to the EC. The levels of interest for both the Cofimvaba and EC public were higher than the levels of knowledge. This indicates that people are still curious about S&T, even though they may not feel very knowledgeable about them. Programmes that focus on cultivating interest in S&T areas and fostering a science culture need to be continued and expanded, starting from home and the early childhood phase, continuing through to the schooling phases and into adulthood.

- 4. Cultivate more positive attitudes towards modern and traditional S&T:** The promise and reservation attitudes towards both modern and traditional S&T for Cofimvaba were higher than for the EC (and South Africa). A focus on improving the culture of science in society will improve attitudes towards science. To build this culture, the public needs to be informed about the promise and risks related to S&T, South African S&T achievements, the benefits of S&T skills for young people, and the value of everyday S&T experiences. There is a need to communicate and raise awareness about traditional S&T and the environment through science content areas which provide opportunities to make the link between traditional and modern science.
- 5. Build trust in science, science institutions and government evidence-based decision-making:** There was moderate trust in the work of scientists, with Cofimvaba adults having higher trust than EC adults. Both the Cofimvaba and EC public trusted S&T information from universities and research organisations, with lower levels of trust in information from government, religious and traditional groups. There was moderate trust in the way that government makes decisions using an evidence-based or participatory approach.

The lack of trust of government decision-making processes may, partly, be due to the public being unaware of government processes. We recommend that the government communication information services (GCIS) develop active strategies to communicate the process and outcomes of the work of government at national, provincial, and local levels. We recommend GCIS provide regular communication and showcasing the social relevance of S&T-related work.

6. Promote access to and trust in S&T information: Over 80% of the Cofimvaba and EC public had access to a cell phone, over six in ten adults had internet access, two-thirds of Cofimvaba and 54% of EC adults reported they had a smartphone, and just over half used the internet on a daily basis. In addition, there was low exposure as well as consumption of S&T information. The most popular uses of the internet were for communication and social media. The most popular and trusted sources of S&T information were television and radio. The most popular news content was sports, health and education.

To enhance access to and engagement with S&T information, efforts should, firstly, focus on increasing digital infrastructure in the area, and secondly, equipping residents with digital literacy skills needed to access and evaluate online S&T information.

Television and radio should be prioritised for targeted S&T communication campaigns. Tailored programming, such as educational series, community discussions, and features on local science initiatives such as the SKA, should be developed to make S&T topics relevant and engaging for the local audience. Developing community-based S&T engagement initiatives, such as workshops, exhibitions, and school programmes, to supplement traditional and digital media efforts, could encourage active participation and consumption of S&T information.

7. Promote science engagement amongst the public: Another source of S&T information is in physical science engagement spaces. Although there was a relatively reasonable availability of public libraries and science centres (ANSSC) in close proximity to the public, it is disappointing that these spaces were not well-used and this potential space not effectively harnessed.

Make libraries and science centres, as well as other spaces, attractive to the public. Introducing incentives, such as free entry days or community-based transportation programmes, can help encourage attendance. Engagement could be further enhanced through initiatives like mobile science labs, travelling exhibitions, or pop-up science events. Additionally, encouraging participation in science activities that directly benefit local communities should be encouraged.

Expanding mobile and digital resources and promoting digital literacy may lead to increased usage of the internet. Developing user-friendly, locally relevant science apps or platforms that encourage engagement in topics like health, recycling, environmental sustainability and practical science for daily life while increasing S&T knowledge and interest should be considered. Zero-rating these apps would enable them to be used by more of the public.

8. Appreciate the public's research-related priorities: The top four research priorities for the Cofimvaba and EC were energy supply, cleaner water supply, good quality education and quality of food. Topics rated as less important were space and the stars, advanced technologies, and traditional knowledge. The top priorities can be considered 'urgent and important', as they represent contemporary societal challenges, the effects of which form part of the lived-daily experiences of the public.

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