

UNDERSTANDING THE PROCESS AND BENEFITS OF TREE-PLANTING CAMPAIGN FOR ENVIRONMENTAL SUSTAINABILITY

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Abstract: *Environmental sustainability is a pressing global concern due to the effects of climate change on health, ecosystems, and economies. In response, Malaysian government agencies and private companies have engaged in tree-planting initiatives as part of their corporate social responsibility (CSR) efforts. In 2022, Telekom Malaysia (TM), a telecommunications company, launched a tree-planting campaign through its foundation, Yayasan Telekom Malaysia (YTM), involving multiple stakeholders across various locations. This study explores the process and benefits of YTM's tree-planting campaign, addressing a critical gap in research on practical environmental sustainability initiatives. Prior studies have primarily focused on reporting environmental elements in sustainability reports required by Bursa Malaysia, often using quantitative approaches. In filling the research gap, this study employed a qualitative approach, using semi-structured interviews as the main instrument to examine environmental sustainability practices through a tree-planting campaign. The findings outline the planning and execution process for tree planting and enumerate the campaign's benefits, such as its contributions to environmental sustainability and raising awareness of Malaysia's tree heritage. The results demonstrate that the telecommunications company successfully executed the campaign and achieved its objectives.*

Keywords: *Corporate Social Responsibility (CSR), Environmental, Sustainability Practice, Telecommunication Company*

Introduction

Climate change is a persistent global issue manifesting in various damaging ways across the planet. The impacts are widespread, affecting health, ecosystems, and economies. People and nature worldwide were already feeling the effects: shrinking water supplies, extreme weather events, burning forests, and melting glaciers. As a response, governments, companies, cities, and communities came together to act through environmental sustainability practices. All parties need to take serious action to escape the worst impacts of climate change and build a safer future for all.

One of the initiatives to respond to climate change is tree planting (Turner-Skoff & Cavender, 2019). Trees are the unsung heroes in the fight against climate change. Not only do they pull carbon out of the atmosphere, but they also help communities and ecosystems adapt to extreme weather events and a hotter planet. They slow flood waters, reduce temperatures in urban areas, and make people healthier and happier. Indigenous trees and forests play an important role in mitigating and adapting to the impacts of climate change. As carbon sinks, trees and forests help cool the earth by removing carbon dioxide from the air and storing it within their roots, stems, and leaves. Trees also build long-term climate resilience by helping regulate the water cycle, reducing soil erosion and the risk of landslides, floods, and drought while purifying the air and providing habitats that house biodiversity and maintain the genetic diversity of species (Turner-Skoff & Cavender, 2019).

The action of government agencies and companies to plant trees is part of corporate social responsibility (CSR) to the planet. According to Gray, Owen, and Maunders (1987), CSR is defined as providing information designed to discharge social accountability, the responsibility to account for actions for which one has social responsibility. A Green Paper Promoting a European Framework for Corporate Social Responsibility defines CSR as "a concept whereby companies integrate social and environmental concerns in their business operations and their interaction with their stakeholders voluntarily" as they were increasingly aware that responsible behaviour leads to sustainable business success (Commission of The European Communities, 2001).

In Malaysia, CSR practices attracted considerable attention when Bursa Malaysia set out the framework for the disclosure of CSR practices for publicly listed Companies (PLCs) on 5 September 2006. The purpose was to regulate companies when identifying CSR practices in the four (4) dimensions of environment, community, workplace, and marketplace. In September 2015, all 193 United Nations members adopted "Agenda 2030" - a plan to solve environmental, social and economic problems. Malaysia is committed to "Agenda 2030" through its Sustainable Development Goals (SDGs) Roadmap. Several SDG targets were being addressed through the integration of the targets into the 11th Malaysia Plan (11MP) for the first implementation phase (2016 – 2020). Consequently, the first edition of the Sustainability Reporting Guide was issued by Bursa Malaysia in 2015. It was then replaced by the second edition in 2018 to assist listed issuers in preparing the Sustainability Statement as required under the Listing Requirements of Bursa Malaysia Securities Berhad (Hawani et al., 2011).

Telekom Malaysia (TM), one of the largest telecommunication companies in Malaysia, has a longstanding commitment to CSR. The company creates opportunities and aims for greater impacts through various programmes and initiatives for its diverse stakeholder groups, including communities. In 2022, for example, Yayasan Telekom Malaysia (YTM), TM's

foundation arm, launched a tree-planting campaign as one of the initiatives. It was the most extensive Gutta-percha Tree-planting campaign in 24 hours and a Malaysia Book of Records-certified campaign in conjunction with World Telecommunication and Information Society Day 2022. The event was inspired by the "Greening Malaysia: Our Trees, Our Life" campaign under the Ministry of Energy and Natural Resources, which aims to preserve the country's biological diversity. This campaign was a significant effort in TM's commitment to plant 12,000 trees nationwide by the end of 2022, aiming to offset greenhouse gas emissions and delay the effects of climate change (TM Berhad, 2022a; TM Berhad, 2022b; TM Berhad, 2022c).

The tree-planting campaign was one of TM's significant CSR environmental sustainability initiatives. As such, it attracted researchers who sought to further understand the implementation of environmental sustainability practices. One of the reasons for conducting this study was that research on environmental sustainability practices was still lacking. Most previous studies focused on reporting the environmental element in a company's Sustainability Report and used quantitative methods. However, very little attention has been given to the implementation of the CSR efforts itself, especially those related to environmental sustainability initiatives. Furthermore, this study intended to utilise the qualitative method to investigate this issue.

To begin with, the researchers met with YTM representatives on 1 September 2022 to discuss potential research collaborations in environmental sustainability. The discussion was met with a positive response. YTM welcomed the researchers to study TM's environmental sustainability, primarily through its tree-planting campaign that started in May 2022. YTM's representatives looked forward to the research outcomes because it would help them improve the initiative and plan for future tree-planting campaigns. According to YTM, no research has been conducted to ascertain the initiative's effectiveness since the company completed its tree-planting campaign in May 2022.

Thus, it was timely for the researchers to undertake this study. Guided by YTM's anticipated outcomes, this study aimed to understand TM's approach to environmental sustainability through its tree-planting campaign. The research began with an in-depth campaign analysis and then examined the benefits of YTM's implementation of this initiative.

Research Methodology

This study employed a systematic yet flexible approach, using a qualitative methodology to examine the issue through a qualitative paradigm. Given the subjective nature of the study, where subjectivity is integral to exploring 'how' questions, a qualitative methodology was deemed suitable. The methodology is appropriate for research questions that require in-depth exploration and investigation. Like any other qualitative research question, this study depended on a well-specified research question with inquiry-based understanding. This study employed a generic inquiry method to maintain the quality of the research, as this method serves as a foundation for understanding issues or phenomena that demand a descriptive qualitative approach and interpretive description subcategories. Since this study aimed to describe the environmental sustainability practices through TM's tree-planting campaign, the generic inquiry was particularly appropriate.

This research employed various data collection methods, including semi-structured interviews, document reviews, and field observations. Participants for the semi-structured interviews were chosen using a purposeful sampling technique (also known as selective or criterion sampling), in which the sampling decisions were made by going into a study on "reasonable" grounds (Lucas, 2014; Sandelowski, 1995). Participants were selected based on their backgrounds, and all were representatives from the campaign's partner institutions. The list of names was gathered from YTM during the first meeting. Each participant was given a pseudonym to maintain the confidentiality of the participants. Transcriptions of semi-structured interviews were analysed using "thematic analysis" by Braun & Clarke(2006).

Upon completing the online interview, the researchers arranged visits to the planting sites where gutta-percha trees were planted at the participating institutions. During the visits, the researchers observed the survival rates of the gutta-percha trees and recorded the findings. The observational data gathered in the field was then analysed to assess the survival and growth conditions of the gutta-percha trees in the research setting.

Findings and Discussion

The process of implementing the Tree-planting campaign by YTM

Gutta-percha, locally known as Nyatoh Taban Merah, was instrumental in the early beginnings of the global submarine telegraph network. In 1851, the latex from the gutta-percha tree was discovered to be the best insulating material, leading to the invention of the first submarine cable in the world. Because of its unique properties, the tree's latex has various applications. Gutta-percha was also known for dental materials such as those used in endodontic procedures in dentistry for filling root canals. Additionally, gutta-percha rubbers are also used in biocompatible and have been historically used in various medical applications.

Recognising the contribution of gutta-percha rubber in the telecommunication industry, Yayasan TM (YTM) undertook the largest gutta-percha tree-planting event in 24 hours on 17 May 2022. The event was inspired by the "Greening Malaysia; Our Trees, Our Life" campaign under the Ministry of Energy and Natural Resources, aiming to preserve the country's biological diversity. YTM organised the event with 18 partners from volunteers, local councils, and public/private institutions and universities (see Table 1).

Table 1: Partner institutions and their roles

Role	Institution
1. Volunteer administrator	1. Yayasan Sukarelawan Siswa (YSS)
2. Gutta-percha sapling's supplier	2. Forest Research Institute Malaysia (FRIM)
3. Planting locations	3. Jabatan Perhutanan Semenanjung Malaysia
	4. Perbadanan Putrajaya
	5. Majlis Perbandaran Selang
	6. Dewan Bandaraya Kuala Lumpur (DBKL)
	7. Multimedia University (MMU)
	8. International Islamic University Malaysia (IIUM)
	9. Universiti Sains Islam Malaysia (USIM)
	10. Universiti Malaya (UM)
	11. Universiti Putra Malaysia (UPM)

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| | 12. Universiti Kebangsaan Malaysia (UKM) |
| | 13. Universiti Teknologi MARA (UiTM) |
| | 14. Universiti Teknologi Petronas (UTP) |
| | 15. Universiti Malaysia Perlis (uniMAP) |
| 4. Sponsors | 16. Mr. DIY |
| | 17. Hara Makers |
| | 18. Unifi |
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At the initial stage, YTM discussed the implementation of gutta-percha tree planting with YSS. Both parties agreed on their roles: YTM would coordinate with local governments for location approvals. YSS would liaise with the universities and assign volunteers for each planting site. Both parties agreed that, concerning the location determination, YTM would deal with local governments, and YSS would deal with related universities and arrange volunteers for all planting locations. YTM also made arrangements with FRIM to provide 5,017 gutta-percha saplings. YSS and site hosts coordinated the logistical aspects of transporting and mobilising the saplings. Hosts at each planting location prepared the designated areas and created planting holes. On planting day, all parties worked together to complete the planting of the saplings within 24 hours. Participants were briefed on the fundamentals of gutta-percha cultivation, including key characteristics and monitoring practices. This collaborative effort involved institutional management, staff, and nearly 1,000 volunteers from YSS and TM's Reaching Out Volunteers (TMRovers).

According to GP001:

"All partners who provided the planting locations were aware that these gutta-percha trees were slow-growing trees that originated from the forest and lived in shading areas. Some of the planting location partners planted gutta-percha trees in the open space, which was unsuitable for the trees. We had tried to give a solution such as putting planting gel in the hole based."

The responsibility of observing and monitoring the growth of gutta-percha trees solely rested with the plant location hosts.

"Based on our verbal agreement, planting location partners understood that observing and monitoring the growth of the gutta-percha trees was their responsibility" – GP001.

The execution process of the tree-planting campaign is concluded in Figure 1.0. The main funding bodies for this project were YTM and YSS, both contributing almost RM300k to execute the project.

"We have spent almost RM270k to fund the execution of this project. This budget included the gutta-percha saplings, launching ceremony, transportation, volunteers' merchandiser and planting instruments" – GP001.

In addition to the funding from YTM and YSS, all the partners supported the programme with direct or indirect contributions. For example, FRIM offered discounts for the gutta-percha saplings and sponsored plant locations. In addition, Mr DIY provided free planting instruments such as gloves and shovels.

"We also received contributions through engagements with our partners. For example, FRIM sponsored 500 gutta-percha saplings planted in their area. They also sold gutta-percha saplings at a minimum price because this project also contributed to the Greening Malaysia project. Mr. DIY provided free planting instruments such as gloves and planting shovels" – GP001.

Location hosts for this project also contributed to cleaning the area and planting holes using their budget.

"Some local councils spent almost RM40k to RM50k to clear the location and made the planting hole" – GP001.

"We contributed almost RM30k to clean the area and made the planting hole in our institution" – GP002.

"It was quite costly to clean the planting area. We have invested almost RM15k to clean the area" – GP007

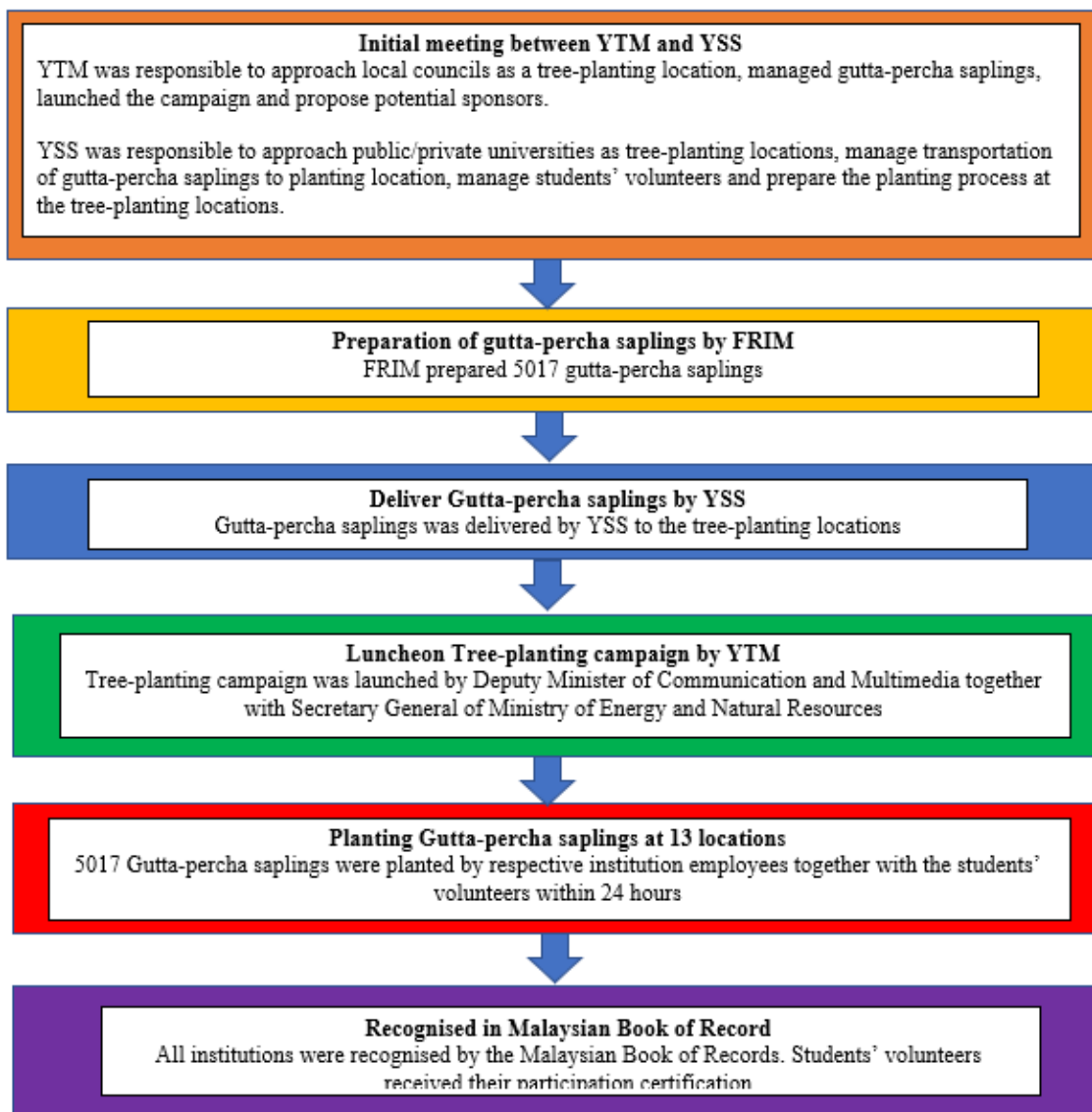


Figure 1.0: Process of Tree-planting Campaign

Benefits of the implementation of the Tree-planting Campaign by YTM

Secure Malaysia's tree heritage

According to a YTM representative, gutta-percha has sentimental value to TM since its rubber was previously used mainly for submarine cables, communication, and telegraphs. YTM has developed basic gutta-percha research since 2018, and all the documents are located at the Telegraph Museum in Taiping Perak. Besides the vast history of gutta-percha in the telecommuting industry, it was included on a red list of threatened species under the International Union for Conservation of Nature (IUCN). The extinction of gutta-percha is perhaps due to its slow growth, as mentioned by participants GP001, GP004, and GP007:

"We are all aware that gutta-percha is a slow-growth forest tree but does not require high maintenance."

Additionally, GP001 indicated that the neighbourhood counties, such as Singapore and Indonesia, have already gazetted gutta-percha trees as a national heritage and have developed a national plan to protect them from extinction.

"Many sources have confirmed that gutta-percha was originally from Malaysia, but we have not planned any protection programme."

Thus, as gutta-percha was originally from Malaysia's forest and essential in the telecommunication industry, YTM took the initial step to protect this national heritage tree from extinction.

Achieve Malaysia's Book of Records

In conjunction with securing Malaysia's heritage tree that was already extinct, YTM launched the largest Gutta-percha Tree-planting event in 24 hours, a Malaysia Book of Records certified campaign. Through this campaign, YTM and 18 partners have planted 5,017 gutta-Percha trees at 23 locations simultaneously. According to GP001:

"We launched the Malaysian Book of Records programme to increase public awareness about this tree and its historical view. Among the objectives of this campaign was to educate our young generation, especially on the history of gutta-percha rubber in the telecommunication industry."

GP007 added:

"We joined this campaign because of the Malaysia Book of Records certification. But the most important thing is that this gutta-percha tree was nearly extinct even though it originated from our land, Malaysia. As far as I know, the oldest gutta-percha tree is in Taiping."

Awareness of the Gutta-percha tree

Almost all the participants in this study were unfamiliar with the gutta-percha tree and their importance to the telecommunication industry. Although GP008 specialised in landscaping, he never knew about gutta-percha:

"Even though I specialise in landscaping, I just learned about this gutta-percha tree when I got involved in this tree-planting campaign. I believe that many Malaysian citizens also do not know about this tree."

The gutta-percha tree-planting campaign also made the participants and the public aware of the programme.

"Our unit has a Key Performance Indicator (KPI) to collaborate with society and external agencies. We welcome any parties that want to have an environment awareness campaign" – GP011.

Thus, this tree-planting campaign increased public awareness of the gutta-percha tree.

Environmental Sustainability

This gutta-percha tree-planting programme was to support Greening Malaysia's agenda by planting 100 million trees across the country by 2025. GP001 indicated:

"This tree-planting campaign supported the Greening Malaysia agenda launched by the 8th Prime Minister in 2021. Thus, most of the city councils we had approached agreed to join due to this Greening Malaysia Agenda."

She added:

"As a company, we are responsible for sustainability, especially in environmental, social, and governance (ESG), to save the planet. This is part of our employees' contribution towards environmental sustainability. This campaign could reduce the carbon footprint."

One of the local councils also supported this Greening Malaysia agenda through a tree-planting campaign:

"As a local authority, we are responsible for realising the Greening Malaysia agenda by planting 100 million trees. The tree-planting campaign is one of the initiatives that will help us realise this Greening Malaysia agenda."

GP007 also indicated that his university was involved in this campaign due to its contribution towards environmental sustainability.

"In our university, we concentrated on three (3) pillars: environment, socioeconomics, and education. When we conduct community outreach, we always classify it into these three (3) pillars. Thus, this tree-planting campaign is in line with our environmental pillar."

"We welcome any external parties who want to collaborate on this tree-planting campaign. We look forward to increasing the number of shading trees. Our campus was originally an oil palm farm. Most oil palm trees have already died or been cut down."

Some of the universities still have space to plant the gutta-percha trees. The area was explicitly gazetted as a forest tree area.

"We have gazetted one area as a mini forest for high-value trees. Gutta-percha trees were planted in this area" – GP008.

"Our university is very committed to greening sustainability, and we still have space to plant these gutta-percha trees" – GP009.

Future research

Rubber produced by the gutta-percha tree has well-known contributions to the telecommunication and medical industries. However, its contribution was slowly forgettable due to advanced manufacturing materials. Additionally, the number of gutta-percha trees in

Malaysia reduced drastically. The tree-planting campaign could allow researchers to explore the potential applications of gutta-percha rubber in various industries.

"We have collaborated with various universities in tree-planting campaigns because there would have been high potential for future research using the gutta-percha tree's rubber. Besides using gutta-percha in the telecommunication and medical industry, university researchers could find other uses of the tree's rubber in other industries" – GP001.

"Our university has various experts in tree-based product research. Perhaps, one day, when this gutta-percha tree is matured, we can proceed with the research on it" – GP008.

Spirit of volunteerism

The Spirit of volunteerism refers to the motivation and enthusiasm that drives individuals to engage in selfless service without expecting direct compensation or personal gain. It is characterised by a sense of compassion, kindness, and a willingness to help others without expecting a reward. The spirit of volunteerism is often associated with a desire to positively impact society, foster greater love, peace, and joy, and be fully human by serving others. The concept of volunteerism was deeply rooted in the idea of selflessness and the willingness to put the needs of others before one's own. It is often seen as a way to bring people together, create a sense of community, and promote personal growth and fulfilment. The spirit of volunteerism can be observed in various contexts, such as community service projects, charity work, and even in the daily lives of individuals who choose to help others without expecting anything in return. It is a powerful force that could unite people and positively impact society. The tree-planting campaign has strengthened the spirit of volunteerism among the participating organisations' employees:

"In this project, we have attracted many employees to volunteer. We have promoted the spirit of volunteerism through various projects and initiatives" – GP001.

"In our organisation, we have three (3) pillars: (1) education; (2) community and nation building; and (3) art, culture, and heritage. In the meantime, we promote education, awareness, and volunteerism in our various programmes" – GP001.

Besides volunteerism among employees, this campaign also promotes volunteerism among university students.

"In this project, we involved almost 1000 volunteers from the private and public universities" – GP003.

"Our volunteer work was focused on human capital development. We have a very limited number of campaigns on environmental sustainability. This gutta-percha tree-planting campaign was good for student volunteers in enhancing their awareness of environmental sustainability. This campaign was open to anybody who wanted to contribute, without any specific criteria voluntarily" – GP003.

As a token of appreciation, all the university student volunteers received some campaign merchandisers and certificates:

"We provide student volunteers with t-shirts, meals, and certificates" – GP001.

Networking

Networking is a crucial skill that can significantly impact students' career prospects. It involves building and maintaining relationships with professionals in their field, leading to hidden job opportunities, personal recommendations, industry insights, mentorship, and increased confidence. Networking helps students learn about job openings not publicly advertised, giving them a competitive edge in the job market. Students can gain valuable advice, career guidance, and access to a wider range of potential employers by connecting with alumni and professionals. Attending industry events, joining professional associations, utilising social media, volunteering, and maintaining regular contact with their network were key strategies for effective networking. Starting to network early in college allows students to establish connections that can support their career growth, enhance their interpersonal skills, build confidence, and open doors to potential mentors. Ultimately, networking is vital for students to navigate the competitive job market and secure professional development and success opportunities. This tree-planting campaign has involved various institutions and is a suitable avenue for the student volunteers to expand their networking:

"This campaign has involved public/private universities, government agencies, and corporate companies. This was the avenue where student volunteers could expand their networking" – GP001.

Conclusion

In conclusion, YTM and its 18 partners successfully hosted a tree-planting campaign, focusing on gutta-percha trees, a highly appropriate choice due to its historical significance in the telecommunication industry. In addition to being recorded in the Malaysia Book of Records, the campaign has achieved several objectives, such as raising public awareness of the gutta-percha tree. Most importantly, this campaign significantly contributed to environmental sustainability for future generations.

Participants joined the campaign with various motivations. Public and private universities viewed it as an opportunity to undertake research related to gutta-percha rubber while fostering a spirit of volunteerism among staff and students. Local councils were motivated by the chance to achieve their KPIs through tree planting in public parks. Furthermore, this campaign has enhanced the attractiveness of the public parks and encouraged public recreational activities. Generally, both universities and local councils agreed that their involvement in the campaign was due to their commitment to environmental sustainability and biodiversity protection.

TM's tree-planting campaign has made a lasting impact on participants and future generations. The most significant outcome of this initiative was heightened awareness of the gutta-percha tree as a national heritage species nearing extinction. Known locally as *Nyatoh Taban Merah*, this tree holds a significant historical role in telecommunications and the health sector, although awareness of its importance remains limited. As these gutta-percha trees mature, it is hoped that they will continue contributing to environmental sustainability and preserving Malaysian biodiversity.

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