



River Flooding Adaptation & Resilience (RIFAR) Challenge

RIFAR Sprint

Challenge Brief

Organised by:



In partnership with:



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Preface

The River Flooding Adaptation & Resilience (RIFAR) Challenge is part of the Securities Commission Malaysia (SC)'s Transition, Resilience & Adaptation in Capital Markets (TRAC) initiative, which seeks to strengthen the role of the capital market in mobilising finance for climate transition, adaptation and resilience. Organised by the SC in partnership with ICAEW Malaysia, Lembaga Urus Air Selangor (LUAS), the Selangor Maritime Gateway (SMG) by Landasan Lumayan Sdn Bhd (LLSB), and Jeffrey Sachs Center on Sustainable Development (JSC), the RIFAR Challenge aims to build awareness and bring young minds together to protect Malaysia's rivers.

As a tropical nation with an extensive network of rivers, riverbanks, and riverine communities, Malaysia is highly dependent on its rivers as source of water, source of food, means of transportation, as well as livelihood for the riverine communities. However, our rivers are highly exposed to threats from extreme weather, pollution, and rapid urbanisation.

The RIFAR Challenge invites students to play a role in protecting, preserving and restoring our rivers, while strengthening their resilience to climate change. It is grounded in the belief that everyone has a role to play, whether by creating engaging and emotionally resonant content that raises awareness or designing adaptation solutions that also deliver broader climate mitigation and transition benefits.

1.0 Introduction & Background

The RIFAR Sprint Challenge focuses on protecting rivers in Selangor. Rivers in Selangor have a combined length of approximately 3,956 km¹, spanning seven river basins: Sungai Bernam, Sungai Langat, Sungai Selangor, Sungai Klang, Sungai Tenggi, Sungai Buloh, and Sungai Sepang². Sungai Selangor alone supplies more than 60% of household water needs in the Klang Valley³.

Selangor contributes 26% to the country's GDP in 2024⁴. It is also the most populous state in Malaysia with more than 7 million residents⁵. These dynamics place pressure on Selangor's rivers to meet the state's increasing demand for clean and reliable water supply.

However, Selangor's rivers continue to face risks that threaten their health, especially river pollution. In 2023, third-party pollution caused five water supply disruption incidents across Selangor, affecting more than 800,000 users⁶. Some rivers, such as the Klang River, run through areas with dense industrial operations and highly populated urban communities, which correspond with a high level of pollution and littering. Since 2016, more than 90,000 metric tonnes of waste have been removed from the Klang River as part of clean-up efforts⁷.

Rivers are also highly exposed to the effects of climate change, leading to severe floods and drought events. During the dry season in 2025, four dams in Selangor reached critical levels, with water levels falling below full capacity. Fluvial flooding also occurs regularly in Selangor, due to river overflow after continuous rainfall, particularly along the Klang River⁸ and Sungai Buloh⁹. These events also had a huge financial impact, with Selangor recording total flood-related losses of RM36.5mil in 2023 and 2024¹⁰.

¹ <https://www.macaranga.org/banking-on-river-reserves-to-protect-water-supply/>

² <https://www.luas.gov.my/en/water-resource-info/river-basin-profile>

³ [Bernama \(2025\) Climate Change and Attitudes: Key Water Management Challenges](#)

⁴ [Free Malaysia Today \(2025\) Selangor records all-time high RM432.1bil GDP in 2024](#)

⁵ [Department of Statistics Malaysia \(2025\) Demographic Statistic Malaysia, Third Quarter 2025](#)

⁶ [Air Selangor Annual Report 2023](#)

⁷ [Selangor Maritime Gateway](#)

⁸ [The Star \(2025\) Klang River water level exceeds danger level](#)

⁹ [The Star \(2025\) Flood mitigation system could not cope with river overflow, says Selangor MB](#)

¹⁰ [The Star \(2025\) RM36mil lost due to S'gor floods](#)

These issues highlight the need for cohesive action at all levels to preserve and restore the health of our rivers. While such efforts are often led by the government, individuals and communities also have an important role to play in preserving and restoring river health.

This Challenge calls on students to develop an engaging short video to raise awareness of the issues surrounding the Selangor's rivers, and to invite the public to take action to protect them. The videos should be evidence-based, using data and information collected through desktop research. We also encourage teams to be creative in relaying the information in their video.

Problem Statement	<p>Rivers in Selangor are vital for urban drainage, water management, and surrounding communities. However, their health and functionality are at risk due to:</p> <ul style="list-style-type: none"> • Persistent littering and solid waste accumulation, restricting water flow and degrading water quality. • Waste blockage in drains and tributaries, increasing erosion, flooding, and stress on riverbanks. • Rapid urbanisation and heavier rainfall events, further intensifying these impacts.
Environmental risks and Vulnerabilities	<ul style="list-style-type: none"> • Flooding: Large sections of the Klang River were heavily clogged by garbage and mud deposits, leaving only around 1 metre of remaining depth. This decreased its capacity to channel rainwater effectively, contributing to flooding in its surrounding area¹¹. • Low water quality: 33 rivers in Malaysia recorded a class III to IV level of pollution, which is considered polluted, while 171 rivers are deemed slightly polluted¹². • Permanent bio-diversity loss: Rivers distribute over 80% of plastic waste, threatening health of aquatic ecosystems and disrupting the natural flow of water¹³.
Financial impacts	<ul style="list-style-type: none"> • Clean-up and maintenance costs: In 2023, more than RM8 million was spent on river cleaning efforts in Selangor and Kuala Lumpur¹⁴. • Water disruption due to polluted river: Water disruptions are estimated to have an economic impact of billions of ringgit due to lost productivity, revenue, and remediations costs¹⁵. In 2023, Air Selangor recorded five water supply incidents due to raw water pollution¹⁶.

¹¹ [Business Today \(2025\) Four Metre Deep Klang River Filled with 3 Metre Rubbish](#)

¹² [Free Malaysia Today \(2026\) 33 rivers categorised as polluted, up from 25 in 2023](#)

2.0 Challenge Objectives and Overview

The RIFAR Challenge encourages students to identify issues surrounding rivers in Selangor and develop a social media reel to build public awareness on protecting Selangor's rivers.

2.1 Challenge Scope & Hypothesis Requirement

Your submission should include the following:

Issues surrounding the river	<ul style="list-style-type: none"> • Select a focus area located in Selangor • Identify at least one issue that endangers the river in the chosen focus area and its cause. Examples of observed issues may include waste accumulation at river bends or low-flow zones, discharge from drains and tributaries into main rivers, illegal dumping from nearby residential or commercial areas, and blockages near structures such as bridges or tidal gates. • Present findings on the impacts of the issue(s) identified e.g., the relationship between river pollution, reduced drainage capacity, and increased flood risk, as well as the resulting social and economic impacts on surrounding communities. • Include visuals to clearly communicate the identified issue(s)
Proposed initiative	<ul style="list-style-type: none"> • Identify at least one low-effort high-impact initiative that the general public can realistically adopt to address the issue identified • Explain how the initiative will positively impact the river, environment and community

¹³ [WWF \(2024\) Preserving Malaysia's Lifelines: The Urgent Need to Combat Plastic Pollution in Rivers](#)

¹⁴ [MalayMail \(2023\) Nik Nazmi: RM8.2m already spent to clean KL, Selangor rivers in 2023](#)

¹⁵ [Air Selangor Sustainability Report 2022](#)

¹⁶ Air Selangor Sustainability Report 2023

Minimum Submission Requirements

Category	Minimum Requirement
Awareness Reel: Prepare a 45- to 60-second reel using the following prompts:	
1. “My River Moment”	<ul style="list-style-type: none"> • Demonstrate focus area (e.g., using Google Map) • Must showcase at least one issue at the specified area and how it impacts the river and the wider community
2. “River Myth vs Reality”	<ul style="list-style-type: none"> • Show contrast between misconceptions of the focus area and the actual reality • Must include: <ul style="list-style-type: none"> ○ Myth ○ Reality ○ Why this is important to understand
3. “What We Can Do”	<ul style="list-style-type: none"> • Present an initiative to solve or mitigate the issue identified • Proposed initiatives should be practical, community-driven, and achievable without reliance on large-scale infrastructure. • Include a call-to-action
Supporting Material: A one-page document containing the sources of information used in the development of the reel	
1. Overview of the problem	<ul style="list-style-type: none"> • At least three sources to corroborate the issue(s) identified • Explain why the issue is happening
2. Research-based “Cause Guess”	<ul style="list-style-type: none"> • Develop a hypothesis on the underlying issue based on evidence and information gathered through desktop research • For example:

	<ul style="list-style-type: none"> ○ Issue: Frequent waste accumulation near a river mouth or tributary. ○ Hypothesis: Clogged drains in the surrounding area may be causing rubbish to flow into the river.
3. Proposed initiative	<ul style="list-style-type: none"> ● Explain the rationale for selecting initiative is selected ● Present evidence to show the effectiveness of the initiative in addressing the issue (e.g., through benchmarking) ● Outline the potential positive impact of the initiative on the environment and wider community

Things to Consider:

- Submissions must be grounded in **evidence-driven insights**, with an emphasis on analysis of data and information collected through desktop research. Teams **are strongly discouraged from physically visiting** the chosen area of the river. Should they choose to do so, participants must refer to the [Safety Guide](#) and are solely responsible for any injury, loss, or damage to persons or property.
- Teams should **consider the judging criteria** (see Appendix) for detailed expectations on deliverables and evaluation.

2.2 Eligibility

To participate in the RIFAR Sprint Challenge, teams must meet the following requirements:

- The challenge is open to undergraduate students from all universities in Malaysia and Malaysian students enrolled in universities abroad.
- Teams must consist of minimum three members.
- Teams must be gender diverse.

3.0 Competition Structure & Timeline

3.1 Competition Timeline

Date	Event	Venue/Mode
28 April 2026	RIFAR Launch & Introductory Webinar	Zoom
12 May 2026	Registration Deadline	Register at https://tinyurl.com/rifar2026registration by Tuesday, 12 May 2026.
17 June 2026	Final Submission Deadline	Google Form
TBA	RIFAR Showcase: Announcement of Winners	TBC

Note: Dates are subject to change, and will be communicated to teams accordingly.

3.2 Competition Details

3.2.1 RIFAR University Challenge Webinar: 28 April 2026

The webinar will feature an exciting lineup of experts who will share insights on the importance of rivers from the perspective of Malaysia's climate adaptation readiness and resilience, the official launch of the challenge and exclusive tips and resources for participants. Speakers include:

- **Dato' Mohammad Faiz Azmi**, Executive Chairman, Securities Commission Malaysia
- **Puan Haslina binti Amer**, Chief Assistant Director, Lembaga Urus Air Selangor (LUAS)
- **Encik Ashazry bin Anuar**, Director of Project Management, Landasan Lumayan Sdn Bhd (LLSB)
- **Shenola Gonzales**, Head of Malaysia, ICAEW

3.2.2 Team Registration

Team leaders / accompanying lecturer needs to **complete the Registration Form** at <https://tinyurl.com/rifar2026registration> by **Tuesday, 12 May 2026**.

3.2.3 Submission Deadline

Teams must upload their submissions via the Submission Portal with the following information by **17 June 2026**:

Awareness Reel (.MP4, .MOV, or any acceptable video format) with the following criteria:

- A 45- to 60-second awareness reel that contains:
 - Issue(s) surrounding the selected river
 - Myth vs Reality on the selected river

- Proposed initiative to address the issue(s)

- A link to the reel that has been posted on Instagram and/or Tiktok by 17 June 2026 and is publicly accessible until the announcement of winners, which remains at the discretion of the SC.
- The following statement of disclaimer is to be included in the caption of the Reel: *'This video is produced and submitted solely for River Flooding Adaptation & Resilience (RIFAR) Challenge 2026: Sprint. All content is created by the participant and reflects the participant's views only. The SC does not verify the accuracy of the content and is not liable for any errors, omissions, or misinformation. Use of SC's name or logo does not imply endorsement.'*
- Video must be in English. Subtitles in any language are allowed.
- Video must not violate any copyright, trademarks, patents, or any other IP or proprietary rights of any third party.
- Video has not been published previously online, nor recognised and/or won an award in another competition.
- Strong submissions are expected to be site-specific, clearly demonstrate cause-and-effect relationships, and present realistic and actionable solutions. Creative and engaging visual storytelling is highly encouraged.

1-page Supporting Material (PDF) summarising:

- Sources of information used in developing the reel
- Findings on the issue identified and hypothesis on its cause
- Evidence to support the proposed initiative to address the issue and its anticipated impact

3.3 Terms and Conditions

All participants must comply with the official Terms & Conditions of the COFAR Challenge.

For more details, refer to the [Terms & Conditions](#).

4.0 Prizes & Recognition

The top three winning teams will receive cash prizes and exclusive dinner with Princess of Selangor and representatives from the SC and ICAEW Malaysia.¹⁷

Prizes	Cash Prizes
Winner	RM3,500
1 st Runner Up	RM2,500
2 nd Runner Up	RM1,000

5.0 Contact & Support

For further information, please visit the Challenge Website at www.sc.com.my/trac/rifar-challenge or contact Malaysia@icaew.com.

¹⁷ Selection of winning teams is subject to conditions outlined in the Terms and Conditions.

6.0 Appendix

Judging Criteria

Component	Criteria	Weightage	Description
Content	Accuracy of Information	20%	Assesses whether information presented in the reel is sufficiently supported by the information and references in the supporting material.
	Relevance to the theme	20%	Assesses how well the reel achieves the objective to raise awareness on issues surrounding rivers in Selangor and the role that everyone can play in protecting rivers.
	Community and Ecosystem Integration	10%	Assesses how well the proposed initiative involves and benefits local communities and the ecosystem.
Delivery	Creativity and Originality	20%	Assesses originality and creativity of the video. Looks for creative elements such as animations, graphics, audio, and innovative storytelling techniques.
	Strength of Message	20%	Assesses effectiveness and clarity of the call-to-action in the reel. Looks at clarity of messaging, ease for public to understand, and how the reel inspires viewers to take action.
	Production Quality	10%	Evaluates quality of video and whether any quality issues are present such as pixelation, distracting background noises, and low-resolution visuals.

