



2025 Macao Biodiversity Data Science Challenge Regulations

To enhance the interest of Macao students and the public in biodiversity and encourage their participation in citizen science activities, the "2025 Macao Biodiversity Data Science Challenge" aims to enhance public understanding and appreciation of the biological world through hands-on experience. By integrating scientific literacy with environmental awareness, the Challenge seeks to foster a deeper sense of responsibility for ecological conservation while promoting sustainability consciousness. The Challenge will be synchronized with the global "City Nature Challenge" (CNC) and contribute to the collection of biodiversity data in Macao region and on a global scale.

Organizers: Sands China, Macao Science Center

Eligibility: Students and residents of Macao are eligible to participate

Competition Categories:

1. Individual Challenge
2. Team Challenge

Individual Challenge
Terms of Entry
Participants may compete individually and are categorized into two categories: <ul style="list-style-type: none">• Student Category• Open Category
Competition Content
<ol style="list-style-type: none">1. Conduct a biodiversity survey on any day between April 25-April 28, 2025.2. Observe and document local wildlife species, and upload the photos to iNaturalist app.
Support Resources
<ol style="list-style-type: none">1. Macao Science Center offers training courses and online educational resources to assist in mastering survey techniques.



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2. Transportation will be arranged for Student Category on the date of competition, providing round-trip service from their school to the designated survey area.
Judging Criteria
<ol style="list-style-type: none">1. Accuracy of species identification2. Level of detail in documentation3. The observation record will only be scored if it meets Research-Grade standards.
Awards
<ol style="list-style-type: none">1. Each category will feature Gold, Silver, and Bronze awards.2. Special awards will be given for outstanding contributions in different species categories, which include: Plants, Fungi, Fish, Insects, Amphibians and Reptiles, Birds, and Mammals.3. The school with the highest total number of species documented will receive an award.4. All prizes consist of physical awards and electronic certificates.5. Students who successfully document over 100 species will be eligible for a special reward (electronic certificate).
Effective Data
<p>The effective data for this competition must meet Research-Grade, which require the following conditions:</p> <ol style="list-style-type: none">1. Basic information: The observation date, geographical coordinates, and clear photos and sound recordings must be recorded.2. Observation group: The observed subjects must be wild species (populations naturally existing in the wild, not farmed or cultivated).3. Community identification: At least two identifiers (including the observer) must reach a consensus, and the identification must be at the species level.4. No data quality issues: The observation record must not be flagged with any data quality issues.
Team Challenge
Terms of Entry
<ol style="list-style-type: none">1. Teams of up to 5 members (excluding instructors)



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2. Each team may be led by up to 2 instructors, and instructors may guide more than one participating team.
3. Each school may send up to 3 teams to participate.

Competition Content

1. Teams will analyze biodiversity data provided by the organizer, then conduct data analysis, including but not limited to:
 - Calculating biodiversity indices (e.g., Shannon-Weiner Index, Simpson Diversity Index)
 - Identifying dominant, rare, and ecological indicator species
 - Mapping the spatial distribution of species
 - Ecological modeling and analysis (e.g., identifying patterns and trends related to environmental factors)
2. Present scientific questions, data analysis, and findings in detail through academic poster.
3. Creating a popular science video to introduce biodiversity and environmental data analysis findings, and propose recommendations for biodiversity and environmental conservation.

Judging Criteria

1. Contribution to biodiversity data (30%)
2. Quality and impact of the academic poster and science video (70%)

Awards

1. Gold, Silver, and Bronze awards.
2. Outstanding Awards for 4th to 10th place.
3. All prizes consist of physical awards and electronic certificates.

Schedule

Information Session	February 24, 2025 , 17:30 – 18:30 Registration link: https://forms.gle/aRJkfecboM7vx5Ut6
Public Training Session	March 1, 2025, 11:00 – 12:30 (1.5 hours) Registration link: https://forms.gle/y4kpRBueX2BpjBNJ6



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Teacher Training Session		<p>March 2, 2025, 10:00 – 13:00; 14:30 – 17:30 (6 hours)</p> <p>Registration link: https://forms.gle/mPf7E799GhTHg7ZD8</p> <p>Note: Teachers who complete the session will receive the Teacher Development (Category II) Certificate.</p>
Individual Challenge	Registration	<p>Now until 23:59 on April 20, 2025</p> <p>Registration link: https://forms.gle/dVtKefywh9LM7pV16</p> <p>Note: Steps to complete before registration and data submission:</p> <ol style="list-style-type: none"> 1. Download and register on iNaturalist app <ul style="list-style-type: none"> ➤ Participants must download the iNaturalist app and complete the registration. ➤ The email used for registration should be the same email as the Google Form registration to ensure accurate data tracking. 2. Install the Macao Biodiversity Network app(Optional) <ul style="list-style-type: none"> ➤ Participants can download the Macao Biodiversity Network app ➤ Participants can log in using iNaturalist credentials, Google account, or Apple ID. ➤ Information about institution should be filled within the app. 3. Complete Google Form Registration <ul style="list-style-type: none"> ➤ After registering the iNaturalist app and Macao Biodiversity Network app, participants could fill in the Google form and register for the Challenge. ➤ Participants should fill in their user IDs of iNaturalist app and Macao Biodiversity Network app, along with email and phone number for further contact and data tracking. ➤ If multiple forms are submitted, only the most recent submission will be considered as the final data.



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	Transportation Registration	Now until 17:00 on March 30, 2025 Registration link: https://forms.gle/oz1eNzCh7F7uKJwKA Note: Transportation service for the Student Category is available on a first-come first-served basis.
	Competition Date	Any day between April 25-28, 2025
Team Challenge	Registration Deadline	Now until 17:00 on April 30, 2025 Registration link: https://forms.gle/UAcD9jb6hUo5UPkK6
	Data Release Date	May 15, 2025 Data will be sent to the participants
	Submission Deadline	By 17:00 on June 30, 2025 Entries should be uploaded to cloud platform; link will be announced shortly.
Results Announcement		Mid-July 2025 (Only winners will be notified)
Award Ceremony		July 22, 2025 (Venue and time will be announced shortly)

Other Provisions

1. The species to be identified must be wildlife species, which may include plants, fungi, fish, insects, amphibians and reptiles, birds, and mammals.
2. Do not submit photos of selfies, pets, indoor or outdoor potted plants, as it may affect the authenticity and accuracy of the database.
3. Protect and preserve nature, please try to reduce your interference with the environment, animals and plants during the competition.
4. Data analysis and findings must be supported by relevant scientific literature and environmental reports to substantiate the analysis and interpretations.
5. Individual Challenge: Each participant may submit more than one entry, but the same entry can only be submitted once. Once an entry is submitted, it cannot be modified, exchanged, or withdrawn.



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6. Team Challenge: Each team can submit only one entry, and the same entry can only be submitted once. Once an entry is submitted, it cannot be modified, exchanged, or withdrawn.
7. The entry must not contain any pornography or violence and should not infringe any law.
8. Each entry submitted must be the participants' original creation that has never been published, awarded or adopted for using by other institutions; otherwise apart from the potential legal responsibility of the participants the Organizers has the right to take back the award of any disqualified participant.
9. If the entry includes content that is not copyrighted by the participant, the source must be clearly indicated at the end of the entry, and the source of the material used must also be listed when submitting the entry to the Organizers.
10. The language (or textual description) of entries may only be in Chinese or English.
11. Participants must comply with the Personal Data Protection Law. In particular, if an entry includes the image of a person, the participant must obtain that person's consent in advance (except when capturing a street scene in a public area without focusing on a specific individual).
12. The copyright and other rights of the entries will be transferred to the Organizers once an award is given.
13. The copyright of winning entries and any income or rights derived therefrom shall belong to the Organizers.
14. The Organizers can use all submitted entries for promotional purposes and activities related with the competition without paying or notifying the participants.
15. All participants are deemed to abide by the regulations and accept the results of the competition once they completed the submission procedures.
The Organizers reserve the right not to award some of prizes if the entries do not meet the desired standard.

Adjudication Panel

1. The adjudication panel will comprise of experts in the fields of environmental science and biodiversity with representatives of the Organizers.



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2. Subject to the decision of the adjudication panel, some Awards may not be given out.

Disclaimer

1. All submitted entries that fail to comply with the rules set out in these regulations will not be assessed by the adjudication panel. The Organizers will not individually inform the participant.
2. The Organizers will not be responsible for any damage, lost, incompleteness, illegibility, delay and misplacement of any submissions that is not caused by the Organizers, and the Organizers will not individually inform the participant of such problems.
3. The Organizers may at its discretion cancel, terminate, modify or suspend the competition and disqualify any participant for misconduct.
4. In the event of any disputes, the Organizers reserve the right of final decision. The information posted on the Website shall prevail over any amendments in the event of any inconsistency.

Contact and Inquiries

1. For more information, please visit the website of the Macao Science Center website: www.msc.org.mo.
2. For any inquiries, please email multimedia@msc.org.mo, or call 87957259 (Ms. Lio) or 87957293 (Ms. Lai).
3. All personal information collected for this event and will be destroyed after the event.