

CONNECTING THE  
GEELONGPORT COMMUNITY TO  
CORIO BAY'S COASTAL ECOSYSTEMS  
AND CLIMATE CHANGE RESEARCH

# GEELONGPORT CITIZEN SCIENCE PROGRAM





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*peek into the fieldwork*

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# CITIZEN SCIENCE DAY

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Get the most out of your Blue Carbon Citizen Science day! Read this field trip briefing for information on how to prepare and what to bring. Also, start getting familiar with the site, the research and the data collection activities.





# DAY IN THE FIELD

The Citizen Science day will begin with a presentation providing insights into coastal wetland research. We will then head to Corio Bay to collect data from the tidal marshes.



## MEETING POINT

**Baptcare - Meeting Room**  
45 Robin Ave, Norlane VIC 3214



## KEY TIMES

Arrival to Baptcare: 8:45 am  
Return to Baptcare: 3:00 pm

## SCHEDULE

|                                     |  |
|-------------------------------------|--|
| 9:00 AM                             | Coastal Wetland talks<br>Incl. morning tea |
| 10:30 AM                            |  |
| 10:30-10:45 AM Travel to field site |  |
| 10:45 AM                            | Fieldwork<br>Incl. picnic lunch            |
| 02:45 PM                            |  |
| 2:45 -3:00 PM Travel to Baptcare    |  |

## FOOD & WATER

Morning tea and a picnic lunch will be provided during the citizen science day (please specify any dietary requirements in your registration form). Please bring your own snacks or energy bars for the field. Water will be available on-site so you can refill your bottle.

## TOILETS

Our field sites do not have toilet facilities. Please use the toilet at Baptcare before departing to the field. In case of emergency, a research vehicle will drive you to the closest toilet.



# GET READY



## CLOTHING & FOOTWEAR



- ☐ Closed & sturdy footwear (hiking boots or gumboots)
- ☐ Long comfortable pants & a long sleeve shirt (to avoid scratches & insect bites). Rain jacket if a rainy day.
- ☐ Spare change of clothes & shoes for your return (optional)

## FIELD SUPPLIES



- ☐ Small daypack (to carry water bottle, hat, personal items)
- ☐ Hat & sunglasses
- ☐ Water bottle & snack
- ☐ Insect repellent & sunscreen
- ☐ Personal items in ziplock/dry bag
- ☐ Medicare card
- ☐ Medications (if required)
- ☐ Camera (optional)

\*Please check the weather forecast and adjust your clothing & supplies accordingly.



# BLUE CARBON SYSTEMS

Coastal wetlands – mangroves, tidal marshes, and seagrasses – are collectively known as 'Blue Carbon' ecosystems. They act as natural carbon sinks, helping offset carbon emissions and mitigate climate change.

COVERING ONLY  
1% OF THE OCEAN  
FLOOR, THEY  
CAPTURE HALF OF  
THE WORLD'S BLUE  
CARBON.

## THEIR IMPORTANCE

### SPEEDY CAPTURE & LONG-TERM STORAGE

They can trap carbon 30-50 times faster than terrestrial forests. 80% of the carbon is stored in the soil, where is locked away for centuries to millennia.

### CLIMATE MITIGATION & ADDITIONAL SERVICES

They are efficient carbon sinks that help offset CO<sub>2</sub> emissions and mitigate climate change. They also enhance biodiversity (eg. sustain migratory birds), support fisheries, provide ecotourism revenues, and protect our coast against erosion and extreme weather events.

### VULNERABLE & DEGRADED

When degraded, coastal wetlands stop capturing carbon and can become significant sources of greenhouse gases (methane, nitrous oxide, carbon dioxide). In Australia, coastal wetlands are mainly threatened by changes in land use and the modification of coastal hydrology.



# CORIO BAY

Located within Wadawurrung Country, Corio Bay is home to a wealth of coastal ecosystems including estuaries, saltmarsh, mangroves, and seagrass meadows. The north coastline forms part of the Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar site, which is of international importance due to the threatened bird populations it supports.

## THE CARBON GAINS FROM SALTMARSH RESTORATION IN THE BELLARINE

Saltmarsh restoration is widely known to enhance bird biodiversity and the scenic value of the coastline. However, the blue carbon benefits from rehabilitating coastal vegetation are unclear in the region. This research will be critical to building the case for the restoration and protection of saltmarsh for blue carbon offsets in Victoria.

To achieve this, participants will help scientists measure and compare blue carbon dynamics across sites with (a) natural, (b) degraded, and (c) rehabilitated saltmarsh communities



WADAWURRUNG  
*Country*



# FIELD SAMPLING

In the field, participants will support the following blue carbon data collection activities:

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## SALTMARSH CONDITION & COVER

Saltmarsh species will be identified within sampling plots, where their cover and condition will be surveyed.

## SOIL CARBON ACCUMULATION RATES & STOCKS

Soil cores (down to 60 cm deep) will be collected using PVC pipes and processed on-site to calculate soil carbon storage.

## GREENHOUSE GAS FLUXES

Soil carbon fluxes (methane and carbon dioxide) will be measured using an Ultraportable Greenhouse Gas Analyser (UGGA).

## SURFACE ELEVATION

Using an RTK GPS, participants will measure saltmarsh elevation in relation to sea level.





# SCIENTISTS IN THE FIELD

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The GeelongPort citizen science program will be led by experienced scientists working with wetlands, community engagement and sustainability across Port Phillip Bay.



**DR MARIA PALACIOS**

BLUE CARBON LAB (DEAKIN)

Maria is the marine ecologist leading the award-winning #BlueCarbonArmy.

[@mdm\\_palacios](#)



**DR LISA MILLS**

GEELONGPORT

Lisa is the environmental engineer leading GeelongPort's Environment and Sustainability team.

[@DrLisaMills](#)



**DR PAUL CARNELL**

BLUE CARBON LAB (DEAKIN)

Paul is a marine and freshwater ecologist working to value and restore coastal wetlands in Victoria.

[@PaulECarnell](#)



**PROF PETER MACREADIE**

BLUE CARBON LAB (DEAKIN)

Peter is the Head of Deakin's Blue Carbon Lab. His research focuses in the use of blue carbon as a natural climate solution.

[@PeterMacreadie](#)



**DR ELODIE CAMPRASSE**

BLUE CARBON LAB (DEAKIN)

Elodie is a marine ecologist and science communicator based at Deakin.

[@ECamprasse](#)



# POTENTIAL HAZARDS\*

\*See pg 10 for emergency assistance

## SNAKES & WILDLIFE

**Venomous snakes could be present at the site! Participants must wear proper footwear (boots) and be mindful of where they step.**

Participants allergic to bee/wasp stings or insect bites should bring necessary medication (EpiPen) and alert staff before heading to the field.



## WEATHER

In summer, participants should wear sunscreen and hats at all times and drink plenty of water. In winter, keep warm with protective jackets and raincoats.



## TERRAIN

The terrain is mostly flat, but wet and muddy areas can cause slips and trips. Wear boots and watch where you step!



## RUSHES & BUSHES

Scratches or cuts from spiky rushes or overhanging branches are very common.

Wear protective clothing - including long pants and long sleeve shirts.



## KNEELING

Field activities require bending down and kneeling. Remember to keep a good posture, flexing the hips and knees, not the waist.

Also, be careful when using tools to avoid any cuts and blisters.





# SAFETY

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## EMERGENCY ASSISTANCE

Deakin University's Blue Carbon Lab has safety protocols and emergency procedures in place. We encourage participants to exercise their best judgment with regard to their own safety and the safety of other team members.

In the event of a medical emergency, all our staff is certified to provide first aid and assist participants. There will be several First Aid kits and snake bandages on site. If necessary, an ambulance will be requested by dialling **000**.

All the field sites in Corio Bay are located less than 20 min drive from the nearest hospital (12 km) and have a stable mobile connection and easy road access.

## NEAREST MEDICAL CENTRE

### UNIVERSITY HOSPITAL GEELONG

Ryrie Street, Geelong VIC 3220  
(03) 4215 0000 (24H)



# PARTICIPANT RIGHTS & RESPONSIBILITIES

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## COVID-19

All participants **MUST** be fully vaccinated against COVID-19 and willing to comply with any Victorian Government COVID-19 health and safety directives whilst participating in the program.

## INTELLECTUAL PROPERTY RIGHTS

We encourage you to share photos, videos, and stories of your fieldwork with family, friends, and social media. However, all information and data gathered is the intellectual property of Deakin University's Blue Carbon Lab. Co-opting or plagiarism of data is strictly prohibited.

## DRUGS & ALCOHOL

Local regulations with regard to the use, possession, sale, or purchase of alcohol or illegal drugs are applicable to all participants and project staff during the field trip.

## DISCRIMINATION

Deakin University's Blue Carbon Lab does not discriminate based on race, religion, ethnicity, national origin, gender, sexual orientation, or any other reason prohibited by applicable law and respects participants' right to privacy.

## RIGHT OF REMOVAL

Any participant found in violation of any of the policies described in this document (or the registration form) is subject to removal from the team at his or her own expense.



*peek into the  
fieldwork*

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**GeelongPort**

## MORE INFORMATION

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### VISIT

 [engage.geelongport.com.au](https://engage.geelongport.com.au)

 [bluecarbonlab.org/geelongport-citizen-science](https://bluecarbonlab.org/geelongport-citizen-science)

### CONTACTS

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