



ICES
CIEM

International Council for
the Exploration of the Sea
Conseil International pour
l'Exploration de la Mer



Facultad de
Biología

**International Council for the Exploration of the Sea (ICES)
WORKING GROUP ON BALLAST AND OTHER SHIP VECTORS (WGBOSV)
WORKING GROUP ON INTRODUCTIONS AND TRANSFERS OF MARINE ORGANISMS (WGITMO)**

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MEETING AGENDA WGBOSV-WGITMO 2024

**4-6 March 2024 WGBOSV Meeting
6-8 March 2024 WGITMO Meeting**

**Venue:
University of Seville, Faculty of Biology
Av. Reina Mercedes s/n
E-41012 Sevilla, Spain**

Note: All times are shown in local time (Central European Time, CET)

MONDAY 4th MARCH		
WORKING GROUP ON BALLAST AND OTHER SHIP VECTORS (WGBOSV)		
8:30 am CET	Set up Computers and testing connection Click here to join the meeting (ADD LINK)	30
9:00 am CET	Welcoming remarks: Macarena Ros, Gemma Martínez Laíz and Sofía Ruíz (Hosts), Okko Outinen (Chair of WGBOSV), Amelia Curd (On-site facilitator)	10
	Review of WGBOSV agenda, conflict of interest, and meeting etiquette – Okko Outinen	10
	Introduction of participants	10
9:30 am CET	ToR a): Conduct strategic planning (identify and develop collaborative activities, advance and standardize methods, etc.) to advance research and address knowledge gaps by reviewing national activities and responding to new requests for advice. ToR Lead: Jenni Kakkonen	
9:30 am CET	Review of National Activities (2023-2024) – 5 to 10 minutes per country	
	<ul style="list-style-type: none"> Belgium (By correspondence) Canada – TBC France – Amelia Curd Germany – Pedro Martinez Finland – National assessment of the status, trends and impacts of marine non-indigenous species for the EU MSFD – Okko Outinen 	10 10 10 20
	Questions/Discussion	10

10:30 am CET	Morning break	25
10:55 am CET	<ul style="list-style-type: none"> • Norway – Erwann Legrand • Portugal – Cátia Bartilotti & Jorge Arteaga (Remotely) • United Kingdom – Hannah Tidbury • Lithuania – TBC • Poland – Monika Normant-Saremba/Joanna Hegele-Drywa • Sweden – Shipping as vector for transfer of invasive species to swedish ports - focus on ships niche areas – Lena Granhag 	10 10 10 10 10 20
	Questions/Discussion	10
	• United States – Matthew First (TBC)	10
Extra time for discussion		
1:00 pm CET	Lunch Break – GROUP PHOTO!	60
2:00 pm CET	ToR b): Provide support to the IMO Ballast Water Management Convention (2004, BWMC) Experience-Building Phase (EBP) by providing input on the validation of compliance monitoring devices, the use of indicative or detailed analysis tools (including the quantification of harmful/target species), or other aspects of the EBP. ToR Lead: Okko Outinen	
2:00 pm CET	ToR Review: Biological testing of ships ballast water indicates challenges for implementation of the BWMC – Okko Outinen	30
	Questions/Discussion	10
2:40 am CET	Presentation: IMO regulatory updates on ballast water – Teo Karayannis	15
	Questions/Discussion	10
3:05 pm CET	Remote presentation: BWE+BWT for vessels transiting to Canadian Arctic waters – TBC	20
	Questions/Discussion	10
3:35 pm CET	Afternoon break – Group PHOTO!	25
4:00 pm CET	Remote presentation: Interim guidance on the application of the BWMC to ships operating in challenging water quality conditions – Sarah Bailey	15
	Questions/Discussion	10
4:25 pm CET	Remote presentation: Interim guidance on the application of the BWMC to ships operating in challenging water quality conditions – William Sturdy	15
	Questions/Discussion	10
Extra time for discussion		
5:00 pm CET	End of Day	
~7:00 pm CET	Dinner at a local restaurant – TBC	

TUESDAY 5th MARCH
WORKING GROUP ON BALLAST AND OTHER SHIP VECTORS
(WGBOSV)

8:30 am CET	Set up Computers and testing connection Click here to join the meeting ADD LINK	30
9:00 am CET	Reporting to ICES – Okko Outinen	30
9:30 am CET	Discussion: WGBOSV 2025-2027 Resolution & Next 3-year ToRs – Okko Outinen	40
10:10 am CET	Election of next chair	10
10:20 am CET	ToR c): Investigate and evaluate the potential effects of shipping on biodiversity in a world transformed by climate change, and provide recommendations regarding the dispersal of organisms by ships, particularly in areas of high biological value (e.g., the Arctic, Baltic, and Mediterranean Seas) ToR Lead: Kimberly Howland and Thomas Therriault	
10:20 am CET	ToR review & Theme session at ICAIS – Thomas Therriault & Kimberly Howland	30
10:50 am CET	Presentation: Marine invasive alien species in Arctic waters – Kimberly Howland (TBC) Questions/Discussion	20 10
11:20 am CET	Morning break	25
11:45 am CET	Remote presentation: Secondary spread dynamics of NIS: The role of connectivity and shipping activity – Cornelia Jaspers (Guest presentation from WGITMO) Questions/Discussion	20 10
12:15 am CET	Remote presentation: Modeling the global environmental pressures from shipping – Jukka-Pekka Jalkanen (Guest presentation from WGSHP) Questions/Discussion	20 10
	Extra time for discussion	
1:00 pm CET	Lunch Break (WGBOSV Group photo)	60
2:00 pm CET	Presentation: Antarctic perspectives on ToR c – TBC Questions/Discussion	20 10
2:30 pm EET	Discussion and reporting under ToR c) Any other business – Diversity, Equity and Inclusion among WGBOSV	20 10
	Extra time for discussion	
3:30 pm CET	End of Day	
~7:00pm CET	Dinner at a local restaurant – TBC	

WEDNESDAY 6th MARCH
**JOINT MEETING WITH WORKING GROUP ON INTRODUCTIONS
AND TRANSFERS OF MARINE ORGANISMS (WGITMO)**

08:30 am	Set up Computers and testing connection	30
CET	Click here to join the meeting (ADD LINK)	
9:00 am	Welcoming remarks: Macarena Ros, Gemma Martínez-Laíz and Sofía Ruíz-Velasco	10
CET	(Hosts), Okko Outinen (Chair of WGBOSV), and João Canning-Clode (Chair of WGITMO)	
	Review of WGBOSV/WGITMO Joint Day agenda, conflict of interest, and meeting etiquette – João Canning-Clode & Okko Outinen	05
	Introduction of participants	15
	In memory of Gordon Copp – Phil Davison & João Canning-Clode	10
09:40 am	WGBOVS ToR d): Investigate and evaluate relatively understudied aspects of vessel biofouling, such as the effect of microfouling (including species contributing to microbially induced corrosion [MIC]), the release of organisms (including larval stages) from ships during normal operations, and biofouling on recreational or fishing vessels.	
CET	WGITMO ToR c): Investigate biofouling as a vector for the introduction and transfer of aquatic organisms on vessels and artificial hard structures, their pressure and impact on the ecosystem with a comparison of prevention or selective mitigation methodologies.	
	ToR lead: Okko Outinen and João Canning-Clode	
9:40 pm	Host Institute presentation: Understanding social drivers of marine bioinvasions in Spain – Gemma Martínez-Laíz	15
CET	Questions/Discussion	10
10:05 am	Host Institute presentation: Characterization of bryozoan communities in marinas of the Mediterranean and adjacent areas: NIS and management measures – Sofía Ruiz-Velasco	15
CET	Questions/Discussion	10
10:30 am	Update: Biofouling – Teo Karayannis	10
CET	Questions/Discussion	05
10:45 am	Update: IMO Study on biofouling – Lisa Drake	10
CET	Discussion	10
11:05 am	Update: International school on Biofouling – Agnese Marchini (TBC)	10
CET	Discussion	10
11:25 am	Morning break – GROUP PHOTO!	25
CET		
11:50 am	Presentation: Evaluating methods used for assessing fouling classes in relation to the risk of non-indigenous species introduction by commercial vessels – Arjan Gittenberger	15
CET	Questions/Discussion	10
12:15pm	Presentation: Updates on Biofouling In-Water Cleaning ISO Standards and Issues Needing ICES Input – Mario Tamburri	15
CET	Questions/discussion	10
	Extra time for discussion	
1:00 pm	Lunch Break – GROUP PHOTO!	60
CET		

2:00 pm CET	INSPIRING KEYNOTE: Effects of human mediated transport of species on the global redistribution of biota: Ecological and evolutionary consequences – Marc Rius	30
	Questions/Discussion	10
2:40 pm CET	WGBOSV ToR e): Evaluate the development of DNA- and RNA-based molecular tools for surveillance and monitoring of ship-borne non-native species, including harmful species. WGITMO ToR e): Evaluate the development and utilization of DNA- and RNA-based molecular approaches to provide science-based tools for strategic planning, policy development, and operational processes regarding non-native species and biological invasions (including detection and monitoring, reconstruction of patterns and vectors of introduction and spread, assessment of establishment and impact risk, and application for invasive species control) <ul style="list-style-type: none"> • ToR Leads: John Darling and Frédérique Viard 	
2:40 pm CET	ToR Review	20
3:00 pm CET	Discussion: Viewpoint on molecular methods – John Darling	30
3:30 pm CET	Presentation: Hull-scraping metabarcoding: an effective approach for identifying non-native species on pleasure craft – Frédérique Viard	15
	Questions/Discussion	10
3:55 pm CET	Afternoon break	25
4:20 pm CET	Remote presentation: GOTeDNA platform/project – Anais Lacoursière (TBC)	15
	Questions/Discussion	10
4:45 pm CET	Presentation: Neobiota Information System (NIS) - A web-based application – Lisa Röpke	15
	Questions/Discussion	10
5:10 pm CET	Next meeting venue/Any other business	10
5:20 pm CET	Neobiota 2024 in Lisbon – Paula Chainho	05
	Extra time for discussion	
5:30 pm CET	End of Day	
~7:00 pm CET	Joint dinner (Location TBA)	

THURSDAY 7th MARCH
WORKING GROUP ON INTRODUCTIONS AND TRANSFERS OF MARINE ORGANISMS (WGITMO)

08:30 Set up Computers and Online connection .30

[Click here to join the meeting \(ADD LINK\)](#)

09:00 **Opening of the meeting** .20

Welcoming remarks: **João Canning Clode** (Chair),
Macarena Ros, Gemma Martínez Laíz and Sofía Ruíz (Hosts), (Co-Hosts)
 Review of the Day agenda, conflict of interest, and meeting etiquette
 Introduction of Participants
 Review of WGITMO Terms of Reference and Agenda

09:20 **ToR a):** Advance research, develop collaborations and address surveillance and knowledge gaps in issues related to the introduction and transfer of marine organisms, through annual reviews of national/international activities and responding to advice requests.

ToR lead: Cynthia McKenzie

National reports (Please limit your report to the 10 minutes scheduled.)

Belgium	Thomas Kerkhove	.10
Canada	Cynthia McKenzie	.10
Denmark	Cornelia Jaspers, Kathe Jensen	.10
Estonia	Henn Ojaveer (+ Talk on NIS impacts in Baltic) (online)	.20
Finland	Maiju Lehtiniemi (online)	.10
France	Amelia Curd	.10

10:40 **Morning break** .20

11:00 Review of National Reports continue

Germany	Stephan Gollasch	.10
Greece	Argyro Zenetos (online)	.10
Iceland	Sindri Gíslason (online)	.10
Israel	Bella Galil	.10
Italy	Anna Occhipinti	.10
Norway	Erwann Legrand	.10
Netherlands	Arjan Gittenberger	.10
Poland	Monika Normant-Saremba	.10
Portugal	Paula Chainho	.10

Extra time for discussion

13.00 **Lunch break** .60

14.00 **ToR a) continues**

Review of National Activities continued

Spain	Macarena Ros	.10
Sweden	Rahmat Naddafi (online)	.10
UK	Phil Davison	.10
USA	April Blakeslee	.10
Lithuania	Sergej Olenin	.10

Presentation: From paper files to a global database: AquaNIS perspectives –
Sergej Olenin .20

Questions

Presentation: Manipulative experiments on the ecological interactions during the invasion process: presentation of case studies in Spain – **Ignacio Gestoso** .20

Questions

Presentation: Exploring and exploiting IAS in Greece and beyond: examples of scientific projects– **Paraskevi K. Karachle** .20

Questions

Discussion ToR a) for 2023 to 2025 – Changes, modifications and expected deliverables – ToR Lead: **Cynthia McKenzie** .10

15:30 Afternoon break .30

16.00 ToR f): Investigate the role of human produced marine debris as a vector and facilitator for the introduction and spread of non-indigenous species (NIS)
ToR Lead: João Canning-Clode

Presentation: Update on DeNIS - Global Database on Marine Debris and Non-Indigenous Species, - **João Canning Clode** .20

Discussion

Presentation: Invasive Jellies: Navigating Challenges in Studying Gelatinous Zooplankton as Invasive Alien Species. – **Jamileh Javidpour** .20

Discussion

Discussion ToR d) for 2023 to 2025 – Changes, modifications and expected deliverables - **João Canning-Clode** .10

17.00 ITMO 50th anniversary

Presentation: ITMO history and first meeting, - **James T. Carlton** .15

Discussion

Presentation: Update on ITMO 50th anniversary paper. – **João Canning-Clode** .15

Discussion

17:30 Close of Day 2

FRIDAY 8TH MARCH
WORKING GROUP ON INTRODUCTIONS AND TRANSFERS OF
MARINE ORGANISMS (WGITMO)

08:30 Reconvene for day 3 – Set up Computers and Online connection .30
[Click here to join the meeting \(ADD LINK\)](#)

09:00 ToR b) Evaluate the impact climate change may have on the introduction and spread of non-indigenous marine organisms, including the Arctic environments.
ToR Lead: Kimberly Howland and Amelia Curd

Presentation: General update on ToR b – published papers, future papers and ICAIS Session – **Amelia Curd and Kimberly Howland**
 Discussion .20

Presentation: Updates and latest results on the Arctic Invasive Alien Marine Species project - **Kimberly Howland**
 Discussion .20

Presentation: Invasive alien species in the changing Arctic – **Kimberly Howland**
 Discussion .20

Presentation: Temperature paper update – **Amelia Curd**
 Discussion .20

Discussion ToR b) for 2023 to 2025 – Changes, modifications and expected deliverables –
ToR Lead: Kimberly Howland and Amelia Curd .10

10:30 Morning break

11.00 ToR d): Advance knowledge base to further develop indicators to evaluate the status and impact of non-indigenous species in marine environments
ToR Lead: Phil Davison

Presentation 1: .20
 Discussion

Presentation: Update on ToR 'd' – recent progress & way forward .20
 – **Phil Davison**

Discussion ToR d) for 2023 to 2025 – Changes, modifications and expected deliverables – .20
Phil Davison

12.00 ToR g): Investigating best practices to minimize the role of aquaculture as a vector for the introduction and transfer of NIS. This would include both aquaculture target NIS and hitchhikers (biofouling and interstitial parasites and pathogens). Impacts of NIS on aquaculture and on ecosystems will be addressed.

ToR Lead: Paula Chainho and Cynthia McKenzie

Presentation: Invasions under the mud: the invisible expansion of NIS in mobile sediments. **Paula Chainho**

Questions .20

Discussion ToR g) for 2023 to 2025 – Changes, modifications and expected deliverables - **Paula Chainho and Cynthia McKenzie**

.40

13.00 Lunch break .60

14.00 ToR g) continues
ToR Lead: Paula Chainho and Cynthia McKenzie

Discussion ToR g) for 2023 to 2025 – Changes, modifications and expected deliverables – **Paula Chainho and Cynthia McKenzie**

.45

Extra time for discussion

.45

15:30 Afternoon break

Concluding remarks –

Macarena Ros, Gemma Martínez-Laíz, Sofía Ruíz-Velasco and João Canning-Clode
(Chair of WGITMO)

TERMS OF REFERENCE (ToRs)

Terms of Reference for WGBOSV (2022-2024)

ToR	Description	Background	Expected Deliverables
a	Conduct strategic planning (identify and develop collaborative activities, advance and standardize methods, etc.) to advance research and address knowledge gaps by reviewing national activities and responding to new requests for advice.	ICES strategic plan Goal 2: understand the relationship between the impact of human activities (e.g., shipping) and marine ecosystems to estimate pressures and impacts and develop science-based sustainable pathways	Report to ICES. Respond to advice requests, as applicable.
b	Provide support to the IMO Ballast Water Management Convention (2004, BWMC) Experience-Building Phase (EBP) by providing input on the validation of compliance monitoring devices, the use of indicative or detailed analysis tools (including the quantification of harmful/target species), or other aspects of the EBP.	The BWMC aims to minimize the transfer of harmful aquatic organisms within the ballast water of ships. To assess the Convention's implementation, the EBP is underway. In addition to gauging the logistics of the implementation, there are science needs related to the validation of methods and tools that need to be addressed.	Input on the general applicability or otherwise of such conditions or methods to IMO or national regulators through meeting participation, correspondence group and/or technical paper or peer-reviewed manuscript.
c	Investigate and evaluate the potential effects of shipping on biodiversity in a world transformed by climate change, and provide recommendations regarding the dispersal of organisms by ships, particularly in areas of high biological value (e.g., the Arctic, Baltic, and Mediterranean Seas)	This work will contribute to the ICES/PICES Strategic Initiative on Climate Change Impacts on Marine Ecosystems (SICCME); address the Convention on Biological Diversity (CBD) and priority actions identified in the Arctic Council Arctic Invasive Alien Species (ARIAS) Strategy and Action Plan; and be relevant to the ICES high-priority action area of 'Arctic research'.	Contribution to symposium or conference, and a peer-reviewed manuscript.
d	Investigate and evaluate relatively understudied aspects of vessel biofouling, such as the effect of microfouling (including species contributing to microbially induced corrosion [MIC]), the release of organisms (including larval stages) from ships during normal operations, and biofouling on recreational or fishing vessels.	This work will be carried out jointly with WGITMO. Ships' biofouling is, with ballast water, a primary vector of non-native species. As management of such vectors is the only effective way to reduce risks of new introductions, addressing biofouling issues is of high priority in non-native species management.	Strengthen ties to the UNDP-GEF-IMO GloFouling Partnerships project through meeting participation and increased discussion of research aims, report to ICES, and/or publish a technical paper or peer-reviewed manuscript.
e	Evaluate the development of DNA- and RNA-based molecular tools for surveillance and monitoring of ship-borne non-native species, including harmful species.	This work will be carried out jointly with WGITMO. Robust monitoring efforts for vessel-borne biodiversity (including non-native species) is critically important, as is the application of reliable and accurate methods to assess compliance to regulations (e.g., BWMC). RNA- and DNA-based molecular tools have been proposed as complementary approaches to traditional monitoring and compliance testing methods, and although some challenges remain, these tools warrant close scrutiny.	Input on the general applicability or otherwise of such methods to IMO or national regulators through meeting participation, correspondence group and/or technical paper, peer-reviewed manuscript, or workshop.

Terms of Reference for WGITMO (2023-2025)

ToR	Description	Background	Expected Deliverables
a	Advance research, develop collaborations and address surveillance and knowledge gaps in issues related to the introduction and transfer of marine organisms, through annual reviews of national/international activities and responding to advice requests	Data, information and knowledge collated and synthesised ensures timely update of AquaNIS as well as national and international databases as appropriate. This information will be used as an underlying information source for other ToRs, responding to incoming advice requests as well as organising collaboration with other international science organisations (e.g. PICES, CIESM, HELCOM)	Annual reports to ICES. Further develop and advance AquaNIS database, and populate it with new data. Respond to incoming advice requests as requested
b	Evaluate the impact climate change may have on the introduction and spread of non-indigenous marine organisms, including Arctic environments.	Contributes to SICCM and ICES high-priority action areas 'Arctic research'	Primary publication on the Arctic environment and the spread of nonindigenous species.
c	Investigate biofouling as a vector for the introduction and transfer of aquatic organisms on vessels and artificial hard structures, their pressure and impact on the ecosystem with a comparison of prevention or selective mitigation methodologies.	Biofouling has been increasing recognized as an important vector in the introduction and transfer of aquatic organisms. Elements of this work will be carried out jointly with WGBOSV as a comparison vector in invasion pathways. Biofouling is an increasing concern for aquaculture, energy installations, and coastal development as stressors on coastal environments. Issues include (1) the regular cleaning process and how to avoid unintentional dropping scraped off material during in-water cleaning activities, (2) can uncontrolled robots conduct regular cleaning or is always a remote controller needed?	Input on the general applicability of preventive measures and selective mitigation technologies through a technical paper or manuscript submitted to a peer reviewed scientific journal also addressing the issues described under "Background". In preparation of this paper input from Australia and New Zealand is sought as key players in this field with long-lasting experience.

ToR	Description	Background	Expected Deliverables
d	Expand knowledge base and develop further the use of decision-support tools to communicate to decision-makers and stakeholders, nonindigenous species risks and impacts in marine and transitional waters.	The aim is to develop further and apply more widely risk-screening tools (i.e. AS-ISK and CMIST) to permit their comparison and cross-calibration of screening outcomes in order to enhance their accuracy for identifying aquatic invaders and knowledge gaps, under both current and future climate conditions, so to inform legislation-related policy and management decisions in Europe (Regulations on the use of aliens in aquaculture, 2007, and managing IAS, 2014; also EU Directives, MSFD, WFD) and North America (e.g. watchlists in Canada). This may be particularly useful for risk assessments and early warning systems.	At least one manuscript to be submitted to a peer-reviewed scientific journal.
e	Evaluate the development and utilization of DNA and RNA-based molecular approaches to provide science-based tools for strategic planning, policy development, and operational processes regarding non-native species and biological invasions (including detection and monitoring, reconstruction of patterns and vectors of introduction and spread, assessment of establishment and impact risk, and application for invasive species control)	Molecular (DNA -based and RNA -based) approaches have been increasingly used in the past decade to uncover cryptic introduced species, understand underlying processes of population establishment and spread, and detect novel introductions and monitor existing ones. Recent innovations have increased the power of these approaches to understand invasion risk and offer possibilities for novel biotechnological solutions for control or eradication of invasive populations. With the advent of recent technologies, it is timely to assess and evaluate their potential applications as well as their limitations, including for early warning systems. This is a shared ToR with WGBOSV	Input on the effective utilization of these methods for international and national policies and regulations. Specifically: 1) Development of guidance on future implementation of molecular tools, based on outcome of workshop to be held jointly with the International Conference on Marine Bioinvasions in 2023. 2) Peerreviewed manuscript providing update on the state of the science and the integration of molecular methods in management contexts. 3) Summary from WGITMO/WBOSV members of existing projects employing molecular tools, specific needs of member states that might be addressed with these tools, and status of incorporation into formal decision-making and management.

ToR	Description	Background	Expected Deliverables
g	Investigate best practices to minimize the role of aquaculture as a vector for the introduction and transfer of non- indigenous aquatic organisms. This would include both nonindigenous species targeted for aquaculture and hitchhikers (biofouling and interstitial, parasites and pathogens). Impacts of non-indigenous species on aquaculture and on ecosystems will be addressed	Aquaculture has been recognized as an important vector in the introduction and transfer of aquatic organisms. ENSARS provided some baseline information on aquaculture risk analysis, including development and global testing of ENSARS' derivative, the AS-ISK. There are important social and economic impacts (positive and negative) of introductions related to aquaculture. Linkages with aquaculture working groups, and WGPDMO will be sought as well as a close collaboration with WGECON.	Input on the general applicability of preventive measures (good practice codes) and selective mitigation technologies through technical guidance and/or a review paper. A joint submission of manuscripts to a peerreviewed scientific journal.

TRAVEL INFORMATION

ICES WGBOSV/WGITMO MEETING 2024

4-8 MARCH, 2024

SEVILLA, SPAIN

MEETING LOCATION

Sevilla, the capital of Andalusia, is a beautiful city located on the Bajo Guadalquivir, at the furthest navigable point of the river. Romans, Visigoths, Moors and Christians have settled on its lands over the centuries, leaving a rich cultural heritage. In short, Seville represents the purest essence of Andalusia. Its culture and its monuments make it one of the most beautiful and unique cities to behold, birthplace and inspiration of writers, painters and artists in general. Seville's gastronomy is a further reflection of its history, including hundreds of delicious specialities.



March is a good time to visit Seville. **Temperatures** can range between **10 °C** during night (although they rarely go below 15°C) to **19-22°C** during day, with some showers.

MEETING VENUE

The ICES WGBOSV/WGITMO Meeting will be held at the **Faculty of Biology**, in the “salon de grados” of the Green Building (we literally call this building “edificio verde”). This faculty is located at the Reina Mercedes Campus of the University of Seville, in the south of the city (see map below). This Campus is one of the most emblematic places of the University of Seville, with a very nice atmosphere, full of



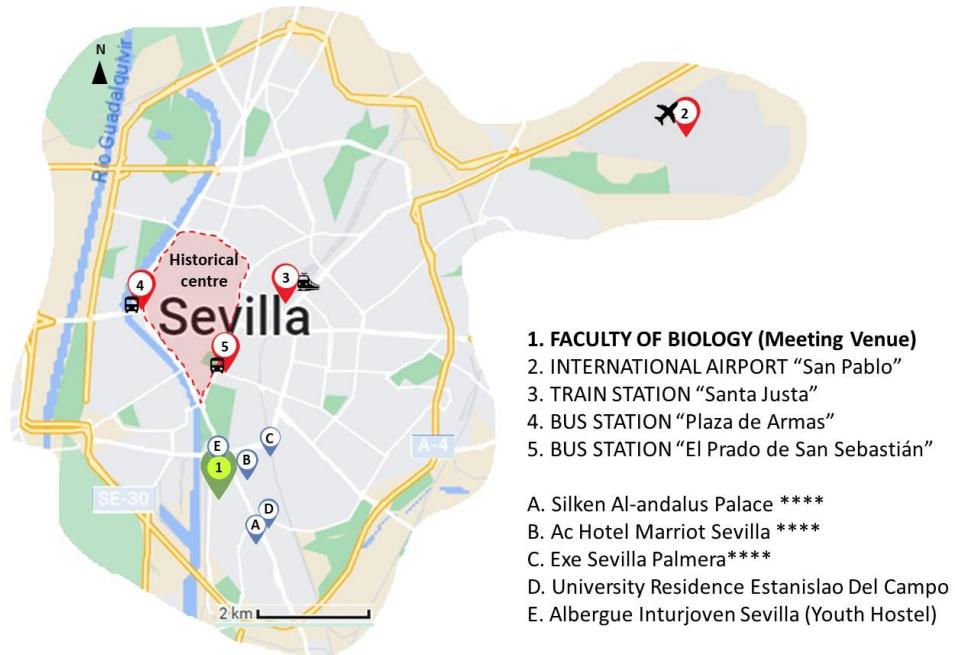
students and University life. The faculties of Biology, Chemistry, Physics, Mathematics and Pharmacy



The Faculty of Biology is settled in Reina Mercedes Av., in the south of the city (**Campus Reina Mercedes. Avda Reina Mercedes S/N. 41012 – Sevilla**)

are housed in the central area of the campus. At Reina Mercedes Avenue there is a wide variety of coffee shops, bars, restaurants, etc. with reasonable prices.

HOW TO GET HERE



Getting here by air

Seville International airport "San Pablo"

The San Pablo **international airport** is located about 10 Km north east of the city, on the A4 motorway to Cordoba and Madrid at km 533. It is the main international airport serving Western Andalusia in southern Spain, and neighbouring province.

There is a **special airport bus service** (bus line EA) every 30 min, from 05.45 to 01.00 to city centre. The cost of a single ticket is 4 EUR and the bus has several stops, including the train station "Santa Justa" (see map above). EA line is connected with bus lines 3 and 34 (which take to the Faculty of Biology). For example, if you go to Campus Reina Mercedes area (meeting venue) you can get off in the stop "Paseo colón (Torre del oro)" and there you can take the regular bus number 3 (more information on EA route: <https://www.aeropuerto-sevilla.com/seville-airport/transportation/seville-airport-bus.php>).

You can also take a **taxi** from the airport to the city centre. Under fair traffic conditions, a taxi ride takes about 20-25 min from the airport, and about 15 min from the Santa Justa train station, to reach the Faculty of Biology. There is a flat rate for the journeys from the airport to the city, or vice versa ("Tarifa Única Aeropuerto"). Urban services from Monday to Friday, from 7am. to 9pm, cost 24,98 EUR. Urban services from Monday to Friday, from 9pm. to 7pm. on Saturdays, Sundays and holidays cost 27,84 EUR (more information in: <https://www.aeropuerto-sevilla.com/seville-airport/transportation/taxi-seville-airport.php#/search>).

Getting here by train

If you are coming by train, you will arrive to Train Station of Santa Justa (see map on previous page), which is connected by regular buses with the city centre.

From the train station of Santa Justa, the high speed train service (AVE, or a cheaper option AVLO) has achieved linking Seville-Madrid in just 2,30 h. There are several trains daily. Prices are very variable, it is good to reserve them in advance (more information in: <https://www.renfe.com/>).

Getting here by bus

Regular urban bus lines 2, 3, 6 and 34 take to the Faculty of Biology (more information on city buses: <http://www.tussam.es>)

WHERE TO STAY

Sevilla is a very tourist city and lodgement prices are not always cheap, so we recommend booking your hotel and travel arrangements as soon as possible. Anyway, near the Reina Mercedes Campus there are reasonable options of different quality levels. We have selected five options within 1,5 km to the meeting venue (see map in the previous page).

A. Silken Al-Andalus Palace Hotel**** (€€€)

(<https://www.hoteles-silken.com/es/hotel-al-andalus-sevilla/>)

- Address: Avenida de la Palmera s/n, esq. C/ Paraná (+34 954 230 600)
- Approximated prices: double and single room from 89€ / night without breakfast
- ✓ **IMPORTANT:** we have got a special price for the first 10 room reservations made until February 4: **64 € single or double room** without breakfast; 74 € with breakfast if it is only one person per room or 84 € if there are two persons per room. If you would like to book any of these options, you have to contact to this email reservas3.alandalus@hoteles-silken.com and ask for the special prize for the “Ref. GRHAA00048525. CUPO ICES WGBOSV/WGITMO MEETING 2024 UNIV. SEVILLA”)
- Distance from meeting venue: 1,1 km
- Observations: we consider it the best quality price option (even without the special meeting prize). It is 15 minutes by walk to the meeting venue (10 minutes if you take the bus line 34). It is well connected to the historical centre by the bus lines 37 and 34 (it takes around 25 minutes), and there is a taxi stand at the door.

B. AC Hotel by Marriot Ciudad de Sevilla **** (€€€)

(<https://www.marriott.com/es/hotels/svqci-ac-hotel-ciudad-de-sevilla/overview/>)

- Address: Av. Manuel Siurot, 25 (+34 954 23 05 05)
- Approximated prices: double and single room from 118€ / night without breakfast
- Distance from meeting venue: 650 m
- Observations: this is a very beautiful hotel, very well connected to the Meeting venue (less than 10 minutes by walk) and to the city centre (less than 15 minutes taking the bus line 34).

C. Exe Sevilla Palmera Hotel**** (€€€)

(https://www.eurostarshotels.com/exe-sevilla-palmera.html?referer_code=bs1gg13ww)

- Address: calle Cardenal Ilundáin, 28 (+34 913 342 196)
- Approximated prices: single and double room from 108€ / night without breakfast
- Distance from meeting venue: 1 Km
- Observations: this hotel is next to the "Virgen del Rocío" suburban train station, so it is well connected by train to "Santa Justa" train station and the city centre ("San Bernardo" suburban train station). It is 15 minutes by walk to the meeting venue.

D. University Residence "Rector Estanislao del Campo" (€€)

(<https://micampusresidencias.com/residencias-universitarias-sevilla/micampus-estanislao/>)

- Address: Carretera Su Eminencia 2A (+34 955 062 480)
- Approximated prices: single room with private bathroom and private kitchen from 65€ / night, double room with private bathroom and private kitchen from 75€ / night (breakfast included)
- Distance from meeting venue: 1,2 Km
- Observations: although it is mainly for students and for long-stay stays of researchers, short-term stays are also possible if there are available rooms. It is 20 minutes by walk to the meeting venue. It is well connected to the historical centre by the bus line 37 (it takes around 15 minutes).

E. Albergue Inturjovent Sevilla/ Sevilla Youth Hostel (€)

(<https://www.inturjovent.com/albergues/sevilla/albergue-inturjovent-sevilla>)

- Address: c/ Isaac Peral, 2 (+34 955181181)
 - Prices**: double room with private bathroom for adults (from 26 to 59 years old): 36€ (+8 € supplement for single use of the double room)/ night (breakfast included); double room with private bathroom for young and seniors (under 26 and over 59 years old): 30€ (+8 € supplement for single use of the double room)/ night (breakfast included).
 - Distance from meeting venue: 450 m
 - Observations: the youth hostel is just 5 minutes walking from the meeting venue.
- **Prices are cheap but, importantly, you need to bring your Hostelling Card. It is also possible to get it in the following link: <https://www.inturjovent.com/carnes> (less than 30 years old: 5 €, more than 30 years old: 10 €)

Besides these five possibilities suggested by the host team, Sevilla offers a great variety of lodgements. For those who prefer to stay in the historical city centre, there are abundant small hotels and hostels of different prices. You can easily find many places on www.booking.com or Airbnb.es. Sometimes, special offers can be found on the internet, and the price can change depending on the time you make the booking in advance. Best luck! Anyway, for any doubt about accommodation in Sevilla, please do not hesitate to contact with the host team.

GASTRONOMY

Sevilla is the place to go for traditional tapas bars – the small plates that have become one of Spain's most prolific exports. More than 3,000 tapas bars hide along Seville's

side streets. You should try Andalusian classics such as **jamón ibérico de bellota** (cured salty pork meat). You can eat at any time of the day, but a typical Andalusian breakfast is a toast of bread with extra virgin olive oil, sliced tomato and Iberian ham. You should also try **pescañitos fritos** (deep-fried fish), **carrillada** (braised cheeks), **pringá** (a special mixture of different cooked meats), **serranito** (warm sandwich with ham, green pepper and chicken or pork), **chickpeas and spinach**, **salmorejo** (a tomato cream served cold), **gazpacho** (a vegetable soup served cold), or **artichokes with jamón** with a jar of local beer Cruzcampo in hand. Close to the meeting venue we recommend the bar Avelino (Plaza los Andes, S/N), Al Gusto Tapas (pizzeria and tapas bar located in edificio palmera plaza, 1, Av. de la Palmera, s/n) and bar Bronce (just in the street of the Faculty of Biology: Av. de la Reina Mercedes, Bloque 15). Moreover, in the following link you can find a good summary of essential Sevilla restaurants: <https://www.eater.com/maps/best-restaurants-seville-spain-where-to-eat>

ADDITIONAL ACTIVITIES



The city centre hosts a varied and unusual monuments and places of such beauty as the **Cathedral with the Giralda tower**. The Cathedral is surrounded by several interesting places to visit such as the **Archivo de las Indias** (Indian Archives), the **Real Alcázar de Sevilla** (Arabic Palace with amazing gardens) and the magical **Barrio de Santa Cruz** (Santa Cruz district in the city centre). Another interesting places to visit include the **Plaza de España**, surrounded by the wonderful **María Luisa Park**, the **Torre del Oro** at the Guadalquivir river, the **Maestranza** (bull-ring), the **Metropol Parasol** (Setas de Sevilla), located in the **Barrio de la Encarnación**, the **Fábrica de Tabacos** (Tabacco Factory; built in the 18th century and now the main building of the University of Sevilla, is also the setting for the very well-known opera by Bizet, Carmen), the **Museo de Bellas Artes** (fine art museum), which houses paintings by artists such as Velázquez and Murillo, the **Alameda de Hércules**, the **Barrio de Triana** (Triana district), **the bridges over the Guadalquivir**, the **aquarium**, the patios of its traditional houses, the balconies and railings, the **flamenco shows**, as well as an endless number of churches, convents and other details which convert the ancient city centre into an open-air museum (more information on: <https://www.andalucia.org/en/sevilla> or <https://www.turismosevilla.org/index.php>).

CONTACTS IN SEVILLA (local host)

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We are looking forward to seeing you in Sevilla!

TIPS FOR ONLINE PARTICIPANTS

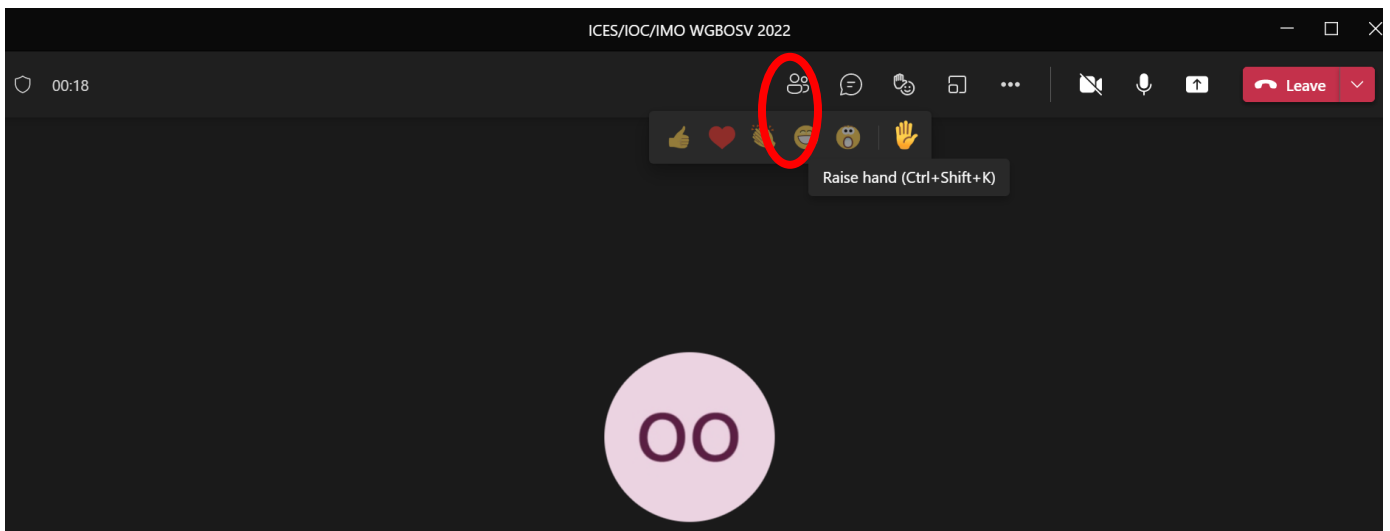
To Join the meeting online:

Monday, Tuesday, and Wednesday:

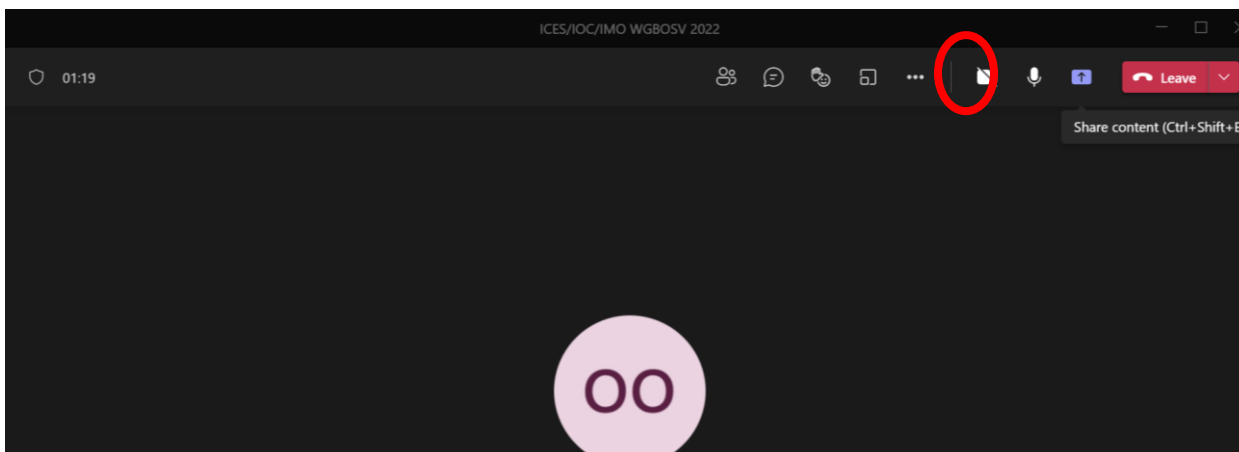
[Click here to join the meeting \(ADD LINK\)](#)

Instructions below are for MS TEAMS, but Zoom has similar features

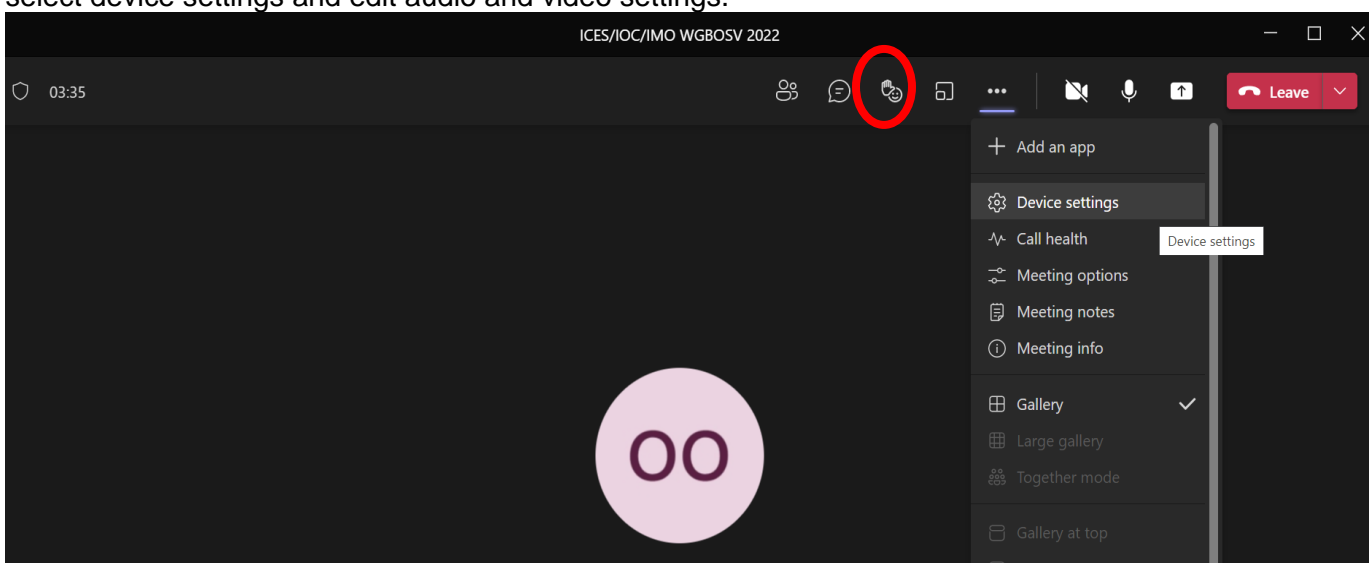
- Please sign in with your full name so everyone knows who is speaking; this is especially helpful to new members and during the joint day, when everyone does not know each other.
- Please mute your microphone unless you are speaking.
 - The host/co-host of meeting can mute a participant and then later prompt the participant to unmute themselves (note that due to privacy concerns, hosts/co-hosts *cannot* turn on participants' microphones [or cameras, for that matter])
- To conserve bandwidth, after the initial introduction of new members and guests, please turn off your camera unless you are presenting or asking a question.
- **To raise and lower your hand**
 - On the top of your screen, see “**Reactions**” including a hand icon



- **To share your screen**
 - There is a “**share**” icon at the top right-hand side of your screen. You can share any content that is open.



- **To edit device settings**
 - There are three dots at the top right-hand side of your screen, where you can select device settings and edit audio and video settings.



- **Chat feature**
 - Since it is distracting to have a discussion going on in the chat panel while a presentation is being delivered or the group is having a verbal discussion, kindly refrain from using the chat function, please.

Reports

- All WGBOSV and WGITMO reports are available, by year, here: [Library \(ices.dk\)](https://www.ices.dk)

23rd International Conference on Aquatic Invasive Species (ICAIS)

- <https://icaais.org/>

Time zones

- Since this meeting is hybrid and online participants will be scattered across multiple time zones, for consistency, the agenda uses the local time (CET).
- If you are not aware of it, this site is helpful to keep track of different time zones:
 - <https://www.timeanddate.com/worldclock/personal.html> — You can customize this page with clocks from different time zones, and you can change your browser settings so the page is visible every time Google Chrome opens

- On the top ribbon in Chrome, click on the three vertical dots on the far right-hand side (= Customize and control Google Chrome), click on “Settings”, scroll down to the header “On Startup”, and click “Add a new page”