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UNIVERSITY OF GALWAY

# 8<sup>th</sup> National Forum on Education for Sustainable Development

TUD, Grangegorman  
December 1<sup>st</sup>, 2023

Associate Professor Una FitzGerald  
[una.fitzgerald@universityofgalway.ie](mailto:una.fitzgerald@universityofgalway.ie)



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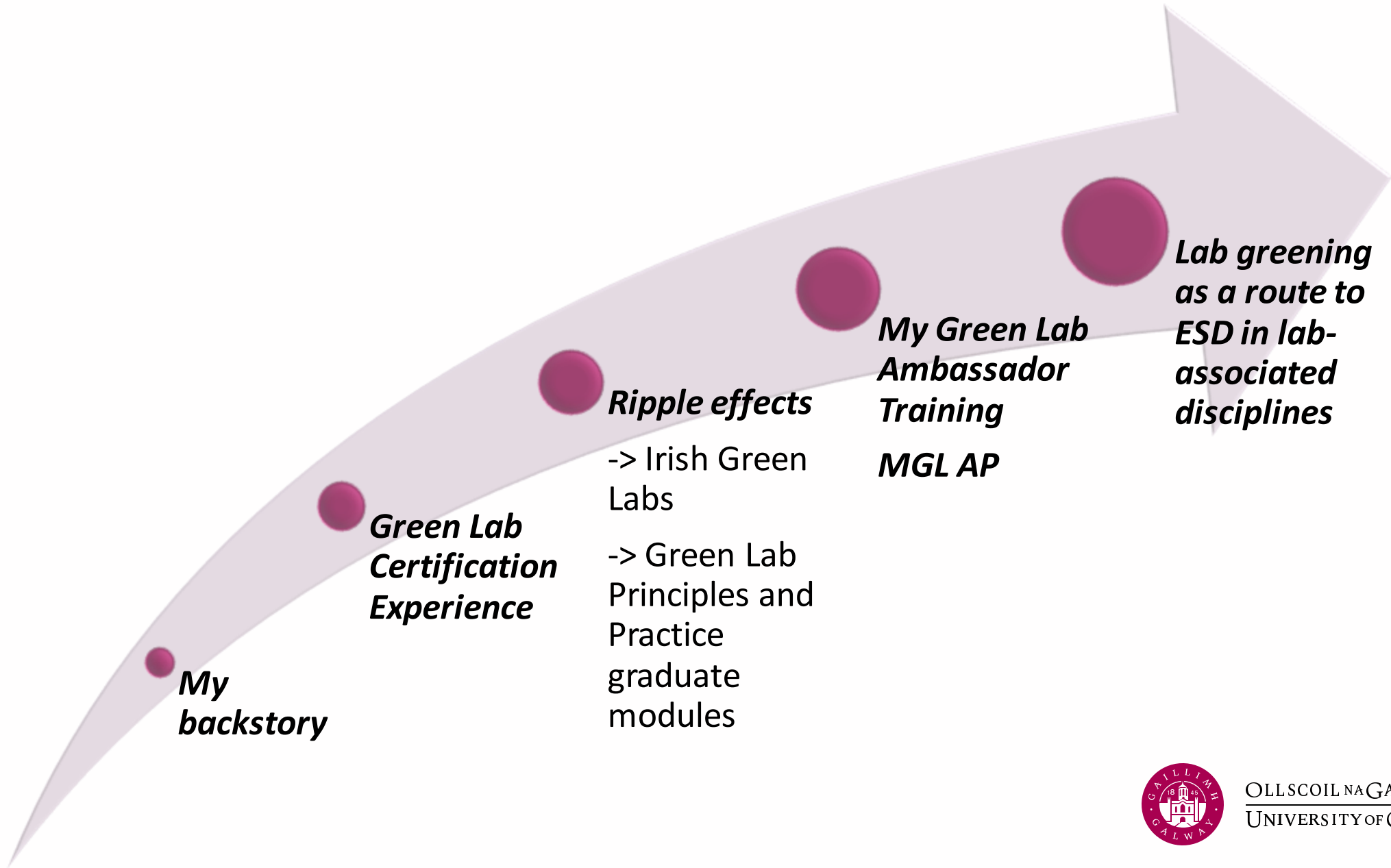


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***Thank you,  
Siobhán Sleeman  
& Niall McMahon***

For the invitaiton to be here today....







My personal  
backstory...

Una's office and lab!  
(Biomedical Sciences Building)

River Corrib



# Multiple Sclerosis Research, Lab Greening

Currently based  
in Biomedical  
Engineering  
At the  
University of  
Galway

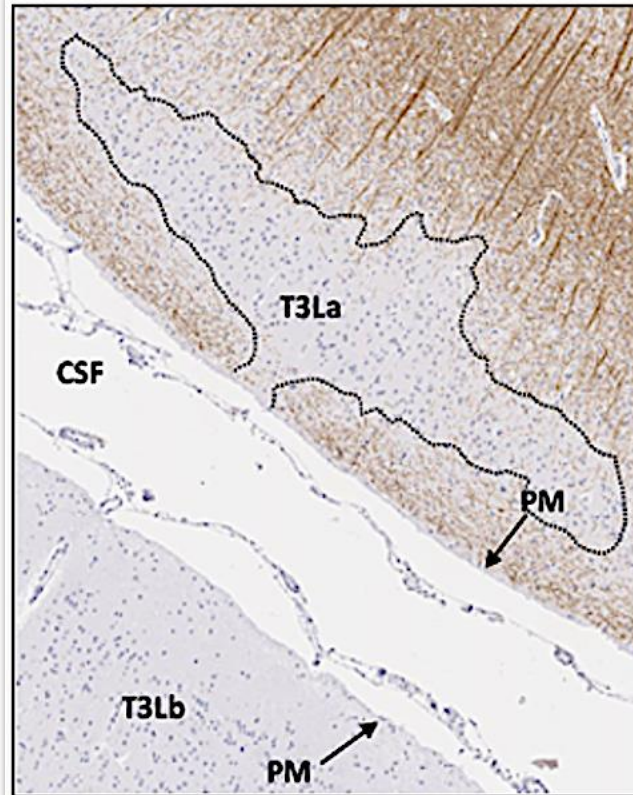


Image of human brain tissue; loss of cortical myelin is delineated in cortex (produced by Dr Jill McMahon, UoG)

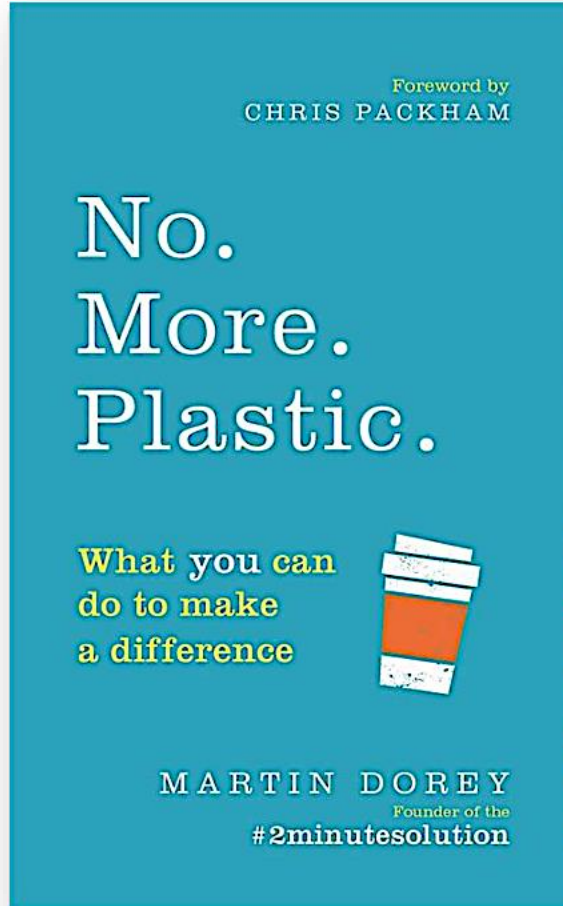


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# My Eco-epiphany in 2018!



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Plastics are only  
one part of the  
story....

*...the environment is also impacted by  
how we consume energy, use water and  
how we process lab chemicals*





# My Green Lab Certification

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Creating a Culture of Sustainability Through Science



# Mission

My Green Lab's mission is to *build a global culture of sustainability* in science to transform the industry into a global leader on environmental sustainability. Through education, community engagement and market leading certification tools, we are inspiring the scientific community to integrate sustainability into everything they do.

## Program Ecosystem

Certification



**my green lab  
certification.**

### **My Green Lab Certification**

International 'gold standard' for laboratory sustainability best practices.

# ACT.

### **The ACT Label**

The world's premier eco-label for laboratory products that ensures Accountability, Consistency and Transparency in order to enable sustainable laboratory procurement.

Advocacy & Education



**freezer  
challenge**

### **Freezer Challenge**

International competition to encourage cold storage best practices.



### **My Green Lab Ambassadors**

Global community of green lab enthusiasts that have been educated and empowered to bring green lab principles into their work and research.



### **My Green Lab Accredited Professionals**

The first credential of its kind developed to offer scientists an opportunity to grow their knowledge and demonstrate their expertise in lab sustainability.

Campaigns



### **UN Race To Zero**

MGL is a delivery partner for the UN RtZ, working to enable the systemic transformation of the Biotech and Pharmaceutical sector. MGL Certification has been selected as a key indicator in the 2030 Breakthrough Outcomes campaign.



**million advocates for  
sustainable science**

### **Million Advocates**

Global advocacy campaign requesting action from funding bodies to prioritize sustainability in the way research is conducted.



# Certification Process



## 1. Assess Baseline

- Survey lab members to understand current practices
- Make recommendations for improvement



## 2. Make Changes

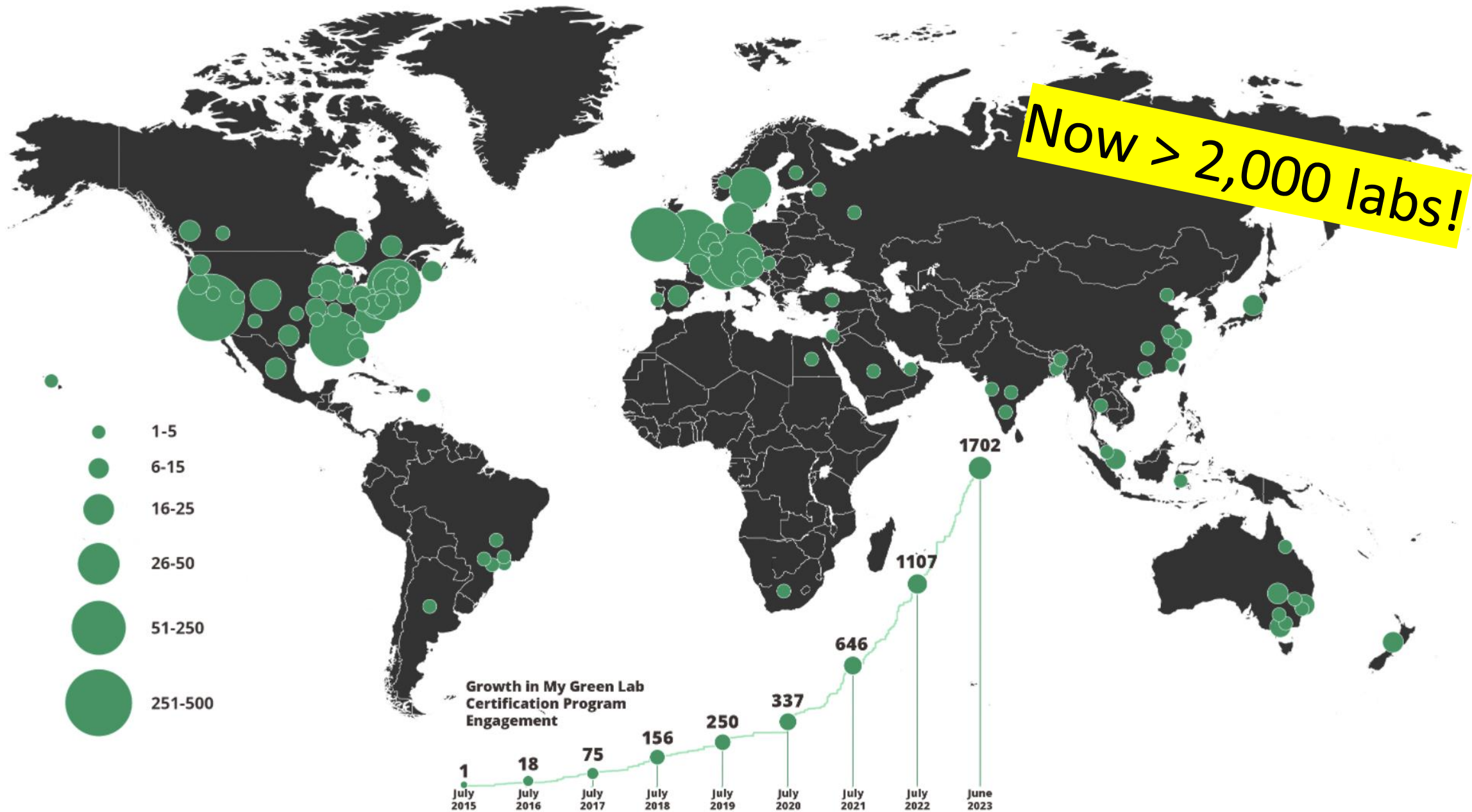
- Labs discuss solutions and implement behavior change practices
- Labs and Green Teams coordinate additional work



## 3. Get Certification

- Re-assessed lab practices
- Certification level given
- Make recommendations for further improvement based on progress

# My Green Lab Certification Programme Growth





 **apoptosis**  
Research Centre

  
Centre for Research in Medical Devices

 **REMEDI**



Centre for Chromosome Biology

**Alimentary Glycoscience Cluster**

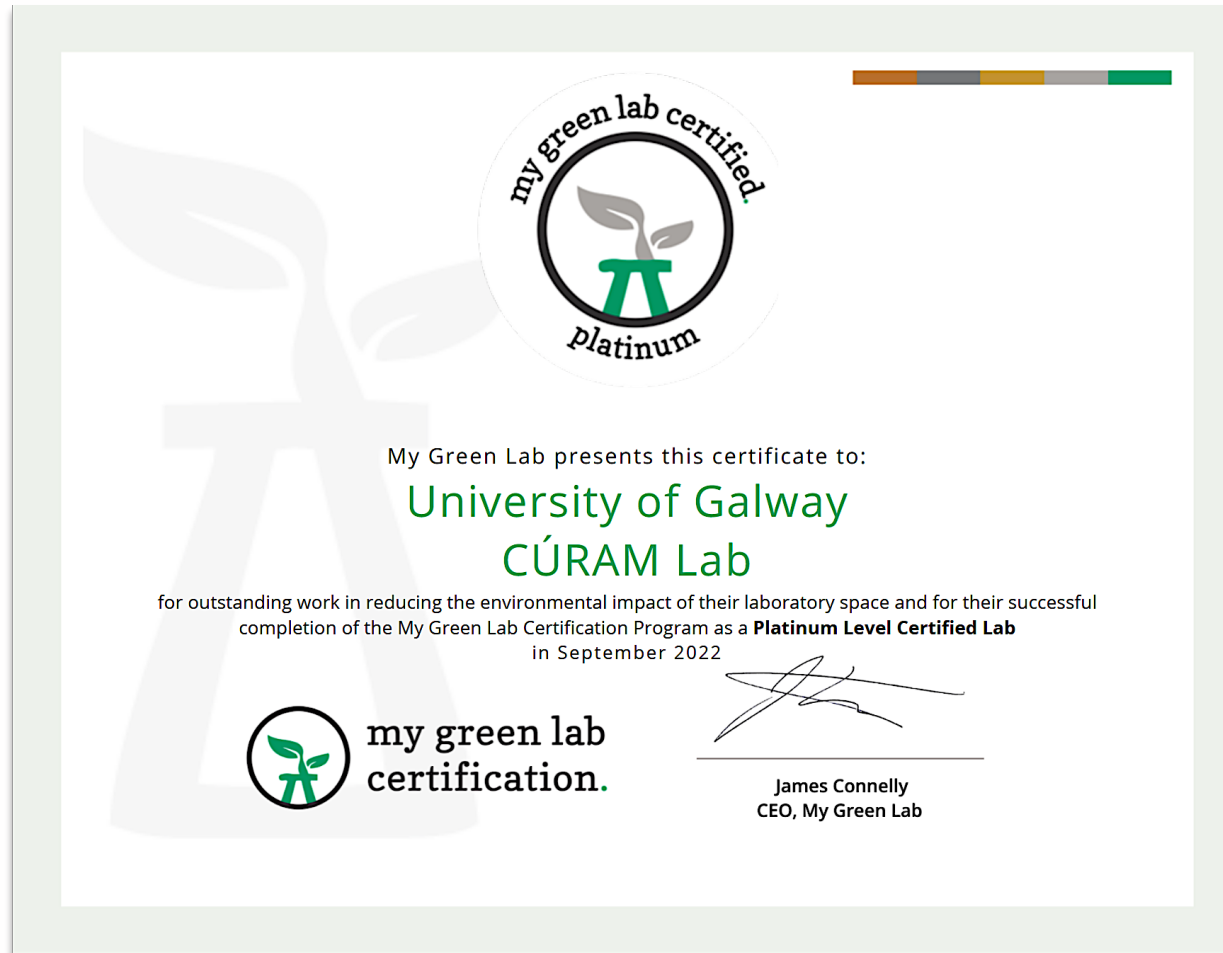


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# Recertification, September 2022



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# Ripple effects of CÚRAM GL Certification



Launched on Earth Day, April 2022





## Aim

Our central aim is to minimise the negative impact that Irish laboratory work has on the environment.



## Mission

To provide an open, transparent platform for Irish lab workers wishing to adopt more sustainable practices.



## Scope

The activities of the network will be delivered through 4 [pillars](#):

- Energy
- Water
- Waste
- Chemistry





University of Galway ×



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[Click here to view sites](#)

Need to pin TUD to map!






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# Ripple effects....





## **Green Lab Principles & Practice graduate module 5 ECTS, level 9, in-person**

- Atmosphere and Climate Change, Sustainability, SDGs, Metrics, Carbon foot printing, Plastics, Biodiversity & Ecosystems, Environmental Psychology, Sociology, Climate Change Communication, Environmental Ethics, Leadership & Governance, the Circular Economy, Doughnut Economics
- How laboratory activities impact our environment (water, energy, lab plastics, chemicals)
- How to implement green lab practices
- Approx 120 students have taken the module



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# Green Lab Principles and Practice Microcredential

- Graduate module (level 9, 10 ECTS)
- €1300 for EU & non-EU
- 2-semester (20 weeks)
- Online
- Available September '24 (BME5107)
- Facilitator- Dr Úna FitzGerald



GREEN LAB PRINCIPLES &



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# Green Lab Principles and Practice modules

## ‘Climate Change 101’

- Content delivered and assessed in semester 1.
- General knowledge assessed using 5 MCQs.
- Each MCQ is worth 10%.

Learnings are applied in semester 2, through completion of an assignment (worth 50%)

- Training in Lab Certification Process
- Preference is for students to then set up a green team within a lab and to initiate certification programme.





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*All lab-associated staff and students should complete (free) MGLA Training - & SEAI's 'Energy Use in Labs' module!*

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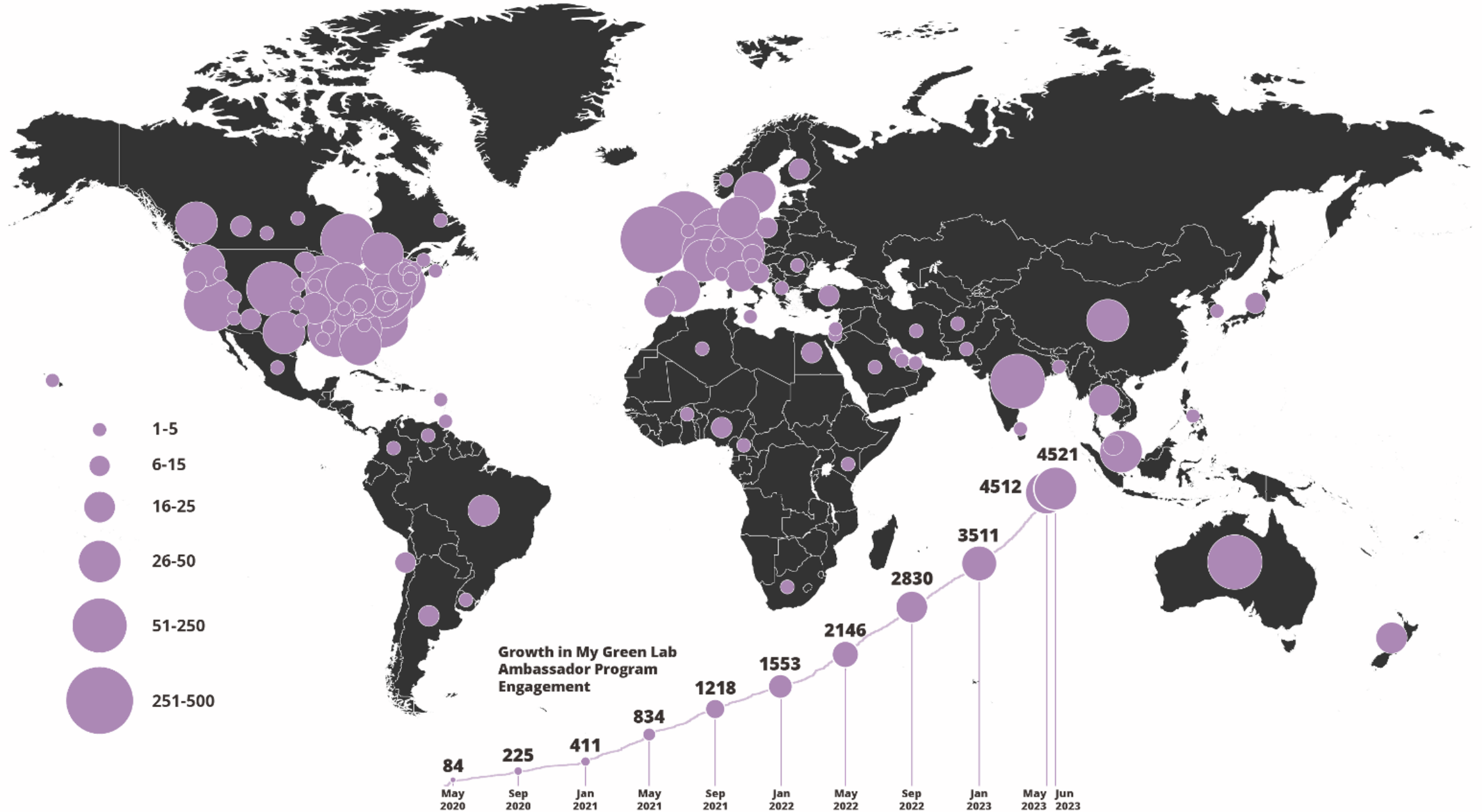


Designed for scientists and laboratory professionals motivated to encourage their lab to be more sustainable.

- Free, online learning program
- Quick introduction to lab sustainability and ideas for how sustainable actions can be implemented
- A first step into lab sustainability



# My Green Lab Ambassador Programme Growth





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*All technical staff  
should complete  
MGL  
Professional  
Accreditation!*

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my green lab  
education

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# Become a Green Lab Expert

The My Green Lab Accredited Professional (AP) course is the first credential of its kind developed to offer scientists and the people who support or work with laboratories an opportunity to grow their knowledge and demonstrate their expertise in lab sustainability.



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### Expert Content

In-depth discussion of green lab topics and solutions from leading experts



### Interactive Format

Interactive content including infographics, videos, quizzes & worksheets



### Industry Recognition

Demonstrate your expertise of green labs through the industry's first professional accreditation



**Waste**



**Green Chemistry**



**Engagement**



**Procurement**



**Energy**



**Water**

The program costs include access to **online modules, videos, resource guides, quizzes,** and access to My Green Lab's AP community.

**Professionals**

**\$75**

USD  
Per module

OR

Purchase all 6 for only

**\$375**

USD

**University/  
NGO/  
Government**

**\$35**

USD  
Per module

OR

Purchase all 6 for only

**\$175**

USD

**Students  
(Undergrad +  
Graduate)**

**\$25**

USD  
Per module

OR

Purchase all 6 for only

**\$125**

USD



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# Conclusion for discussion

- Lab greening is a practical way to embed ESD within lab-associated disciplines in all HEIs.
- Students and staff should become 'green lab literate' by completing MGLA training and/or MGL AP.
- Lab greening within research settings opens up opportunities for publication within the 'emerging discipline' of lab sustainability.





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*Thank you for  
listening....questions?*

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