STUDENT AMBASSADOR TOOLKIT



Welcome to the Nature Positive Universities Student Toolkit!

This toolkit is the document used by Nature Positive Universities Student Ambassadors as inspiration for their actions.

If you're a Student Ambassador, welcome! Please read through parts I and 2 to understand a bit more about the programme and your role in it, before part 3 which will give you inspiration on what actions you might want to take for nature on campus.

If you're not an Ambassador but want to make positive change on your university campus, feel free to still browse the toolkit! Skip to Part 3 which provides inspiration for actions for nature that can be taken on university campuses and beyond.



PART 1: INTRODUCTION



Introduction: What is Nature Positive Universities?

We are a growing network of people from over 500 higher education institutions across the world, from over 100 countries working together to promote nature on our campuses, in our supply chains and within our cities and communities. We were founded by UNEP and the University of Oxford in partnership with the UN Decade on Ecosystem Restoration.



We depend on nature for our survival, and nature depends on us. This is a critical time to stand up for nature. We believe that universities can use their power and influence to help lead their communities on a Nature Positive journey, uniting both the climate and biodiversity crises to build more resilient ecosystems, help nature recover and limit climate change.

What does Nature Positive mean?

Nature Positive means halting and reversing nature loss so that species and ecosystems start to recover



To be Nature Positive, institutions must develop a measured biodiversity baseline, timeframe, a target, clear actions, analysis of how actions add up, monitoring and transparent reporting (<u>Milner-Gulland, 2022</u>).

Setting and meeting ambitious targets for nature is vital to protecting life on earth and ensuring a liveable planet for future generations.

There are many factors outside of our spheres of influence that require a global transformation to enable truly Nature Positive outcomes, but this should not stop us beginning our urgent journeys towards this global goal.

How can a university work towards Nature Positive?



A university's impacts on nature

For a university, we define being nature positive as restoring the species and ecosystems that have been harmed by the impacts of the university and its activities and enhancing the university's positive impacts on nature

Framework: The Conservation Hierarchy

To be truly nature positive we need to address past, indirect and diffuse negative impacts on biodiversity, and consider aspirational nature-positive outcomes.

We can thus combine impact mitigation with proactive biodiversity action under a single framework known as the <u>Conservation Hierarchy (4Rs)</u>:



The conservation hierarchy draws from the well-established mitigation hierarchy approach to structure biodiversity targets, illustrating how they collectively contribute to an overarching vision for nature.

This approach is flexible; any action or target, such as protected area targets, or species-orientated targets, can be readily incorporated and set within a wider vision for nature.

Watch this video for more information on the Conservation Hierarchy



Where do Student Ambassadors fit in?

There are many ways for students to be involved at their universities, and this will vary a lot depending on where you are, what resources are available, what groups already exist, and the position students have at their institutions.

In addition, some universities will have already made the Nature Positive Pledge, and are working with us, others are yet to take this step.

We believe students can be powerful agents for change, acting in existing student groups, as individuals, in collaboration with their staff and interacting with their wider communities, and we'd love to work with you to find the best ways to contribute towards the change we need to see.



Being a Student Ambassador means taking action for nature on your campus to contribute to its Nature Positive journey and sharing experiences with other students across the world.

Your university doesn't have to have taken the Nature Positive Pledge for you to become an Ambassador; in fact, many of our Ambassadors are currently campaigning for their universities to take the Pledge as part of their role. There are lots of different ways to contribute, and Part 3 of this toolkit is designed to provide you with some ideas to get started.

What we offer:

- Experience volunteering with mentors at University of Oxford and the UN Environment Programme;
- A chance to make a difference on your campus;
- Inspiration and networking with a community of likeminded individuals;
- Resources and training from peers to help you organise events and activities;
- A certificate documenting your role with us after completing your workbook;
- Flexibility to work around your time and commitments.

What we ask of you:

- Attend at least 4 of the monthly Ambassador sessions to learn about a relevant topic or skill and network with other Student Ambassadors;
- Complete at least I action for your workbook within the 9 months of the programme;
- Record your progress in your workbook, and submit this at the end of your time with us to receive certification;
- Stay in touch with us to let us know any queries and if you are unable to continue volunteering.



In the future:

- We'd love your suggestions and feedback on what works and what doesn't.
- In the future, we would like to develop a Small Grants programme to better support students to take action where resources are a barrier.
- We are also aware that language is a barrier, and are working to make sure our resources will be available in multiple languages.

Featured Student Ambassadors

We have Student Ambassadors across the world, so wherever you are from – you are welcome!

Here are some of our past and present Student Ambassadors from around the world:



Favour (Nigeria)

Favour started a nature group to increase student activism on her campus at the University of Benin and has organised activities like community litterpicks and outreach events at local schools.



Muhammed (Pakistan) Muhammed is a Forestry student at the University of Haripur where he has engaged in afforestation to increase the diversity of plants on campus, and has campaigned for his university to make a Nature Positive Pledge.



Avani (India)

Avani is a volunteer with Familial Forestry at Government College Dungbar. She has helped nurture & distribute 75,000 saplings in her community and assists in combatting desertification through native planting.

PART 2: HELPING YOUR UNIVERSITY ON THEIR NATURE POSITIVE JOURNEY



The Nature Positive Pledge: What does it mean?

Part of being a Student Ambassador is working and advocating for your university to sign the Nature Positive Pledge.

This is a pledge made by senior management of a university, such as a Vice Chancellor, Rector or Head of Sustainability, committing to start a Nature Positive journey. Your university doesn't have to have taken action already to take the Pledge, but must be willing to start the steps below.

Actions towards Nature Positive will require collaboration between many parts of an institution, such as grounds and estates teams, catering and gardening staff, academic experts, students and sustainability managers.



Steps of the Nature Positive Pledge

When a university makes a Pledge, they commit to the following steps to work towards becoming Nature Positive as an Institution:



The Pledge timeline involves university action and collaboration between staff, students and the public, so this may mean not all stages of the process are feasible for Student Ambassadors to undertake. It doesn't mean you shouldn't engage with them or be disappointed if you cannot take action at a certain stage. Instead, Student Ambassadors can empower themselves and others through the Actions and Influence stage of the Pledge, as well as taking other actions for nature.

The Nature Positive Pledge: Who has already made the Pledge?

Universities who had already made the Nature Positive Pledge were announced at COPI5 in Montreal in December 2022. These included over 100 universities from over 45 countries.

You can watch the <u>launch video</u> here which showcases some of the Universities that have made a Pledge:

You can also read more about the launch at the <u>UNEP news</u> <u>story</u> here.



1. Assess the baseline

To begin its nature positive journey, a university first needs to carry out a baseline of its biodiversity impacts. This is the first step of the Nature Positive Pledge. The university can choose its metrics and scope to measure its institutional impacts on biodiversity. This is unlikely to be something a student could approach alone, but it will be valuable for your university to have your support with this!



1a) Campus biodiversity survey

The first stage might be to complete a baseline study of the biodiversity present on campus and university-owned land. Depending on resources available, this may include comprehensive records of species and/or habitats present at this point in time. It may also focus on particular indicator species to match the available time and resources of the people carrying out this work. The scope is up to your institution, and NPU will provide guidance to share how other universities have gone about this.

1b) Calculating the university's biodiversity footprint

Supply chain impacts can be estimated by first collecting university procurement data, such as paper and lab supplies, IT equipment, food and building materials. An example of how this can be done is at the <u>University of Oxford</u>. NPU can supply a list of the data required to replicate the supply chain biodiversity footprint calculations carried out at Oxford. Procurement data can be converted into environmental impacts such as eutrophication, land use, water and climate impacts. This data can then be converted into a proxy biodiversity measure to allow relative comparisons of impacts on biodiversity.





1. Assess the baseline

Case Study: <u>Trinity College Dublin</u> pilot biodiversity audit

A biodiversity audit was recently completed to document biodiversity across Trinity's 47-acre green campus in the city of Dublin. This was a collaboration between staff and students, Estates and Facilities teams, interns and volunteers. The study highlighted that in addition to iconic species such as foxes, trees and swifts, there is a wealth of hidden biodiversity in the form of plants, insects, fungi and other creatures.

This was one of the first tasks of the newly appointed Vice President for Biodiversity and Climate Action and will feed into the Biodiversity Strategy which is being developed to encompass all of Trinity's operations.

Given that increased urbanization is recognized as being one of the drivers of habitat and biodiversity loss, their vision is to capitalize on Trinity's position at the forefront of biodiversity research, to utilize the full extent of the built and natural habitats across all Trinity's estate as a 'Living lab', and employ initiatives that are scientifically assessed and documented.



Coláiste na Tríonóide, Baile Átha Cliath Trinity College Dublin Ollscoil Atha Cliath | The University of Dublin

Discovering Trinity's Biodiversity

Report from the Biodiversity Audit Pilot Study¹ August 2021

Report prepared by Dr Ursula King and Prof Jane Stout School of Natural Sciences, Trinity College Dublin



¹The Pilot Biodiversity Audig project ran from May to August 2021, funded by the Provost's Sustainability Fund, the Biotary Discipline, UNI-ECO Green Challenges and a philamthropic domains. The project was a collaboration between taff and students in the School of Natural Sciences, with members of the Estates and Facilities team, and the Trinity Sustainability terler.



2. Set SMART targets

After a university has calculated its baseline, it should set SMART targets — specific, time limited, measurable targets for nature.

- Targets must be specific, measurable, attainable, relevant and time bound, but their scope is up to the university.
- A great time to set these is when writing or reviewing the university's sustainability or biodiversity strategy.
- Ambitious targets can be institution-wide, encompassing campus buildings, grounds, operations and supply chains.
- Depending on what is acceptable to your university community, targets could also be just for specific aspects, such as "Biodiversity net gain for food purchasing by 2035" or "No net loss of forests associated with university paper procurement by 2025".
- Wide consultation with different stakeholders is key to gauging ambition and achieving buy-in for your targets.

You can read more about SMART targets <u>here</u>, but see the next page for what they involve.



SPECIFIC

What exactly are you trying to achieve?



State what you'll do

Use action words



MEASURABLE

How will you know when you've achieved it?



Provide a way to evaluate

Use metrics or data targets



ATTAINABLE

Is it genuinely possible to achieve it?



Within your scope

Possible to accomplish

RELEVANT

Does it contribute to your organisation or institution?



Ensure targets improve the organisation or institution

TIME-BASED

When do you want to achieve this by?



State when you'll get it done

Be specific on date or timeframe

Example: Decarbonise Oxford



This student campaign previously only focused on climate action but now includes biodiversity targets, highlighting the connection of the two crises but also the importance of including both in university-wide sustainability.

This campaign is working towards each college at University of Oxford to:

- Adopt a target for net zero carbon and biodiversity net gain at least as ambitious as the central University's 2035 date.
- Publishes a strategy as to how they will achieve this target, with annual reporting, covering scope 1, 2 and 3 emissions as well as biodiversity impacts, and including or alongside a policy commitment to divest from fossil fuels.
- Implements the appropriate governance and enablers to enact this strategy, including a sustainability committee with student representation, and dedicated staff time.

Context:

The University of Oxford has a 'collegiate system', so although it has a Sustainability Strategy this does not apply to the individual student 'colleges', which are independent. The University strategy involves net zero carbon and biodiversity net gain by 2035.

Other universities may not have this system and so instead, students could campaign for their individual subject departments, the central university, and their student union.

Working with college environmental representatives, the campaign works within the university structure. If your university has a representative focused on sustainability, try and work with them to have a student voice in wider university activity.

3. Actions and Influence

This step involves universities taking actions for nature using the framework for action shown earlier from the Conservation Hierarchy (Refrain, Reduce, Restore, Renew).

The university should prioritise actions based on feasibility, risks, costs, and acceptability to the university community using the Conservation Hierarchy. It should decide which will get implemented first and calculate how far they will get the university towards its overall goal.

OXFORD'S OPTIONS

To achieve no net loss of biodiversity, the University of Oxford could focus more heavily on preventing harms to biodiversity (option 1). Or it could try to compensate for the impacts that its activities and operations have on the planet (option 2).



This graphic shows some possible scenarios for actions to meet University of Oxford's goal of "Biodiversity Net Gain by 2035". The full paper documenting this work is available below:

https://www.nature.com /articles/d41586-022-01034-1

onature

3. Actions and Influence

The Actions and Influence stage can include all the actions and activities that universities take for nature, including on their grounds, operations, catering, investment decisions, outreach and public-facing events and initiatives.

This stage is the easiest for Ambassadors to get involved with, and can involve action at many levels, as an individual, as part of a student group, or in collaboration with university staff. Part 2 of this Toolkit contains some suggested actions, but these should be monitored, evaluated and adapted to help meet the appropriate targets for your university.



Remember to consider your capacity as a student versus the university institution as a whole; don't put too much on yourself. Acknowledge your own limits and where the university should support you or take over.

4. Reporting

We ask universities to commit to transparent reporting of progress on an annual basis, highlighting current progress towards reducing impacts on nature according to the aspects of the pledge: baseline, targets and actions.

The requirements will be light-touch, similar to the information required in the initial Pledge form, with brief updates on each aspect and relevant URLs. More detailed submissions are also welcome, documenting your university's Nature Positive journey and links to any reports and publications we can share.

Reporting is suggested to be done by your university by a committee or paid sustainability/biodiversity staff member. However, we encourage students to get involved with the reporting and to make sure student voices are acknowledged in the reporting process.



PART 2: AMBASSADOR ACTIONS



As a Nature Positive Universities Ambassador, we want you to help make Nature Positive change in your university. The actions in this toolkit are designed to provide inspiration for what you might like to do in your role.

The actions below are grouped into four categories representing different areas of impact on nature. You might want to tackle one action from each category in your time as an Ambassador, focus on one category, or do as many as you can!

- I. Biodiversity on campus
- 2. Food
- 3. Circular economy and waste
- 4. Beyond-campus activities and outreach

Whatever you decide to do, make sure you share your amazing work! Tag us on social media with the hashtags #GenerationRestoration and #NaturePositiveUni, share photos on our Ambassador WhatsApp chat, and submit a case study to our website.

Before we start with our main actions, we have some things you may want to do first of all to get started.

Primary action: ask your university to take the Pledge

Before we delve into the different categories of actions below, we'd like to encourage everyone to ask their university to take the NPU Pledge that we detailed in part I of the booklet. Below are some tips from Student Ambassadors about what helped to get their universities on board:

- Talk to friends and build a team
- Send a letter of invitation from NPU
- Peer pressure mention nearby Pledged universities
- Provide NPU contacts we are happy to support you and answer their questions
- Don't be discouraged if your university is not ready to Pledge

To achieve Nature Positive outcomes at a large organisation like a university, many people need to work together, representing all parts of the university ecosystem. This is why it's so important to have your university on board! However, if your university has not Pledged you can definitely still be a student ambassador!



Some things to bear in mind if you want to make your campaign as persuasive as possible:

- Make sure the content is relevant
- Concentrate on what you can offer and feasibility of the university to change or adapt, not solely on your universitys' shortcomings
- Set out realistic goals that you will aim to achieve during your term
- Try to stick to one side of A4
- Make sure it's well-presented and easy to read
- Run it past people to see what they think before you submit it

There are lots of traditional ways to get your message out there on campus, including posters, handouts and flyers. But don't forget, one of the most effective – and certainly the cheapest and easiest – means of communication is word of mouth. Social media is another cheap and effective way of getting yourself noticed.

Your campaign will benefit from building popular support on campus so that your group includes a network of students, staff, academics (and each of these group's representatives) and alumni. In order to do this you can; a) Target individuals e.g. by getting their contact details at a meeting, campaign stall or by attracting their attention to your campaign through the media.

b) Link up with other groups on campus e.g. with the idea of forming alliances and sharing resources in order to campaign.

One great way to engage groups and your university with the Nature Positive Pledge is by educating and explaining the necessity and importance of nature positivity and biodiversity! This can be done through public meetings or events discussing the future of biodiversity. Starting a society at university is a great way to follow your passion and to share it with like-minded people. Although it might seem daunting, you're more likely to be successful in your actions and reap other benefits if you're part of a team.

How do I set up a nature group?

Here are some simple tips to founding a nature group:

- Make sure you set out your aims, have an idea of the activities you'll run, and have the support of at least 10 people (usually the number of people needed for a university society).
- Next you'll need a solid team behind you. Most universities will require your society to have a president, vice-president, secretary and treasurer.
- Think of ways to grab the attention of students. Make sure you keep the momentum going after the first few weeks to maintain interest. You might want to create a mailing list to invite people to events, or start a chat on social media.
- Prepare in advance for handing on the baton to the next committee – and make arrangements to stay in touch if the new team have any questions.

Biodiversity on campus

Increasingly, biodiversity is being recognised as a cornerstone of a healthy, happy, prosperous and sustainable university space.

Biodiversity is short for "biological diversity", the variety of life on earth. It includes all living organisms and the ecosystems in which they occur. Abundance and diversity of ecosystems, species, and genes and the interactions between them are a key part of biodiversity. Together they create an intricate balance that ensures the continuance of life in the natural world and the provision of oxygen, fresh water and a wide variety of natural resources that are essential for us.

From habitat destruction and pollution to our use of natural resources, humans are taking their toll on the natural systems which keep the world functioning properly. The Millennium Ecosystem Assessment found that global species extinction rates are up to 1000 times higher than the historical rate shown by the fossil record and this is expected to increase 10 fold in the coming decades.

The actions in this category show how you can take action to document, preserve, and increase biodiversity on your university campus, all while engaging staff and students.



Students recording plants on campus, Independent University Bangladesh

iNaturalist is an app and website that allows you to identify and record species you see around you. It can be used by anyone, and as well as independently logging the wildlife around you, you can collate observations from different users in a 'Project' – allowing a collaborative exploration of biodiversity in an area.

How to use iNaturalist to make observations:

An observation records an encounter with an individual organism at a particular time and location. This includes encounters with signs of organisms like tracks, nests, or things that just died. When you make an observation, you'll record:

Who you are

You'll need to make an iNaturalist account and please only post your own personal observations

Where you saw it

Record both the coordinates of the encounter as well as their accuracy. You can obscure the location from the public

What you saw

Choose a group of organisms like **butterflies** or better yet a specific organism like the **Monarch butterfly**. If you provide evidence you can leave this blank and the **community can help**

When you saw it

Record the date of your encounter, not the date you post it to iNaturalist

Evidence of what you saw

By including evidence like a **photo or sound**, the community can help add, improve, or confirm the identification of the organism you encountered. Help the community by taking clear well framed photos, by including multiple photos from different angles

Your observations don't need to include all of these parts, but they do in order to become research quality observations for science. Remember, you should make separate observations for each separate organism you encounter. If you observed something that is not wild, like a garden plant or a lion in the zoo, make sure to mark it as captive/cultivated to prevent it from becoming research quality.

©iNaturalist

Join the Student Ambassadors' iNaturalist group



Send <u>Emily</u> or Nell your iNaturalist ID, then you will be able to join the Student Ambassadors' iNaturalist group to share your observations. You can record flora and fauna anywhere you are for this group- it does not only have to be on campus!



Founded by Vanier College in Montréal, Québec, and launched in 2022, the Campus Biodiversity Network aims to promote campus greenspace observation and protection by using iNaturalist, eBird and eButterfly.

The Campus Biodiversity Network has now partnered with NPU and encourages students, staff, and faculty at educational institutions in Montreal and beyond to champion their institutions' green spaces and connect with others through citizen-science observations.

By creating a project for your university under the Campus Biodiversity Network, all the species recorded within your campus boundaries will be collated together, allowing you (and the rest of the world!) to see what biodiversity is found on your campus. You could use this as a very basic representation of the kind of nature that exists on your campus, as a baseline (along with other measures) for your university's campus biodiversity.



Steps to setting up an iNaturalist campus project

 Make an <u>iNaturalist</u> account and start recording species you see on campus

2. Find out if there is already an iNaturalist project for your campus

3. If not, find out if there is a map (KML format) of your campus land, or make one yourself using <u>our instructions.</u>

4. Consider making a digital banner for your university! This needs to be 760 x 320 pixels and can include photos or artwork.

5. Check with your university if they're happy to share the university logo and <u>complete</u> <u>the form to join</u>







Conduct a BioBlitz

A BioBlitz is an event in which a group of individuals aim to record as many species of plants, animals and fungi as possible in a location, over a defined time period (usually 24 hours). It's an informal and fun way to create a snapshot of the biodiversity that can be found on your campus.

As well as providing a good idea of species richness on campus grounds, a BioBlitz is a great opportunity for participants to learn together and share their expertise and enthusiasm for nature. It usually involves a group of scientists, students, naturalists and members of the public working together. This is a great way of breaking down barriers to engagement with science and raising awareness of the role of biological recording, and gives the public an opportunity to contribute to a genuine scientific survey.


Ambassador Case study: Oxford University Nature Conservation Society, UK



"For the past three years, we have been running our annual society BioBlitz for students and staff of the University as well as wider residents of Oxford City."

To consider...

The site:

Choose a site and secure permissions to access and survey – this might involve checking any conservation designations in the survey area that may limit the activities which can be undertaken or obtaining permission from the landowner.

Time of year:

Biodiversity varies hugely across the year and this can strongly affect your BioBlitz findings.

Promotion:

The more people involved in your BioBlitz, the more records you'll get and the more successful it will be. Promote the event through different channels, including social media, email, posters, and word of mouth.

Equipment:

You might need nets and containers for terrestrial invertebrates or aquatic life. Universities often have equipment to borrow, so do ask!

Species records:

Species records are the ultimate goal for your BioBlitz. You can either make your own recording sheets to give out to participants on the day, or preferably use a mobile apps to save paper. All species records are important, whether common or rare, as they allow you to build a biodiversity map of your local area, and also compare how your university is doing compared to others or where it can improve. You should also always try and send your records to the local environmental records centre (in the UK) or local environmental charity as it might be useful to them.

Expert advice:

Universities have many academics and biology experts which are passionate about their research and may be happy to volunteer their time for a few hours — ask them if they'll come along and help you ID! If not, use ID books and mobile apps such as iNaturalist and iRecord.



Further guidance and information:

- A Guide to Running a BioBlitz from the <u>UK Natural History Museum</u>
- Download the <u>iRecord app</u>
- Visit the iNaturalist website

Native restoration involves restoring ecosystems to their natural state by reintroducing native plant and animal species whilst removing invasive species and restoring natural waterways. By restoring ecosystems to their natural state, we can help to mitigate the effects of climate change, protect endangered species, and ensure that our campuses contribute to a thriving natural environment.

A recent review led by Kew scientists and Botanic Gardens Conservation International (BGCI) proposes '<u>ten golden rules for reforestation</u>' to boost benefits for people and the planet. Check these out before you do any reforestation:

- I. Protect existing forest first
- 2. Work with local people
- 3. Maximize biodiversity recovery to meet multiple goals
- 4. Select the right area for reforestation
- 5. Use natural forest restoration wherever possible
- 6. Select tree species that maximise biodiversity
- 7. Use resilient tree species that can adapt to a changing climate
- 8. Plan ahead
- 9. Learn by doing
- 10. Make it pay



Examples of native reforestation

Some reforestation efforts involving students in the NPU network include:

Plantar o Futuro, Aveiro

Organized by Agora Aveiro in collaboration with the Group for Sustainability of the University of Aveiro and the Municipality of Estarreja, <u>"Planting the Future"</u> represents a movement for the defense and promotion of the autochthonous forest and its value in mitigating climate change, resilience against fires and biodiversity conservation.





Familial Forestry, Bikaner

Founded by Shyam Sunder Jyani at Government Dungar College, Bikaner, Rajasthan, the project involves nutritional gardens, institutional forests, and sapling nurseries. The philosophy of Familial Forestry involves individuals and communities treating trees as part of their families, taking ownership of the green spaces around them, promoting a sense of environmental responsibility and enhancing the urban forest ecosystem. The inclusion of fruit-bearing trees and plants can provide not only nutritional and biodiversity benefits but also economic benefits for the community through the sale of excess produce.

Examples of native reforestation

Some reforestation efforts involving students in the NPU network include:

Miyawaki forest, Lahore

Students joined their university's efforts establishing a Miyawaki forest on campus at Government College University Lahore. Saplings for a Miyawaki forest are planted at high density with native species to ensure fast establishment mimicking natural processes. These can provide pockets of rich biodiversity inside otherwise urban areas.





Native species planted at Kottayam, India

Students joined staff to celebrate World Environment day 2023 by planting local varieties including papaya, pepper, mango and guava at Baker College for women, Kottayam, India with the aim of conserving nature and serving humanity. In the UK, you can join a national biodiversity programme for universities, offering free support to staff and students to make impactful changes for hedgehogs (and other wildlife). This programme allows universities to progress through Bronze, Silver and Gold levels, supporting this native species which is currently in severe decline.

With a choice of actions including communicating the issues, completing hedgehog surveys and improving green spaces for hedgehogs, there are actions to suit every university. This is a great programme for any urban or rural university and particularly for those who are or have considered declaring a climate and nature emergency.

In 2019, the programme reached 36 universities across the UK and is a partnership between the British Hedgehog Preservation Society and SOS-UK. Contact info@hedgehogfriendlycampus.co.uk for more information and to get involved and check <u>their website here</u>.



Build bug hotels and nest boxes

Why?

Providing the space for birds and bats to shelter or build a nest will aid them during nesting season and provide refuge for various species depending on the box size. Insect boxes are more crucial than ever today with increasing biodiversity loss and lack of rotting wood habitat – they provide the small spaces insects use to shelter, aiding the survival of a wide range of species.



Where?

The boxes can be installed in a wide range of locations. They can be secured to a brick wall, tree, or insect boxes can be placed on the ground. Their effectiveness can be maximised with other biodiversity enhancement strategies such as wild corners to provide a larger, enriched habitat and shelter.

- I. Make or buy the boxes: guides on how to build them are available online. Insect boxes are the simplest and cheapest to make: materials include hollow bricks, bamboo canes, cardboard and a roof for shade and shelter. A variety of sizes and shapes will accommodate a greater diversity of wildlife.
- 2. Find a location to install the boxes. Bird and bat boxes can be installed on a wall or tree, and insect boxes can be placed in the corner of a garden or patch of land. Ensure the boxes are properly built with adequate habitat surrounding them.
- 3. Leave the boxes to be occupied. Camera traps inside bird boxes can be used to view the species making use of them and might reveal some surprises!

Reduce mowing on your campus

Why?

Decreasing the frequency of lawn mowing promotes insect and plant diversity. It also discourages removal of 'weed' species which may be vital nectar and pollen sources for urban insect communities.



Where?

Campus grounds and gardens. Anywhere with intensively managed lawns will benefit from this change; it may be especially desirable in less conspicuous areas.

How?

Speak to your university grounds staff and encourage them to wait as long as possible between mowing lawns - do so only when the grass has become unbearably long, keeping in mind that longer grass is of greater benefit to biodiversity. In the UK, you can find grassland mangement guidance <u>online</u>.

Example from Blühender Campus, Freie Universität Berlin

"Blühender Campus" (Blooming Campus) is an interdisciplinary initiative aiming to encourage biological diversity on campus. The initiative's focus is to foster biodiversity in the green spaces which were mowed up to nine times a year in 2019. Since 2020, the mowing of all areas has been significantly reduced to only around 5 times per year depending on weather and use, and pauses across campus during the early flowering phase in April. In a pilot project, some very different, species-rich flowering areas are currently being created on around eight hectares.

Create a native wildlife hedge

Why?

Hedgerows are an important habitat for a range of wildlife, including birds, bees and butterflies. Hedges may also improve living conditions within universities – Abhijith and Kumar (2019) found hedges to be effective at improving air quality, and they also substantially contribute reduce noise.



Where?

Though they can be planted almost anywhere, hedgerows provide the most benefit if they are connected to a network of hedgerows/woodlands – these act as wildlife corridors. Hedges can often be chosen in place of a fence.

- I...Select a mixture of native hedging trees and shrubs to plant.
- 2. At the desired location, remove weeds and large stones. Dig over the area and add organic matter if needed.
- 3. Planting is best done between autumn and spring, and when the ground is not frozen or waterlogged.
- 4. The plants should be placed in a staggered double row roughly 0.5 m apart specific spacing depends on how large each plant will grow. It is better to leave more space if unsure as gaps can be filled in later.
- 5. Water generously and cover with a thick layer of mulch to reduce competition between the young hedge and any 'weeds' which may grow.
- 6. Feed the hedge and top up the mulch every year for the first two years, occasional watering may be required.
- 7. Prune the hedge in the autumn, as nesting birds will not be disturbed and deciduous trees and shrubs are dormant during this period. Cutting back hard is not a problem – it will encourage the hedge to thicken.

Build shrub and container gardens

Why?

Shrub and container gardens can enhance biodiversity in areas that have few resources for nature. Introducing a range of flowering plants will enhance plant diversity, provide resources for pollinators and habitat for other insects. At a large enough scale these benefits will transfer to other aspects of biodiversity, for example increasing invertebrate food sources for birds.



Where?

This is a great option for locations where there is limited greenspace, for example in a paved university courtyard or roof garden. You can get creative, using hanging baskets or window boxes to introduce plants to a variety of locations. Container gardens can also enhance the indoor environment, although the main benefits will be to the humans using these spaces!

- I. Containers are cheaply available or repurpose existing tubs and pots. The bigger the better, but select your container for your intended space.
- 2. Fill the containers with peat-free compost.
- 3. Select your plants, you can sow native wildflowers or plant plug plants. These can be augmented with ornamental species, particularly those selected for their benefits to pollinators and other invertebrates. Planting is best in early spring or autumn. If using seeds, sow in early spring.
- 4. In hot weather, containers will need watering to stop them from drying out. Trimming and cutting back some species may be necessary in the autumn, but leaving dead vegetation over winter can provide habitat for insects.

Develop wild corners: log piles, pond habitats, and scrub

Why?

Gardens can be good for wildlife but typically lack the undisturbed, shaded & overgrown habitat that attracts threatened wildlife like hedgehogs and amphibians. A small undisturbed area can provide habitat for neglected wildlife whilst maintaining a good-looking garden. Wild corners allow multiple actions from the toolkit to be carried out in a small space e.g. a small pond, wildflower patch or even log pile. The corners can be extended to agricultural fields and along with hedgerows provide buffers for habitat areas, even helping to reduce soil erosion and runoff.



Where?

Wild corners can be created in any small patch of land, Larger spaces accommodate a greater diversity and number of species, but multiple corners allow multiple different habitats to be incorporated into the same garden (eg. both a wildflower patch and log pile). With respect to fields, 0.5ha of undisturbed grassland is suitable to protect the habitat and wildlife surrounding and entering the field margins.

- I. Mark out the area to be made into the wild corner. This should be a suitable size to house the species but to be left undisturbed for extended periods without use as part of the garden/field.
- 2. Introduce the materials to the wild corner. This may involve digging and lining a small trench to fill with rainwater as a shallow pond, a log pile or long-grass and flowers. An overgrown log pile is very cheap, requires next to no maintenance and will help to provide space for the most threatened wildlife.
- 3. Leave the land undisturbed; wildlife will find it and use it, and if the land has been developed sufficiently no further modifications or maintenance will be required.

Food

Biodiversity is critical for safeguarding global food security, underpinning healthy and nutritious diets, improving rural livelihoods, and enhancing the resilience of people and communities. We need to use biodiversity in a sustainable way, so that we can better respond to rising climate change challenges and produce food in a way that doesn't harm our environment.

The global food system is the primary driver of biodiversity loss on the planet. With 7.7 billion mouths to feed, more and more land is being given over to food production, causing habitat loss around the world and stripping vast swathes of land of its biodiversity. While the rise in biodiversity-friendly practices is encouraging, more needs to be done to stop the loss of biodiversity for food and agriculture.

The actions in this category show how you can address the core drivers of biodiversity loss through changing diets, supply chains, and understanding around food.



Changing the food staff and students at your university eat doesn't have to involve banning certain high-impact items. It can be a as simple as 'nudging' people to make more environmentally friendly decisions.

What does 'nudging' involve? Consider this: when a university provides easy bicycle parking and repair stations, it nudges students to bike to campus. When a university makes plant-based food the default dish, it nudges students towards environmentally-friendly diets. These "green nudges" are positive and gentle persuasions to influence behaviours on campus and to instil environmental values that can last a lifetime.

If you'd like to do this on your campus, check out the 'Little Book of Green Nudges' by UNEP which includes tips and tricks for a more sustainable diet amongst other things. You can find it here: <u>https://www.unep.org/resources/publication/little-book-green-nudges</u>.



Too Good To Go is a service that connects customers to restaurants and shops which have surplus unsold food, allowing them to purchase the food for a highly reduced price. At present it only operates in Europe and North America, but the more companies that sign up and more people that use the app, the more it will spread!

If your university has a campus cafe, restaurant, or grocery store, you can encourage them to join the programme. Write a letter, make a petition, or send an email explaining what TooGoodToGo is and why you'd like them to sign up. They'll make more money by selling their excess food, and the planet will be helped by reducing food waste!



Check out the TooGoodToGo website and app <u>here</u>.

Support a study of the impact of food on biodiversity at your university

The food our university serves can have a huge impact on biodiversity depending on where it is supplied from. It can be really difficult to get an idea of where the impacts are in your university canteen, so a great start is by supporting your university to conduct a study on the impact of food on biodiversity. You don't have to do this alone – it could be a group research project in collaboration with staff, or something you campaign for.

Determining biodiversity footprints: A how-to guide for food impacts



Some examples of research into the environmental impacts of food:

An undergraduate biology student at University of Oxford produced a guide for understanding and reducing the impacts of food at her Oxford college. You can download this <u>here</u>.

The purpose of this handbook was to:

- Inform St Hilda's College of their current impacts attributed to meals from the Dining Hall.
- Given these impacts, suggest how St Hilda's could improve based on the Conservation Hierarchy.





Another study at Oxford was conducted by researchers, students and staff at another Oxford college, Lady Margaret Hall, and applies the Mitigation and Conservation Hierarchy (MCH) framework to guide LMH towards reducing its impacts from food and deliver ambitious targets for biodiversity in ways that are practical and acceptable for the College.

Some data and methods you may want to use include:



Poore & Nemecek (2018) database 🔯 exiobase

ReCiPe conversion factors

<u>Clark, M. & al.</u> (2022) <u>methods</u>

Grow your own food on campus

One great way you can promote sustainable consumption and highlight the importance of how food is produced is by growing your own food on campus. This helps you to consider what can potentially harm nature in food growing – converting land from nature to agricultural land, using chemicals to prevent pests and weeds, and removing plants from the soil to interrupt nutrient cycles. If you'd like to start a campus food garden, check out some inspiration from the universities below!



<u>Campus Crops</u> at McGill has been operating since 2007. This student-led organisation have maintained their mission of creating a gardening community on campus.

Some of the other student initiatives growing food and community on campus at McGill include:

- Macdonald Student-run Ecological Gardens
- Thompson House Community Garden
- The 200 Urban Garden Project



Examples from our network:

The University of Keele (UK) has a student sustainability bungalow with a garden outside used for growing food!





<u>University of Ottawa</u> (<u>Canada</u>) has a <u>pollinator</u> garden with blueberries!

Dungar Government College Bikaner (India) has planted nutri-gardens to offer healthy fresh food to university members



There are many online resources helping you begin a campus food garden, or if you'd like some tips you can ask your fellow Ambassadors on our Slack chat! Especially in many European and North American countries, animal products can have an extremely large environmental impact. Much more land, resources, and carbon emissions can go into producing meat and dairy compared to vegetarian protein sources, so promoting plant-based options can be a great way to reduce the biodiversity footprint of your university's food.

With this Action, you can get creative in how you achieve it! Would it be best to create a petition, to speak directly to your catering staff, to raise awareness amongst students?

Plant-based universities

One example of promoting plantbased options is the Plant Based Universities campaign by students across the UK who are demanding a transition to 100% sustainable plantbased catering. Students from several universities are part of this, and have held stalls, dropped banners, raised motions, organised media articles and held debates in their student unions to raise awareness and attract support of plant-based menus.



Pulses are critical when it comes to facing the challenges arising from poverty, food security, human health and nutrition, soil health, and the environment. The United Nations General Assembly nominated February IO as World Pulses Day to raise awareness and highlight the nutritional benefits of pulses and their contribution to sustainable food systems and world hunger.

You could work with your university canteen to promote pulse-based dishes on this day, or arrange an event on campus to promote all the benefits to fellow students.



There is so much information on how food affects the environment. One way to raise awareness of the issue is to host a screening of a documentary about food and the planet, similar to our other documentary actions.

As with the other documentary actions, don't forget...

- Plan a location with appropriate capacity.
- Ensure the room is dark!
- Bring snacks.
- Suggest a discussion after the screening, and always use this as a springboard to tell your audience how they can get involved in Nature Positive activities.

Our favourite food documentaries:

Some of our favourite documentaries can be found on Waterbear (free), YouTube, and Netflix. Have you watched any of these?

- Just Eat It
- Kiss the Ground
- Cowspiracy
- Meat the Future
- Seaspiricy

Circular economy & waste

Poor waste management can harm biodiversity both directly (e.g. the consumption of plastic microbeads by marine wildlife) and indirectly (e.g. landfill sites, which provide ideal conditions for bacteria that produce methane — a potent greenhouse gas that contributes to climate change). Unmanaged waste in our environment can also affect human health – we rely directly on healthy, functioning environments for survival.

To reduce waste, we should take a Conservation Hierarchy approach. First, the best way to reduce all waste is to <u>refrain</u> – refrain from buying. Do you really need that new shirt, or can you wear something you already own? Do you need to buy a disposable shopping bag, or can you reuse an old one?

If you need to buy an item, the next step is <u>reduce</u>. Can you buy something with less packaging, made of recycled materials, and with a lower environmental impact?

Once you've done as much as possible for the first two steps, the third is to reuse. Make the product last as long as possible so you don't have to buy anything more.

Finally, recycle and dispose of the item properly. Perhaps you could upcycle it into something new, or if not, recycle it.

Universities, and the students and staff within them, make these decisions every day. You can help promote a circular economy and reduce waste at your university with the actions below.

OF WASTE



*potentially for energy generation

Refrain: screen a documentary about consumerism

To help encourage others to reduce their consumption, you could screen a documentary about why buying less is so important.

How?

- Plan a location with appropriate capacity.
- Ensure the room is dark!
- Bring snacks.
- Suggest a discussion after the screening, and always use this as a springboard to tell your audience how they can make a difference.

What to watch?

There are lots of relevant documentaries out there, but three great ones are:

- Minimalism: A Documentary About the Important Things (2015)
- Inside the Shein Machine: Untold (2022)
- The True Cost (2015)

Check our WaterBear online for lots of documentaries about waste and plastic packaging.



Refrain: celebrate Zero Waste Day

30th March 2023 marked the first ever <u>International Zero Waste Day</u>. This is a great opportunity to raise awareness about the concept of Zero Waste and organise supporting actions.

Some example posts and text to share the concept of Zero Waste:





What does zero-waste mean?

- In nature's closed-loop system, there is no waste
- A circular economy aims to create a system that mimics nature's resource-recycling cycle
- A zero-waste approach aims to keep waste out of landfills and the oceans

How to achieve zero waste?

- The goal of zero-waste is not about recycling
- Governments can incentivise waste reduction through legislation
- Businesses can incorporate circular designs to stop generating waste
- Consumers can avoid single-use items and opt for reusables

Share and Spread the word!

We cannot drown our planet with waste.

Example from our network:

Students based at University of Abomey-Calavi, Benin established a new group and organised their first actions to coordinate with the International Day of Zero Waste. You can check them out on Twitter : @npuclubs







To help people refrain from buying new clothes, start a social media page where people can swap or borrow clothes from others. This might include every day outfits people no longer want, formal dresses and suits that you might rent out for others to borrow; or requests by people who want a certain item but want to borrow before they have to buy.

Students at the University of Oxford have done this, allowing students to swap washed/clean clothing, accessories and shoes. Could your university do this too?



Refrain: campaign for water refill stations

Do students on your campus regularly buy plastic water bottles? Did you know that plastic can't be recycled forever, so will one day end up in landfill even if you recycle it? Campaigning to add water refill stations on your campus might be the action for you!

Students at the University of Tokyo have campaigned to install water dispensers as an alternative to selling water in disposable plastic bottles on their campus. This took around two years of work, liaising with different areas of the university staff, academics and management.



Mahi who has been closely involved with the successful campaign shared her tips:

- Persistence the campaign took over two years to achieve results.
- Research-based proposal the student team did their research into suitable locations with both water and electricity supply, and presented a detailed case to staff.
- Context specific the solutions had to take into account the existing systems of provision of beverages on campus, such as vending machines.
- Importance of design branding the dispensers and water bottles with attractive designs was considered a key to the scheme's success and support.
- Collaboration connect with relevant university committees.

Reduce: campaign for reduction in waste across campus

For your university to reduce their waste, you need to evidence student support and use your influence to promote change. As well as the campaign on introducing water dispensers on campus so students refrain from purchasing single-use plastics, there are lots of ways you can campaign using similar techniques for reduction in plastic too.

Some ideas include:

- <u>Campaign for reduced packaging in your canteen</u> do sandwiches need to come wrapped in plastic, or could students bring their own containers? Is plastic cutlery necessary? Could you reduce the volume of plastic on the wrapping of items?
- <u>Campaign for the reduction of leaflets</u>, flyers, and other hand-outs that you might be given at a Careers or Fresher's Fair — do we really need this single use waste, or would a QR code or a link to a website suffice instead?
- <u>Campaign for a reduction in printing</u> do your professors really need your work to be printed off, or could they read a copy online? Think about whether this could be applicable to your university, and where you might need to apply the pressure to make change.



Reduce: promote LEAF scheme

Laboratories are responsible for producing a significant percentage of a university's carbon emissions, by consuming up to ten times more energy and four times more water per square metre than other academic spaces. They also consume excessive amounts of plastic, and it is estimated that they are responsible for generating around 2% of plastic waste worldwide.

Short for Laboratory Efficiency Assessment Framework, LEAF is a userfriendly online tool developed by the Sustainability Team at University College London (UCL), which aims to support more sustainable and cost-effective laboratory management, teaching and research. You could suggest this scheme to your university or laboratory manager.



Just because our clothes and accessories might be getting old and worn, doesn't mean we should throw them. We can give them a new life and reuse them even more by repairing or up-cycling them!

To host a repair workshop, you'll need to hire a room and provide some basics like thread, needles, and perhaps some other materials like fabrics for patching, or glue. People can bring their bags, clothes, or other textiles to breathe a new life into them through repair and upcycling — and you might even be able to give one another inspiration for how to repair your items!

Check out this poster from an event at the University of Oxford for inspiration:



Some waste cannot be avoided, so we need to ensure that this is dealt with in the best possible way to minimise harm to nature. It is thus important to know what your university does with its waste – do all recyclable materials get recycled? Does food waste get sent off to be composted, or is it composted on site if possible?

Speak to your university's Buildings and Facilities teams to ask them these questions. Once you have your answers, think about how this could be improved. Remember to follow Mahi's campaigning tips!

Campaigning tips

- Persistence campaigns can take a long time to achieve results.
- Research-based proposal do your research before you formulate demands, and present a detailed case to staff.
- Context specific remember the solutions should take into account the existing systems at your university.
- Collaboration connect with relevant university committees.

Plastic waste to art events can be used as a demonstration to create awareness about plastic pollution to land and marine life and how it affects us. This can be done among the team or in schools for the younger age to learn.

You can find very creative demonstrations on IG: @castawaycolor

Tips:

- Gather clean plastic waste and tools like scissors, glue, etc.
- Bring some photos to inspire people you could also engage with a local artist to guide you.
- During the session, tell a story about plastic pollution, the intrinsic link between plastic pollution and our health, how plastic disrupts marine life and how to recycle properly.



A community litter pick can be a great way to help tidy the community and prevent waste harming wildlife. One great example of this is seen in Nigeria!

Students from several Nigerian Universities joined together with their local communities to commemorate #WorldCleanUpDay2022 and #LeaveNoTrace campaign by organising several clean up events in September 2022.

Litter pick events took place at Kontagora market, Lagos, and Uselu market, Benin City, Nigeria. Friends of Nature student group, University of Benin co-organised the events, which raised awareness and demonstrated opportunities to restore degraded areas of land and build pride in the local environment.







Top tips from our network:

Students at IATP Jhansi have offered some of their top tips for conducting a litter pick...

1. Choose a location

Choose a location suffering from litter that you'd like to help clean up.

2. Contact existing community groups

Check whether there are any community groups in the area you'd like to conduct your litter pick, and if so get in touch with the group leader to see if they would like to collaborate.

3. Contact private landowners

You will need to gain permission to litter pick as a group on private land. If this is part of your university landscape this may be easier to ask the relevant staff.

4. Organise and promote

Choose a date, time, and meeting place for your litter pick and advertise it widely. To incentivise people, you might want to run a competition with a prize for the person who collects the most litter.

5. Gather equipment

Contact your local council, biology department, or other authority to hire litter pickers, gloves, and bags. You also need to arrange for waste collection – leaving the litter bags somewhere without authorisation may be unlawful,so either plan to drop off at a tip/recycling centre or arrange for someone to collect the waste. You might also want to bring a first aid kit.

Please note: This information does not constitute legal advice and is provided for general information purposes only. Please contact the appropriate authorities for legal advice before organising a litter pick to ensure you and others are safe and legally protected. Our universities are a vital piece of the puzzle of Nature Positive. If we are to truly reach our goal, we need to start where we are and cause change in our institution, but then work beyond this and spread ripples of change through the rest of society.

We also need to consider the impact of our university beyond what it consumes and its on-campus impacts: its curriculum, career offerings, and the behaviours it encourages also matter.

This final section of the Toolkit describes how you can take action which will have impacts beyond your university, affecting surrounding communities, supply chains, and research.


To truly reach Nature Positive we need to open doors of learning to everyone, informing and educating them about the role they can play in nature conservation and the actions they can take. Many schools do not have the expertise to educate their students on environmental topics, but young people are the future and we need them to become invested in making change.

Steps to conducting an outreach event at schools

- Recognise the school or community you want to speak with, and so who your target audience is – your approach might be different for rural and urban communities, depending on what you think is important to those groups.
- Contact the school head about your desire to host an educational event and organise a date.
- Organise a team of fellow university students to help out at the event, and write a plan for the session including the topics you'll cover, who will say what, how long it'll take, and whether you need to produce any posters or worksheets, etc.
- Gather the necessary materials, and be willing to leave these with teachers to ensure they can conduct these lessons again in the future.

Examples from our network:

Favour (University of Benin) organised outreach encouraging the next generation of enviornmental activitsts to make pledges at local schools.



Natty Molang (Cross Rivers University Calabar) visited schools to help establish eco-clubs for school children and raise awareness on environmental issues.



Whilst at university you have a chance to contribute to academic knowledge and advance your field — so why not link this to being nature positive?

Choose a topic you're passionate about

Your dissertation or research project will take a lot of time, so it's important to choose a topic that interests you. Think about what you've learnt on your course, through the Nature Positive Universities course, or through others?

Choose something different

It's important to choose a unique topic for your project in order to draw novel conclusions and contribute to the field. Read surrounding literature and see if any questions come to mind – you might think of approaching an already-researched area from a different angle, applying an existing method to a new study system, or answering a question posed in the discussion section of recent work.

Find a supervisor

Hopefully there will be someone in your university able to supervise your work, but if not you can look further afield! Search online for academics who have written papers you're interested in and get in touch — you never know if they'd be willing to help out. You'll know by now that every sector of the economy needs to consider its environmental impacts if we are to become Nature Positive and reach Net Zero. This means it's important not just to teach about environmental sustainability in biology and geography, but across all different subjects.

Do you think there is enough environmental education in your course? Or is there room to campaign for more? If you think there is, you could take this action to campaign for curriculum change.

How to campaign for curriculum change:

- First, identify what you think needs to be added to the curriculum. This might be small things added into each lecture, or a set of topics that need to be added as separate lectures.
- You then need to draw up a plan of how these can be incorporated into the curriculum – for example, what lectures would they replace? What specific classes could the ideas be incorporated in? Who could deliver the lectures? This shows you're dedicated and have thought this through: although staff members might not use your ideas directly, they might take inspiration from them.
- Talk to lecturers first and ask if they'd be willing to add the desired topics to their lectures.

- Create a petition before you approach the university management so they can see that the request is coming from a large body of students and that sustainable knowledge is in demand.
- Contact the relevant staff members and organise a meeting!

What could be added to my curriculum?

Below are some ideas for things you might want to see on your course. The list is not exhaustive, and there is likely something you can think of relevant to your course!

- Biology ecology & conservation; the link between biology & social science in encouraging behaviour change; conservation policy & governance.
- Chemistry how chemicals are sourced and the impact of different chemical materials; renewable energy generation; sustainable lab practice (see the LEAF scheme for lab sustainability).
- Engineering renewable energy generation; life cycle assessments of materials & their environmental sustainability.
- Material science consideration of the life cycle assessments of materials used in the course; use of low-impact materials.
- Social sciences how we can cause behaviour change to encourage more sustainable practices; working with people in conservation; stakeholder engagement; community-based conservation.
- Arts and fashion sustainable materials; how paint/other media is made and its impact; alternative models to consumption such as leasing & rental; using 'artivism' to raise awareness to change.
- History the environmental context of the eras you're learning about.

Time to get started!

It's now time to start your Workbook and begin your journey as a Nature Positive Student Ambassador. Let us know if you have any questions, and if not we can't wait to see what you get up to!

