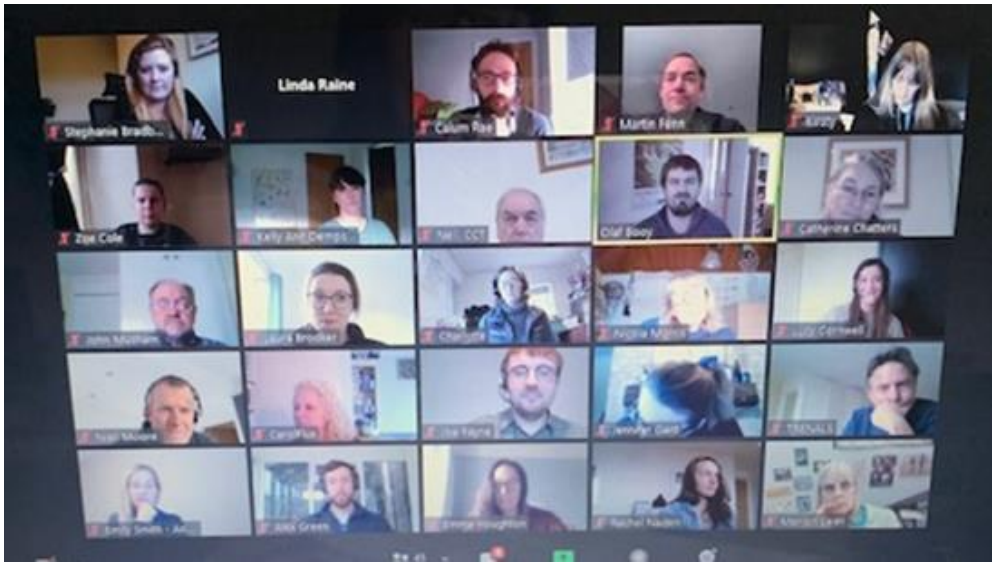
Proceedings of the Non-native Species Local Action Group Workshop

Held on 26-27 January 2021

Via Zoom



Programme

On 26th-27th January 2021 the GB Non-native Species Secretariat organised the 12th Local Action Group Workshop, funded by Defra. The workshop was held via Zoom and we had 54 attendees.

Day 1

Welcome (Niall Moore, NNSS)

Defra update (Joe Payne, Defra)

BREAKOUT SESSION A: Environmental Land Management Scheme

Introduction to the Environmental Land Management Scheme (Jon Westlake, Welsh Government)

Introduction to the Environmental Land Management Scheme (Defra, Ellen Brown)

Introduction to breakout session (Niall Moore, NNSS)

Breakout session into three virtual rooms

Key points to feedback from each group

LOCAL ACTION GROUP PRESENTATIONS

Using kayakers to tackle floating pennywort (Andrea Griffiths, Medway Valley Countryside Partnership)

Scotland Invasive Species Initiative (Callum Sinclair, SISI)

Site Guardians in the South West (Nicola Morris, SW Lakes Trust & Kate Hills, SW Water)

Comments and close

Day 2

Welcome (Olaf Booy, NNSS)

BREAKOUT SESSION B: INNS MAPPER

Plans to develop INNS Mapper (Rachel Naden, Yorkshire Water)

Recording INNS in the EA (Martin Fenn, Environment Agency)

Breakout session into three virtual rooms to discuss

Feedback from breakout

LOCAL ACTION GROUP PRESENTATIONS

Exmoor Non-native Invasive Species project (Holly Moser, Exmoor National Park Authority)

CINNG update (Emma Weller, CINNG)

Balsam Bashing with our Friends in Finland (Kelly Ann Dempsey, River South Esk Partnership)

Wales Resilient Ecological Network (Adrian Jones, North Wales Wildlife Trust & Tara Daniels, WaREN Project)

Update on biocontrol initiatives for the UK (Marion Seier, CABI)

After LIFE – update on the RAPID LIFE project (Alexia Fish, APHA)

Final comments and close

Breakout Session Feedback

Day One: Breakout Session A – Environmental Land Management Scheme

Summary of key points from breakout sessions on invasive non-native species (INNS) and environmental land management schemes**.**

Local Action Groups are a range of community groups comprising landowners, volunteers, eNGOs, local government etc. that work together to manage invasive non-native species locally. In January 2021 the GB Non-native Species Secretariat held a workshop session to elicit the views of these groups with regards to the potential for E.L.M. to support strategic management of INNS in the future. Summary findings are presented below.

General

1. Many invasive non-native species are very suitable for control under E.L.M. schemes. In total, about 30 species would be suitable, mainly plants (6 animals, 20+ plants).
    a. The scheme needs to be sufficiently flexible to allow the list of target species to expand as the need arises.

2. Some species can usually be controlled at a local level, often by a single land-owner or manager with no need for greater coordination. Examples include:
    a. Purple pitcher plant
    b. Water primrose.

3. Some species will usually need control at larger scales (often catchment-scale) to have strategic benefits. Himalayan balsam is the best example but mink and deer need control at large scales too in order for the control to be effective.

    a. Indeed for some INNS plants control needs to be undertaken systematically - firstly in the headwaters and along tributaries before tackling infestations further down the catchment.

4. Many species can be controlled at different scales – from local to catchment/county/regional scales, depending on the circumstances.

5. For species that need control at more than a local scale co-ordination of landowners is essential to ensure that control work is undertaken systematically at the appropriate (often catchment) scale. This will ensure that:
    a. the scheme offers good value for money;
    b. control work is implemented efficiently and effectively.
    c. [Note the Medway INNS Project deals with 150 landowners and emphasised that INNS control would not occur without an organisation to provide co-ordination.]

6. The scheme also needs to be flexible so it can adapt to ‘local’ strategic priorities at the relevant level, for example at the county level or the catchment level.

7. The scheme should incentivise landowners to deal with small infestations quickly and not encourage them to wait until the infestation grows and they would get more money to control it. This is critical for strategic management of INNS.

8. Four elements are key: (i) baseline information on distribution (and abundance), (ii) coordination of control among land-owners (for many but not all species) (iii) multi-year (e.g. 5-10 year) funding is essential to see through control plans, and (iv) monitoring for a sufficient time (e.g. to prevent re-infestation from the seedbank).

Costs of control - for some key species (all costs are per annum)

Note: Current Countryside Stewardship payments:
SP4: £324 per ha for Himalayan Balsam, Japanese Knotweed and Floating Pennywort. These costs are too low to be realistic. Uptake rates are believed to be very low.
SB6: £2,800 - £4,400 per ha for rhododendron control, depending on land type. Uptake rates unknown.

Note: There have been a range of invasive species control measures under the Scottish Rural Development Plan – including Rhododendron, grey squirrel and several riparian plants. This has had some success and the main lessons learned have been that control needs to be (i) at the appropriate scale, (ii) sustained for the required time, (iii) coordinated and (iv) with remuneration set at an appropriate rate.

Japanese knotweed

- Cost of Japanese Knotweed control on the Isle of Wight is between **£1,200 - £1,500** per km. Carol Flux.

- The average cost of Japanese Knotweed control in Yorkshire is **£1,200 per km** of river bank for the first year of treatment, cost of treatment reduces in subsequent year (Alex Green + John Cave). [However, it was pointed out that when populations of INNS are substantially reduced it often takes contractors nearly as long to do the work as they have to search for the remaining plants so the costs may not be significantly reduced.]

- For the 70 miles of the River Medway (excluding its tributaries) the cost of 5 staff to control between 3 – 5 species is approximately **£300 per mile (£200 per km)**. Andrea Griffiths.

- Exmoor National Park Authority pays contractors £10,000 per annum for Japanese Knotweed control which works out as **£15 per 10m^2**. Charlotte Thomas.

- **£100 for 10m^2** per annum for each of 4 years (Neil Green).

Himalayan Balsam

- River Dee **£500 per km on 1 side/£1k both sides**. Gemma Rose.

- **£2,000 per km** using contractors only (using volunteers, as is standard, would cut costs considerably).

Giant Hogweed

- **£350 per km of riverbank**.

Floating pennywort

- **£1,100 per km** on average for control.

Notes:
Costs are for only these 4 species of plants. I intend to follow up with some of the LAGs to ascertain costs for several other species, in particular: American skunk cabbage, purple pitcher plant, water primrose – all species that can be controlled at the level of an individual landowner.

Use of volunteers (which is standard for all LAGs) on many of these species would considerably reduce costs compared to contractors alone. We have estimated a staff to volunteer ratio of nearly 20:1 - based on feedback from 10 LAGs.

Possible payment scenarios

1. There would be difficulties in paying landowners only on the basis of results where control work is long-term, for example control of Himalayan Balsam which might take 10 years or more.

2. Timescales for control need to be appropriate – for some species over 10 years to control, mop up small infestations coming from the seedbank – but E.L.M must not incentivise dragging out control if it can be done more quickly. Perhaps the following approach would work:

    a. Higher payment in year one
    b. Lower payments in subsequent years
    c. Lump sum on completion – but note longer-term monitoring is often needed.
    d. Cut-off point after 5 years (depending on species)?

Some outstanding issues/questions:

1. How do we incentivise early action (often on small infestations) when the hassle of making an application (both time and cost) will put off land-owners from applying in the first place – this is what happened under SRDP.

2. How do we incentivise control of multiple species – e.g. often JK, HB and GH are present along the same riparian strip and control of all 3 would be more efficient.

Annex 2: Possible species for inclusion in environment land management schemes with suggested scale, outcome and timescale for each.

Species	**Scale of control needed**	**Outcome**	**Timescale to eradicate**
Himalayan balsam	Catchment	Eradication	10 years+
Giant hogweed	Catchment	Eradication	10-15 years
Japanese knotweed	Local?	Eradication	3-10 years
Rhododendron	Local	Eradication	10 years
Cherry laurel	Local	Eradication	10 years
Skunk cabbage	Catchment/Local	Eradication	10+ years
Purple pitcher plant	Local	Eradication	10 years
Floating pennywort	Catchment	LT Control	10 years
Water primrose	Local	Eradication	5-10+ Years
Parrot's feathers	Catchment/Local	LT Control?	10 years
M. heterophyllum	Local	Eradication	3 years
Mink	Catchment/county	Eradication	10 years
Grey squirrel	Local	LT Control	N/A
Muntjac deer	Local	LT Control	N/A

Day One: Breakout Session B – Environmental Land Management Scheme

Topic 1 – Species
Are any obvious species missing from the list provided in Annex 2 to the questionnaire?

- American Signal Crayfish (Calum Rae, Charlotte, Emily Smith)
- New Zealand Pygmyweed *Crassula helmsii* (Alexia Fish and Andrea Griffiths) but it's recognised that this species is extremely difficult to control
- Other knotweeds (eg Giant Knotweed *Fallopia sachalinensis*, Himalayan Knotweed *Persicaria wallichii* and Hybrid Knotweed *Fallopia* x *bohemica*) in addition to Japanese Knotweed which is already on the list (Charlotte)
- Montbretia *Crocosmia* x *crocosmiifolia* (Charlotte)
- Monkey Flower *Mimulus guttatus* (Charlotte)
- Orange Balsam *Impatiens capensis* (Alexia Fish)
- Water Fern *Azolla filiculoides* (Andrea Griffiths)

Carol Flux suggested that the scheme needs to be sufficiently flexible to allow the list of target species to expand as the need arises.

Carol advised that the scheme also needs to be flexible so it can adapt to local strategies at the relevant level, for example at the county level or the catchment level.

A number of other people also recommended that the scheme should be designed to reflect the situation pertaining to a particular area. Andrea Griffiths suggested that RIMPs could be used to inform spatial prioritisation. Alexia pointed out that some RIMPs have been prepared at a very large scale, although some RIMPs provide more detail at a smaller scale, for example at county level.

Topic 2 – Designing the scheme
A number of people advised that co-ordination of landowners is required to ensure that control work is undertaken systematically at the catchment scale:

- to ensure that money is spent wisely;
- to ensure that the scheme offers good value for money;
- to ensure that control work is implemented efficiently and effectively.

LAGs currently perform this co-ordination role. Andrea mentioned that the Medway Project deals with 150 landowners and emphasised that INNS control would not occur without an organisation to provide co-ordination. Alex Green considers that LAGs are in the best position to organise the work.

A number of people re-iterated the comment that Trevor Renals had made earlier during the workshop this afternoon regarding the need to ensure that INNS control is undertaken systematically at the catchment scale and to ensure that INNS are controlled in the headwaters and along tributaries. Funding would not be wisely spent if it was allocated to landowners part way down a catchment without ensuring that INNS are tackled further upstream. It was noted that LAGs are in a perfect position to co-ordinate the allocation of funding. However, the group noted that if the scheme is not being designed to enable funding to be provided to LAGs, the scheme would need to be 'policed' effectively to ensure that landowners implemented INNS control.

Emily Smith asked whether there is sufficient knowledge about the distribution of INNS to enable target species to be prioritised and she asked whether LAGs (with their grass-roots knowledge of INNS) could play a useful role in providing such information. She also suggested that LAGs could play a useful role in providing advice on biosecurity.

Emma Houghton asked whether landowners would have to prove that they had actually undertaken work to control INNS before they received the funding.

Carol Flux pointed out the difficulties in paying landowners on the basis of results where control work is long-term, for example control of Himalayan Balsam which might take 10 years or more. Calum Rae referred to control of Japanese Knotweed where the results of treatment can be seen very quickly; the amount of Japanese Knotweed in the second year of a treatment programme is markedly less than in the first year. He explained that his Project undertakes surveys to monitor Japanese Knotweed control sites every year and emphasised that continuous surveying is needed to demonstrate effectiveness of treatment work. Alexia emphasised the need for a decent baseline survey to enable subsequent monitoring of treatment work to be undertaken meaningfully; she stressed that the scheme would need to ensure sufficient funding is allocated for monitoring and she recommended that guidance would need to be provided to ensure that the baseline survey and monitoring were undertaken using a suitable methodology. The group recognised the need to continue to monitor a site for a number of years even when the target species appears to have been eradicated and cited Trevor Renals' recommendation to continue to monitor Creeping Water Primrose sites for 5 years. Charlotte referred to the 15 years spent controlling Japanese Knotweed on Exmoor and emphasised the need to continue monitoring even when you think you've eradicated it.

Carol Flux reiterated the importance of allocating funding to enable control work to be undertaken systematically within a catchment. She suggested that funding could be concentrated at the top of the catchment (to control, for example, Himalayan Balsam) and then money could be allocated in phases to landowners further downstream.

<u>Eradication v Control</u>
The group considered whether 'eradication' or 'control' would be appropriate for particular species. Charlotte was concerned that some landowners would be reluctant to enter the scheme if they knew that they were expected to achieve eradication. Derek considered that 'we'd struggle to eradicate plants'.

<u>Timescales</u>
The group noted that the length of an E.L.M.S. agreement might determine whether or not landowners would be encouraged to apply for an agreement. Niall referred to a short-term (5 year) scheme in Scotland that did not attract many farmers as they considered that five years was too short a period in which to demonstrate results.

The group considered the 'timescale to eradicate' column in the list of Species at Annex 2 of the questionnaire. It was agreed that the 3 years suggested for Water Primrose is probably a significant underestimate in most situations.

Carol Flux cited the control of Creeping Water Primrose which has taken 7 or 8 years on the Isle of Wight; Catherine referred to control of this species at Breamore Marsh in Hampshire which has still not been eradicated despite control work each year since 2009.

Emma Houghton cited the control of Giant Hogweed which can take 10+ years before it is eradicated.

The group considered whether it would be right for E.L.M.S agreements to offer payments to control a certain plant for, say, 10 years if a landowner was able to control it on his particular site in fewer years. Charlotte suggested that this problem could be overcome by offering yearly capital payments. Alexia suggested that E.L.M.S. could focus on species which could be controlled relatively quickly.

Alex Green suggested that E.L.M.S. agreements could be set up for a 5 year period and then re-evaluated.

The group considered that, in general, the timescales suggested in Annex 2 to the questionnaire are too short.

Alexia suggested that E.L.M.S. could be suitable for encouraging landowners to deal with small infestations quickly. The scheme would need to be designed to incentivise landowners to control relatively small populations to prevent then becoming more widespread. Emily suggested that E.L.M.S. could incentivise landowners by providing money sooner if they eradicate INNS quickly.

Emily Smith asked whether biological control would be funded by E.L.M.S.

Costs

The group recognised the difficulties in attempting to calculate standardised, average costs as costs vary depending on a) the density and extent of the target species, b) ease of accessibility to work sites, c) widely differing prices offered by different contractors.

Niall referred to standard costs of £324 per ha for Himalayan Balsam, Japanese Knotweed and Floating Pennywort and recognised that these costs were too low to be realistic.

Alexia offered to provide costs for Japanese Knotweed and Himalayan Balsam.

Carol Flux suggested that costs could be estimated on the basis of cost of a contractor's daily rate. Carol cited £250 as a daily rate but stressed that for Himalayan Balsam control two or three visits are needed to each site per season.

Alex Green said that the average cost of Japanese Knotweed control in Yorkshire is £1,200 per km of river bank for the first year of treatment. He said that the cost of treatment reduces in subsequent years. However, Catherine pointed out that when populations on INNS are substantially reduced it often takes contractors just as long to do the work as they have to search for the remaining plants so the costs are not significantly reduced.

Andrea roughly calculated that for the 70 miles of the River Medway (excluding its tributaries) the cost of 5 staff to control between 3 – 5 species is approximately £300 per mil.

Charlotte said that Exmoor National Park Authority pays contractors £10,000 per annum for Japanese Knotweed control which works out as £15 per 10 metres squared. Exmoor NPA have asked landowners for a voluntary contribution of £25 per site. This brought in £3k of donations.

Carol Flux said that the cost of Japanese Knotweed control on the Isle of Wight is between £1,200 - £1,500 per km.

Notes collated by Catherine Chatters
New Forest Non-Native Plants Officer, Hampshire & Isle of Wight Wildlife Trust
26 January 2021

Trevor's Note

- Regardless of the ELMS tier chosen, the applicant should be able to qualify for landscape-scale payment options for certain issues, such as INNS management;
- The different tiers of ELMS need to have corresponding biosecurity measures/capital payments, to deliver the 'enhancing biosecurity' 24-year Environment plan;
- Payments should relate to specific species (cross-referring to a list maintained on the NNSS website to ensure it remains current);
- Payments need to incentivise landowners to host/perform the management, but still provide funding for any LAG engagement;
- LAGS need a funding stream, such as water industry support, to fund preliminary INNS catchment planning before ELMS funding is secured;
- Funding needs to avoid incentivising landowners for having (as opposed to eradicating) INNS. Payments need to encourage management and shift the incentive towards maintaining favourable status and rehabilitating soils/habitat;
- The Catchment Sensitive Farming approach may be applicable to INNS planning and could provide another layer to CSF plans. LAGS should be instrumental in identifying target species and compiling plans.

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Day One: Breakout Session C – Environmental Land Management Scheme

Species	Good for ELM? (rank 1 = good, 2 = okay, 3 =bad)	Long-term objective? **SCALE**	How long would it take to achieve? **Good to promote length of time needed for effective control**	How should costs be distributed? **Mix of front loaded to get going, but on-going to keep people incentivised. Needs to include training.**	Approximate cost (pa)	Is access to all invaded land essential? **Yes if catchment control**	How do we monitor progress? **Need to prove the problem to the landowner, map extent and monitor with landowner to show improvements. Need long term monitoring. Needs to be mix of self reporting by landowner, external checks; so will need co-ordination role.**
Himalayan balsam		Tributary Catchment Local areas e.g. Train tracks and Roads	Eradication		Gemma Rose, River Dee £500 km on 1 side/£1k both sides. Cabi trials at one site £8k		
Giant hogweed		Local areas as grows over large areas of farmland	Eradication		£350 per km.		
Japanese knotweed		Local if small scale and catchment	Eradication		John Cave, Yorkshire £1,200 per km in urban setting		
Rhododendron		Local	Control				
Cherry laurel		Often ignored for management, less obvious without rhoddy flowers, can cover large areas of e.g. woodland. Local/site scale	Control				
Skunk cabbage		Catchment but also local e.g. if in pond/closed system or up a tributary	Eradication				
Purple pitcher plant		Local	Eradication				
Floating pennywort		Catchment and local if isolation/small scale	LT control				

Water primrose		Local	Eradication				
Parrot's feathers		Catchment/local	LT control				
M. heterophyllum		Local	Eradication				
Mink		Catchments/county look at SE regional trial scheme	Eradication				
Grey squirrel		Bigger than local scale and need to assess connectivity	LT control				
Muntjac deer		Local	LT control				
Other invasive deer fallow, Sika; some debate as to whether to include Chinese water deer (which are rare in their own country now?)		Area	LT control				
Cotoneaster							

Comments

1. Need to make clear to the public that catchment does not just refer to river catchments, but can be landscapes too.
2. New arrivals, small numbers of INNS aim for management/eradication.
3. If biocontrol methods are proved effective, to be able to include in ELMS.
4. Use of cordon sanitaire for wider control.
5. Post eradication monitoring is important.
6. Co-ordination, long term commitment and monitoring are crucial.

Day Two: Breakout Session – INNS Mapper

The group discussed the following questions:

1. How do you collect data to achieve the function of your LAG? What are the positives/ negatives of this data collection?
2. What additional data would aid your LAGs activity?
3. How can we improve data sharing between stakeholders?
4. If we were to re-develop current tools to create an app/website tool what features would be useful for you?

General comments

Consistency is needed as different organisations are using a range of tools, but requirements from these tools vary between users making it difficult to have one that suits everyone.

iRecord and INNS mapper have different functions – iRecord is a good general biological recording tool but INNS mapper is useful for recording management.

they'd rather just have one recording app, but having multiple options isn't the worst problem to have.

The main benefit to more and more useful data was in planning; but also for comparisons- to see what is working and what isn't.

- Data is sent to the Local Environmental Record Centres who sell data for commercial purposes. As a charity her organisation is not able to afford to buy back their data. Would like a sharing agreement with charities.

1. **How do you collect data to achieve the function of your LAG? What are the positives/ negatives of this data collection?**

The group reported various methods of data collection from analogue paper records, to online recording systems such as iRecord and INNS mapper, and bespoke digital data capture tools and 3rd party apps.

Recording method	Positives	Negatives
iNaturalist.	Good for volunteers.	Unsure whether the data is shared with iRecord / indicia database.

iRecord • Used by river bailiffs who are told to record INNS. • Use to record information from walkover surveys.	Simple to use if you know how to identify species.	Users need to know what to be on the lookout for and don't receive feedback on their records.
Bespoke apps / recording sites • Tyne Rivers Trust app • A local angling club has developed its own online recording site.	Can include other survey information useful for project (e.g. water quality)	Not always clear whether the data is shared with iRecord / indicia.
INNS Mapper		• May be too complicated for all volunteers to use. • Lack of accuracy with GPS. Only two people allowed in boat (one spraying and one driving) so no accurate recording of location.
ArcGIS Pro Giant hogweed recorded in polygons with gridrefs at top and bottom end and work out square meterage. Monitored after treatment. Landowners give pinpoint location data. Use ArcGIS Pro to record site locations etc also include whether contractor or volunteer effort.	Used GPS but now use phones as easier.	Individual plants are not mapped so don't know where they are.
Internal system		Not all operatives record in the same way.

Use standardised spreadsheet for records from 30 groups, record everything in 10k squares, name, date, presence of red or grey, culled squirrels, no of days, record max number seen at a given time. Like to have a data sharing agreement in place to share data.		No GIS training available.
Geo Area software Deal with Hb removal on own reserve and extend to other landowners. Work carried out with volunteers 3 times a year. Site is boggy and it is very difficult to accurately map location of plants within the site.		Difficult to map terrain within boggy site.
Collect Hb from the water by boat or wading. The local recorder, students and SEPA have recorded locations. The public are encouraged to phone in sightings of INNS and recorded on Scottish INNS Initiative. All stakeholders have access to data.		
LERC Wales app In Wales, we encourage people to record onto NBN Atlas via iRecord or LERC Wales apps. The Wales INNS Portal allows data to be easily downloaded. Some data is not available on NBN Atlas and this has to be obtained from other sources.		
Intending to use drone to survey this year to supplement maps and spreadsheet. Point raised	time saving by use of drone	training (£600 per week) and qualifications needed to use drones

about legality of sharing records collected from private land by drone. Noted that laws changed on drones 31Dec20.		
Paper records	Accessibility- everyone can fill out a form	Adding details such as GPS coordinates becomes laborious. The data often then needs uploading to whatever digital system is being used (be it an excel spreadsheet held by the LAGs or to a local recording database) so it always means extra work.
Apps	Often have a few good features	Not necessarily accessible to older people (who make up the bulk of volunteers) Problems with access to mobile signal, recording in the rain and battery life.

2. **What additional data would aid your LAGs activity?**

Common data collected by LAGs includes species, location, and light detail on whether it is being managed or not.

What additional data would be valuable to collect?

- Polygon data to show the area of infestation, LAG coverage, or management
- Abundance data to show how dense an infestation is, and ability to show changes in this over time to reflect management work.
- Pathways of introduction and spread and proximity.
- Ease of access point onto difficult terrain.
- Management success rates over time - having access to the data on what management techniques worked well, and where, would be helpful for planning and would help contextualise the data gathering the volunteers do.
- Long term- being able to add in possible impacts of the population of INNS could be useful (i.e tagging a big patch of balsam with a note to show that records shows the prevalence of native wildflowers in the area have decreased in 5 years)

What are the barriers to collecting this data?

- Identification skills of recorders.
- Knowing what volunteers can tackle themselves.
- Issues around privacy of records on private land. Suggestions for getting around this include blurring records, setting a larger scale (e.g. 10k square) for data made public.

What format would data collection be most helpful (e.g. paper/ tablet/ mobile phone application/ website)?

- The group wanted a digital App or online form, but still need a paper option for older volunteers.
- Mobile friendly webpage.
- The Angling Trust have used a progressive web application for a pollution recording system. This looks like an app on the phone but is a webpage, cheaper and easier to update than an app. Data can be entered when out of signal and is sent when signal is restored.

3. **How can we improve data sharing between stakeholders?**

- Reduce timelag in uploading records / these appearing online.
- Ensure data ends up in the same place.
- Create standard template for recording to make it easier for organisations to share data.
- Help LAGs understand data law so they can feel confident they are not about to breach GDPR.
- Remove fees attached to accessing historical data held by recording societies.
- Identify 3 data points that stakeholders are interested in and encourage people share those data points. I.e for 2021 we want to know what invasive plant species is spreading most, what habitats are you focussing on this year and what are you volunteer numbers this year- this will not only increase the amount of data shared, but help LAGs and stakeholders forge links between each other to make data sharing easier and more intuitive in the future.
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4. **If we were to re-develop current tools to create an app/website tool what features would be useful for you?**
    - A “team” account for organisations or LAGs so that they can quickly see the management data other members have uploaded. This would be useful for reporting back to funders.
    - A progress report / setting a RAG status for sites, e.g. red if invasive species recorded there but no management taking place, green if eradicated (useful to retain this information rather than removing a species record once eradicated so that monitoring for regrowth can continue). This can be done on iNaturalist (can set up a project and set questions for recorders e.g. how big is the infestation, has it been treated).
    - Linked to the above, the ability to add information to existing records, e.g. when management has taken place.
    - Feedback on records, e.g. an acknowledgement of receipt and notification if management is carried out.
    - Notifications when a key species is recorded in a specified area.
    - Training materials and information on biosecurity.

- Geotagging- so uploading photos automatically attaches the image to the relevant part of a map
- Easy amendments to existing records (so increases/decreases of population size can be quickly and accurately reflected)
- The current apps are all a bit clunky- ease of use and ergonomic design should be a priority
- Offline mode
- Would like to see positive feedback being given to volunteers on the data they have supplied (ie. purposes and what it has contributed to etc) to encourage them to continue their efforts. This is often ignored.
- Whatever system is adopted in future, it needs to acknowledge contribution of volunteers so they feel valued.
- Would be great if there was a map to see which groups and projects are working in your area.