SRix4Veg Logistics and Practical Details

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SRIX4Veg Logistics Overview

- Part 1: Equipment logistics and UAV regulations in Spain
- Part 2: Participants’ Travel and Accommodation
- Part 3: Health and Safety
SRIX4Veg Logistics Overview

- Part 1: Equipment logistics and UAV regulations in Spain
  1. Shipping and storage
  2. UAV EU licence and insurance

- Part 2: Participants’ travel and Accommodation
- Part 3: General information and Health and Safety
Equipment logistics: Shipping and Storage

1. Instruments have to be shipped **prior** to the campaign (~1 week before) if flying.

2. We recommend that participants use the shipping companies’ tracking facilities.

3. Storage will be ensured at the **Albacete campus of UCLM**.

4. **Details of the instruments** must be provided.

<table>
<thead>
<tr>
<th>Equipment details to be provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact details printed on the boxes / Labelling of boxes</td>
</tr>
<tr>
<td>Dimension and number of the boxes for each instrument (UAV + other instruments used to support the UAV acquisition)</td>
</tr>
<tr>
<td>Number/Sets of batteries available</td>
</tr>
<tr>
<td>Battery type</td>
</tr>
<tr>
<td>UAV model</td>
</tr>
<tr>
<td>Safety equipment</td>
</tr>
</tbody>
</table>
Equipment logistics: Potential Issues

1. LiPo (Lithium Polymer) batteries on a plane:

<table>
<thead>
<tr>
<th>Wh rating</th>
<th>IATA guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 100 Wh</td>
<td>Up to 20 spare batteries can be taken in carry-on baggage</td>
</tr>
<tr>
<td>100 – 160 Wh</td>
<td>A maximum of 2 spare batteries may be taken along</td>
</tr>
<tr>
<td>More than 160 Wh</td>
<td>Transport only as dangerous goods freight</td>
</tr>
</tbody>
</table>

2. Shipping: Most couriers are reluctant/prohibit the shipping of LiPo batteries.

3. To get relief from import duty it is possible to get a Temporary Admission (ATA) Carnet (for a fee) which is an international customs and temporary import/export document.

4. Check the operating temperatures of your instruments since Spain can exceed 40°C during the SRIX4Veg time window.
UAV regulations in Spain

SRIX4Veg activity in the “Open” category and “A3” subcategory

- **VLOS** must be maintained at all times
- Maximum flight height limit, from the take-off point, of **120 m**
- **No fly** over uninvolved people
- A distance of **150 m** or more from congested areas must be maintained
- **Easy Access Rules for UAS EASA document:**
  

<table>
<thead>
<tr>
<th>UAS</th>
<th>Operation</th>
<th>Drone operator registration</th>
<th>Drone operator competence</th>
<th>Remote pilot minimum age</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 25 g</td>
<td>Subcategory A1 (can also fly in subcategory A3)</td>
<td>No flight expected over uninvolved people (if it happens, overflight should be minimized)</td>
<td>No training required</td>
<td>No minimum age</td>
</tr>
<tr>
<td>&lt; 500 g</td>
<td>A1 (can also fly in subcategory A3)</td>
<td>No flight over assemblies of people</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>&lt; 2 kg</td>
<td>A2 (can also fly in subcategory A3)</td>
<td>No flying over uninvolved people</td>
<td>Read carefully the user manual</td>
<td>Complete the training and pass the exam defined by your national competent authority or have a “Proof of competency for online training” for A1/A3 “open” subcategory</td>
</tr>
<tr>
<td>&lt; 25 kg</td>
<td>A3</td>
<td>Do not fly near or over people</td>
<td>Read carefully the user manual</td>
<td>Complete the training and pass the exam defined by your national competent authority or have a “Proof of competency for online training” for A1/A3 “open” subcategory</td>
</tr>
</tbody>
</table>
UAV regulations: Flight Restrictions Zones

Las Tiesas is partially covered by the Aeródromo La Gineta to the north-east of the site.

Flights cannot be freely made at any unplanned location on the site and must be restricted to the target flight zone.
UAV regulations: EU Licence

- **Registration with AESA** (Spanish Aviation Safety and Security Agency) is mandatory for the drone pilot to obtain your **drone operator registration number** that needs to be displayed with a sticker on the drone you fly.

- Non-EU participants who have qualifications in their specific countries will need to check themselves whether those are acceptable in EU. **Online courses exist to obtain the certificate for flying an UAV in the open category in all EU countries.**
UAV regulations: Insurance

- Each participant is liable for their own UAV and any damages that may be caused by it, or any theft, damage or loss caused to their UAV, payload and property while taking part in SRIX4Veg.

- We recommend that participants have an insurance policy associated with their UAV to cover civil liability to third parties for damages that may arise.
SRIX4Veg Logistics Overview

- Part 1: Equipment logistics and UAV regulations in Spain

- Part 2: Travel logistics
  1. Participants’ travel
  2. Participants’ accommodation

- Part 3: General information and Health and Safety
### Travel from airports to Albacete

<table>
<thead>
<tr>
<th>Airport to Albacete</th>
<th>Distance</th>
<th>Driving</th>
<th>Public Transports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alicante -&gt; Albacete</td>
<td>170 km</td>
<td>1:30 min</td>
<td>1:45 min</td>
</tr>
<tr>
<td>Valencia -&gt; Albacete</td>
<td>190 km</td>
<td>2 hours</td>
<td>2 hours</td>
</tr>
<tr>
<td>Madrid -&gt; Albacete</td>
<td>260 km</td>
<td>2:30 min</td>
<td>2:40 min</td>
</tr>
</tbody>
</table>
Accommodation

We recommend to book the accommodation in advance (at your expenses!)

Las Tiesas is located ~25km from Albacete
SRIX4Veg Logistics Overview

- Part 1: Equipment logistics and UAV regulations in Spain
- Part 2: Participants travel and Accommodation

- Part 3: Health and Safety and final discussion

1. Health and safety
Health and Safety

- **Amenities**: toilets on site but food/water need to be prepared the day before

- This region of Spain is **very hot and dry** in the proposed SRIX4Veg campaign window (bring SPF, long trousers and long-sleeved t-shirts)

- Participants should communicate, before the campaign, any special requirements for any of the team members joining the exercise

- Someone with a first aid qualification in each team would be highly recommended

- Check the **operating temperatures** of the instruments/batteries since this region of Spain can exceed 40°C

- Check the **wind tolerance** of the UAV platform since wind can be high because of the topography of the site
Endorsed by:

Committee on Earth Observation Satellites

Funded by:

esa

In collaboration with:

USGS
CSIRO
Australian Government Geoscience Australia

In partnership with:

ITAP
University of Castilla-La Mancha

Project partners:

University of Southampton
NPL
EOLAB

Thanks for the attention!