

Wildlife Health Intelligence Platform

User Manual

This manual describes the Wildlife Health Intelligence Platform and explains its proper use.

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THE WILDLIFE HEALTH INTELLIGENCE PLATFORM – WHIP

WHIP stands for “Wildlife Health Intelligence Platform” and it is a user-friendly web-based database to properly record and manage data associated with wildlife health events including observations of sick or injured, dead, and healthy animals; specific individuals; necropsies; samples collected (including storage information), and diagnostic tests and results. WHIP was developed and is maintained by the Canadian Wildlife Health Cooperative (CWHC), based at the University of Saskatoon, Saskatchewan. Together with the Wildlife Conservation Society (WCS) Health Program, CWHC developed a version of WHIP for new national or regional-level multiagency wildlife health surveillance programs or specific wildlife disease studies.

Access to the data in WHIP is restricted. To obtain access user accounts are requested and approved by database administrators. Authorized users are granted different permissions to view, upload, edit, or delete different sets of data. Data entry options are either manual input on the Graphical User Interface (GUI) or automatic bulk import. WHIP stores diverse data types, including text and numeric information, as well as pdf files, image files in several formats, video, and audio files.

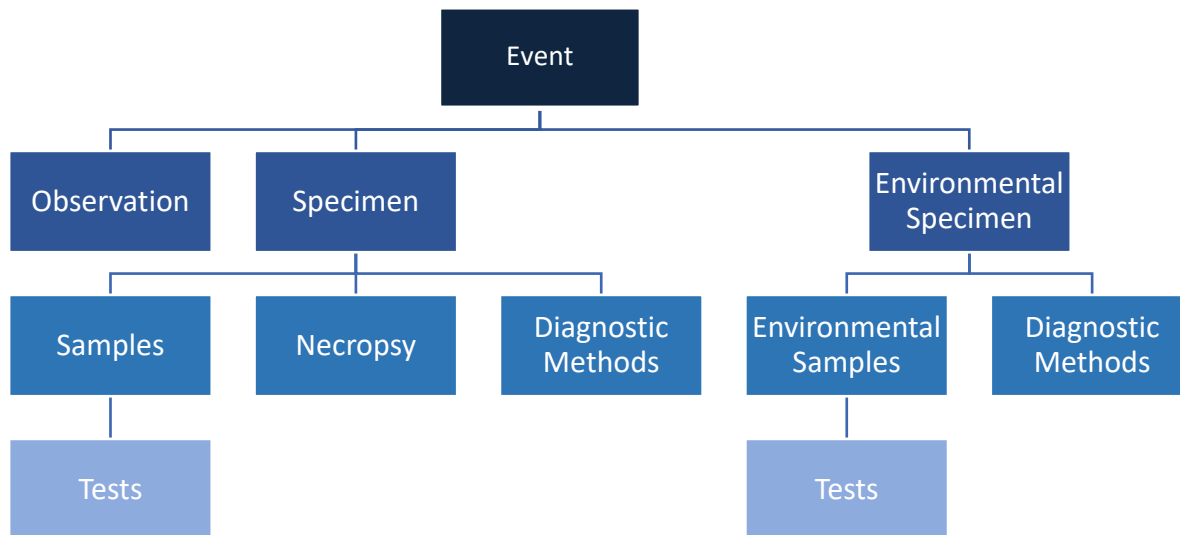
WHIP exports data as a .csv file for analysis and visualization in any data analysis software. Specific data subsets can be exported based on any Field of the database and data access restrictions.

In this manual, we **capitalize** nouns such as **Events**, **Observations**, **Specimens**, and others when they refer to specific WHIP terms.

STRUCTURE OF THE WILDLIFE HEALTH DATA IN WHIP

In the WHIP database, wildlife health data are stored as **Events**. An **Event** refers to a specific Wildlife Health Event, a discrete spatiotemporal set of Field findings that are relevant for the goals of wildlife health surveillance; therefore, they can be recorded during Targeted Surveillance activities, Scanning Surveillance activities, or Outbreak investigations. Wildlife Health Events involve the site characteristics where the Event occurs; the species present; sick, injured, and dead animals as well as any healthy individuals nearby. The components are recorded as **Event**, **Observations**, **Specimens**, and **Environmental Specimens**. **Observations** describe species present at a Wildlife Health Event that are not sampled or examined. **Specimens** are specific individuals present at the Wildlife Health Event that provide samples, are necropsied, or are examined using specific methods such as radiology, ultrasound, cytology, etc. **Environmental Specimens** are animal tissues collected when the specific individual source cannot be identified, or come from abiotic sources such as water. Further, **Events** also include the **Samples** collected from the **Specimens** and **Environmental Specimens** for testing, findings during the **Necropsy** of **Specimens**, and findings in **Specimens** and **Environmental Specimens** using **Diagnostic Methods**. Finally, WHIP also considers the **Tests** conducted with the **Samples** collected from the **Specimens** and **Environmental Specimens**.

A summary of the data structure in SMART for Health is provided below.



Wildlife Health Event: is a discrete spatiotemporal set of Field findings that are relevant for the goals of wildlife health surveillance. Wildlife Health Events include the observation of sick, injured, and dead animals, as well as healthy individuals. These can belong to the same or different species. Wildlife Health Events can also include data from individual animals; field necropsies; the samples collected from these individual animals; environmental specimens; environmental samples; diagnostic tests; and pathogen tests (see diagram above, page 6).

Under certain circumstances, a group of healthy animals by themselves can be a Wildlife Health Event. For example, if they are relevant to the goals of Targeted Surveillance activities (e.g., healthy individuals of a species susceptible to the surveyed pathogen) or if they are detected during an Outbreak Investigation (e.g., healthy animals in a site with massive mortality). Moreover, healthy animals can be part of a Wildlife Health Event when they are associated with dead, sick, or injured animals detected during: Targeted Surveillance (e.g., healthy animals of a species susceptible to the surveyed pathogen mixed with sick animals), Scanning Surveillance activities (e.g., healthy vultures around a dead mammal carcass), or an Outbreak Investigation.

Event examples include: (1) a group of dead, live, and sick waterfowl on the edge of a pond, (2) the presence of healthy individuals of a species that is susceptible to a pathogen of interest (healthy wild boars found while investigating the presence of African Swine Fever virus), (3) the collection of samples at a commercial trade location or farm, (4) the identification of poisoned carnivores during a Field mission, (5) an injured herbivore, and (6) findings at discrete spatiotemporal locations during an outbreak investigation.

Observation: one or more animals that are only viewed at an Event. These animals do not provide carcasses for necropsy or samples, and no diagnostic method is conducted on them. Viewed-only animals of the same species belong to the same Observation.

Specimen: a specific individual animal at the Event that provides samples, that diagnostic methods are conducted upon, or whose carcass is used for a necropsy.

As shown in the Figure on page 6, in WHIP **Specimens and Environmental Specimens are not part of Observations**. In practice, if 20 sick, 15 healthy, and 5 dead animals of the same species are found in a single spatiotemporal location (40 animals total) and carcasses or samples are collected from **2 dead** individuals, then a single Event should be created in WHIP that includes **2 Specimens** (one per each sampled dead individual) and a **single Observation** (one species recorded). This single **Observation** describes the age, sex, and health status of the 20 sick, 15 healthy, and **3 dead** individuals that were not sampled. As a result, the Event will contain 40 animals: **2 Specimens** and the **38 individuals observed**.

EVENT, OBSERVATION, SPECIMEN, AND ENVIRONMENTAL SPECIMEN CODES

A fundamental concept associated with data structure and to locate data are Event, Observation, Specimen, and Environmental Specimen Codes. The Codes are generated automatically by WHIP as Events are created and Observations, Specimens, and Environmental Specimens are added to them. When using WHIP under the WCS license, Event Codes are structured as “WCS.XXXXXX” with XXXXXX representing an assigned serial number. A unique suffix structure is then added to the Event Code for Observation, Specimen, and Environmental Specimen Codes. The suffix structure for an Observation Code is a period followed by a letter in alphabetic order (e.g., WCS.XXXXXX.A). The suffix structure for a Specimens Code is a period symbol and a sequential number (e.g., WCS.XXXXXX.1). The suffix structure for an Environmental Specimens Code is a colon symbol and a sequential number (e.g., WCS.XXXXXX:1). For example the Event WCS.100088 has 2 Observations, 3 Specimens, and 2 Environmental Specimens. The corresponding Codes are:

WCS.100088 for the Event

WCS.100088.A and WCS.100088.B for the Observations

WCS.100088.1, WCS.100088.2, WCS.100088.3 for the Specimens

WCS.100088:1, WCS.100088:2 for the Environmental Specimens

ACCESSING WHIP

CREATE A USER ACCOUNT

The first step to access WHIP and view, upload, edit, or download data is to request a user account. To request the account, complete the information requested here <https://wcs.whipdb.org/#/access-request>. The user should get an email with the subject “WHIP Access Request Confirmation”. If you are an approved user, you will receive an email with the subject “Your WHIP Access Request Has Been Accepted”. This second email confirms your account is ready to use.

LOGGING IN TO THE WEB-BASED USER INTERFACE

To access WHIP, authorized users will open <https://wcs.whipdb.org> on a web browser, preferably Chrome and avoid Safari, and provide their username and password (see below).

The image shows a web-based sign-in interface for WHN WHIP. At the top left is the Wild Health Net logo. The main heading is 'WHN WHIP' with the subtitle 'Sign In to Dashboard'. The form contains the following elements: an 'Email' input field, a 'Password' input field, a checkbox for 'Remember Me', and a 'Recover Password' link. A green 'Sign In' button is positioned below the form. At the bottom of the page, it states 'Version: 1.4.11' and 'Platform developed and maintained by: Canadian Wildlife Health Cooperative. © 2021'. A security logo for Starfield Technologies is also present, with the text 'STARFIELD TECHNOLOGIES VERIFIED & SECURED VERIFY SECURITY'.

INITIAL SCREEN

The Graphical User Interface (GUI) provides access to **two features** that are **always available**. On the left side of the screen, the GUI has a **Navigation Panel** with a list of **Tools** including the “Dashboard”, “Submission Wizard”, “Bulk Import”, “Log Out”, etc. Depending on the user access level, the “Observations”, “QA/QC”, “Sample Inventory”, “Pathologist”, and “Preferences” Tools may or may not be visible because they are under development. On the top, the GUI has the **Search Engine** to help find specific subsets of data.

The center of the WHIP screen displays the **Dashboard**, specifically the **Specimen History Table**. This Table provides the list of the last Specimens viewed or edited. It is possible to access a recently opened record using this Table by clicking on the corresponding row. Note, the Specimen History Table does not show all records, to search a record, see “[Quick Search](#)” and “[Queries](#)”. Access the dashboard any time by clicking on the “Dashboard” **Tool**.

The screenshot displays the WHIP dashboard. At the top, there is a green header with the text "WHIP" on the left, a "Quick Search" input field with a magnifying glass icon, and a dropdown menu currently set to "All". On the right side of the header, there is a user profile icon labeled "DM".

On the left side, there is a vertical navigation panel with the following items: DASHBOARD (selected), SUBMISSION WIZARD, OBSERVATIONS, QA / QC, SAMPLE INV, BULK IMPORT, ADMIN, PATHOLOGIST, PREFERENCES, and LOGOUT.

The main content area is titled "SPECIMEN HISTORY" and contains a table with the following data:

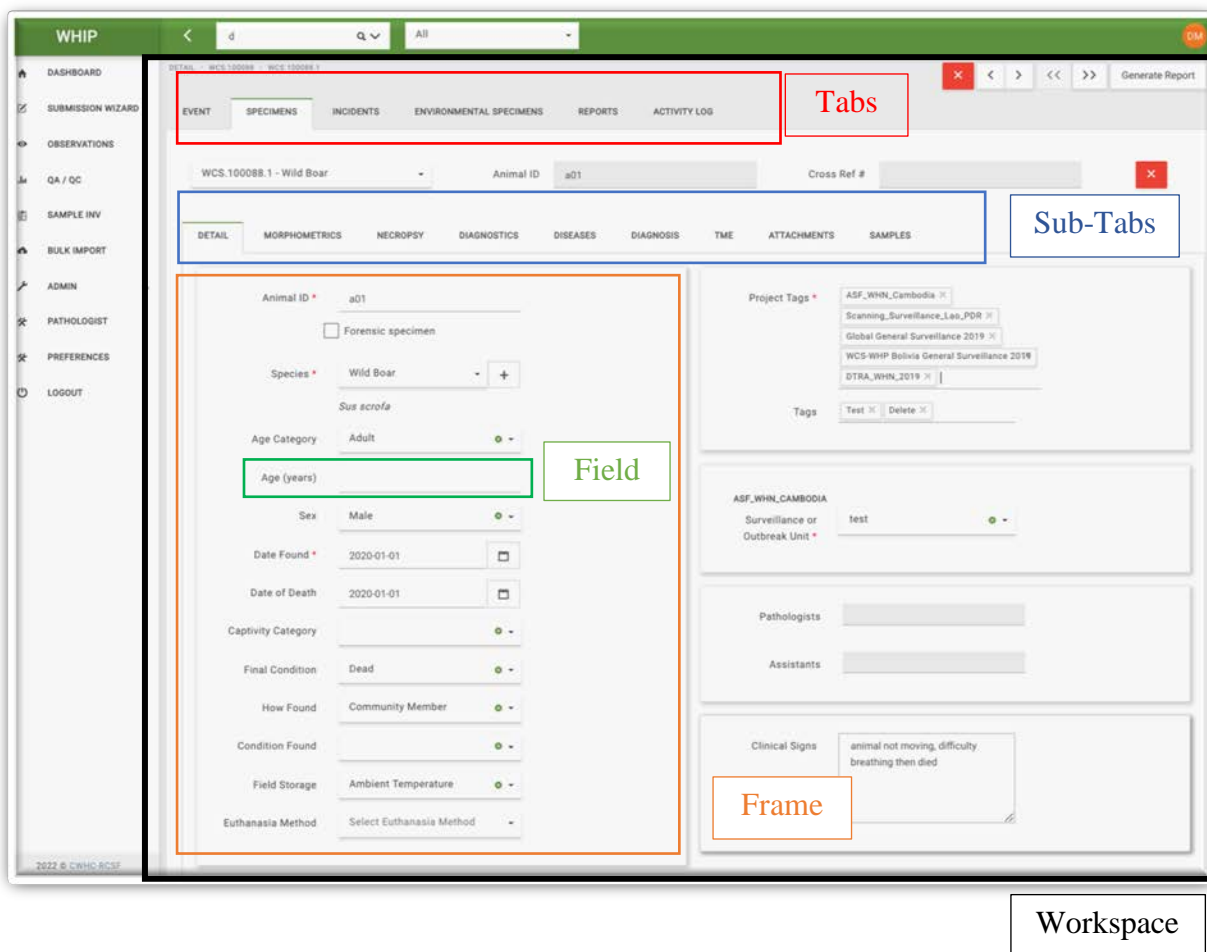
| Cross Reference | Specimen code | Animal ID | Common Name | Date Received |
|-----------------|---------------|-----------|---------------------|---------------|
| | WCS.100088.1 | a01 | Wild Boar | 2020-01-17 |
| | WCS.100088.9 | 1111 | Amolops archotaphus | 2021-03-15 |
| | WCS.100005.1 | E190224.1 | Asian Elephant | 2019-02-24 |
| | WCS.100116.1 | E200117 | Asian Elephant | 2020-01-20 |
| | WCS.100141.1 | E200115 | Asian Elephant | 2020-01-19 |

Below the table, it says "Showing 1 to 5 of 15 Entries". At the bottom right of the table area, there is a pagination control showing "1" selected, with "2" and "3" also visible.

Red boxes with text labels are overlaid on the image: "Search Engine" points to the search bar, "Dashboard" points to the table area, and "Navigation Panel" points to the left sidebar.

ACCESSING DATA IN WHIP: TABS, SUB-TABS, FRAMES, AND FIELDS

After clicking on a row of the **Specimen History** Table or using the **Search Engine** to identify specific subsets of data, the user interface displays the **Workspace** (black box) which shows the data of the Event structured in Tabs, Sub-Tabs, and Frames. These Tabs (red box), Sub-Tabs (blue box), and Frames (orange box) hold information associated with a specific piece of the Event (Event Site, Observation, Specimen, Environmental Specimen, Necropsy, Samples, Tests, etc.) collected through specific Fields (green box):



The Fields in the Tabs, Sub-Tabs, and Frames are specific prompts that request data input and they are filled to create a new Event or to edit the data (see the corresponding sections [“Creating a new Event”](#) and [“Add or Edit data”](#)). For information about each Field across Tabs and Sub-Tabs see the Data Dictionary.

When an Event does not contain Specimens or Environmental Specimens, then the corresponding Tab will not be available and its font color faded compared to other labels. In the figure above, compare the “Event” Tab label and the “Environmental Specimen” label. This particular Event does not involve Environmental Specimens.

Mandatory Fields are indicated with a red star. In the figure above, “Animal ID”, “Species”, “Date Found”, and “Projects” are mandatory Fields.

EVENT TAB

The Event Tab contains the Sub-Tabs “Detail”, “Location”, “History”, “Observations”, “People/Contacts”, “Attachments”, and “Interpretation”. The location of these elements is shown below:

The screenshot displays the WHIP software interface. The top navigation bar includes a search bar, a dropdown menu set to 'All', and a 'Last Search Results' button. The left sidebar contains various menu items such as 'DASHBOARD', 'SUBMISSION WIZARD', 'OBSERVATIONS', 'QA / QC', 'SAMPLE INV', 'BULK IMPORT', 'ADMIN', 'PATHOLOGIST', 'PREFERENCES', and 'LOGOUT'. The main content area shows the 'EVENT' tab selected, with sub-tabs for 'DETAIL', 'LOCATION', 'HISTORY', 'INTERPRETATION', 'PEOPLE/CONTACTS', 'ATTACHMENTS', and 'OBSERVATIONS'. The 'DETAIL' sub-tab is active, displaying the following information:

- Event Date: 2020-01-17
- Event Type: Transect Sampling, Free-ranging, Environmental Specimen
- Event Cross Reference Number: (empty field)
- Morbidity/Mortality in Livestock: Yes (selected), No
- Morbidity/Mortality in Humans: Yes (selected), No

Below this information is a section for 'ENVIRONMENTAL SPECIMEN' with the following details:

- Received By: (empty field)
- Date Received: 2021-09-28

A table at the bottom shows the specimen details:

| Sample Type | Species | Number Received |
|--------------------|------------------|-----------------|
| AG - Adrenal Gland | Select a Species | 1 |

THE “EVENT-DETAIL” SUB-TAB

This Sub-Tab holds data regarding the date and type of the Event, and the presence of disease or mortality in humans or livestock at or near the Event. This Tab also includes the **Specimen** and the **Environmental Specimen** Frames. The Specimen Frames are provided per **species** while the Environmental Specimens Frames are provided per **type**. Information regarding the “Finder Person”, “Submitter Person”, and the “Receiver” is shown for **Specimens** and **Environmental Specimens** independently (see next four figures below).

The screenshot displays the 'Event - WCS.100088' detail page in the WHIP system. The 'ENVIRONMENTAL SPECIMEN' section is highlighted with an orange box. It contains the following information:

- Received By: [Dropdown menu]
- Date Received: 2021-09-28
- Sample Type: AG - Adrenal Gland
- Species: Select a Species
- Number Received: 1

Below the Environmental Specimen section is the 'FINDER PERSON' section, which includes a search bar and a table of contact information:

| Name | Affiliation (mt) | Phone | Email | Address | Edit \ Remove |
|----------------|------------------|----------------|-----------------|--|-----------------|
| Mathieu Pruvot | null | 1 970 402-1675 | mpruvot@wcs.org | 1474 Campus delivery Fort Collins, Larimer, Colorado USA | [Edit] [Remove] |

ENVIRONMENTAL SPECIMEN
✕

Received by + ✎

Date Received 📅

| Sample type | Species | Number Received |
|---|---|--------------------------------|
| <input type="text" value="Bm - Bone Marrow"/> | <input type="text" value="Select a Species"/> | <input type="text" value="1"/> |

FINDER PERSON

Full Name Search +

| Name | Phone | Email | Address | Edit \ Remove |
|-----------------|-------|--------------------|---------|--|
| Diego Montecino | | dmontecino@wcs.org | null | ✎ ✕ |

SUBMITTING PERSON

Full Name Search +

| Name | Phone | Email | Address | Edit \ Remove |
|-----------------|-------|--------------------|---------|---|
| Diego Montecino | | dmontecino@wcs.org | null | ✎ |

SUBMITTING AGENCY

Full Name Search +

WHIP Quick Search All

DETAIL WCS.100088 - WCS.100088.1

SPECIMEN

Received By

Date Received

| Species | Number Received |
|---|--------------------------------|
| <input type="text" value="Amolops compotrix"/> <input type="button" value="+"/> | <input type="text" value="1"/> |

FINDER PERSON

Full Name Search

SUBMITTING PERSON

Full Name Search

| Name | Affiliation (mt) | Phone | Email | Address | Edit \ Remove |
|----------------|------------------|----------------|-----------------|--|-------------------------------------|
| Mathieu Pruvot | null | 1 970 402-1675 | mpruvot@wcs.org | 1474 Campus delivery Fort Collins, Larimer, Colorado USA | <input type="button" value="edit"/> |

SUBMITTING AGENCY

Full Name Search

| Name | Phone | Email | Address | Edit \ Remove |
|--------------|-----------------|--------------|--|--|
| WCS Cambodia | +855 23 219 443 | sken@wcs.org | #21, Street 21 Phnom Penh Cambodia 12000 | <input type="button" value="edit"/> <input type="button" value="X"/> |

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SPECIMEN



Received by WCS Cambodia - +

Date Received 2020-10-23

| Species | Number Received |
|-------------------------|-----------------|
| Aaron Bauer's Gecko - + | 1 |

FINDER PERSON

Full Name Search Search Name - +

SUBMITTING PERSON

Full Name Search Search Name - +

| Name | Phone | Email | Address | Edit \ Remove |
|----------------|----------------|-----------------|---|---------------|
| Mathieu Pruvot | 1 970 402-1675 | mpruvot@wcs.org | 1474 Campus delivery Fort Collins, Larimer, Colorado USA | |

SUBMITTING AGENCY

Full Name Search Search Name - +

| Name | Phone | Email | Address | Edit \ Remove |
|--------------|-----------------|--------------|---|---------------|
| WCS Cambodia | +855 23 219 443 | sken@wcs.org | #21, Street 21 Phnom Penh Cambodia 12000 | |

THE “EVENT-LOCATION” SUB-TAB

This Sub-Tab has information about the spatial coordinates of the Event. The coordinates can be provided in Decimal Degrees; Degrees, Minutes, and Seconds (DMS); or Universal Transverse Mercator (UTM).

The Fields in the “**Address**” Frame are populated based on the latitude and longitude provided.

The red pin on the map displays the location of the entered spatial coordinates.

The “**Description**” Frame contains data about the “Landscape Type” and “Location Description”.

The screenshot displays the WHIP software interface for the "EVENT-LOCATION" sub-tab. The interface is organized into several sections:

- Navigation:** A sidebar on the left contains menu items such as DASHBOARD, SUBMISSION WIZARD, OBSERVATIONS, QA / QC, SAMPLE INV, BULK IMPORT, ADMIN, PATHOLOGIST, PREFERENCES, and LOGOUT. The top navigation bar includes "EVENT", "SPECIMENS", "INCIDENTS", "ENVIRONMENTAL SPECIMENS", "REPORTS", and "ACTIVITY LOG".
- Event Details:** The main content area shows "Event - WCS.100088" with sub-tabs for "DETAIL", "LOCATION", "HISTORY", "INTERPRETATION", "PEOPLE/CONTACTS", "ATTACHMENTS", and "OBSERVATIONS".
- Coordinate Source:** A section with a dropdown menu set to "Calculated" and radio buttons for "DECIMAL DEGREES" (selected), "DMS", and "UTM". It displays "Latitude * 52.1377" and "Longitude * -106.62" with a "Find On Map" button.
- Address:** A section with dropdown menus for "Street Address" (Crop Science Field Laboratory), "City" (Saskatoon), "County" (Corman Park No. 344), "Province/State" (Saskatchewan), and "Country" (Canada), along with a "Find On Map" button.
- Description:** A section with dropdown menus for "Landscape Type" (Urban) and a text field for "Location Description" (near the door).
- Map:** A map on the right side of the interface shows the location of the event in Saskatoon, Saskatchewan, with a red pin indicating the specific location.

EVENT SPECIMENS INCIDENTS ENVIRONMENTAL SPECIMENS

Event - WCS.100088

DETAIL **LOCATION** HISTORY INTERPRETATION PEOPLE/CO

Coordinate Source Calculated



DECIMAL DEGREES DMS UTM

Latitude * 52.1371

Longitude * -106.6313


Find On Map

> Address

| | | |
|----------------|--------------------|---|
| Street Address | 44 Innovation Blvd |  ▾ |
| City | Saskatoon |  ▾ |
| County | Division No. 11 | |
| Province/State | Saskatchewan | |
| Country | Canada | |

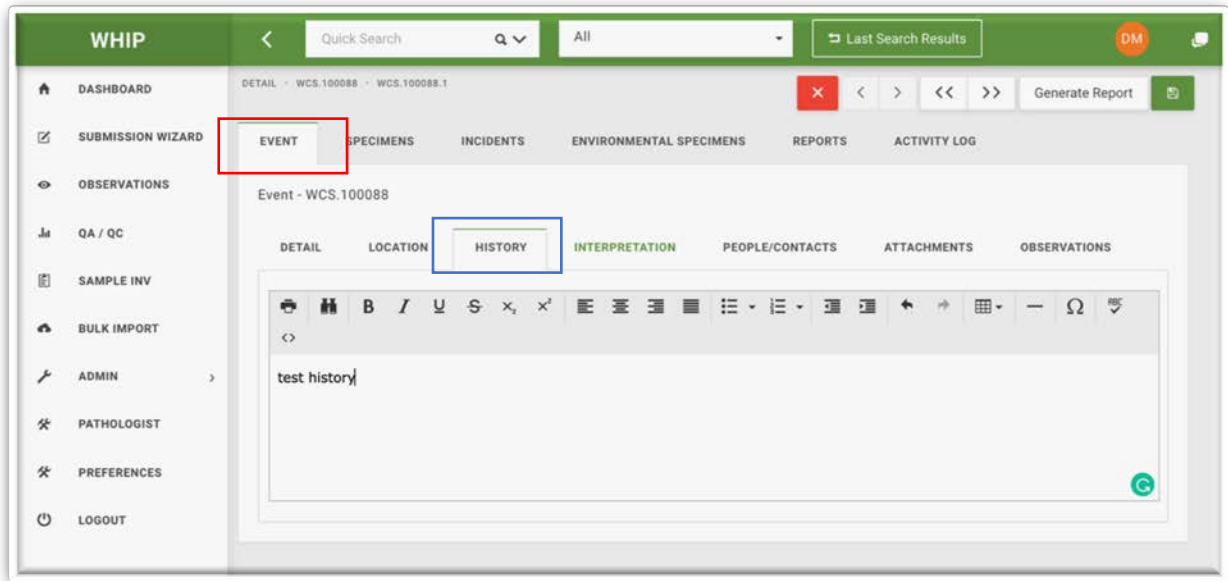
Find On Map

> Description

| | | |
|----------------------|--------------------------|---|
| Landscape Type | Urban |  ▾ |
| Location Description | <div>near the door</div> | |

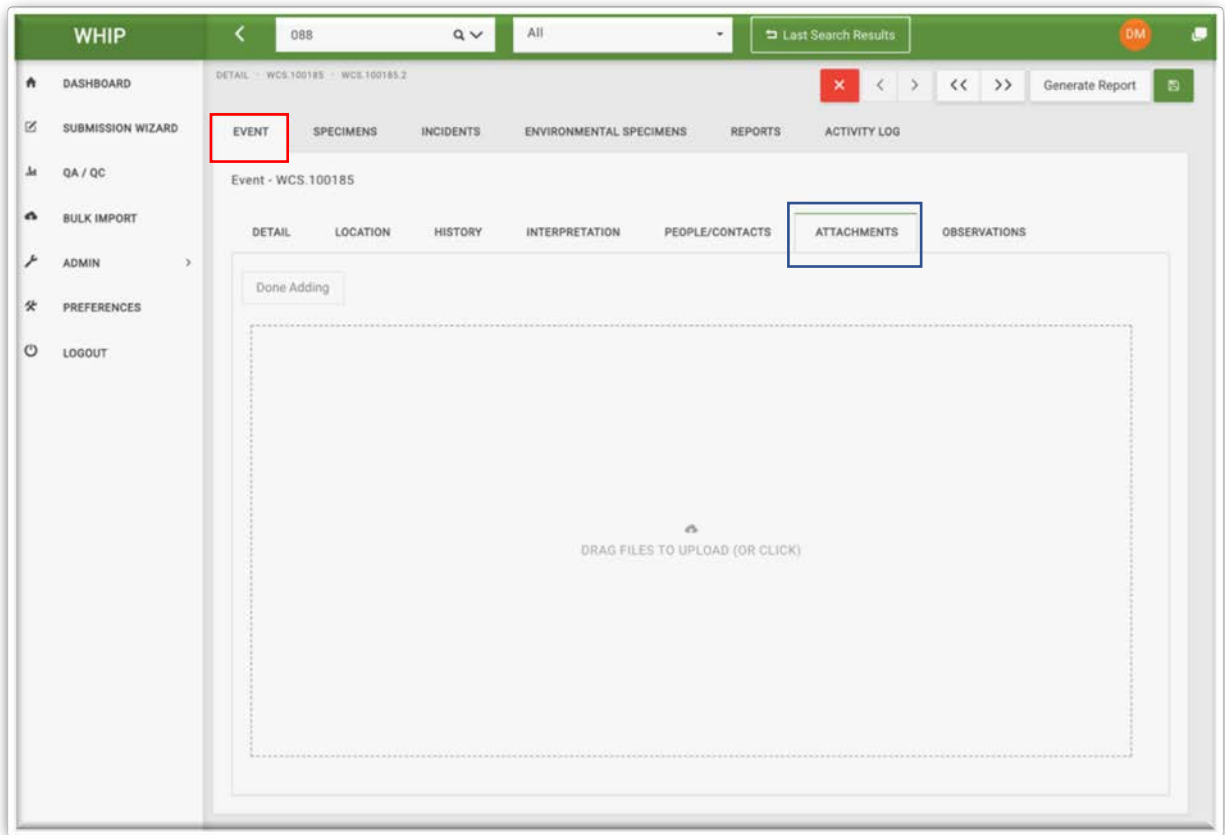
THE "EVENT-HISTORY" SUB-TAB

This "History" Sub-Tab has a text box to include details of the **Surveillance or Outbreak Unit** and the **Event**.



THE “EVENT-ATTACHMENTS” SUB-TAB

This Sub-Tab allows the user to add image, audio, text, zip, and pdf files **associated with the full Event**. Small icons of the attached files appear when they are present.



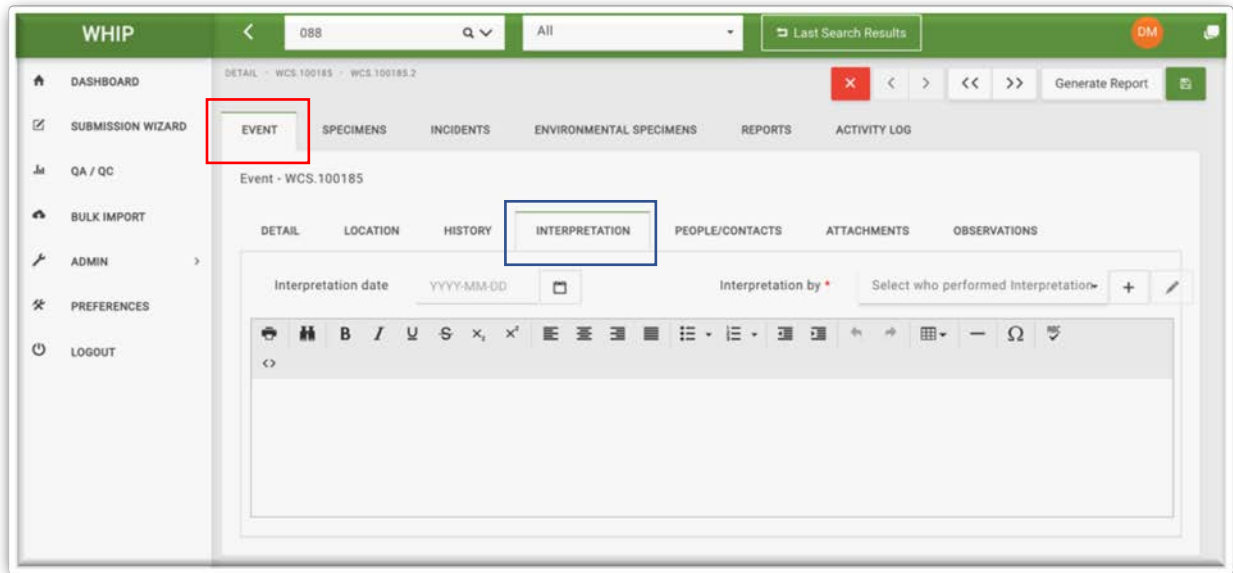
THE “EVENT-PEOPLE/CONTACTS” SUB-TAB

This Sub-Tab stores the information about the Pathologist in charge of the Event, the Authority who will provide the final diagnosis to the Event, and the Assistants to the Authority. The Sub-Tab also includes the Frame “Other Contacts” which keeps information of other individuals that could be contacted to trace the Event and its samples, necropsies, etc.

The screenshot displays the WHIP software interface. At the top, there is a green header with the text "WHIP" and a search bar containing "088". Below the header, a navigation menu includes "EVENT" (highlighted with a red box), "SPECIMENS", "INCIDENTS", "ENVIRONMENTAL SPECIMENS", "REPORTS", and "ACTIVITY LOG". The main content area is titled "Event - WCS.100185" and features a sub-tab "PEOPLE/CONTACTS" (highlighted with a blue box). This sub-tab contains three input fields: "Pathologists" with the value "Charlotte Hollinger", "Authority" with the value "Charlotte Hollinger", and "Assistants" with the value "Sokha Chea". Below these fields are two sections for "OTHER CONTACTS": "PEOPLE" and "ORGANIZATIONS", each with a "Full Name Search" field and a search button.

THE "EVENT-INTERPRETATION" SUB-TAB

This Sub-Tab contains a text box that provides the final diagnosis of the Event, after pathology, clinical diagnosis, and Pathogen Tests have been completed.



THE “EVENT-OBSERVATIONS” SUB-TAB

This **Sub-Tab** has the data associated with the **Observations** belonging to the **Event**. Each **Observation** has the information of the individuals only observed per species. The data per **Observation** is shown in specific Frames which contain the secondary Sub-Tabs “**Detail**”, “**Tentative Diagnosis**”, “**Diseases**”, and “**Attachments**”.

The screenshot displays the WHIP application interface. The top navigation bar includes a search bar and a dropdown menu. The left sidebar contains navigation options: DASHBOARD, SUBMISSION WIZARD, OBSERVATIONS, QA / QC, SAMPLE INV, BULK IMPORT, ADMIN, PATHOLOGIST, PREFERENCES, and LOGOUT. The main content area shows the 'EVENT - WCS.100088' page with tabs for 'DETAIL', 'LOCATION', 'HISTORY', 'INTERPRETATION', 'PEOPLE/CONTACTS', 'ATTACHMENTS', and 'OBSERVATIONS'. The 'OBSERVATIONS' tab is active, displaying a form for 'OBSERVATION - WCS.100088.B'. The form includes fields for 'Project Tags' (ASF_WHN_Cambodia), 'Tags' (Delete), 'Observation Date' (2020-05-21), 'Observation Details' (Multiple tracks of wild boar found around the carcass. Unknown number of wild boar), 'How Found' (Select How Found), 'Captive Category' (Select a Captivity Category), 'Clinical Signs', and 'Surveillance or Outbreak Unit' (ASF_WHN_CAMBODIA).

The secondary-level “**Detail**” Sub-Tab provides information about the Date of Observation; the person that made the Observation; the number of observed-only animals of the corresponding species per sex, age, and health status; and what was observed about the animals of the corresponding species. Furthermore, this Sub-Tab contains Fields to categorize Observations, Specimens, and Environmental Specimens based on the Surveillance Type (“**Project Tags**”) and Surveillance Units or Outbreak Units (see above).



DETAIL

TENTATIVE DIAGNOSIS

DISEASES

ATTACHMENTS

Project Tags * ASF_WHN_Cambodia X

Tags Delete X

Observation Date * 2020-05-21

Observation Details
Multiple tracks of wild boar found around the carcass.
Unknown number of wild boar

How Found Select How Found ▼

Captivity Category Select a Captivity Category ▼

Clinical Signs

ASF_WHN_CAMBODIA
Surveillance or Outbreak Unit Select an Identifier Value ▼



OBSERVER

Full Name Search *

Search Name



| Name | Affiliation | Phone | Email | Address | Edit \ Remove |
|-----------|-------------|-------------|-------|---------|---------------|
| Mengxiong | | 02052952916 | | | |

| Species * | Total Seen * | Number Healthy | Number Sick or Injured | Number Dead |
|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Mainland Serow   | <input type="text" value="1"/> | <input type="text" value="0"/> | <input type="text" value="0"/> | <input type="text" value="1"/> |
| Adult Male | <input type="text" value="1"/> | <input type="text" value="0"/> | <input type="text" value="0"/> | <input type="text" value="1"/> |
| Adult Female | <input type="text" value="0"/> | <input type="text" value="0"/> | <input type="text" value="0"/> | <input type="text" value="0"/> |
| Juvenile | <input type="text" value="0"/> | <input type="text" value="0"/> | <input type="text" value="0"/> | <input type="text" value="0"/> |
| Unknown | <input type="text" value="0"/> | <input type="text" value="0"/> | <input type="text" value="0"/> | <input type="text" value="0"/> |
| Fetus | <input type="text" value="0"/> | <input type="text" value="0"/> | <input type="text" value="0"/> | <input type="text" value="0"/> |
| Adult Unknown Sex | <input type="text" value="0"/> | <input type="text" value="0"/> | <input type="text" value="0"/> | <input type="text" value="0"/> |

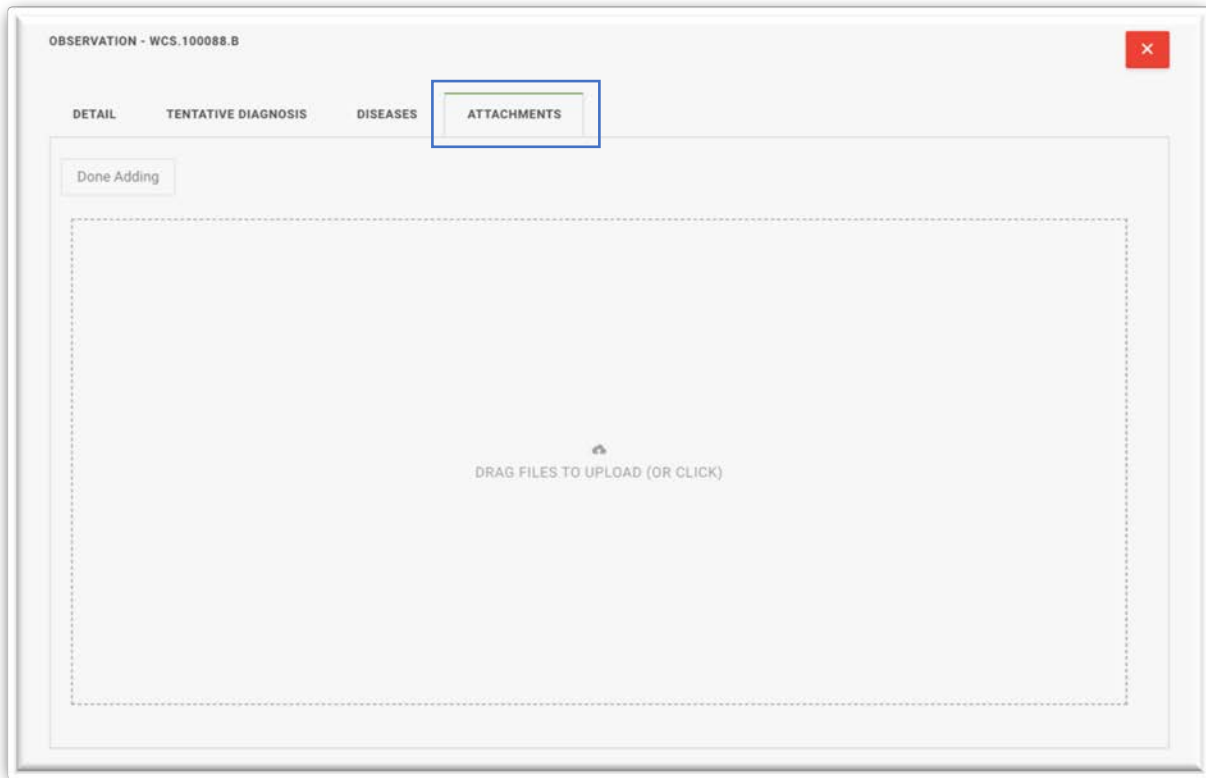
The “**Tentative Diagnosis**” secondary Sub-Tab holds data regarding the potential cause of disease, injury, or death of the observed-only animals of the corresponding species.

The screenshot shows a web application window titled "OBSERVATION - WCS.100088.B" with a red close button in the top right corner. The interface has four tabs: "DETAIL", "TENTATIVE DIAGNOSIS", "DISEASES", and "ATTACHMENTS". The "TENTATIVE DIAGNOSIS" tab is selected and highlighted with a blue border. Below the tabs is a form with four fields, each with a red asterisk indicating it is required:

- Tentative Category of Diagnosis ***: A dropdown menu with the text "Select a Category of Diagnosis".
- Tentative Diagnosis By ***: A dropdown menu with the text "Select Diagnosis By", a plus sign (+), and an edit icon (pencil).
- Tentative Diagnosis Date ***: A date input field with the placeholder "YYYY-MM-DD" and a calendar icon.
- Tentative Diagnosis ***: A large, empty text area for entering the diagnosis.

The “**Diseases**” secondary Sub-Tab is locked unless the “Infectious/Inflammatory” option of the “Tentative Category of Diagnosis” Field in the “Tentative Diagnosis” tab is selected. This secondary Sub-Tab is used to record a suspected pathogen(s) based on the disease or mortality observed in sick or dead observed-only animals of the Event (if any) and epidemiologic context. Each pathogen is a fixed single-choice Field. The choices and criteria to select each option are provided in the [Data Dictionary](#). Please carefully review the options provided in the Data Dictionary to select the suspected pathogens. More than one pathogen can be selected. If the criteria of the Data Dictionary is not met do not select any pathogen.

Finally, the “**Attachments**” secondary Sub-Tab allows the user to add image, audio, text, zip, and pdf files **associated with the Observations**. Small icons of the attached files appear when they are present.



SPECIMENS TAB

The Specimens Tab contains the Sub-Tabs “**Detail**”, “**Diagnostics**”, “**Necropsy**”, “**Morphometrics**”, “**Samples**”, “**Diseases**”, “**Diagnosis**”, “**TME**”, and “**Attachments**” and they provide information of those individuals sampled, necropsied, or examined using diagnostic methods. The location of these elements is shown below:

WHIP

Quick Search [Q] All [v] Last Search Results

DETAIL - WCS.100088.1 - WCS.100088.1

EVENT SPECIMENS INCIDENTS ENVIRONMENTAL SPECIMENS REPORTS ACTIVITY LOG

WCS.100088.1 - Wild Boar Animal ID a01 Cross Ref #

DETAIL MORPHOMETRICS NECROPSY DIAGNOSTICS DISEASES DIAGNOSIS TME ATTACHMENTS SAMPLES

Animal ID * a01

Forensic specimen

Species * Wild Boar +

Sus scrofa

Age Category Adult

Age (years)

Sex Male

Date Found * 2020-01-01

Date of Death 2020-01-01

Captivity Category

Final Condition Dead

How Found Community Member

Condition Found

Field Storage Ambient Temperature

Euthanasia Method Select Euthanasia Method

Project Tags * ASF_WHN_Cambodia Scanning_Surveillance_Lao_PDR Global General Surveillance 2019 WCS-WHP Bolivia General Surveillance 2019 DTRA_WHN_2019

Tags Test Delete

ASF_WHN_CAMBODIA Surveillance or Outbreak Unit * test

Pathologists

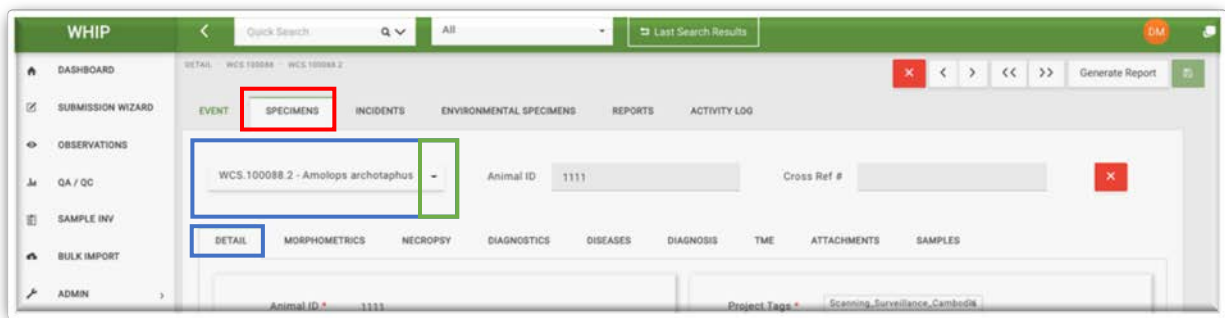
Assistants

Clinical Signs animal not moving, difficulty breathing then died

2021 © WHIP-ECTF

SPECIMENS MENU

The **Specimens Tab** has a **Specimen Menu** to select and display a specific Specimen of the current Event in the Graphical User Interface across Sub-Tabs. Clicking on the down arrow on the right of the **Specimen Menu** shows the list of Specimens of the Event. Select the desired **Specimen Code** to view its data.



THE “SPECIMEN-DETAIL” SUB-TAB

This Sub-Tab contains the data regarding Specimen identification (“**Animal ID**”), the demographics and health status of the Specimens, the species, the condition of the Specimen, and findings at initial observation. Furthermore, this Sub-Tab contains Fields to categorize Observations, Specimens, and Environmental Specimens based on Surveillance Type (“**Project Tags**”) and Surveillance Units or Outbreak Units (see above).

THE “SPECIMEN-DIAGNOSTICS” SUB-TAB

This Sub-Tab provides information about the results of several types of diagnostic procedures that can be conducted with the individual or its tissues, such as Histology, Radiology, Toxicology, Biochemistry, Cytology, Haematology, and others; and the reference number for the laboratories that completed these procedures. View the results of these diagnostics by clicking on the corresponding Tab bar on the left and reading the content in the text box. Images associated to these diagnostic procedures are found in the “**Attachments**” Sub-Tab.

The screenshot displays the WHIP software interface. The top navigation bar includes a search bar, a dropdown menu set to 'All', and a 'Last Search Results' button. The left sidebar contains a menu with options: DASHBOARD, SUBMISSION WIZARD, OBSERVATIONS, QA / QC, SAMPLE INV, BULK IMPORT, ADMIN, PATHOLOGIST, PREFERENCES, and LOGOUT. The main content area is divided into several tabs: 'EVENTS', 'SPECIMENS', 'INCIDENTS', 'ENVIRONMENTAL SPECIMENS', 'REPORTS', and 'ACTIVITY LOG'. The 'SPECIMENS' tab is highlighted with a red box. Below this, a dropdown menu shows 'WCS.100088.1 - Wild Boar', and input fields for 'Animal ID' (a01) and 'Cross Ref #' are visible. A second set of tabs includes 'DETAIL', 'MORPHOMETRICS', 'NECROPSY', 'DIAGNOSTICS', 'DISEASES', 'DIAGNOSIS', 'TME', 'ATTACHMENTS', and 'SAMPLES'. The 'DIAGNOSTICS' tab is highlighted with a blue box. The 'DIAGNOSTICS' section features a list of diagnostic categories on the left: HISTOLOGY, IMMUNOHISTOCHEMISTRY, BACTERIOLOGY, PARASITOLOGY, PCR, RADIOLOGY, TOXICOLOGY, VIROLOGY, CLINICAL BIOCHEMISTRY, CYTOLOGY, ELECTRON MICROSCOPY, HAEMATOLOGY, and OTHER LAB RESULTS. The 'HISTOLOGY' category is selected, and its corresponding text box is highlighted with an orange border. The text box contains a rich text editor with a toolbar and a large empty area for text input. A 'Lab Reference Number' field is located above the text box. A green circular icon is visible in the bottom right corner of the text box.

THE "SPECIMEN-NECROPSY" SUB-TAB

This Sub-Tab stores Necropsy data, including the condition and storage of the carcass; the type, location, and date of the necropsy; the person in charge of the necropsy; and necropsy results by body system.

The screenshot displays the WHIP application interface. The top navigation bar includes a 'Quick Search' field, a dropdown menu set to 'All', and a 'Last Search Results' button. The left sidebar contains a menu with items: DASHBOARD, SUBMISSION WIZARD, OBSERVATIONS, QA / QC, SAMPLE INV, BULK IMPORT, ADMIN, PATHOLOGIST, PREFERENCES, and LOGOUT. The main content area shows a 'DETAIL' view for 'WCS.100088.1 - Wild Boar' with 'Animal ID' 'a01'. The 'SPECIMENS' sub-tab is highlighted with a red box. Below it, the 'NECROPSY' sub-tab is highlighted with a blue box. The 'NECROPSY' form includes fields for 'Necropsy Date' (2020-01-15), 'Necropsy Level' (Complete Necropsy), 'Performed By' (Alice Porco), 'Necropsy Location' (Select a Necropsy Location), 'Carcass Condition Score' (Select Carcass Condition Score), 'Carcass Field Storage (mt)' (Select a Carcass Field Storage (mt)), and 'Necropsy Laboratory (mt)' (Select a Necropsy Lab (mt)). A 'Primary Necropsy' section is also visible. At the bottom, there is a rich text editor with a toolbar and a text area containing instructions: '#Add observations below on each row, after the ";" Add "NA" if not assessed, or "NAF" if no abnormal finding'. The text area contains the following observations: 'Body condition score;', 'External signs on carcass; bruise on the carcass', 'Wounds/Scars;', 'Skin/Hair Coat/Nails;', and 'External parasites; ticks'.

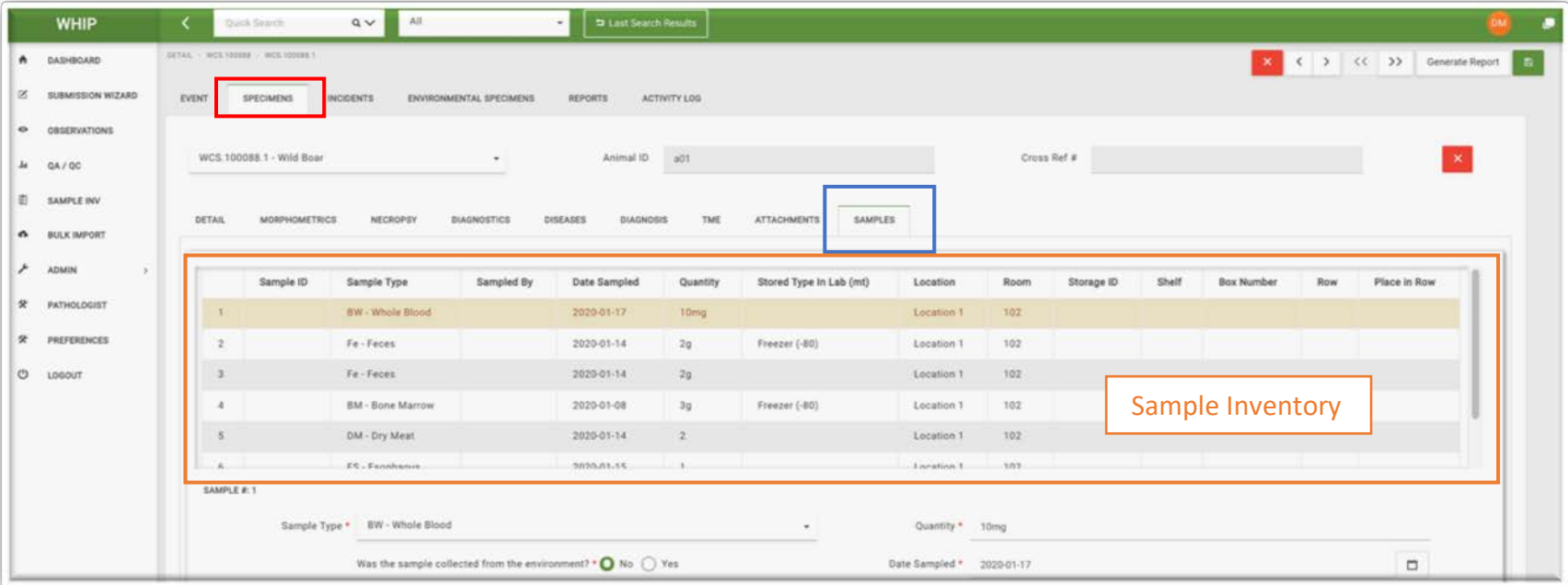
THE “SPECIMEN-MORPHOMETRICS” SUB-TAB

This Sub-Tab holds information about four body measurements: weight (in kilograms), length (in centimeters), height (in centimeters), and girth (in centimeters).

The screenshot displays the WHIP (Wildlife Health Inspection Program) interface. The top navigation bar includes a search bar, a dropdown menu set to 'All', and a 'Last Search Results' button. The left sidebar contains a menu with options: DASHBOARD, SUBMISSION WIZARD, OBSERVATIONS, QA / QC, SAMPLE INV, BULK IMPORT, ADMIN, PATHOLOGIST, PREFERENCES, and LOGOUT. The main content area shows a 'DETAIL' view for specimen 'WCS.100088.1 - Wild Boar'. The 'SPECIMENS' sub-tab is highlighted with a red box. Below it, the 'MORPHOMETRICS' sub-tab is highlighted with a blue box. The 'MORPHOMETRICS' section contains four input fields: Weight (Kg), Length (cm), Height (cm), and Girth (cm). The 'Animal ID' field is populated with 'a01'. A 'Generate Report' button is visible in the top right corner of the main content area.

THE “SPECIMEN-SAMPLES” SUB-TAB

The Specimen-Samples Sub-Tab holds all the information of the **Samples** collected from each individual animal. This Sub-Tab has the “**Sample Inventory**” Table on the top. Each row of this Table has a summary of each sample data. In the figure below, the Specimen WCS. 100088.1 has at least 6 samples:



The screenshot displays the WHIP software interface. The left sidebar contains navigation options: DASHBOARD, SUBMISSION WIZARD, OBSERVATIONS, QA / QC, SAMPLE INV, BULK IMPORT, ADMIN, PATHOLOGIST, PREFERENCES, and LOGOUT. The main content area is titled 'WCS.100088.1 - Wild Boar' and shows the 'SPECIMENS' sub-tab selected. Below this, the 'SAMPLES' sub-tab is active, displaying a table with the following data:

| Sample ID | Sample Type | Sampled By | Date Sampled | Quantity | Stored Type In Lab (mt) | Location | Room | Storage ID | Shelf | Box Number | Row | Place In Row |
|-----------|------------------|------------|--------------|----------|-------------------------|------------|------|------------|-------|------------|-----|--------------|
| 1 | BW - Whole Blood | | 2020-01-17 | 10mg | | Location 1 | 102 | | | | | |
| 2 | Fe - Feces | | 2020-01-14 | 2g | Freezer (-80) | Location 1 | 102 | | | | | |
| 3 | Fe - Feces | | 2020-01-14 | 2g | | Location 1 | 102 | | | | | |
| 4 | BM - Bone Marrow | | 2020-01-08 | 3g | Freezer (-80) | Location 1 | 102 | | | | | |
| 5 | DM - Dry Meat | | 2020-01-14 | 2 | | Location 1 | 102 | | | | | |
| 6 | FC - Foodhouse | | 2020-01-15 | 1 | | Location 1 | 102 | | | | | |

Below the table, the details for the selected sample (Sample # 1) are shown:

Sample Type * BW - Whole Blood
Quantity * 10mg
Was the sample collected from the environment? * No Yes
Date Sampled * 2020-01-17

Selecting one row of the “**Sample Inventory**” Table displays the corresponding full **Sample** data below. For example, the figure above shows first sample of the Specimen WCS. 100088.1 highlighted. The full data of this Sample is shown on the next page.

| | | | | | | |
|---|------------------|------------|------|---------------|------------|-----|
| 1 | BW - Whole Blood | 2020-01-17 | 10mg | | Location 1 | 102 |
| 2 | Fe - Feces | 2020-01-14 | 2g | Freezer (-80) | Location 1 | 102 |
| 3 | Fe - Feces | 2020-01-14 | 2g | | Location 1 | 102 |

Sample Inventory

SAMPLE #: 1

Sample Type * BW - Whole Blood Quantity * 10mg

Was the sample collected from the environment? * No Yes Date Sampled * 2020-01-17

Medium Type Select a State (mt) Stored Type in Lab (mt) Select a Storage Type (mt)

Place in Row Sample Field Storage (mt) Select a Storage Type (mt)

Sampled By Select or Add Sampled By Room * 102

Location * Location 1 Shelf

Storage ID Row

Rack Box Number

Sample ID * A01-BI-VTM

Notes

notes test

The full Sample data includes its identification, type of tissue, quantity, date collected, preservation medium, and storage conditions in the Field and laboratory, including how and where.

THE "SPECIMEN-DISEASES" SUB-TAB

The Specimen-Diseases Sub-Tab holds all the information about Pathogen Tests conducted on individual animal **Samples**. This Sub-Tab displays the "**Disease Inventory**" Table first. Each row of this Table has a summary of **Pathogen Tests** conducted on **Samples** from a **Specimen** selected in the **Specimen Menu**.

The screenshot shows the WHIP system interface. The 'SPECIMENS' sub-tab is selected, and the 'DISEASES' sub-tab is also selected. The 'DISEASE INVENTORY' table is highlighted with an orange border and labeled 'Disease Inventory'.

| Disease | Tested | Method | Results Received | Result | Status | Sample Source | Sample ID |
|---------------------|---|-------------------------|------------------|--|-----------------|------------------|--------------|
| African swine fever | <input checked="" type="radio"/> Yes <input type="radio"/> No | Conv. PCR | 2020-02-05 | <input type="checkbox"/> Positive | Positive | BW - Whole Blood | A01-BI-VTM |
| African swine fever | <input checked="" type="radio"/> Yes <input type="radio"/> No | Conv. PCR | 2020-01-08 | <input type="checkbox"/> Negative | Negative | Fe - Feces | A01-Fe-Plain |
| African swine fever | <input checked="" type="radio"/> Yes <input type="radio"/> No | Ag-ELISA | 2020-01-08 | <input type="checkbox"/> Negative | Negative | BW - Whole Blood | A01-BI-VTM |
| African swine fever | <input checked="" type="radio"/> Yes <input type="radio"/> No | Conv. PCR | 2020-01-18 | <input type="checkbox"/> Pending | Pending | Fe - Feces | A01-Fe-RNA |
| African swine fever | <input checked="" type="radio"/> Yes <input type="radio"/> No | Conv. PCR | 2020-01-08 | <input type="checkbox"/> Positive | Positive | Fe - Feces | A01-Fe-Plain |
| African swine fever | <input checked="" type="radio"/> Yes <input type="radio"/> No | Conv. PCR | 2020-01-16 | <input type="checkbox"/> Negative | Negative | Fe - Feces | A01-Fe-RNA |
| Brucella sp. | <input checked="" type="radio"/> Yes <input type="radio"/> No | Conv. PCR | 2020-01-17 | <input type="checkbox"/> Negative | Negative | BW - Whole Blood | A01-BI-VTM |
| Brucella sp. | <input checked="" type="radio"/> Yes <input type="radio"/> No | Conv. PCR | 2020-01-17 | <input type="checkbox"/> Negative | Negative | Fe - Feces | A01-Fe-Plain |
| Nipah virus | <input type="radio"/> Yes <input checked="" type="radio"/> No | Select a Testing Method | YYYY-MM-DD | <input type="checkbox"/> Select a Result | Select a Status | | |
| Rabies | <input type="radio"/> Yes <input checked="" type="radio"/> No | Select a Testing Method | YYYY-MM-DD | <input type="checkbox"/> Select a Result | Select a Status | | |
| West Nile Virus | <input type="radio"/> Yes <input checked="" type="radio"/> No | Select a Testing Method | YYYY-MM-DD | <input type="checkbox"/> Select a Result | Select a Status | | |

Below the **Disease Inventory** Table there is a series of vertical **Pathogen Tabs** on the left side with acronyms for specific pathogens, and Frames with Fields for pathogen specific tests. Clicking on one of these Pathogen Tabs displays the **Pathogen Tests** for the selected pathogen (Pathogen Tab) belonging to the Specimen selected in the **Specimen Menu**. These Frames provide the complete documentation of each selected **Pathogen Test** including the sample source, the test method, the date of results, the laboratory that conducted the test, and the test results.

Pathogen Tabs

The screenshot displays a software interface with a vertical sidebar on the left containing pathogen tabs: ASF, BRUC, NIV, RABIES, and WNV. The main area shows two test forms for African Swine Fever. The top form, titled 'AFRICAN SWINE FEVER - TEST #1', is selected and contains the following data:

| Field | Value |
|----------------------|--|
| Testing Lab | NAHL-National Animal Health Laboratory |
| Lab Reference Number | |
| Sent For Testing | 2020-01-30 |
| Results Received * | 2020-02-05 |
| Sample Source * | BW - Whole Blood (A01-BI-VTM) |
| Testing Method * | Conv. PCR |
| Test Result * | Positive |
| Notes | |

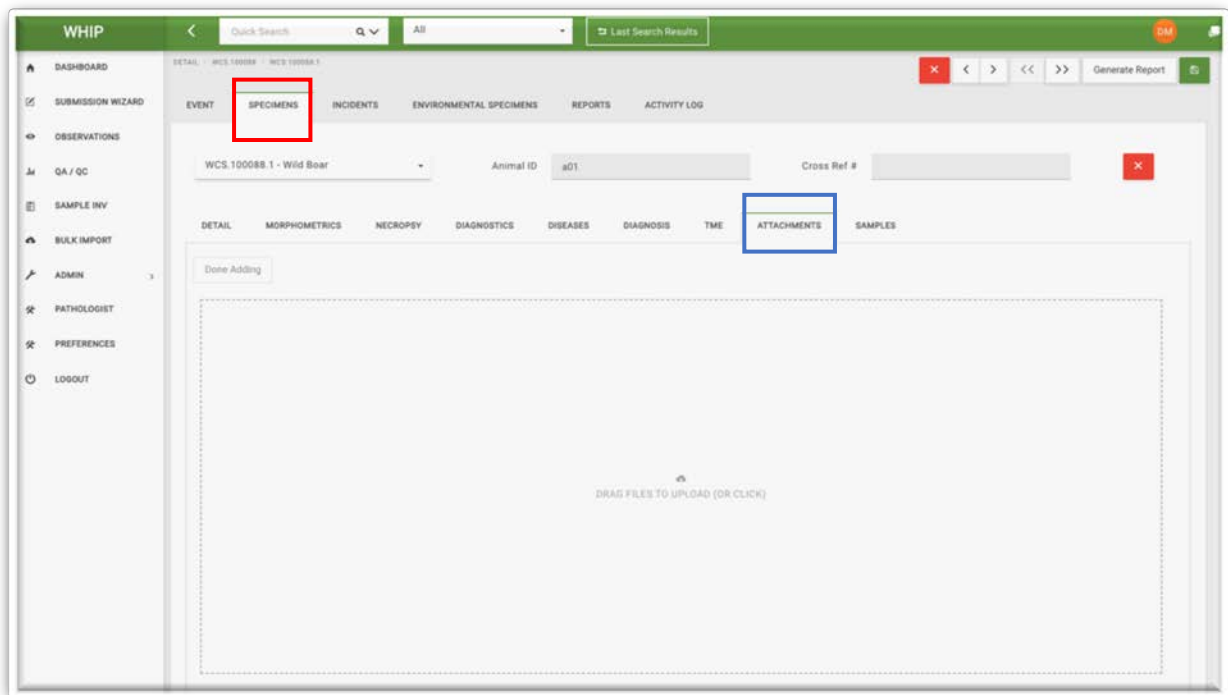
The bottom form, titled 'AFRICAN SWINE FEVER - TEST #2', contains the following data:

| Field | Value |
|----------------------|---|
| Testing Lab | NAHPRI - National Animal Health and Production Research Institute |
| Lab Reference Number | |
| Sent For Testing | 2020-01-01 |
| Results Received * | 2020-01-08 |
| Sample Source * | Fe - Feces (A01-Fe-Plain) |
| Testing Method * | Conv. PCR |
| Test Result * | Negative |
| Notes | |

Pathogen Test

THE “SPECIMEN-ATTACHMENTS” SUB-TAB

Use this Sub-Tab to add image, audio, text, zip, and pdf files **associated with the Specimen**. Small icons of the attached files appear when they are present.



THE “SPECIMEN-DIAGNOSIS” SUB-TAB

This Sub-Tab has Fields to describe the final diagnosis of the **Specimen**, including the individual responsible for the diagnosis, the actual diagnosis, and the date and status of the diagnosis.

The screenshot displays the WHIP software interface. The top navigation bar includes a search bar and a dropdown menu. The left sidebar contains various menu items such as DASHBOARD, SUBMISSION WIZARD, OBSERVATIONS, QA / QC, SAMPLE INV, BULK IMPORT, ADMIN, PATHOLOGIST, PREFERENCES, and LOGOUT. The main content area is divided into several tabs: EVENT, SPECIMENS (highlighted with a red box), INCIDENTS, ENVIRONMENTAL SPECIMENS, REPORTS, and ACTIVITY LOG. Below the tabs, there are input fields for 'WCS.100088.1 - Wild Boar', 'Animal ID: a01', and 'Cross Ref #'. A secondary set of tabs is visible: DETAIL, MORPHOMETRICS, NECROPSY, DIAGNOSTICS, DISEASES, DIAGNOSIS (highlighted with a blue box), TME, ATTACHMENTS, and SAMPLES. The 'DIAGNOSIS' sub-tab is active, showing a form with the following fields: 'Category of Diagnosis' (dropdown), 'Diagnosis Lab' (dropdown with '+' and edit icons), 'Diagnosis By' (dropdown with '+' and edit icons), 'Diagnosis Status' (dropdown), 'Diagnosis Date' (YYYY-MM-DD date picker), a checked 'Externally Available' checkbox, and a large text area for 'Diagnosis'.

THE “SPECIMEN-TME” SUB-TAB

This Sub-Tab is intended for use by trained veterinary pathologists.

This Sub-Tab has two areas. On the left there is a Frame containing the Secondary Sub-Tabs “Custom” and “Preset”. The “Custom” Secondary Sub-Tabs have the Tertiary Sub-Tabs “Topography”, “Morphology”, and “Etiology”. These Tertiary Sub-Tabs have [Multi-tree](#) Fields with terms that describe the location of pathological lesions, the morphology of pathological lesions, and the etiology of the lesions following the necropsy and complementary diagnostic tests (see [“Special Fields in WHIP - Custom Topography, Morphology, and Etiology”](#)).

DETAIL MORPHOMETRICS NECROPSY DIAGNOSTICS DISEASES DIAGNOSIS TME

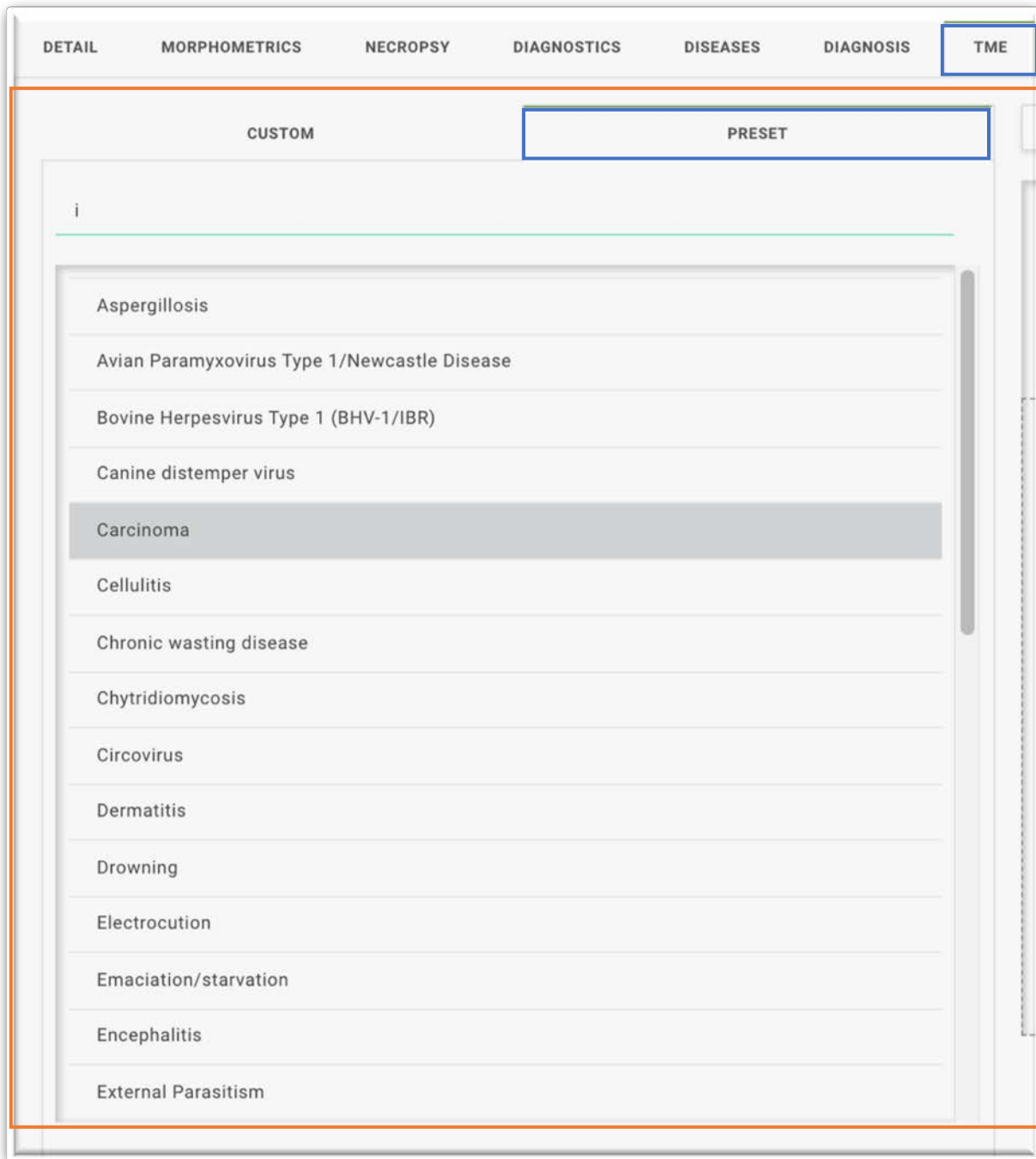
CUSTOM PRESET

TOPOGRAPHY MORPHOLOGY ETIOLOGY

Search

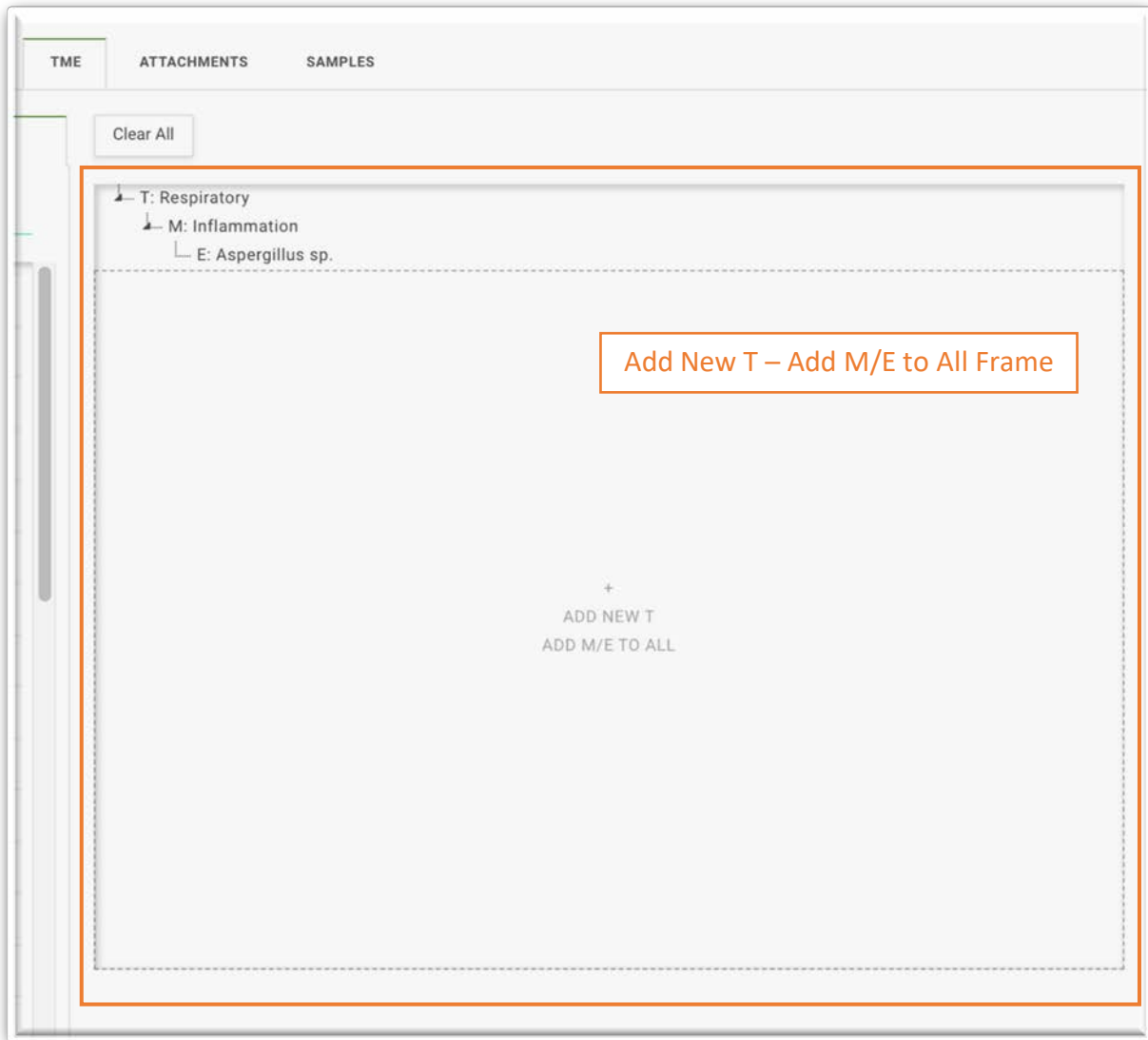
- Alimentary System
 - Anus
 - Cloaca
 - Esophagus (2)
 - Large Intestine (3)
 - Mouth (7)
 - Oropharynx
 - Salivary Glands
 - Small Intestine (3)
 - Stomach (5)
 - Vent (avian)
- Body region (11)
- Cardiovascular System (2)
- Ears (3)
- Endocrine (5)
- Eye (4)
- Hematopoietic/lymphoid (9)
- Liver (5)
- Muscular/skeletal (2)
- Nervous System (6)
- Pancreas (exocrine) (3)
- Peritoneum and retroperitoneum (6)
- Reproductive (4)
- Respiratory (10)
- Skin (6)
- Urinary (5)

The “Preset” Secondary Sub-Tab has a list of diseases or syndromes. Each Preset item includes a predefined set of topography, morphology, and etiology terms (see [“Special Fields in WHIP – Preset Topography, Morphology, and Etiology”](#)).



The “Custom” and “Preset” Secondary Sub-tabs have a “Search” tool to find specific terms within the Tertiary Sub-Tabs (“Custom” Secondary Sub-Tab) or specific diseases or syndromes (“Preset” Secondary Sub-Tab; see images above).

Right of the TME Sub-Tab is the “+ Add New” Frame that receives and shows the terms selected from the Tertiary Sub-Tabs of the “Custom” Secondary Sub-Tab, and also shows the predefined options associated with the diseases or syndromes selected in the “Preset” Secondary-Tab. Custom options are added by dragging TME terms into the Frame and Preset items are added by double clicking each item. The frame switches to “+ Add New T – Add M/E to All” after one selection has been added to the frame. The “Clear All” button on the top of the Frame deletes the selections made.



ENVIRONMENTAL SPECIMENS TAB

The Environmental Specimens Tab contains the Sub-Tabs “Detail”, “Diagnostics”, “Samples”, “Diseases”, “Attachments”, and “Diagnosis” and they provide information on each specific Environmental Specimen of the Event. The location of these elements is shown below:

The screenshot displays the WHIP (Wildlife Health Information Platform) interface. The top navigation bar includes a search bar, a dropdown menu set to 'All', and a 'Last Search Results' button. The main navigation menu on the left lists various system functions such as Dashboard, Submission Wizard, Observations, QA/QC, Sample Inv, Bulk Import, Admin, Pathologist, Preferences, and Logout. The central content area is titled 'ENVIRONMENTAL SPECIMENS' and features a table with the following data:

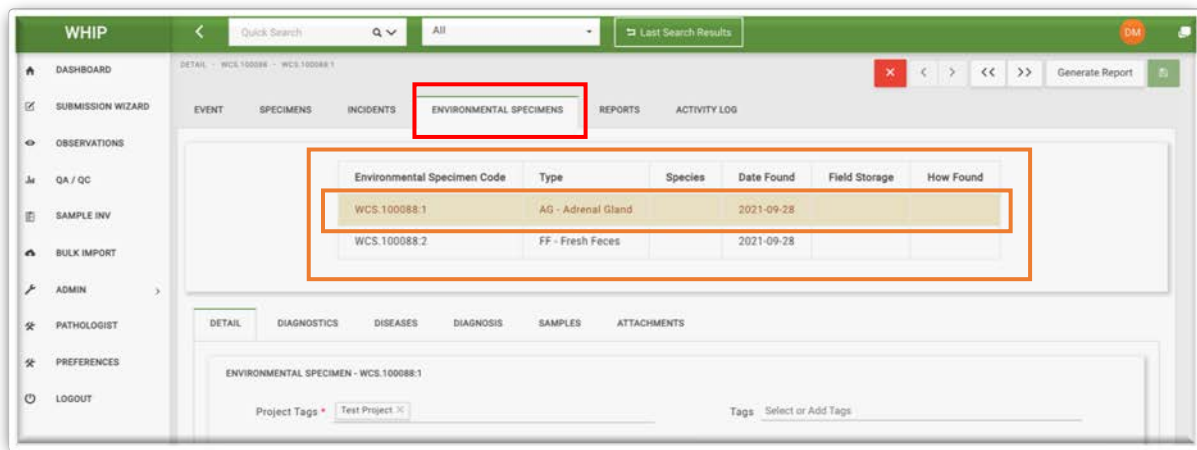
| Environmental Specimen Code | Type | Species | Date Found | Field Storage | How Found |
|-----------------------------|--------------------|--------------------------------|------------|---------------|-----------|
| WCS.100088.1 | AG - Adrenal Gland | | 2021-09-28 | | |
| WCS.100088.2 | FF - Fresh Feces | Wild Boar <i>Sus scrofa</i> | 2021-09-28 | | |

Below the table, a sub-tab menu is visible with options: DETAIL, DIAGNOSTICS, DISEASES, DIAGNOSIS, SAMPLES, and ATTACHMENTS. The 'DETAIL' sub-tab is currently selected, showing a form for 'ENVIRONMENTAL SPECIMEN - WCS.100088.1'. This form includes fields for Project Tags (AIV, WHN, Vietnam), Tags, Surveillance or Outbreak Unit (AIV, WHN, VIETNAM), Species (AG - Adrenal Gland), Type (AG - Adrenal Gland), Date Found (2021-09-28), Field Storage, and How Found. A Notes section is also present at the bottom of the form.

Environmental Specimen Inventory

ENVIRONMENTAL SPECIMEN INVENTORY

The Environmental Specimen Tab has the “**Environmental Specimen Inventory**” showing a summary of each **Environmental Specimen** associated with an **Event**. Selecting a specific Environmental Specimen in the **Environmental Specimen Inventory** of the current Event displays its data in the Graphical User Interface across the Sub-Tabs.



THE “ENVIRONMENTAL SPECIMEN-DETAIL” SUB-TAB

This Sub-Tab contains provides the summary of a selected **Environmental Specimen**, highlighted in light brown, in the Environmental Specimen Inventory. Details on the corresponding Environmental Specimen include the species that sourced it, the type, and how it was collected and found. Furthermore, this Sub-Tab contains Fields to categorize Environmental Specimens according to Surveillance Type (“[Project Tags](#)”) and Surveillance Units or Outbreak Units (see above).

THE “ENVIRONMENTAL SPECIMEN-DIAGNOSTICS” SUB-TAB

This Sub-Tab provides information about the results of several types of diagnostic procedures that can be conducted with an Environmental Specimen, such as Histology, Toxicology, Electron Microscopy, and others; and the reference number for the laboratories that completed these procedures. View the results of these diagnostics by clicking on the corresponding Tab bar on the left and reading the content in the text box. Images associated with these diagnostic procedures are found in the “**Attachments**” Sub-Tab.

The screenshot displays the WHIP system interface. The top navigation bar includes a search bar, a dropdown menu set to 'All', and a 'Last Search Results' button. The left sidebar contains various navigation options: DASHBOARD, SUBMISSION WIZARD, OBSERVATIONS, QA / QC, SAMPLE INV, BULK IMPORT, ADMIN, PATHOLOGIST, PREFERENCES, and LOGOUT. The main content area is divided into several tabs: EVENT, SPECIMENS, INCIDENTS, ENVIRONMENTAL SPECIMENS (highlighted with a red box), REPORTS, and ACTIVITY LOG. Below the ENVIRONMENTAL SPECIMENS tab is a table with the following data:

| Environmental Specimen Code | Type | Species | Date Found | Field Storage | How Found |
|-----------------------------|--------------------|--------------------------------|------------|---------------|-----------|
| WCS.100088:1 | AG - Adrenal Gland | | 2021-09-28 | | |
| WCS.100088:2 | FF - Fresh Feces | Wild Boar <i>Sus scrofa</i> | 2021-09-28 | | |

Below the table is another set of tabs: DETAIL, DIAGNOSTICS (highlighted with a blue box), DISEASES, DIAGNOSIS, SAMPLES, and ATTACHMENTS. The DIAGNOSTICS tab is active, showing a list of diagnostic procedures on the left: HISTOLOGY (selected), IMMUNOHISTOCHEMISTRY, BACTERIOLOGY, PARASITOLOGY, PCR, RADIOLOGY, TOXICOLOGY, VIROLOGY, CLINICAL BIOCHEMISTRY, CYTOLOGY, ELECTRON MICROSCOPY, HAEMATOLOGY, and OTHER LAB RESULTS. The main content area of the DIAGNOSTICS tab is a text editor with a rich text toolbar and a text area containing the following instructions:

HISTOLOGY Lab Reference Number

#add rows following this format: Slide ID; Picture ID; Organ; Lesion; Modifier; Severity
if one or more of these fields have no data, leave empty space between the two semi-colons

THE “ENVIRONMENTAL SPECIMEN-SAMPLES” SUB-TAB

The Environmental Specimen-Samples Sub-Tab holds all the information about the **Samples** collected from each Environmental Specimen. This Sub-Tab has the “**Environmental Sample Inventory**” Table on the top with rows summarizing information on each Sample.

The screenshot shows the WHIP application interface. The top navigation bar includes a search bar and a dropdown menu. The left sidebar contains various navigation options. The main content area displays the 'ENVIRONMENTAL SPECIMEN-SAMPLES' sub-tab, which is highlighted with a blue box. Below this, a table titled 'Environmental Sample Inventory' is shown, with columns for Sample ID, Sample Type, Sampled By, Date Sampled, Quantity, Stored Type In Lab (mt), Location, Room, Storage ID, Shelf, Box Number, Row, and Place in Row. The first row is highlighted in light brown. Below the table, the full sample data for 'SAMPLE #: 1' is displayed, including Sample Type (AG - Adrenal Gland), Quantity (1 mg), and a form for 'Was the sample collected from the environment?' with 'Yes' selected.

| Sample ID | Sample Type | Sampled By | Date Sampled | Quantity | Stored Type In Lab (mt) | Location | Room | Storage ID | Shelf | Box Number | Row | Place in Row |
|-----------|--------------------|------------|--------------|----------|-------------------------|------------------|------------------|------------|-------|------------|-----|--------------|
| 1 | AG - Adrenal Gland | | 2021-12-27 | 1 mg | | WCS Storage Unit | WCS Storage Unit | | | | | |
| + | AG - Adrenal Gland | | | | | | | | | | | |

SAMPLE #: 1

Sample Type * AG - Adrenal Gland

Quantity * 1 mg

Was the sample collected from the environment? * No Yes

Date Sampled * 2021-12-27

Selecting one row of the “**Environmental Sample Inventory**” Table displays the corresponding full **Sample** data below. For example, the figure above shows first sample of the Environmental Specimen WCS. 100088:1 highlighted in light brown. This Sample’s full data is shown on the next page

DETAIL DIAGNOSTICS DISEASES DIAGNOSIS **SAMPLES** ATTACHMENTS

| Sample ID | Sample Type | Sampled By | Date Sampled | Quantity | Stored Type In Lab (mt) | Location | Room | Storage ID | Shelf | Box Number | Row | Place in Row |
|-----------|--------------------|------------|--------------|----------|-------------------------|------------------|------------------|------------|-------|------------|-----|--------------|
| 1 | AG - Adrenal Gland | | 2021-12-27 | 1 mg | | WCS Storage Unit | WCS Storage Unit | | | | | |
| + | AG - Adrenal Gland | | | | | | | | | | | |

SAMPLE # 1

Sample Type * AG - Adrenal Gland Quantity * 1 mg

Was the sample collected from the environment? * No Yes Date Sampled * 2021-12-27

Medium Type Select a State (mt) Stored Type in Lab (mt) Select a Storage Type (mt)

Place in Row Sample Field Storage (mt) Select a Storage Type (mt)

Sampled By Select or Add Sampled By Room * WCS Storage Unit

Location * WCS Storage Unit Shelf

Storage ID Row

Rack Box Number

Sample ID * 1111

Notes

The full Sample data includes its identification, quantity, date collected, preservation medium, and storage conditions in the Field and laboratory, including how and where.

THE “ENVIRONMENTAL SPECIMEN-DISEASES” SUB-TAB

The Environmental Specimen-Diseases Sub-Tab holds all the information about Pathogen Tests conducted on Samples from each Environmental Specimen. This Sub-Tab has the “**Disease Inventory**” Table on the top. Each row of this Table summarizes the Pathogen Tests conducted on the **Environmental Samples** from the **Environmental Specimen** selected in the **Environmental Specimen Inventory**.

The screenshot displays the WHIP system interface. The top navigation bar includes a search bar and a dropdown menu. The left sidebar contains navigation options: DASHBOARD, SUBMISSION WIZARD, OBSERVATIONS, QA / QC, SAMPLE INV, BULK IMPORT, ADMIN, PATHOLOGIST, PREFERENCES, and LOGOUT. The main content area is divided into several sections:

- ENVIRONMENTAL SPECIMENS** (highlighted with a red box): This section contains a table with the following data:

| Environmental Specimen Code | Type | Species | Date Found | Field Storage | How Found |
|-----------------------------|--------------------|---------|------------|---------------|-----------|
| WCS.100088.1 | AG - Adrenal Gland | | 2021-09-28 | | |
| WCS.100088.2 | FF - Fresh Feces | | | | |

Environmental Specimen Inventory (highlighted with an orange box)

- DISEASES** (highlighted with a blue box): This section contains a table with the following data:

| DISEASE INVENTORY | | Tested | Method | Results Received | Result | Status |
|---------------------|---|----------|--------|------------------|--------------|-----------------|
| African swine fever | <input type="radio"/> Yes <input checked="" type="radio"/> No | Ab-ELISA | - | 2022-01-05 | Pending | Select a Status |
| African swine fever | <input checked="" type="radio"/> Yes <input type="radio"/> No | Ab-ELISA | - | 2022-01-05 | Inconclusive | Inconclusive |
| African swine fever | <input checked="" type="radio"/> Yes <input type="radio"/> No | Ab-ELISA | - | 2022-01-05 | Negative | Negative |

Disease Inventory (highlighted with an orange box)

Below the Disease Inventory table is a dropdown menu labeled "Select a Disease to Add".

Below the **Disease Inventory** Table there is a series of **Pathogen Tabs** on the left side with acronyms for specific pathogens and Frames with pathogen-test specific Fields. Clicking on one of these Tabs displays the **Pathogen Test** Frames for the selected pathogen (Pathogen Tab) belonging to the Environmental Specimen selected in the **Environmental Specimen Inventory**. These Frames provide the complete documentation of each selected **Pathogen Test** including the sample source, the test method, the date of results, the laboratory that conducted the test, and the test results.

Pathogen Tabs

The screenshot displays a web interface for pathogen testing. On the left, a vertical sidebar contains tabs for different pathogens: ASF, BRUC, NIV, RABIES, and WNV. The main area shows two test frames for African Swine Fever (ASF).

Test #1: AFRICAN SWINE FEVER - TEST #1. Testing Lab: NAHL-National Animal Health Laboratory. Lab Reference Number: (empty). Sent For Testing: 2020-01-30. Results Received: 2020-02-05. Sample Source: BW - Whole Blood (A01-BI-VTM). Testing Method: Conv. PCR. Test Result: Positive. Notes: (empty).

Test #2: AFRICAN SWINE FEVER - TEST #2. Testing Lab: NAHPRI - National Animal Health and Production Research Institute. Lab Reference Number: (empty). Sent For Testing: 2020-01-01. Results Received: 2020-01-08. Sample Source: Fe - Feces (A01-Fe-Plain). Testing Method: Conv. PCR. Test Result: Negative. Notes: (empty).

A label "Pathogen Test" is overlaid on the right side of the Test #2 frame.

THE “ENVIRONMENTAL SPECIMEN-ATTACHMENTS” SUB-TAB

Use this Sub-Tab to add of image, audio, text, zip, and pdf files **associated with the Environmental Specimen**. Small icons of the attached files appear when they are present.

The screenshot displays the WHIP software interface. The top navigation bar includes a search bar, a dropdown menu set to 'All', and a 'Last Search Results' button. The left sidebar lists various menu items: DASHBOARD, SUBMISSION WIZARD, OBSERVATIONS, QA / QC, SAMPLE INV, BULK IMPORT, ADMIN, PATHOLOGIST, PREFERENCES, and LOGOUT. The main content area is divided into several tabs: EVENT, SPECIMENS, INCIDENTS, ENVIRONMENTAL SPECIMENS (highlighted with a red box), REPORTS, and ACTIVITY LOG. Below these tabs is a table with the following data:

| Environmental Specimen Code | Type | Species | Date Found | Field Storage | How Found |
|-----------------------------|--------------------|--------------------------------|------------|---------------|-----------|
| WCS.100088:1 | AG - Adrenal Gland | | 2021-09-28 | | |
| WCS.100088:2 | FF - Fresh Feces | Wild Boar <i>Sus scrofa</i> | 2021-09-28 | | |

Below the table, there are more tabs: DETAIL, DIAGNOSTICS, DISEASES, DIAGNOSIS, SAMPLES, and ATTACHMENTS (highlighted with a blue box). The ATTACHMENTS sub-tab is active, showing a 'Done Adding' button and a large dashed box for file uploads. Below the dashed box, the text 'DRAG FILES TO UPLOAD (OR CLICK)' is displayed.

THE “ENVIRONMENTAL SPECIMEN-DIAGNOSIS” SUB-TAB

This Sub-Tab has Fields to describe the final diagnosis of the **Environmental Specimen**, including the individual responsible for the diagnosis, the actual diagnosis, and the date and status of the diagnosis.

The screenshot displays the WHIP software interface. The top navigation bar includes a search bar, a dropdown menu set to 'All', and a 'Last Search Results' button. The left sidebar contains various menu items such as 'DASHBOARD', 'SUBMISSION WIZARD', 'OBSERVATIONS', 'QA / QC', 'SAMPLE INV', 'BULK IMPORT', 'ADMIN', 'PATHOLOGIST', 'PREFERENCES', and 'LOGOUT'. The main content area is divided into several tabs: 'EVENT', 'SPECIMENS', 'INCIDENTS', 'ENVIRONMENTAL SPECIMENS' (highlighted with a red box), 'REPORTS', and 'ACTIVITY LOG'. Below the 'ENVIRONMENTAL SPECIMENS' tab is a table with the following data:

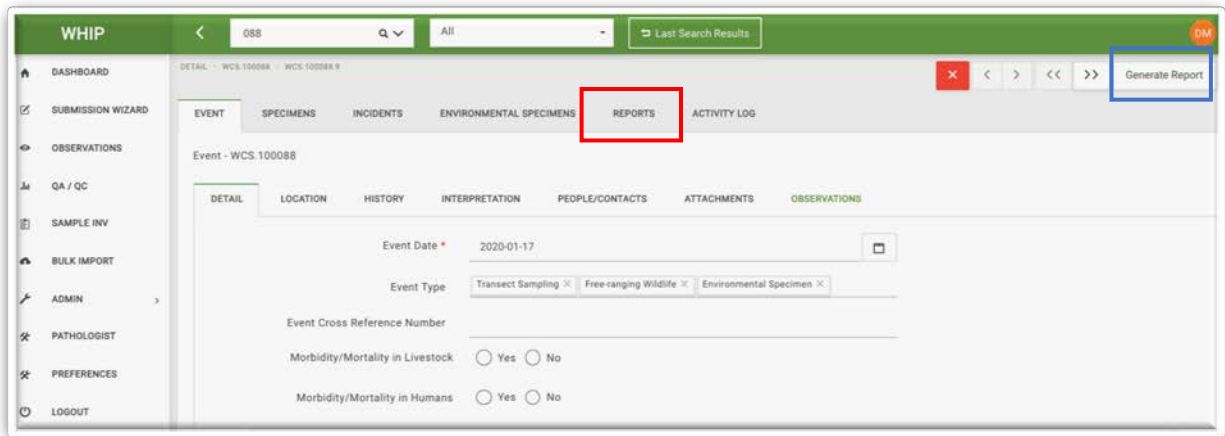
| Environmental Specimen Code | Type | Species | Date Found | Field Storage | How Found |
|-----------------------------|--------------------|--------------------------------|------------|---------------|-----------|
| WCS.100088:1 | AG - Adrenal Gland | | 2021-09-28 | | |
| WCS.100088:2 | FF - Fresh Feces | Wild Boar <i>Sus scrofa</i> | 2021-09-28 | | |

Below the table, there are more tabs: 'DETAIL', 'DIAGNOSTICS', 'DISEASES', 'DIAGNOSIS' (highlighted with a blue box), 'SAMPLES', and 'ATTACHMENTS'. The 'DIAGNOSIS' form contains the following fields:

- Category of Diagnosis * (Dropdown menu: Select a Category of Diagnosis)
- Diagnosis Lab * (Dropdown menu: Select Diagnosis Lab, with '+' and edit icons)
- Diagnosis By * (Dropdown menu: Select Diagnosis By, with '+' and edit icons)
- Diagnosis Status * (Dropdown menu: Select Diagnosis Status)
- Diagnosis Date * (Text input: YYYY-MM-DD, with a calendar icon)
- Externally Available
- Diagnosis * (Text area)

REPORTS TAB

The “Reports” tab is currently under development and we do not recommend its use for now. Similarly, the “Generate Report” button on the top-right of the screen is also under development.



TYPES OF FIELDS IN WHIP

Fields are specific prompts in the Graphical User Interface that request data input to describe the Event and its components. The database uses different types of Fields for data entry. To properly describe a Wildlife Health Event in WHIP, it is important to know about these different types of Fields. The type of each Field is provided in the Data Dictionary [here](#).

NUMERIC

These are Fields expecting a number. Numeric Fields have up and down arrows to increase and decrease the value but it can also be typed directly. For example, the number of adult male individuals observed sick or injured in the “Event-Observations-Detail” Sub-Tab:

| Species * | Total Seen * | Number Healthy | Number Sick or Injured | Number Dead |
|--|--------------|----------------|------------------------|-------------|
| Mainland Serow ⊖ ⊕ | 1 | 0 | 0 | 1 |
| Adult Male | 1 | 0 | 0 | 1 |
| Adult Female | 0 | 0 | 0 | 0 |
| Juvenile | 0 | 0 | 0 | 0 |
| Unknown | 0 | 0 | 0 | 0 |
| Fetus | 0 | 0 | 0 | 0 |
| Adult Unknown Sex | 0 | 0 | 0 | 0 |

TEXT

These Fields are text boxes and are used for a long-form written response. For example, the “History” of an Event in the “Event-History” Sub-Tab:

The screenshot shows the 'Event - WCS.100088' interface with the 'HISTORY' sub-tab selected. A rich text editor toolbar is visible above a text area. The text area contains the following text:

test adding another specimen to the same event through the submission wizard as a test exercise test

DATE

These Fields expect a date. A calendar is provided to the right of the Field. For example, the “Event Date” in the “Event-Details” Sub-Tab:

The screenshot shows the 'Event - WCS.100088' interface with the 'DETAIL' sub-tab selected. The 'Event Date' field is highlighted with a green box and contains the date '2020-01-17'. To the right of the field is a calendar icon, also highlighted with a green box. Below the field, a calendar widget for January 2020 is displayed, with the date '17' highlighted in blue.

| SUN | MON | TUE | WED | THU | FRI | SAT |
|-----|-----|-----|-----|-----|-----|-----|
| 29 | 30 | 31 | 01 | 02 | 03 | 04 |
| 05 | 06 | 07 | 08 | 09 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | 01 |
| 02 | 03 | 04 | 05 | 06 | 07 | 08 |

BOOLEAN

These Fields have a “Yes” or “No” as answer. For example, the “Morbidity/mortality in Livestock” in the “Event-Detail” Sub-Tab:

The screenshot displays a web application interface for an event record. The main header shows tabs for EVENT, SPECIMENS, INCIDENTS, ENVIRONMENTAL SPECIMENS, REPORTS, and ACTIVITY LOG. Below this, the event title is 'Event - WCS.100088'. A secondary set of tabs includes DETAIL, LOCATION, HISTORY, INTERPRETATION, PEOPLE/CONTACTS, ATTACHMENTS, and OBSERVATIONS. The 'DETAIL' tab is active, showing the following fields:

- Event Date *: 2020-01-17 (with a calendar icon)
- Event Type: Transect Sampling ×, Free-ranging ×, Environmental Specimen ×
- Event Cross Reference Number: (empty)
- Morbidity/Mortality in Livestock: Yes No (highlighted with a green box)
- Morbidity/Mortality in Humans: Yes No

FIXED SINGLE-CHOICE LIST

These Fields are completed by selecting a single choice from a list of fixed options. These Fields have a down arrow to the right and they do **not** have a “+” button. For example, the “Age Category” Field in the “Specimen-Detail” Sub-Tab:

The image displays two screenshots of a web application interface, specifically the 'Specimen-Detail' sub-tab. The interface includes tabs for 'EVENT', 'SPECIMENS', 'INCIDENTS', 'ENVIRONMENTAL SPECIMENS', and 'REPORTS'. The 'SPECIMENS' tab is active, showing a specimen with ID 'WCS.100088.1 - Wild Boar' and 'Animal ID' 'a01'. Below this, there are sub-tabs for 'DETAIL', 'MORPHOMETRICS', 'NECROPSY', 'DIAGNOSTICS', and 'DISEASES'. The 'DETAIL' sub-tab is selected, showing fields for 'Animal ID', 'Forensic specimen', 'Species', 'Age Category', 'Age (years)', and 'Sex'. The 'Age Category' field is highlighted with a green box in both screenshots. In the left screenshot, the 'Age Category' field is set to 'Adult' and has a green circle with a down arrow to its right. In the right screenshot, the 'Age Category' field is open, showing a dropdown menu with options: 'Adult', 'Fetus', 'Juvenile', 'Neonate', and 'Unknown'. The 'Adult' option is selected and highlighted in blue. A green box highlights the dropdown menu in the right screenshot.

Typing directly in these Fields helps quickly subset the available list of responses. Entering a response that is not listed (e.g. “Sub-adult” in the “Age Category” Field) is not allowed by WHIP and it will not save. To clear the selected option, click on the crossed green circle to the right of these Fields (see above).

FLEXIBLE SINGLE-CHOICE LIST

These Fields are completed by selecting a single choice from a list of options. More options can be created by users if needed. These Fields have a down arrow to the right and they also have a “+” button. They can also have a pen icon to edit specific information of the selected choice. For example, the “Received By” Field in the “Event-Detail” Sub-Tab and the “Species” Field in the “Specimen-Detail” Sub-Tab:

Event Cross Reference Number

Morbidity/Mortality in Livestock Yes No

Morbidity/Mortality in Humans Yes No

ENVIRONMENTAL SPECIMEN

Received By

Date Received 2021-09-28

Sample Type

Species

EVENT SPECIMENS INCIDENTS ENVIRONMENTAL SPECIMENS REPORTS

WCS.100088.1 - Wild Boar Animal ID a01

DETAIL MORPHOMETRICS NECROPSY DIAGNOSTICS DISEASES

Animal ID * a01

Forensic specimen

Species *

Age Category

Age (years)

WRITTEN SINGLE-CHOICE LIST

These Fields are similar to flexible single-choice list and they are also completed by selecting a single choice from a list of options. However, unlike flexible single-choice list Fields, more list options can be created by users just by manually entering a desired choice. These Fields also have a down arrow to the right but they do not have a “+” button or a pen icon. For example, the “Location” Field in the “Specimen-Sample” Sub-Tab:

Sample Type *

Was the sample collected from the environment? * No Yes

Medium Type

Place in Row

Sampled By

Location *

Storage ID

Rack

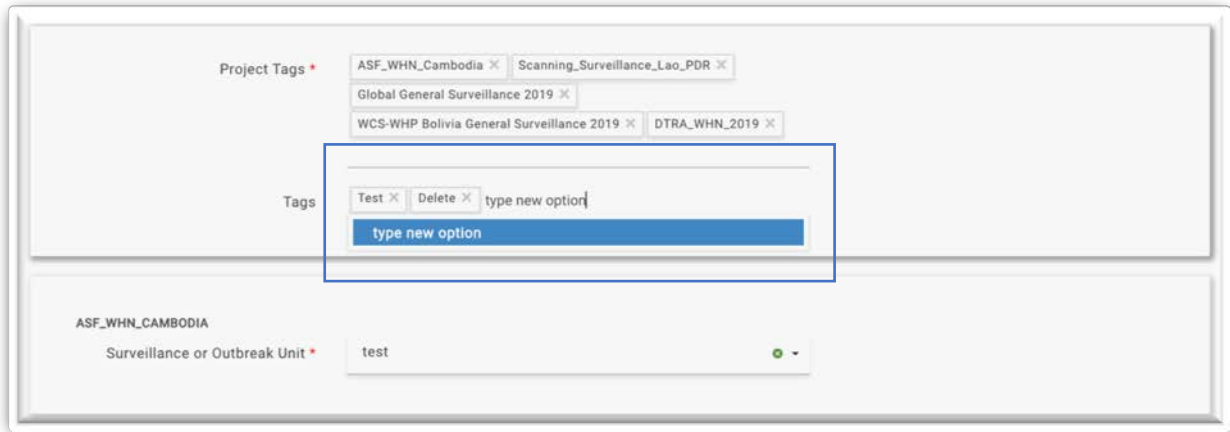
FIXED MULTI-CHOICE LIST

These Fields present a series of choices and more than one can be selected. Once the cursor is placed in the response line a drop down option list will appear. Selected choices will be displayed as a series of boxes to the right of the Field. It is not possible to add choices to the list. To remove selected options, click on the cross on the top-right of each box (blue circle). For example, the “Event Type” Field of the “Event-Detail” Sub-Tab:

The screenshot displays a web application interface for an event management system. At the top, there are navigation tabs: EVENT, SPECIMENS, INCIDENTS, ENVIRONMENTAL SPECIMENS, REPORTS, and ACTIVITY LOG. The 'EVENT' tab is selected. Below this, the event details for 'Event - WCS.100088' are shown. A sub-tab 'DETAIL' is selected, with other sub-tabs being LOCATION, HISTORY, INTERPRETATION, PEOPLE/CONTACTS, and ATTACHMENTS. The 'Event Date' is set to 2020-01-17. The 'Event Type' field is the focus, showing a dropdown menu with options: Free-ranging, Captive or Hunted Wildlife, Environmental Specimen (highlighted), and Livestock. Two blue circles highlight the 'x' icons on the 'Free-ranging' and 'Captive or Hunted Wildlife' options, indicating they are selected. Below the dropdown, there are two radio button questions: 'Morbidity/Mortality in Livestock' and 'Morbidity/Mortality in Humans', both with 'Yes' and 'No' options.

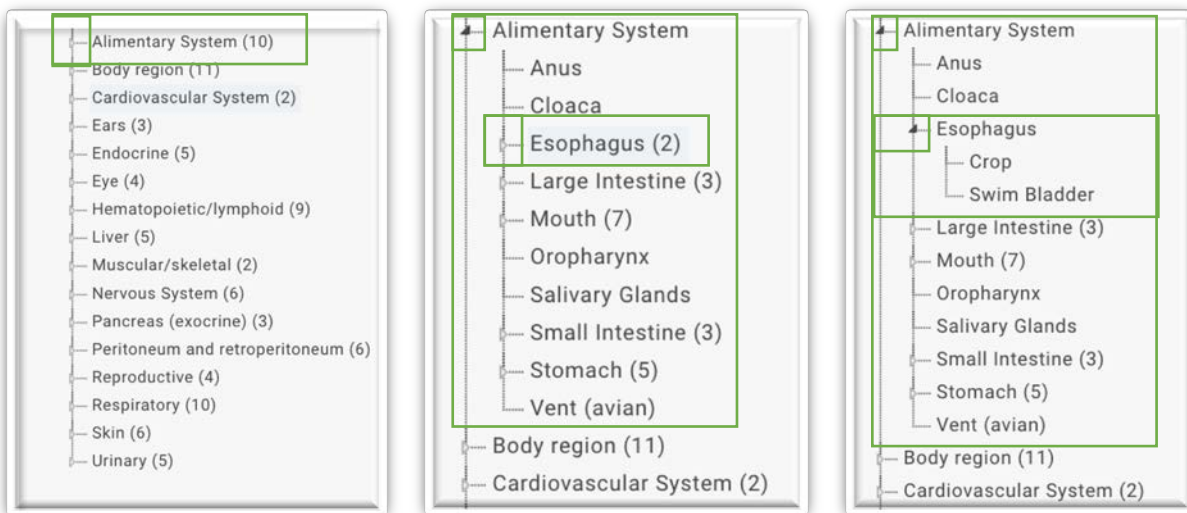
WRITTEN MULTI-CHOICE LIST

These Fields are similar to the written single-choice list Fields as new responses can be created by manually entering a desired choice. However, unlike these type of Fields that only accept a single response, several responses can be entered.



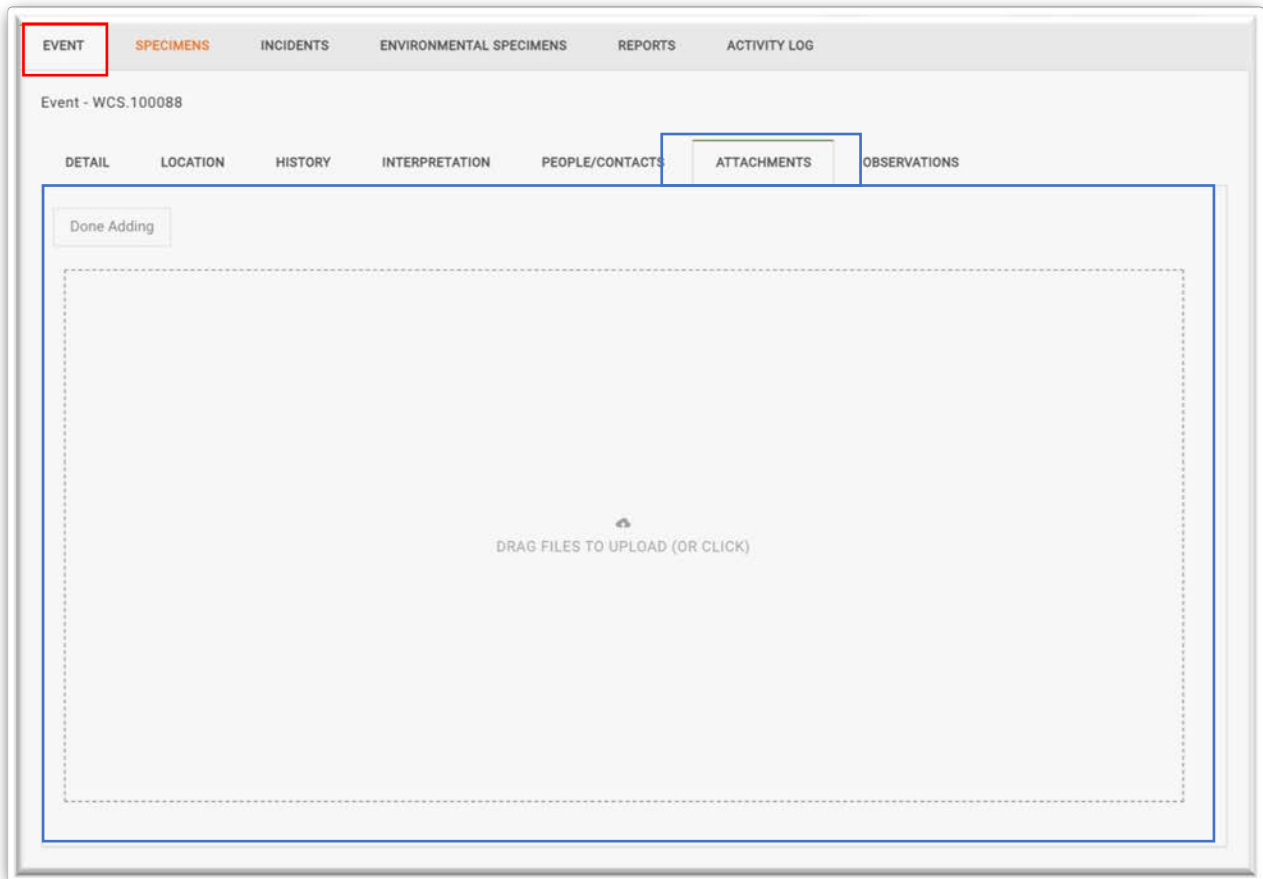
MULTI-TREE

Multi-tree Fields are dynamic tree Fields in WHIP's Graphical User Interface that allow the user to find and select hierarchical information. Briefly, users can select terms at any level of the tree. To navigate within the tree, sublevels are opened by clicking the corner nodes between levels. When lower-level terms are available, the corner of the node shows a white arrow icon and a number indicates the count of the lower-level terms it contains. Once clicked, it turns black and displays the lower level options.



ATTACHMENTS

These are Fields programmed to receive files associated with Events, Observations, Specimens, and Environmental Specimens. For example, the “Event-Attachments” Sub-Tab:



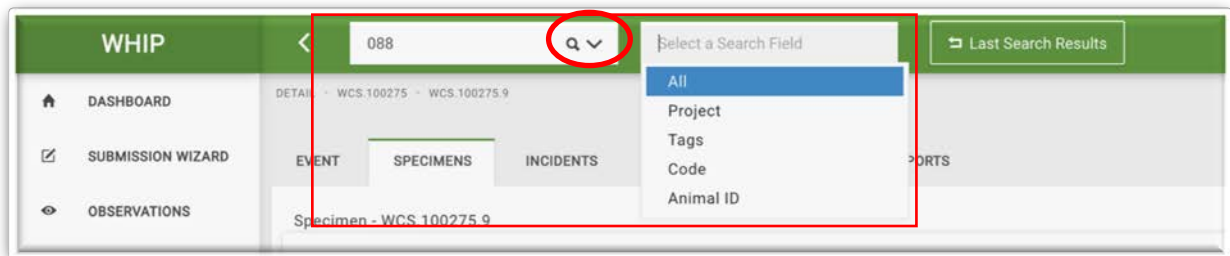
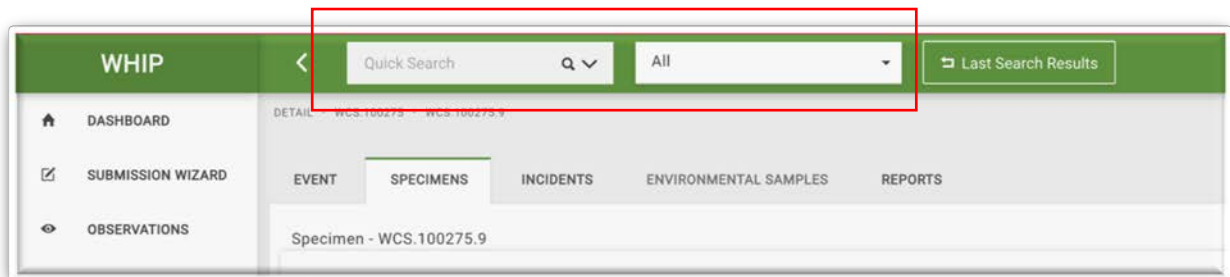
The Attachments Sub-Tabs (in the Event, Observation, Specimen, and Environmental Specimen Tabs) show the attached files on the current level (Event, Observation, Specimen, or Environmental Specimen) and all higher levels. For example, the Observation, Specimen, and Environmental Specimens level attachments are not shown in the Event level attachments.

QUICK SEARCH AND QUERY DATA IN WHIP

Efficiently searching for data in WHIP helps to: i) quickly examine Events in the Graphical User Interface; ii) find Events, Observations, Specimens, and Environmental Specimens that need editing; and iii) export specific sets of data (see the “Export Data from WHIP” section).

QUICK SEARCH

Go to the **Search Engine** on the top of the screen. The two boxes can be used to perform quick searches. Select the Field on which you want to search in the right box, and type the search key in the left box. To initiate the search, click on the magnifying glass symbol.



A “Results” screen will appear with 2 Tabs (“Results” and “Export”). The **Results Tab** has 3 Sub-Tabs: “**Observation**”, “**Specimen**”, and “**Environmental Specimen**”. Click on each of these Sub-Tabs to explore the tabled results. If no results are found under one of the three Sub-Tabs, it will be a lighter grey and not accessible. Enter a string or number in the “**Type Keyword**” Field to obtain more specific results. The number of results displayed on the screen can be adjusted using the dropdown to show “Entries”.

WHIP

088 Code

RESULTS EXPORT

SPECIMEN OBSERVATION ENVIRONMENTAL SPECIMEN

Show 25 Entries Standard

| Cross Ref # | Specimen code | Animal ID | Latin Name | Common Name | Age Category | Age (years) |
|-------------|---------------|-----------|----------------------|---------------------|------------------------|-------------|
| | WCS.100088.9 | | Amolops archotaphus | Amolops archotaphus | | |
| | WCS.100088.8 | | Amolops archotaphus | Amolops archotaphus | | |
| | WCS.100088.7 | | Amolops compotrix | Amolops compotrix | | |
| | WCS.100088.6 | | Gekko aaronbaueri | Aaron Bauer's Gecko | Adult | |
| | WCS.100088.5 | | Malacocincla abbotti | Abbott's Babbler | AHY - After Hatch Year | |
| | WCS.100088.4 | | Amolops archotaphus | Amolops archotaphus | Adult | |
| | WCS.100088.3 | 1111 | Amolops archotaphus | Amolops archotaphus | Adult | |
| | WCS.100088.2 | 1111 | Amolops archotaphus | Amolops archotaphus | Adult | |
| | WCS.100088.1 | a01 | Sus scrofa | Wild Boar | Adult | |

WHIP

088 Code

RESULTS EXPORT

SPECIMEN OBSERVATION ENVIRONMENTAL SPECIMEN

Show 25 Entries Standard

088.1

| Cross Ref # | Specimen code | Animal ID | Latin Name | Common Name | Age Category | Age (years) | Sex | Submitting Agency |
|-------------|---------------|-----------|------------|-------------|--------------|-------------|------|-------------------|
| | WCS.100088.1 | a01 | Sus scrofa | Wild Boar | Adult | | Male | |

Clicking on a row of the Result Table opens the case with the structure explained in the section “Accessing Data in WHIP: Tabs, Sub-Tabs, and Frames”.

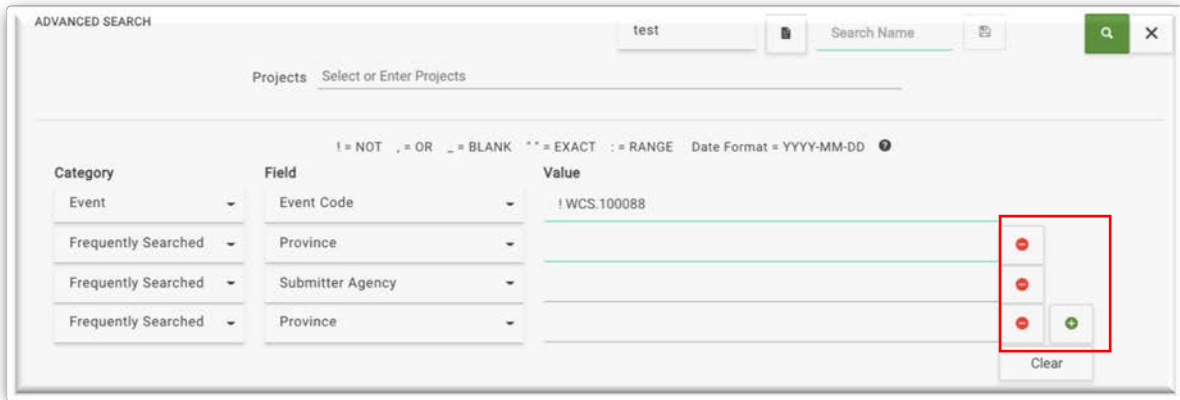
ADVANCED QUERIES

Select the drop down arrow appearing on the right side of the quick search box. This will unroll the “**Advanced Search**” Table which has 3 columns (“**Category**”, “**Field**”, and “**Value**”) to build and execute queries based on multiple types of information and Fields.

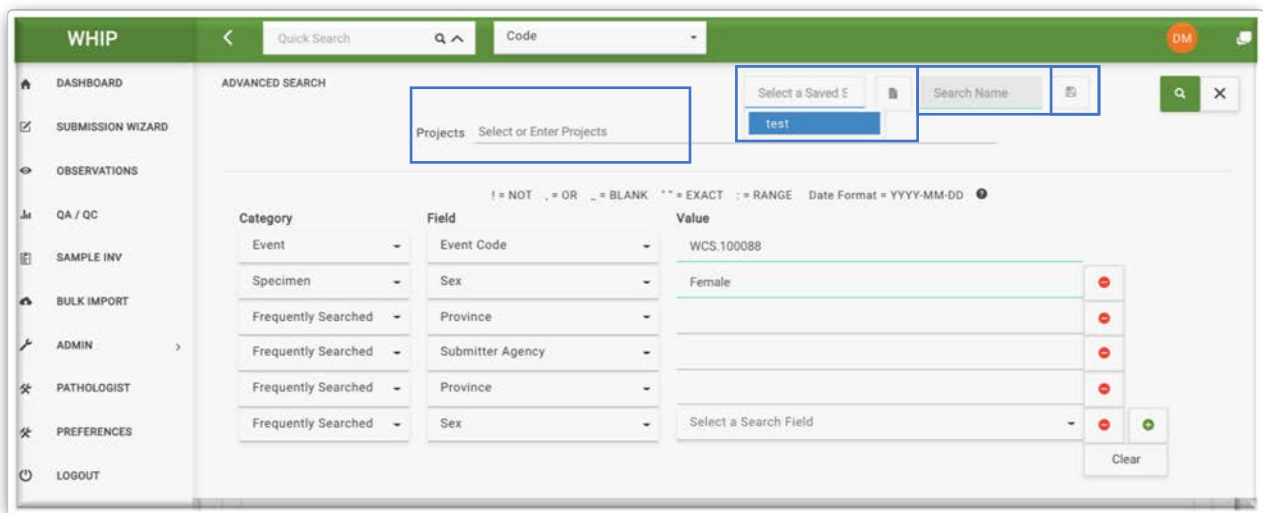
For example, to conduct a query to find the female specimens of a specific Event, select “Event” and “Specimen” in the “**Category**” column. Then select the Event-level Field “Event Code” and the Specimen-level Field “Sex” in the “**Field**” column. Finally, provide the search keys to find cases that have matching data (For example, use the search keys “WCS.100088” and “Female” in the “**Value**” column). Click on the green magnifying glass on the top-right side of the screen to start the search.

| Category | Field | Value |
|---------------------|------------------|-----------------------|
| Event | Event Code | WCS.100088 |
| Specimen | Sex | Female |
| Frequently Searched | Province | |
| Frequently Searched | Submitter Agency | |
| Frequently Searched | Province | |
| Frequently Searched | Sex | Select a Search Field |

Include more search criteria for the queries by clicking on the green-circled plus icon at the end of the last row shown and delete search criteria by clicking in the red-circled minus icon. Note, it is possible to query by “Projects Tags” using the Projects Field on the top of the “**Advanced Search**” Frame. If a “**Value**” is left empty it will not be included in the search criteria.



Save a query by naming it in the “Search Name” Field and clicking on the disk button to the right. Use a saved query by searching for its name in the “Select a Saved Search Name” Field. Saved queries cannot be deleted and are user-account specific.



Finally, it is possible to conduct more complex queries:

i) Find cases that **do not include** the search key in the specified Field. For example, search for all Events except the “WCS.100088” using the “!” symbol:

ADVANCED SEARCH

test Search Name

Projects Select or Enter Projects

! = NOT , = OR _ = BLANK * = EXACT : = RANGE Date Format = YYYY-MM-DD

| Category | Field | Value |
|---------------------|------------------|-------------|
| Event | Event Code | !WCS.100088 |
| Frequently Searched | Province | |
| Frequently Searched | Submitter Agency | |
| Frequently Searched | Province | |

Clear

ii) Find cases where the specified Field does include one or another value. For example, Specimens that were found by hunters or patrol teams using the “,” symbol (note the search value entered is case and space independent):

ADVANCED SEARCH

test tes

Projects Select or Enter Projects

! = NOT , = OR _ = BLANK * = EXACT : = RANGE Date Format = YYYY-MM-DD

| Category | Field | Value |
|---------------------|------------------|-----------------------|
| Specimen | How Found | Hunter,Patrol |
| Frequently Searched | Date Received | |
| Frequently Searched | Tags | |
| Frequently Searched | Submitter Agency | |
| Frequently Searched | Province | |
| Frequently Searched | Sex | Select a Search Field |

Clear

iii) Find cases where the specified Field is empty. For example, Specimens of the Event “WCS.100088” whose age is not provided using the “_” or underscore symbol:

WHIP

Quick Search Code

ADVANCED SEARCH

test Search Name

Projects Select or Enter Projects

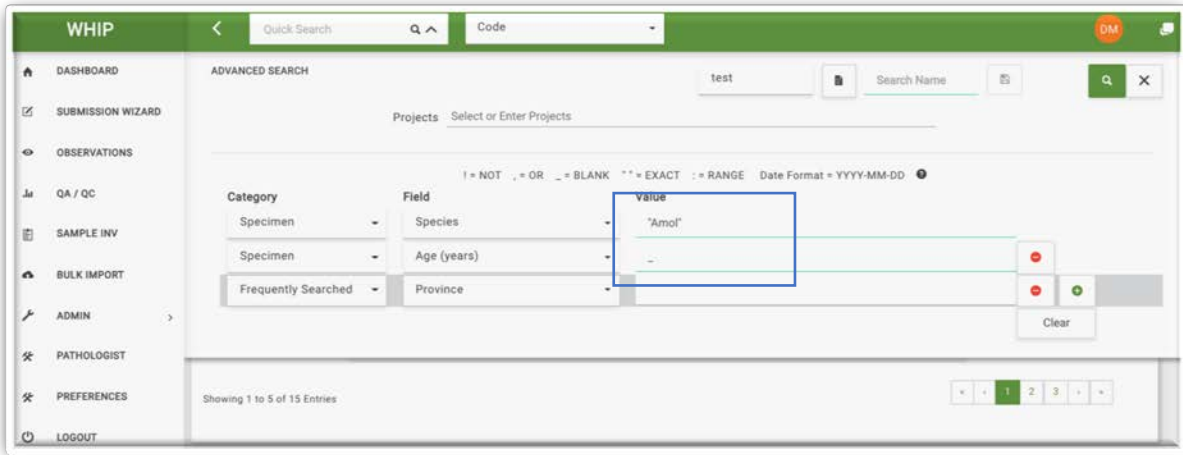
! = NOT , = OR _ = BLANK * = EXACT : = RANGE Date Format = YYYY-MM-DD

| Category | Field | Value |
|---------------------|-------------|------------|
| Event | Event Code | WCS.100088 |
| Specimen | Age (years) | _ |
| Frequently Searched | Province | |

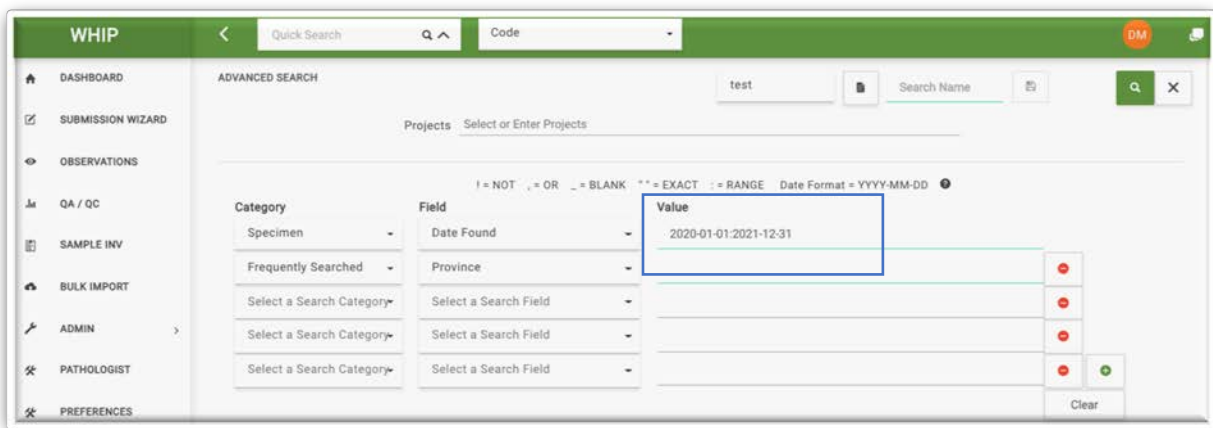
Clear

WCS.100088 Amolnes archibanus Amolnes archibanus

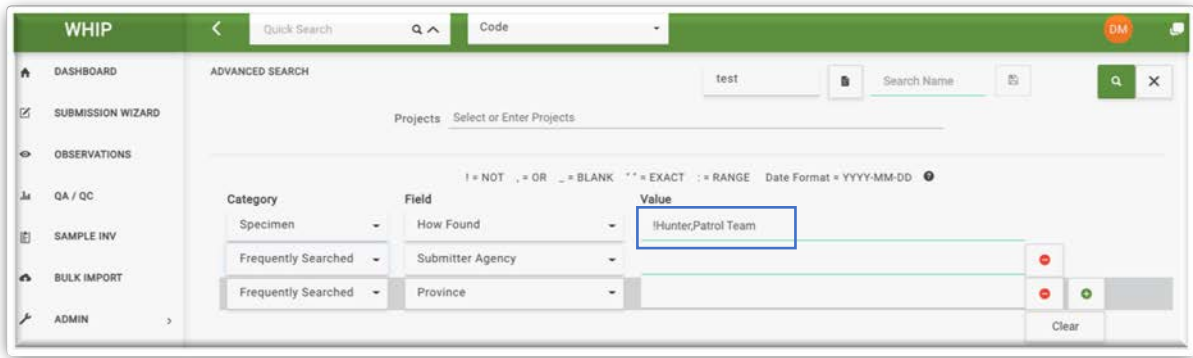
iv) Find cases where the specified Field has a specific string in its value. For example, Specimens whose species name has the string “Amol”, surrounding the search term with “” (note the search value is case independent):



v) Find cases where the specified Field has a range of values. For example, specimens that were found between the 2020 and 2021, use the “:” symbol between the first date of 2020 and the last day of 2021 (note the date format YYYY-MM-DD is required):



vi) Find cases using a combination of the criteria previously mentioned. For example, Specimens that were not found by hunters or patrol teams using the “!” and “,” symbols:

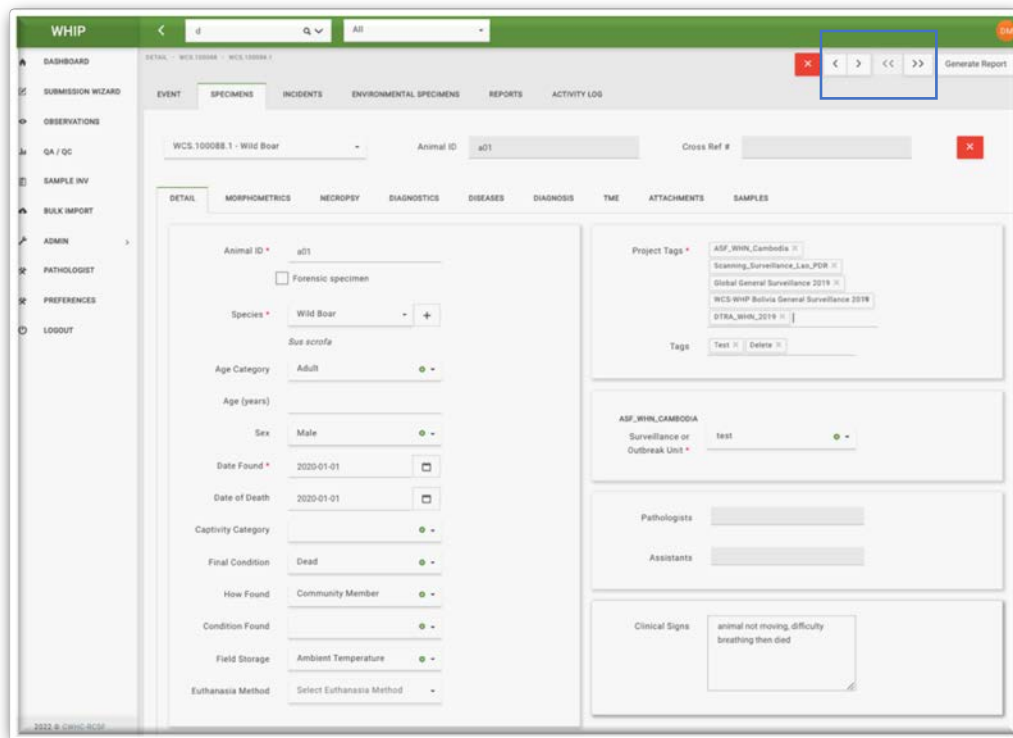


After completing the quick search or the query, WHIP displays a “Results” screen with compatible cases as explained in the previous section.

If your search only returns one case, this case will be automatically open.

NAVIGATION TOOLS

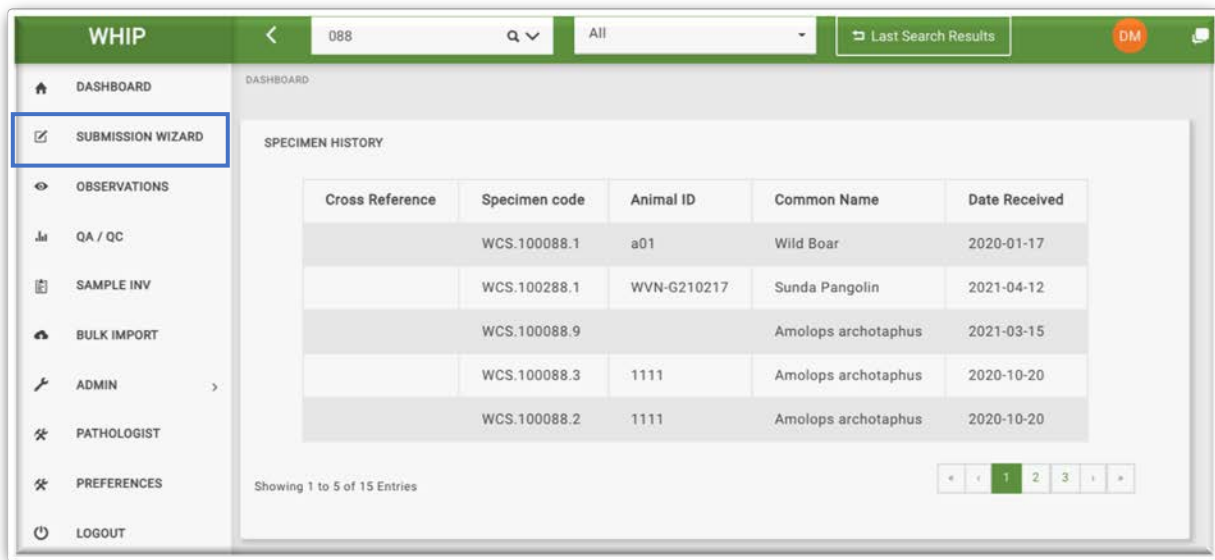
After accessing to an Event, a set of four buttons are available in the top-right corner of the screen with arrow symbols. The left and right single arrows allow to navigate to the previous and next Specimen of the Event, similar to the [Specimens Menu](#). The left and right double arrows allow to navigate across the Events returned for the last search made using the [Search Engine](#).



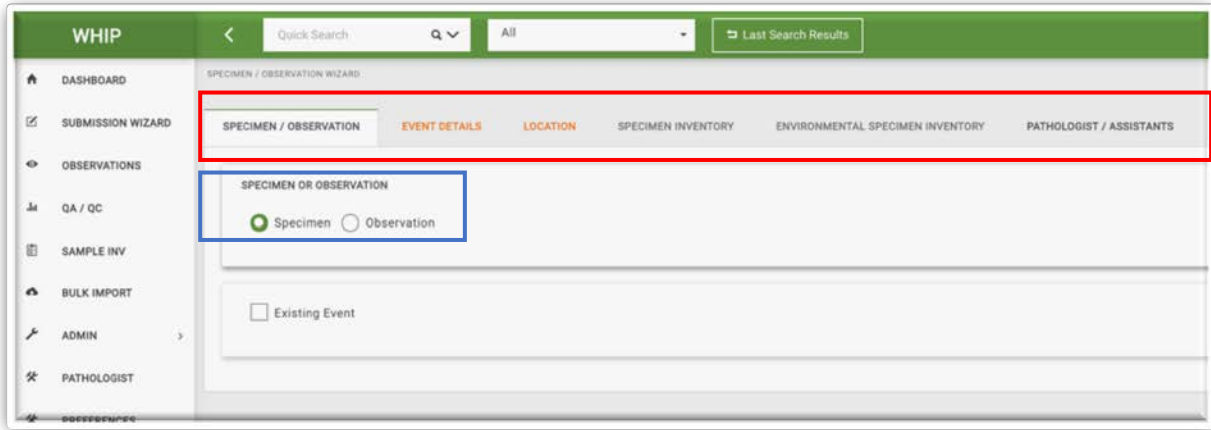
ADDING DATA IN WHIP

CREATING NEW EVENTS USING THE GRAPHICAL USER INTERFACE

To create new Events and provide the corresponding data, log in to WHIP and go to the **“Submission Wizard”** Tool on the **Navigation Panel**:

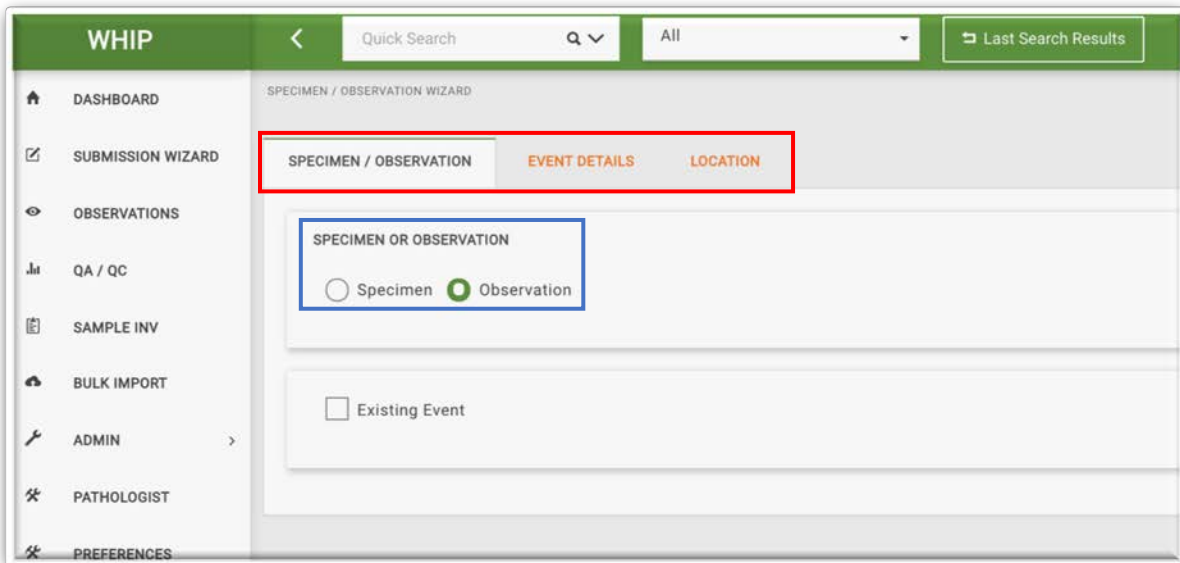


WHIP will display a new screen with six Tabs: **“Specimen/Observation”**, **“Event Details”**, **“Location”**, **“Specimen Inventory”**, **“Environmental Specimen Inventory”**, and **“Pathology/Assistants”**. Initially, the **“Event Details”** and **“Location”** Tabs are orange because mandatory Fields in these Tabs are not filled. Complete the **“Specimen/Observation”** Tab by choosing **“Specimen”** or **“Observation”**. Select the first option if the Event contains **“Specimens”** or **“Environmental Specimens”**. Select the second option to create an Event with Observations only.



CREATING AN EVENT WITH OBSERVATIONS ONLY

Click on the “Observation” choice in the “Specimen/Observation” Tab. The Tabs “**Specimen Inventory**”, “**Environmental Specimen Inventory**”, and “**Pathology/Assistants**” disappear because they are not necessary in the absence of Specimens or Environmental Specimens.



Go to the “Event Details” Tab and complete, at minimum, the required Fields **for the animals of the first observed-only species**. Refer to the [Data Dictionary](#) for details on any specific Field. The first Frame captures details of the Event and Observation, such as how the observed-only animals were identified and their captivity category. Below, the “**Observation Inventory**” Frame requests the number of individuals observed per age, sex, and health status of the first observed-only species.

SPECIMEN / OBSERVATION **EVENT DETAILS** LOCATION

Project Tags * Select Projects

Event Date * YYYY-MM-DD

Observation Date * YYYY-MM-DD

Observation Details *

How Found Select How Found ▾

Captivity Category * Select Captivity Category (mt) ▾

Event Type Select an Event Type

History

Tags

Observation Inventory

| Species * | Total Seen * | Number Healthy | Number Sick or Injured | Number Dead |
|----------------------------|--------------|----------------|------------------------|-------------|
| Select a Species ▾ + | 0 | 0 | 0 | 0 |
| Adult Male | 0 | 0 | 0 | 0 |
| Adult Female | 0 | 0 | 0 | 0 |
| Juvenile | 0 | 0 | 0 | 0 |
| Unknown | 0 | 0 | 0 | 0 |
| Fetus | 0 | 0 | 0 | 0 |
| Adult Unknown Sex | 0 | 0 | 0 | 0 |

Observation Inventory

Fill in the **Observation Inventory** by entering the number of Healthy, Sick or Injured, and Dead animals that are Adult Males, Adult Females, Adults of Unknown Sex, Juveniles, or Unknown. The first row and the first column of the table are locked. The locked row displays the species' totals by health status and the locked column displays the species' totals by age and sex categories. After the **Observation Inventory of the first observed-only species** is completed, the orange "Total Seen" font and Table color will turn grey. Complete the Contacts Information requested on the Frame below:

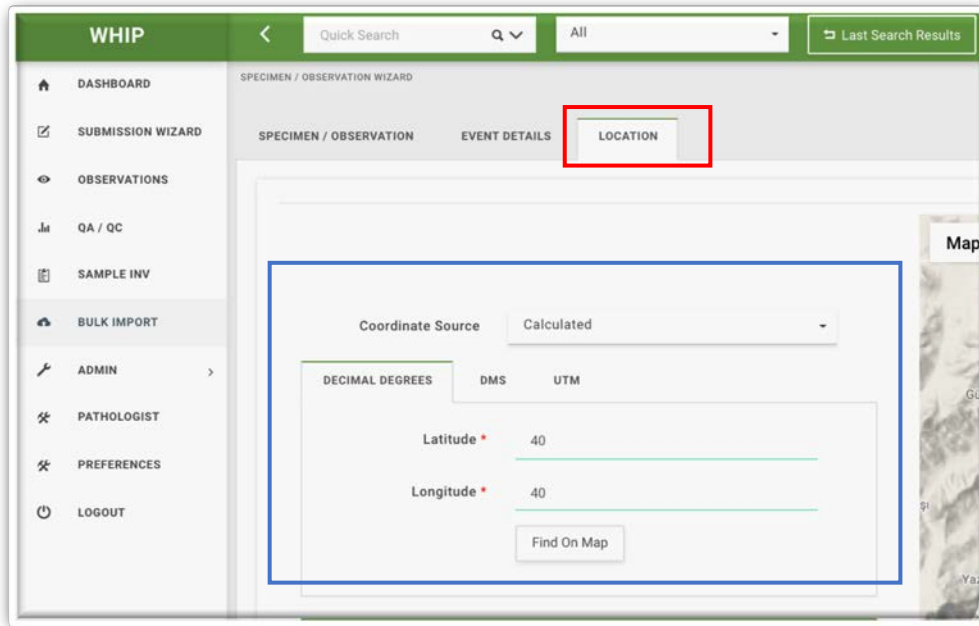
The image shows a web interface titled "CONTACTS" in orange. It contains three search sections, each with a "Full Name Search" label and a "Search Name" input field with a dropdown arrow and a "+" button. The first section is labeled "OBSERVER PERSON". The second section is labeled "OTHER CONTACTS" and contains a sub-section labeled "PEOPLE". The third section is labeled "ORGANIZATIONS".

Once an Observer Person is provided the orange "Contacts" label turns grey, indicating this required Field has been filled. After the mandatory Fields in the Observation Inventory and "Contacts" Frames are completed, the orange Tab "Event Details" will also switch to grey, indicating all the required Fields in this Tab have been filled.

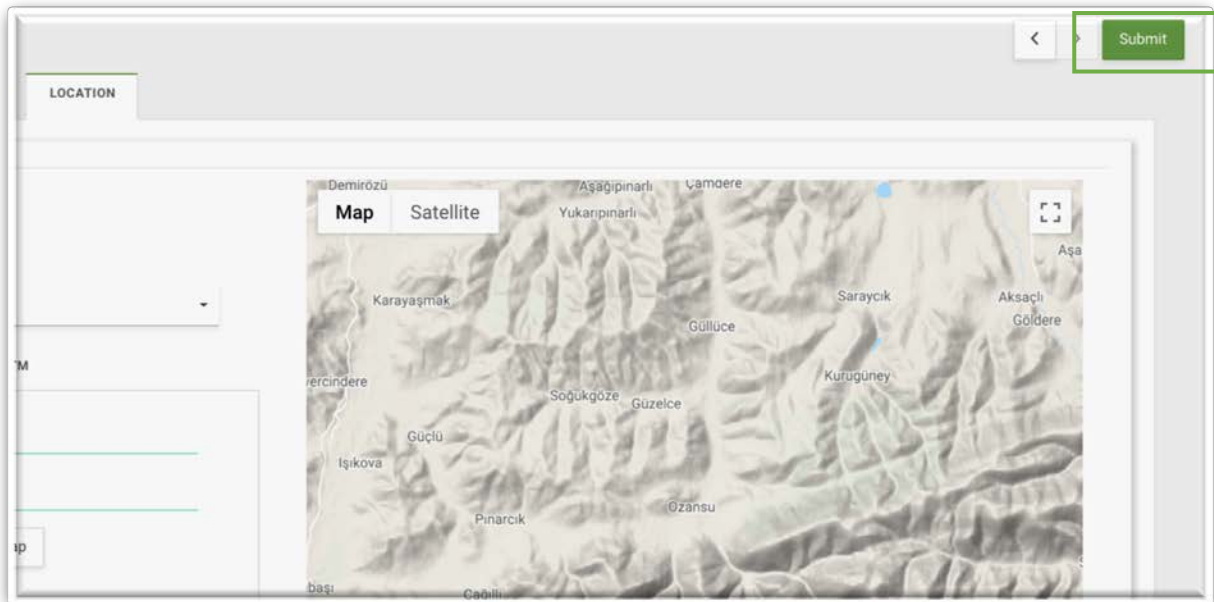
Next, provide the spatial coordinates in the "Location" Tab. If DMS or UTM coordinates are provided, the database will automatically convert the coordinates to Decimal Degrees and populate the "**Latitude**" and "**Longitude**" Fields.

The red pin on the map can also be moved to a new location using the mouse cursor and the left button of the mouse (click the pin, move, and release the pin). Moving the pin will modify the Fields "**Latitude**", "**Longitude**", and the Fields on the "**Address**" Frame. Completing the entry of required coordinates turns the orange "Location" grey.

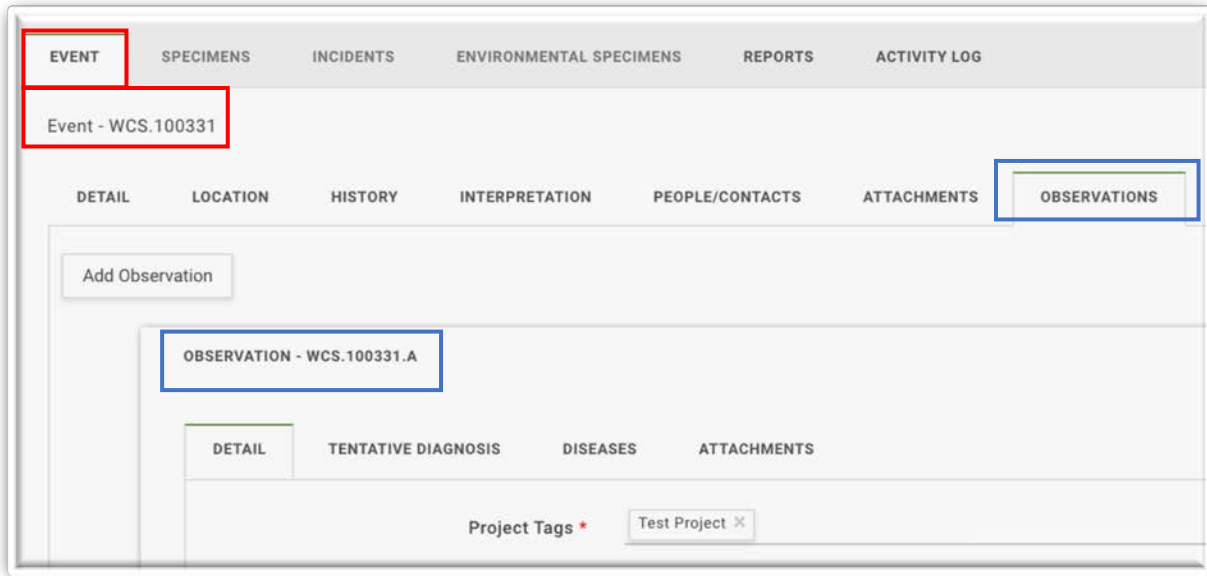
Enter the "Landscape Type" and the "Location Description".



The addition of the coordinates turns the orange “Location” Tab grey and having filled all the required Fields, the faded green “Submit” button on the top-right turns green, indicating that the Event with a single Observation is ready for submission:



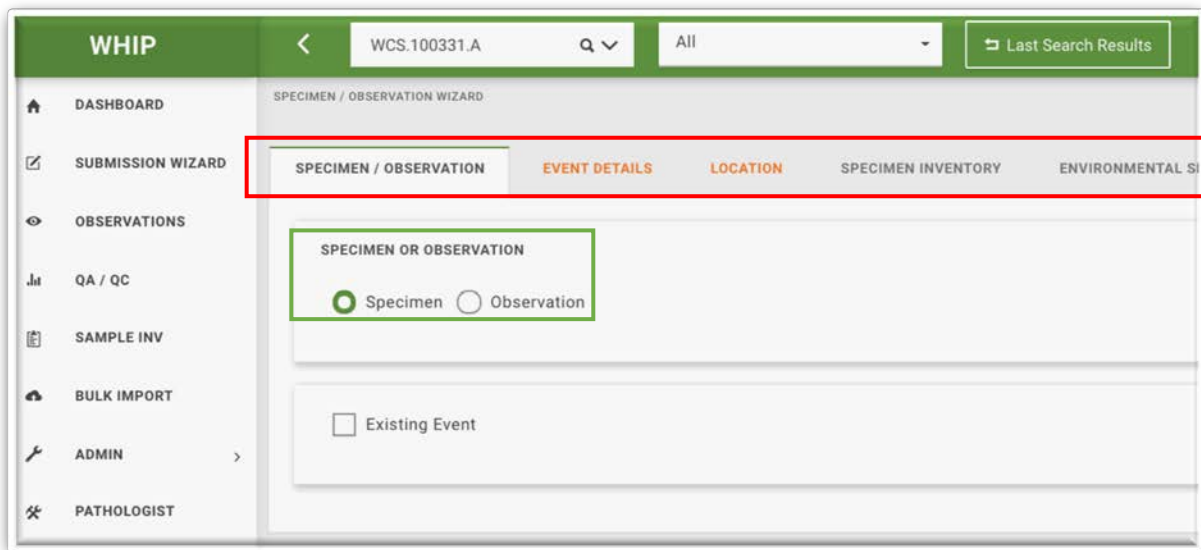
Clicking on “Submit” creates the Event. The next screen shows the newly created Event as it appears in the database, section “Event-Observations” Sub-Tab, with the corresponding and automatically created **Event Code** and **Observation Code**.



The Submission Wizard does not provide all the Fields for an Event with Observations only. Therefore, additional Fields need to be completed after creating an Event (see “Edit Data in WHIP”). To add more Observations (observed-only animals of other species) click on the “Add Observation” button in the Event – Observations tab (see “[Adding New Observations to an Event](#)”).

CREATING AN EVENT WITH SPECIMENS OR ENVIRONMENTAL SPECIMENS

Click on the “Specimen” option in the “Specimen/Observation” Tab.



Go to the “Event Details” Tab and complete the Fields presented in four Frames. Basic Event information data is located in the first Frame. The number of Specimens per species is located in the **Specimen Inventory**, in the second Frame. The number of Environmental Specimen per Type of tissue, and per species when indicated, is located in the **Environmental Specimen Inventory**, in the third Frame, and the contact information is located in the fourth Frame. If the tissue type is abiotic (e.g., water or soil) leave the Species Field empty. Please refer to the [Data Dictionary](#) for details on specific Fields.

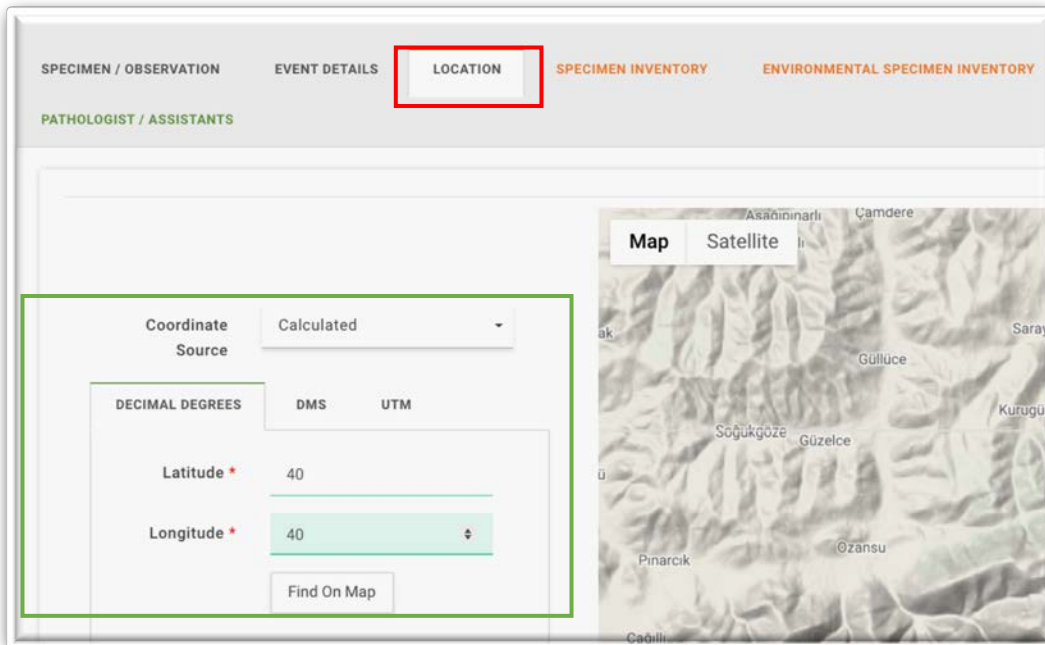
Complete the required Fields in the “Contacts” Frame. At least one of the Fields marked with a red circle needs to be completed (e.g., the full name of the “Submitting Person” or the full name of the “Submitting Agency” must be completed).

Once all required Fields are filled, the orange “Event Details” Tab turns dark grey and the locked light grey Specimen Inventory or Environmental Specimen Inventory Tabs are unlocked and turn orange.

Next, provide the spatial coordinates in the “Location” Tab. If DMS or UTM coordinates are provided, the database will automatically convert the coordinates to Decimal Degrees and populate the “Latitude” and “Longitude” Fields.

The red pin on the map can also be moved to a new location using the mouse cursor and the left button of the mouse (click the pin, move, and release the pin). Moving the pin will modify the Fields “Latitude”, “Longitude”, and the Fields on the “Address” Frame. Completing the entry of required coordinates turns the orange “Location” dark grey.

Enter the “Landscape Type” and the “Location Description”.



Click on the Specimen Inventory Tab if Specimens were added to the Event. Enter the detailed Specimen data by selecting each row of the **Specimen Table** and completing the Fields provided in the **Specimen Frame**. Please refer to the [Data Dictionary](#) for details on specific Fields.

SPECIMEN / OBSERVATION EVENT DETAILS LOCATION **SPECIMEN INVENTORY** ENVIRONMENTAL SPECIMEN INVENTORY PATHOLOGIST / ASSISTANTS

SPECIMEN

Project Tags * Select Projects Tags Select or Add Tags

| | Species | Age Category | Sex | Final Condition |
|---|---------------------------|--------------------------|----------------|----------------------------|
| 1 | Siamese Leaf-toed Gecko ▾ | Select an Age Category ▾ | Select a Sex ▾ | Select a Mortality State ▾ |
| 2 | Siamese Leaf-toed Gecko ▾ | Select an Age Category ▾ | Select a Sex ▾ | Select a Mortality State ▾ |
| 3 | Aaron Bauer's Gecko ▾ | Select an Age Category ▾ | Select a Sex ▾ | Select a Mortality State ▾ |

Specimen Table

SPECIMEN - 1

Project Tags * Scanning_Surveillance_Cambodia X Tags Select or Add Tags

Forensic specimen

Species Siamese Leaf-toed Gecko ▾

Age Category Select an Age Category ▾ Final Condition Select a Mortality State ▾

Age (years)

Sex Select a Sex ▾ Field Storage Select Field Storage ▾

Euthanasia Method Select Euthanasia Method ▾

Date Found * Thu Dec 30 2021 00:00:00 GMT-0300 (Chile Sumr

Date of Death YYYY-MM-DD

Captivity Category Select a Captivity State ▾ How Found Select How Found ▾

Specimen Frame

The “Project Tags” Field is present in the Specimen Table Area and in each Specimen Frame. Complete the “Project Tags” and “Surveillance or Outbreaks Unit” for all Specimens at once (Specimen table area) or for each Specimen (Specimen Frame).

Once the mandatory Fields are completed for each Specimen, the orange “Specimen Inventory” label turns dark grey.

Click on the Environmental Specimen Inventory Tab if Environmental Specimens were added to the Event. Enter the detailed specimen data by selecting each row of the **Environmental Specimen Table** and completing the Fields provided in the **Environmental Specimen Frame** below. Please refer to the [Data Dictionary](#) for details on specific Fields.

The screenshot displays a web application interface with a top navigation bar containing tabs: SPECIMEN / OBSERVATION, EVENT DETAILS, LOCATION, SPECIMEN INVENTORY, ENVIRONMENTAL SPECIMEN INVENTORY (highlighted with a red box), and PATHOLOGIST / ASSISTANTS. Below the navigation bar, the 'ENVIRONMENTAL SPECIMEN' section features a 'Project Tags' dropdown with 'Scanning_Surveillance_Cambodia' selected and a 'Tags' dropdown with 'Select or Add Tags'. A table, labeled 'Environmental Specimen Table' with an orange box, contains one row with the following data:

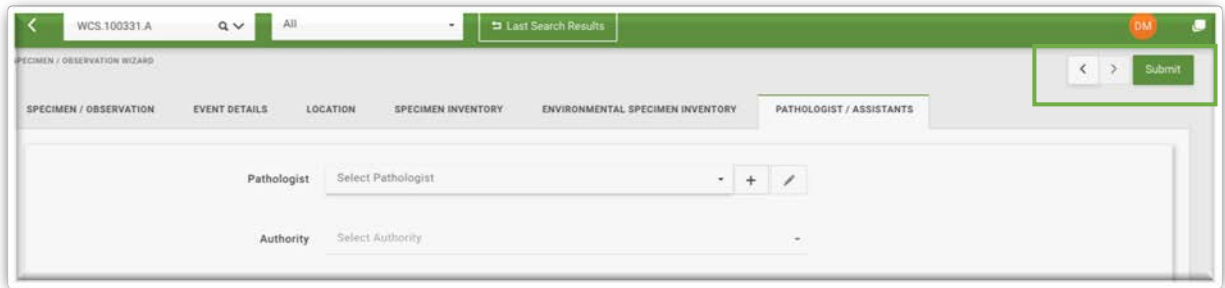
| | Type | Species | Date Found | Field Storage | How Found |
|---|--------------|--|------------|---------------|-----------|
| 1 | AS - Air Sac | Siamese Leaf-toed Gecko <i>Dixonius siamensis</i> | 2021-12-30 | | |

Below the table is the 'ENVIRONMENTAL SPECIMEN - 1' form, labeled 'Environmental Specimen Frame' with an orange box. The form includes the following fields:

- Event Cross Reference Number: _____
- Species: Siamese Leaf-toed Gecko (dropdown menu)
- Type: AS - Air Sac (dropdown menu)
- Date Found: 2021-12-30 (calendar icon)
- Field Storage: Select Field Storage (dropdown menu)
- How Found: Select How Found (dropdown menu)

Once the required Fields are completed for each Environmental Specimen, the orange “Environmental Specimen Inventory” label turns dark grey.

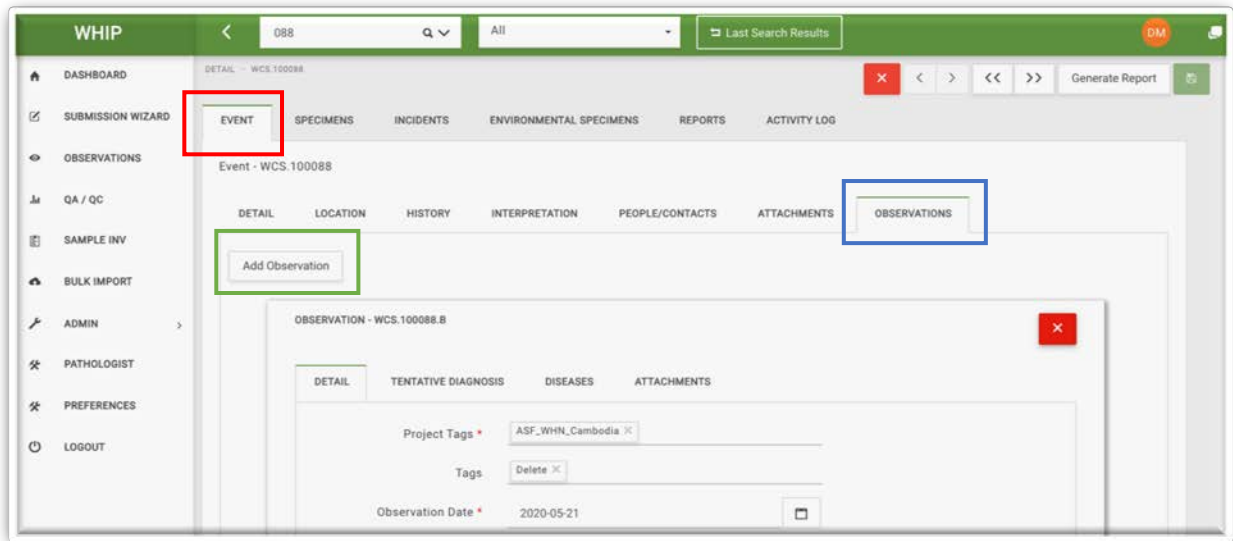
At this stage if all required Fields are completed, all the Tabs are dark grey and the “Submit” button on the top-right is unlocked. However, before creating the new Event, complete the “Pathologists/Assistants” Tab following the guidelines in the [Data Dictionary](#) (see below).



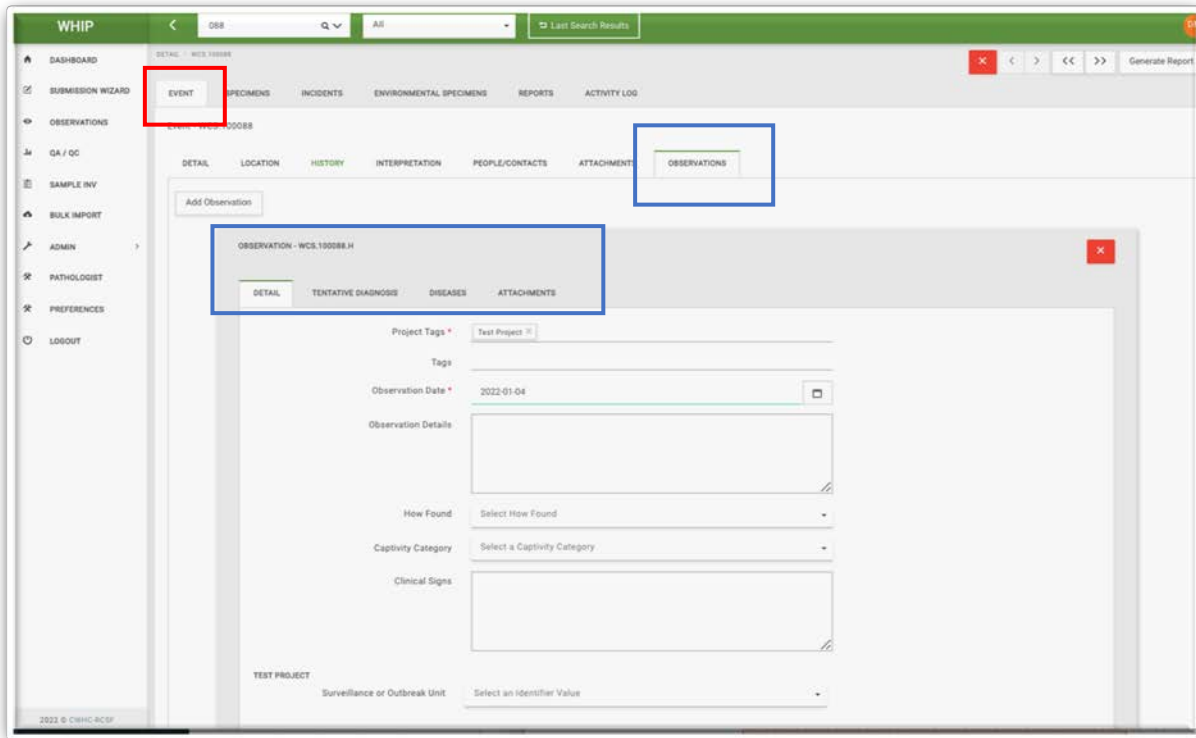
Clicking on “Submit” creates an Event with Specimens or Environmental Specimens. The next screen that appears shows the newly created Event as it appears in the “Event-Specimens” or “Event-Environmental Specimen” Sub-Tab, with the corresponding and automatically created **Event Code** and **Specimens or Environmental Specimens Codes**. If needed, add Observations to the created Event by clicking on the “Add Observation” button of the Event – Observations tab (see [“Adding New Observations to an Event”](#)).

ADDING NEW OBSERVATIONS TO AN EVENT

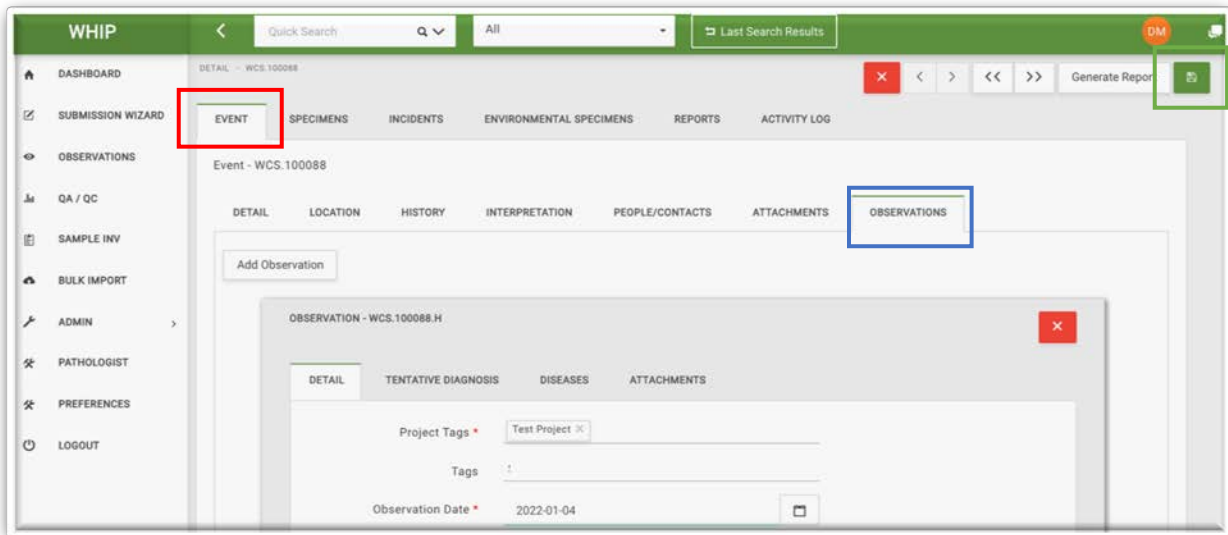
To add a new Observation to an Event, go to the Event – Observations Sub-Tab and click on the “Add Observation” button.



A new grey Frame labeled with the code for the new Observation will appear. This Frame has four Sub-Tabs: “Detail”, “Tentative Diagnosis”, “Diseases”, and “Attachments”. The “Diseases” Sub-Tab is unlocked once the **Observation Inventory** in the “Details” Sub-Tab is completed. See [“Creating an Event with Observations only”](#) for guidance on the structure and completing the Fields in the Sub-Tabs.



Complete the mandatory fields to unlock the “Save” button. Click on the “Save” button to add the new Observation to the Event.



ADDING NEW SPECIMENS TO AN EVENT

To add a new Specimen to an Event, go to the Submission Wizard and click on the “Specimen” Option and check the “Existing Event” option. Search for the Event of Interest based on the Event code or the Date of the Event. It is possible to search based on Province, Species, or Submitter Name. Click on the “Search” button:

The screenshot displays the WHIP Submission Wizard interface. The left sidebar contains navigation options: DASHBOARD, SUBMISSION WIZARD, OBSERVATIONS, QA / QC, SAMPLE INV, BULK IMPORT, ADMIN, PATHOLOGIST, PREFERENCES, and LOGOUT. The main content area is titled 'SPECIMEN / OBSERVATION WIZARD' and includes a 'Submit' button. The 'SPECIMEN / OBSERVATION' step is active, showing a 'SPECIMEN OR OBSERVATION' section with radio buttons for 'Specimen' (selected) and 'Observation'. Below this is the 'Existing Event' section, which is checked. It includes an 'Event Code' field with the value '088', an 'or' separator, and 'Date' fields with a range from 'YYYY-MM-DD' to 'YYYY-MM-DD'. At the bottom, there are input fields for 'Species', 'Province', and 'Submitter Name', along with a 'Search' button.

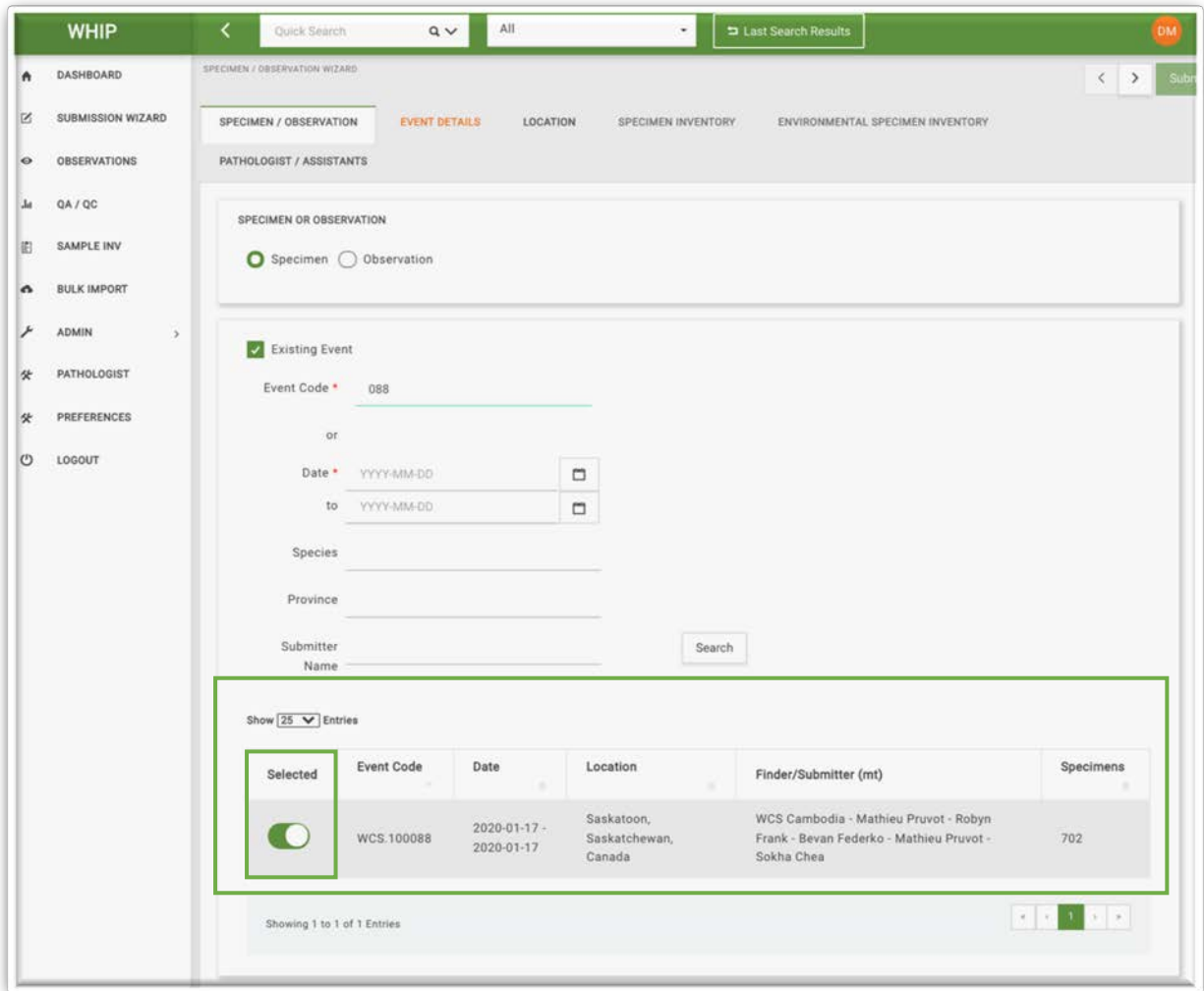
A Table showing the matching Events will appear. If multiple Events are displayed, use the navigation tools provided to adjust the number of entries displayed or move through the list (lower right arrows and 'pages'). If a row of this Table is clicked, a Window with a summary of the Event is displayed.

The screenshot shows a web application window titled "Event Details - WCS.100088". At the top, there is a search bar with "Quick Search" and a dropdown menu set to "All". The main content area includes the following fields:

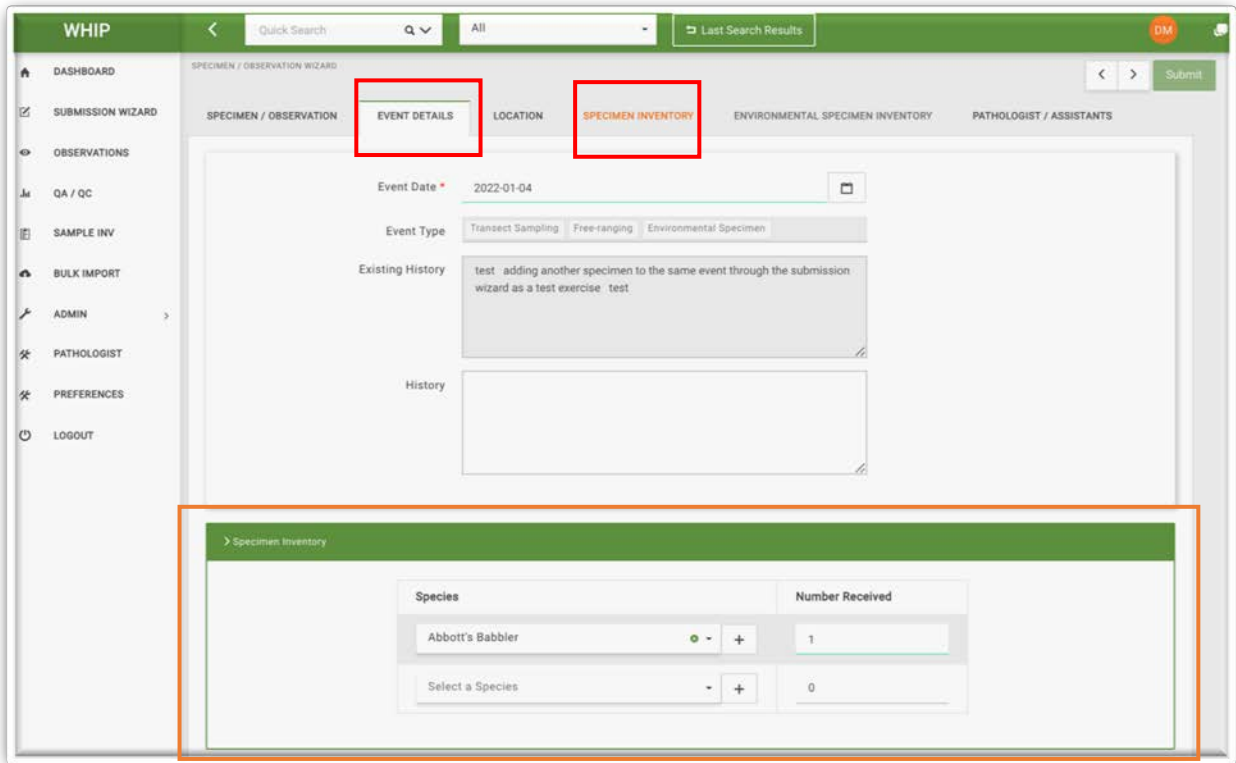
- Event Date ***: A date picker showing "2020-01-17".
- Event Type**: A multi-select menu with options "Transect Sampling", "Free-ranging Wildlife", and "Environmental Specimen".
- Morbidity/Mortality in Livestock**: Radio buttons for "Yes" and "No".
- Morbidity/Mortality in Humans**: Radio buttons for "Yes" and "No".
- History**: A rich text editor with a toolbar. The text inside reads: "test adding another specimen to the same event through the submission wizard as a test exercise test".

A "Cancel" button is located in the bottom right corner of the window.

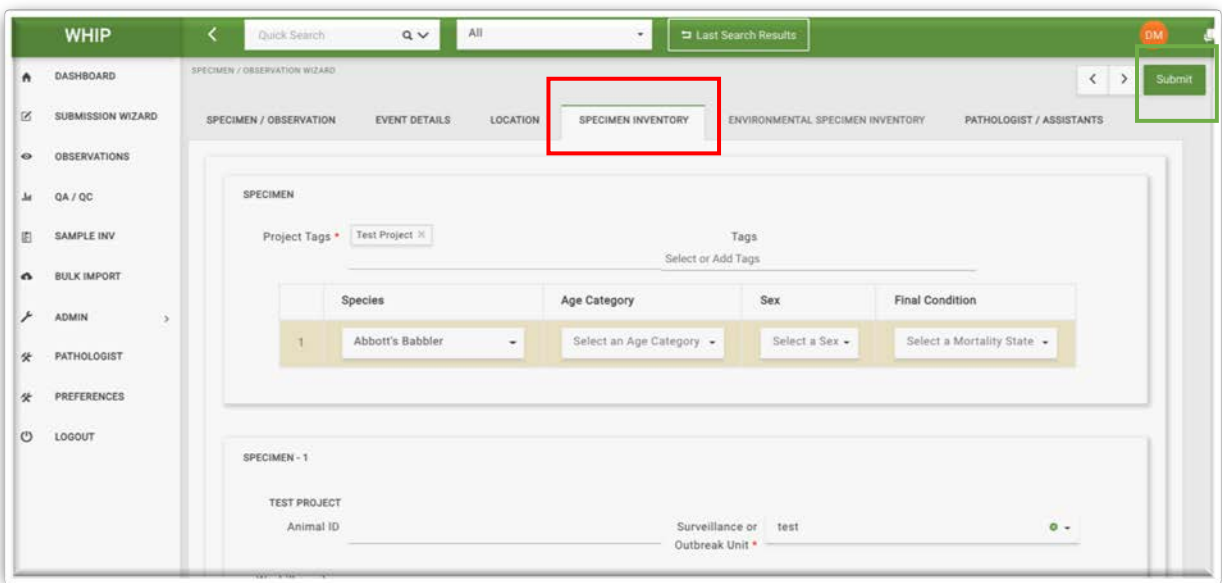
To add new Specimens, click on the "Selected" switch of the corresponding row to choose the desired Event, turning the switch green.



Once an Event is selected, click on the “Event Details” Tab to provide the Event Date (which usually is the same as the original date), the Contacts information, and add the new Specimen(s) in the Specimen Inventory Table. The **Specimens already included in the Event are not shown on the Specimen Inventory of the Submission Wizard but they are in the system.** Therefore, **do not re-enter Specimens and add only the new ones.** Once required Fields are completed, the “Event Details” Tab label turns dark grey and the “Specimens” Tab is unlocked and orange.



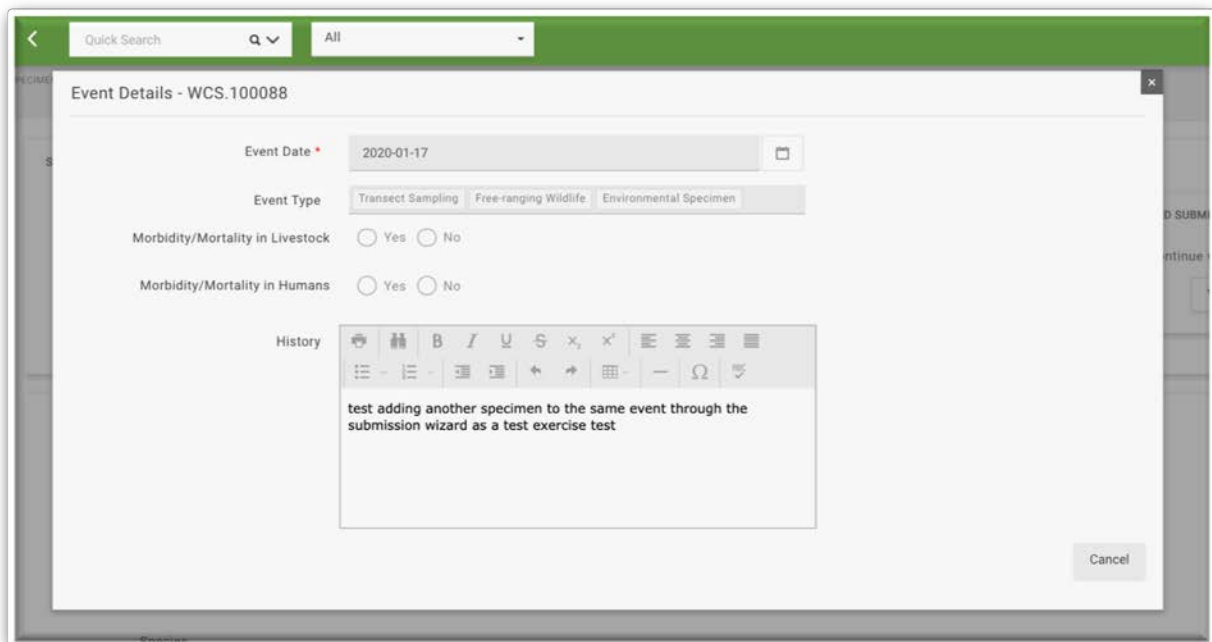
Go to the **“Specimen Inventory”** Tab and complete the Fields for the new Specimens. The completion of mandatory Fields unlocks the **“Submit”** button on the top-right corner (green). Save the new Specimen for the Event by clicking the **“Submit”** button.



ADDING NEW ENVIRONMENTAL SPECIMENS TO AN EVENT

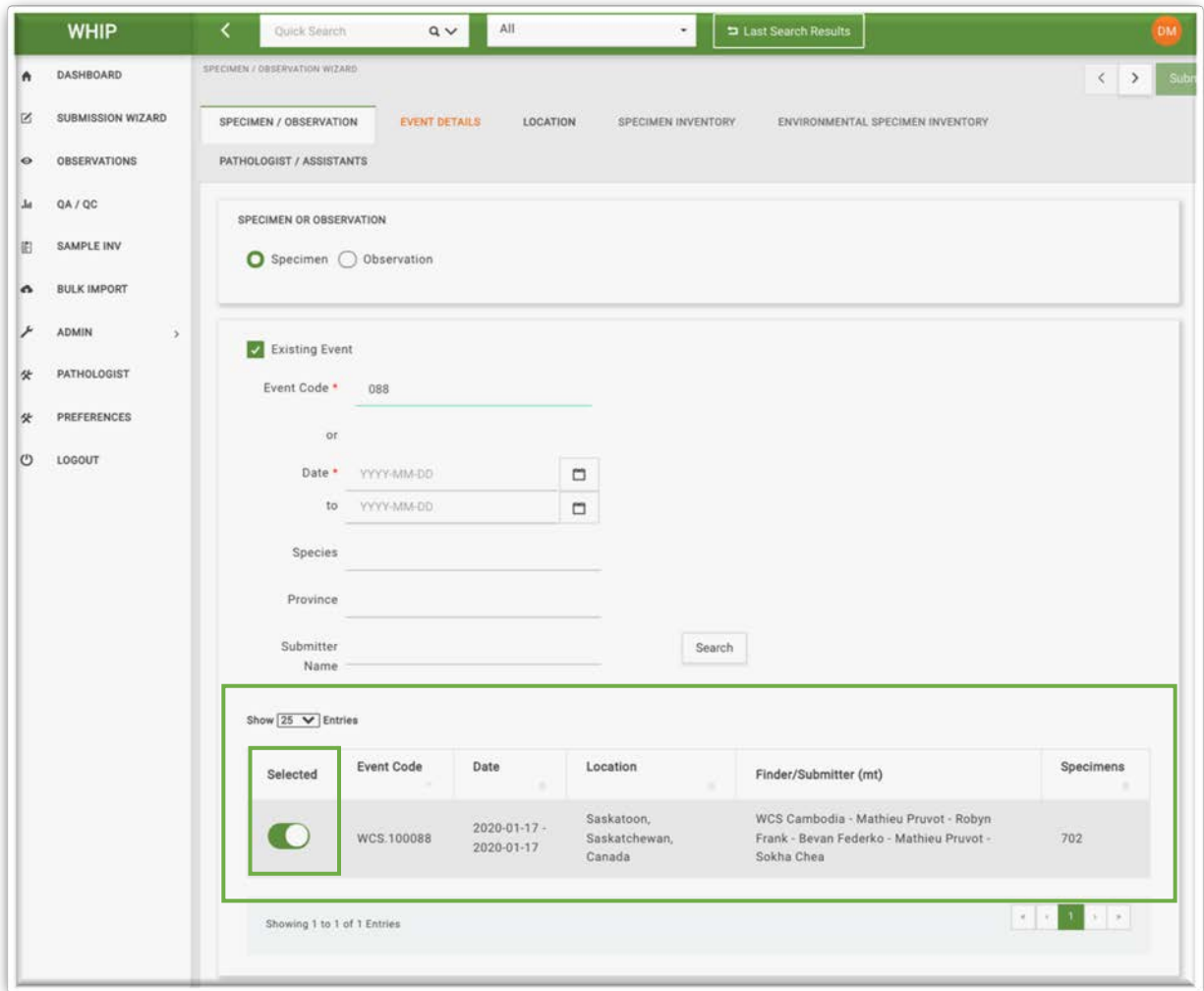
To add a new Environmental Specimen to an Event, go to the Submission Wizard and click on the “Specimen” Option and check the “Existing Event” option. Search for the Event of Interest based on the Event Code or the Date of the Event. It is possible to search based on Province, Species, or Submitter Name. Click on the “Search” button.

A Table showing the matching Events will appear. If multiple Events are displayed, use the navigation tools provided to adjust the number of entries displayed or move through the list (lower right arrows and ‘pages’). If a row of this Table is clicked, a Window with a summary of the Event is displayed.



The screenshot shows a window titled "Event Details - WCS.100088". At the top, there is a "Quick Search" field with a magnifying glass icon and a dropdown menu set to "All". Below this, the "Event Date" is set to "2020-01-17" with a calendar icon. The "Event Type" is set to "Environmental Specimen", with other options being "Transect Sampling" and "Free-ranging Wildlife". There are two sections for "Morbidity/Mortality": "Morbidity/Mortality in Livestock" and "Morbidity/Mortality in Humans", each with "Yes" and "No" radio buttons. Below these is a "History" section with a rich text editor toolbar. The history text reads: "test adding another specimen to the same event through the submission wizard as a test exercise test". A "Cancel" button is located in the bottom right corner of the window.

To add new Specimens, click on the “Selected” switch of the corresponding row to choose the desired Event, turning the switch green.



Click on the “Event Details” Tab to provide the Event Date (which usually is the same as the original date), the Contacts information, and add the new Environmental Specimen(s) in the Environmental Specimen Inventory Table. The **Environmental Specimens already included in the Event are not shown on the Inventory** but they are in the system. Therefore, **do not re-enter Environmental Specimens and add only the new ones**. Once the Table is completed, the “Event Details” Tab label turns grey and the “**Environmental Specimens**” Tab is unlocked and orange.

WHIP

Quick Search All DM

SPECIMEN / OBSERVATION WIZARD

SPECIMEN / OBSERVATION **EVENT DETAILS** LOCATION SPECIMEN INVENTORY **ENVIRONMENTAL SPECIMEN INVENTORY** PATHOLOGIST / ASSISTANTS

Event Date * 2022-01-04

Event Type

Existing History

History

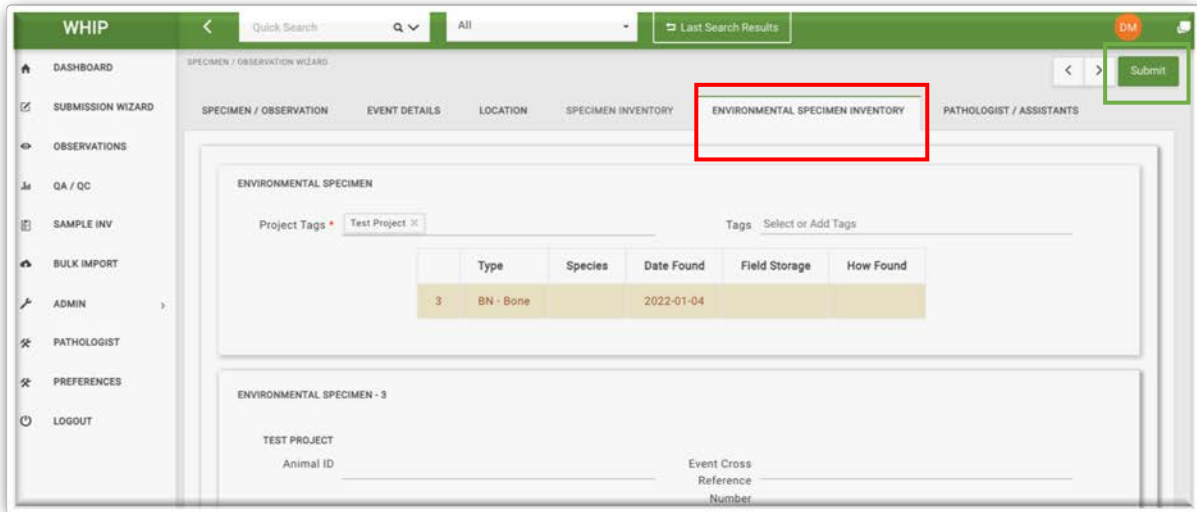
> Specimen Inventory

| Species | Number Received |
|----------------------|-----------------|
| Select a Species - + | 0 |
| Select a Species - + | 0 |

> Environmental Specimen Inventory

| Type | Species | Number Received |
|---------------------------------|----------------------|-------------------------|
| BN - Bone <input type="radio"/> | Select a Species - + | 1 <input type="text"/> |
| Select Type (mt) - | Select a Species - + | 0 |

Go to the “**Environmental Specimen Inventory**” Tab and complete the Fields for the new Environmental Specimens. Once the mandatory Fields are completed, the “Submit” button on the top-right corner is unlocked (green). Save the new Specimen for the Event by clicking the “Submit” button.



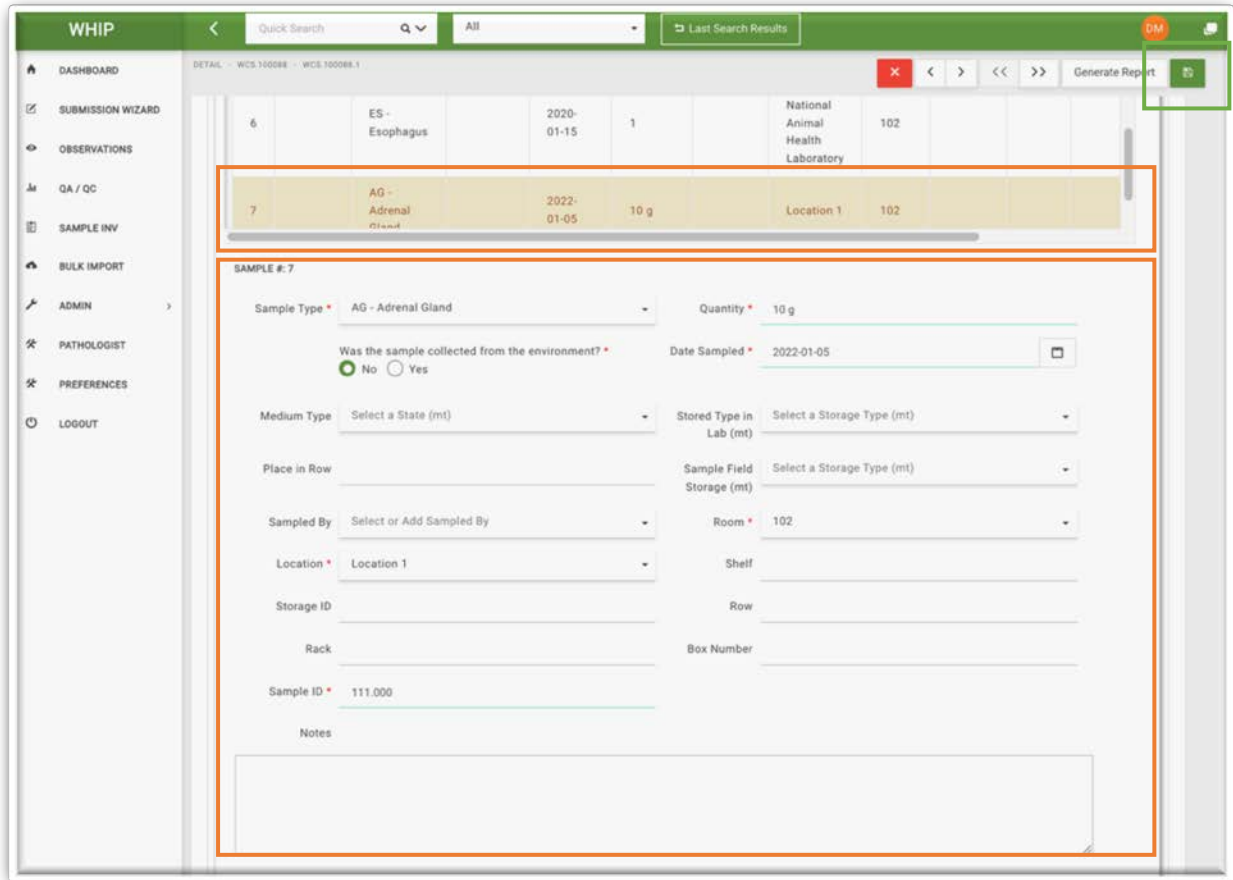
ADDING NEW SAMPLES TO A SPECIMEN

To add a new Samples to a Specimen, find and open the Specimen and go to the “Specimen-Samples” Sub-Tab. When this Sub-Tab is opened, scroll to and select the last row of the Sample Inventory, which will be empty except for a ‘+’ symbol. Once selected, the row will be highlighted in light-brown.

The screenshot displays the WHIP software interface. The top navigation bar includes a search field, a filter dropdown set to 'All', and a 'Last Search Results' button. The left sidebar contains a menu with options like DASHBOARD, SUBMISSION WIZARD, OBSERVATIONS, QA / QC, SAMPLE INV, BULK IMPORT, ADMIN, PATHOLOGIST, PREFERENCES, and LOGOUT. The main content area shows a specimen detail view for 'WCS.100088.1 - Wild Boar' with an Animal ID of 'a01'. The 'SPECIMENS' sub-tab is active, and the 'SAMPLES' sub-tab is selected. A table lists existing samples, with the last row (row 6) highlighted in light brown and containing a '+' symbol. Below the table, a form titled 'SAMPLE #: 7' is visible, containing various input fields for sample details such as Sample Type, Quantity, Date Sampled, Medium Type, Stored Type in Lab, Place in Row, Sampled By, Location, Storage ID, Rack, Sample Field Storage, Room, Shelf, Row, and Box Number.

| Row | Sample Type | Date | Quantity | Lab |
|-----|----------------|------------|----------|--|
| 5 | DM - Dry Meat | 2020-01-14 | 2 | Animal Health Laboratory |
| 6 | ES - Esophagus | 2020-01-15 | 1 | NAHL - National Animal Health Laboratory |
| | + | | | |

Complete the required Fields below the Table while the last row of the Sample Inventory Table is highlighted. Once the mandatory Fields are completed, the “Save” button on the top-right of the screen (transparent) is unlocked and turns green. Click “Save” and check that the new Sample is added to the Sample Inventory. Repeat to add additional samples.



ADDING NEW ENVIRONMENTAL SAMPLES TO AN ENVIRONMENTAL SPECIMEN

To add a new Environmental Samples to an Environmental Specimen, find and open the Environmental Specimen and go to the “Environmental Specimen-Samples” Sub-Tab. When this Sub-Tab is opened, scroll to and select the last row of the Environmental Sample Inventory, which will be empty except for a ‘+’ symbol. Once selected the row will be highlighted in light-brown.

The screenshot shows the WHIP software interface. The top navigation bar includes a search bar and a dropdown menu. The left sidebar contains navigation options like DASHBOARD, SUBMISSION WIZARD, OBSERVATIONS, QA / QC, SAMPLE INV, BULK IMPORT, ADMIN, PATHOLOGIST, PREFERENCES, and LOGOUT. The main content area is divided into several sections:

- SPECIMENS Section:** A table with the following data:

| Environmental Specimen Code | Type | Species | Date Found | Field Storage | How Found |
|-----------------------------|--------------------|--------------------------------|------------|---------------|-----------|
| WCS.100088:1 | AG - Adrenal Gland | | 2021-09-28 | | |
| WCS.100088:2 | FF - Fresh Feces | Wild Boar <i>Sus scrofa</i> | 2021-09-28 | | |
- SAMPLES Section:** A table with the following data:

| Sample ID | Sample Type | Sampled By | Date Sampled | Quantity | Stored Type In Lab (mt) | Location | Room | Storage ID | Shelf | Box Number |
|-----------|--------------------|------------|--------------|----------|-------------------------|------------------|------------------|------------|-------|------------|
| 1 | AG - Adrenal Gland | | 2021-12-27 | 1 mg | | WCS Storage Unit | WCS Storage Unit | | | |
| + | AG - Adrenal Gland | | | | | | | | | |
- SAMPLE # 2 Form:** A form with the following fields:
 - Sample Type: AG - Adrenal Gland
 - Quantity: Don't type 0
 - Was the sample collected from the environment?: No Yes
 - Date Sampled: YYYY-MM-DD
 - Medium Type: Select a State (mt)
 - Stored Type in Lab (mt): Select a Storage Type (mt)
 - Place in Row: [Empty field]
 - Sample Field Storage (mt): Select a Storage Type (mt)
 - Sampled By: Select or Add Sampled By
 - Room: Select or Add Room

Complete the required Fields below the Table while the last row of the Sample Inventory Table is highlighted. Once the mandatory Fields are completed, the “Save” button on the top-right of the screen (transparent) is unlocked and turns green. Click “Save” and check that the new Sample is added to the Sample Inventory. Repeat to add additional samples.

WHIP

Quick Search All Generate Report

DETAIL - WCS 10068 - WCS 10068 1

| Sample ID | Sample Type | Sampled By | Date Sampled | Quantity | Type In Lab (mt) | Location | Room | Storage ID | Shelf | Box Number |
|-----------|--------------------|------------|--------------|----------|------------------|------------------|------------------|------------|-------|------------|
| 1 | AG - Adrenal Gland | | 2021-12-27 | 1 mg | | WCS Storage Unit | WCS Storage Unit | | | |
| 2 | AG - Adrenal Gland | | 2022-01-05 | 1 mg | | WCS Storage Unit | WCS Storage Unit | | | |

SAMPLE # 2

Sample Type * AG - Adrenal Gland Quantity * 1 mg

Was the sample collected from the environment? * No Yes Date Sampled * 2022-01-05

Medium Type Select a State (mt) Stored Type in Lab (mt) Select a Storage Type (mt)

Place in Row Sample Field Storage (mt) Select a Storage Type (mt)

Sampled By Select or Add Sampled By Room * WCS Storage Unit

Location * WCS Storage Unit Shelf

Storage ID Row

Rack Box Number

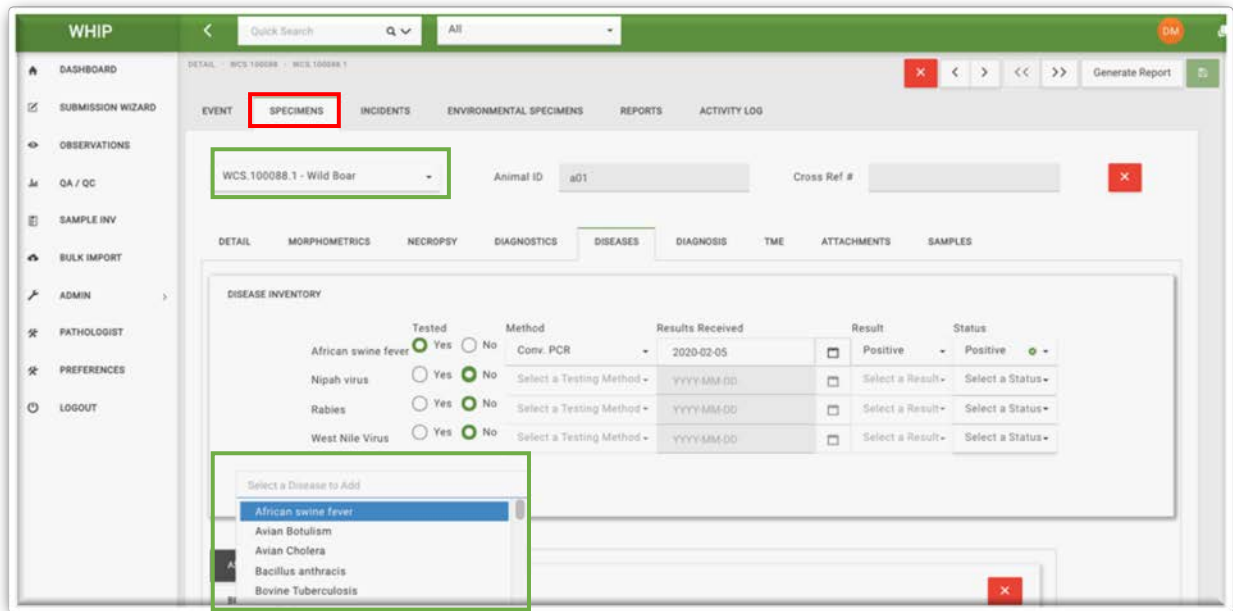
Sample ID * 1111

Notes

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ADDING NEW TESTS TO A SAMPLE

To add a new Pathogen Test to a Sample, find and open the Specimen sourcing the Sample and go to the “Specimen-Diseases” Sub-Tab. At the bottom of the **Disease Inventory** there is a “Select a Disease to Add” Field. Click on the down arrow at the right of that Field and select the desired pathogen.



The Pathogen Tabs, Pathogen Test Frames, and their Fields are located below the Disease Inventory. If it is the first time a disease is selected for the current Specimen, then a new Pathogen Tab will be added with the corresponding acronym. Click on this Tab to open the new Pathogen Test Frame for the selected disease with empty Fields. If it is not the first time the disease is selected for the current Specimen, click on the corresponding Pathogen Tab and go to the new Pathogen Test Frame with empty Fields at the bottom of the Graphical User Interface.

The image shows two overlapping windows for 'AFRICAN SWINE FEVER - TEST #1' and 'AFRICAN SWINE FEVER - TEST #2'. A sidebar on the left lists disease categories: ASF, TB, BRUC, NIV, RABIES, and WNV. The ASF category is highlighted with a green box. The top window (TEST #1) is filled with data: Testing Lab is 'NAHL-National Animal Health Laboratory' (with a green checkmark), Lab Reference Number is empty, Sent For Testing is '2020-01-30', Results Received is '2020-02-05', Sample Source is 'BW - Whole Blood (A01-BI-VTM)', Testing Method is 'Conv. PCR', and Test Result is 'Positive'. The bottom window (TEST #2) is empty, with placeholder text for all fields and a red 'X' in the top right corner.

Complete the mandatory Fields of the Pathogen Test to unlock (from transparent to green) the “Save” button on the top-right corner of the screen. Click on “Save” and check that the new Pathogen Test has been saved. If a Pathogen Test has been saved a new row in the Disease Inventory Table will appear. Repeat to add additional tests.

DETAIL - WCS.100088 - WCS.100088.1

X
<
>
<<
>>
Generate Report
📄

BRUC

NIV

RABIES

WNV

Lab Reference Number

Sent For Testing: 2020-01-30 🗓

Results Received *: 2020-02-05 🗓

Sample Source *: BW - Whole Blood (A01-BI-VTM) ● ▾

Testing Method *: Conv. PCR ▾

Test Result *: Positive ▾

Notes:

AFRICAN SWINE FEVER - TEST #2 X

Testing Lab: Select a Testing Lab ▾ + ✎

Lab Reference Number

Sent For Testing: YYYY-MM-DD 🗓

Results Received *: 2022-01-05 🗓

Sample Source *: Fe - Feces (A01-Fe-Plain) ● ▾

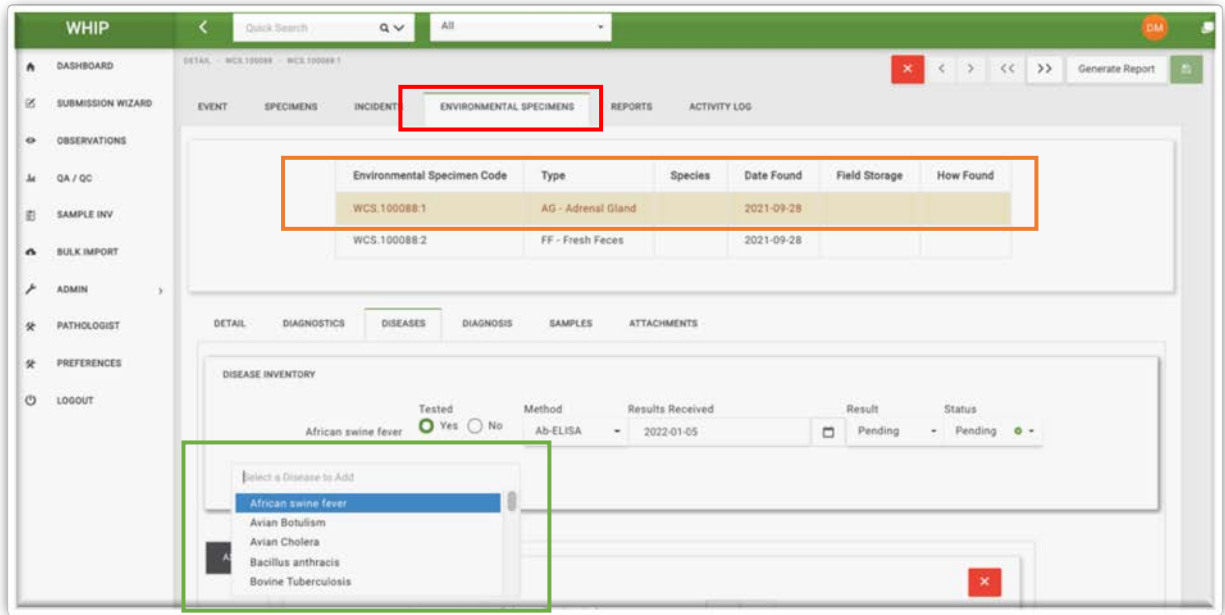
Testing Method *: Ab-ELISA ▾

Test Result *: Inconclusive ▾

Notes:

ADDING NEW TESTS TO AN ENVIRONMENTAL SAMPLE

To add a new Pathogen Test to an Environmental Sample, find and open the Environmental Specimen sourcing the Environmental Sample and go to the “Environmental Specimen-Diseases” Sub-Tab. At the bottom of the Disease Inventory there is a **“Select a Disease to Add”** Field. Click on the down arrow at the right of that Field and select the desired pathogen.



The Pathogen Tabs, Pathogen Test Frames, and their Fields are located below the Disease Inventory. If it is the first time a disease is selected for the current Specimen, then a new Pathogen Tab will be added with the corresponding acronym. Click on this Tab to open the new Pathogen Test Frame for the selected disease with empty Fields. If it is not the first time the disease is selected for the current Specimen, click on the corresponding Pathogen Tab and go to the new Pathogen Test Frame with empty Fields at the bottom of the Graphical User Interface.

The image displays a software interface for managing African Swine Fever (ASF) tests. On the left, a sidebar menu lists various diseases: ASF (highlighted), TB, BRUC, NIV, RABIES, and WNV. The main area contains two forms, 'AFRICAN SWINE FEVER - TEST #1' and 'AFRICAN SWINE FEVER - TEST #2'. The first form is populated with the following data:

- Testing Lab: NAHL-National Animal Health Laboratory
- Lab Reference Number: (empty)
- Sent For Testing: 2020-01-30
- Results Received: 2020-02-05
- Sample Source: BW - Whole Blood (A01-BI-VTM)
- Testing Method: Conv. PCR
- Test Result: Positive
- Notes: (empty)

The second form, 'AFRICAN SWINE FEVER - TEST #2', is a template with the following fields:

- Testing Lab: Select a Testing Lab
- Lab Reference Number: (empty)
- Sent For Testing: YYYY-MM-DD
- Results Received: YYYY-MM-DD
- Sample Source: Select a Sample Source
- Testing Method: Select a Testing Method
- Test Result: Select a Result
- Notes: (empty)

A red 'X' button is located in the top right corner of both forms, indicating a save or close function.

Complete the mandatory fields of the Pathogen Test to unlock (from transparent to green) the “Save” button on the top-right corner of the screen. Click on “Save” and check that the new Pathogen Test has been saved. If a Pathogen Test has been saved a new row in the Disease Inventory Table will appear. Repeat to add additional tests.

DETAIL - WCS.100058 - WCS.100058.1

Generate Report

BRUC

NIV

RABIES

WNV

Lab Reference Number

Sent For Testing 2020-01-30

Results Received * 2020-02-05

Sample Source * BW - Whole Blood (A01-BI-VTM)

Testing Method * Conv. PCR

Test Result * Positive

Notes

AFRICAN SWINE FEVER - TEST #2

Testing Lab Select a Testing Lab

Lab Reference Number

Sent For Testing YYYY-MM-DD

Results Received * 2022-01-05

Sample Source * Fe - Feces (A01-Fe-Plain)

Testing Method * Ab-ELISA

Test Result * Inconclusive

Notes

ADDING NECROPSY DATA TO A SPECIMEN

To add necropsy data to a Specimen, find and open the Specimen sourcing the carcass necropsied and go to the “Specimen-Necropsy” Sub-Tab. Complete the Fields in the Necropsy Frame.

The screenshot displays a software interface for specimen management. At the top, there is a search bar with '458' and 'All' filters, and a 'Last Search Results' button. Below this, a navigation bar includes 'EVENT', 'SPECIMENS' (highlighted with a red box), 'INCIDENTS', 'ENVIRONMENTAL SPECIMENS', 'REPORTS', and 'ACTIVITY LOG'. The main content area shows specimen details: 'WCS.100458.1 - Brown Rat', 'Animal ID: WVN-R326', and 'Cross Ref #'. Below the details, a sub-tab bar includes 'DETAIL', 'MORPHOMETRICS', 'NECROPSY' (highlighted with a blue box), 'DIAGNOSTICS', 'DISEASES', 'DIAGNOSIS', 'TME', 'ATTACHMENTS', and 'SAMPLES'. The 'NECROPSY' form is highlighted with an orange border and contains the following fields:

| | | | |
|-------------------------|------------------------------------|---------------------|------------------------------|
| Necropsy Date * | YYYY-MM-DD | Necropsy Level * | Select a Necropsy Level - |
| Performed By * | Select who performed Necropsy- + / | Necropsy Location | Select a Necropsy Location - |
| Carcass Condition Score | Select Carcass Condition Score - | Necropsy Laboratory | Select a Necropsy Lab- + / |
| Carcass Field Storage | Select a Carcass Field Storage - | | |

The “Primary Necropsy” and “Secondary Necropsy” text boxes are located below the Necropsy Frame. Use the “Primary Necropsy” to record the findings of the first necropsy conducted with the carcass of the Specimen. Follow the instructions in the text box to enter the findings per body system. If a “Secondary Necropsy” is conducted with the carcass, use the “Secondary Necropsy” text box and follow the instructions provided to enter the findings per body system.

Primary Necropsy

Gastrointestinal System (esophagus, stomach, intestine, feces, pancreas, liver, gallbladder): your findings;

Urinary System (kidneys, ureter, urinary bladder, urethra): your findings;

Reproductive System (ovaries, uterus, testes, epididymis, prostate, presence of fetus): your findings;

Lymphatic System (spleen, lymph nodes): your findings;

Endocrine System (thyroid/parathyroid, adrenal, pituitary): your findings;

Nervous System (brain, spinal cord, peripheral nerves): your findings;

Conclusion: your findings;

Secondary Necropsy

#Describe necropsy findings for each item. Make sure to type the findings between the ":" and the ";" (basically replace "your findings" text with your own data) in each system. It is key to:

- i) Leave the ";" at the end of each section as the last character without a preceding space
- ii) Do not use ";" or ":" when writing the findings
- iii) Replace "your findings" with "NA" if the system is not assessed or "NAF" if no abnormal finding
- iv) Do not delete the instructions including this line and start after this line//

External Signs On Carcass: your findings;

Nutritional Condition (Emaciated/Thin/Normal/Overweight/Obese): your findings;

Eyes: your findings;

Ears: your findings;

Nostrils: your findings;

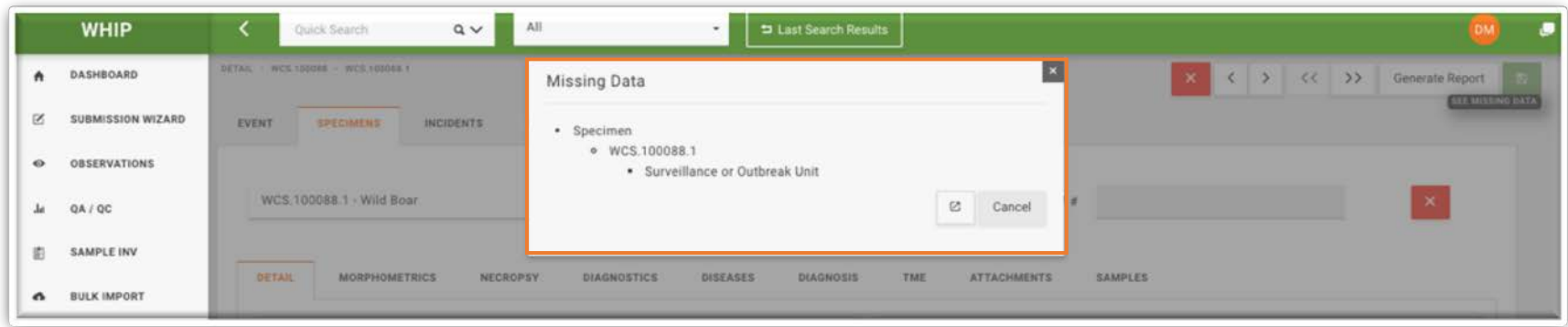
Once the necropsy data has been completed, click on the "Save" button on the top-left corner of the screen.

EDITING EVENTS, OBSERVATIONS, SPECIMENS, AND ENVIRONMENTAL SPECIMENS

To edit Events, Observations, Specimens, and Environmental Specimens, find them using the quick search or advanced queries and navigate to the corresponding Tab (Event, Observation, Specimen, and Environmental Specimen) and Sub-Tab containing the Field(s) to edit (add or modify the corresponding Field data). Modifying the content of at least one Field will unlock the “Save” button on the top-right corner of the screen. Click on this button to save the edited information. If a mandatory Field is missing information after the editing, the corresponding Tab(s) and Sub-Tab(s) holding this Field will turn orange and the “Save” button remains locked with the message “See Missing Data”. See an example in the image below.

The screenshot displays the WHIP system interface for editing a specimen record. The top navigation bar includes a search bar, a dropdown menu set to 'All', and a 'Last Search Results' button. The left sidebar contains various navigation options such as 'DASHBOARD', 'SUBMISSION WIZARD', 'OBSERVATIONS', 'QA / QC', 'SAMPLE INV', 'BULK IMPORT', 'ADMIN', 'PATHOLOGIST', 'PREFERENCES', and 'LOGOUT'. The main content area shows the specimen details for 'WCS.100088.1 - Wild Boar' with fields for 'Animal ID' (a01) and 'Cross Ref #'. The 'SPECIMENS' tab is highlighted in orange, and the 'DETAIL' sub-tab is highlighted in blue. The 'Save' button is locked with the message 'SEE MISSING DATA'. The form includes fields for 'Animal ID', 'Species' (Wild Boar, *Sus scrofa*), 'Age Category' (Adult), and 'Age (years)'. There are also sections for 'Project Tags' and 'Tags'.

To find which Field(s) prevent(s) the “Save” button from unlocking click on the “See Missing Data” message.

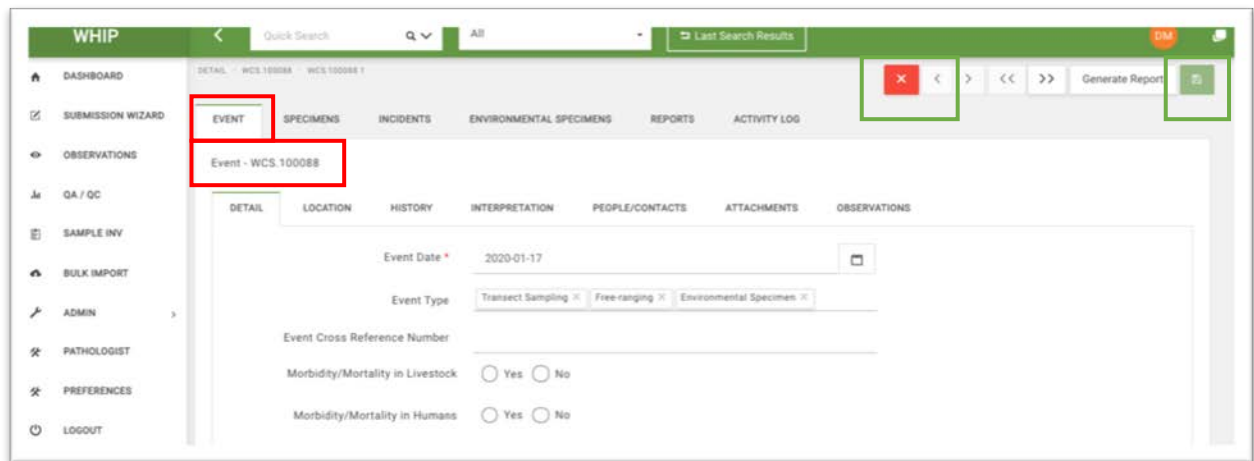


To unlock the “Save” button, complete the Fields indicated in the “Missing Data” Window. Save the edited data.

DELETING DATA

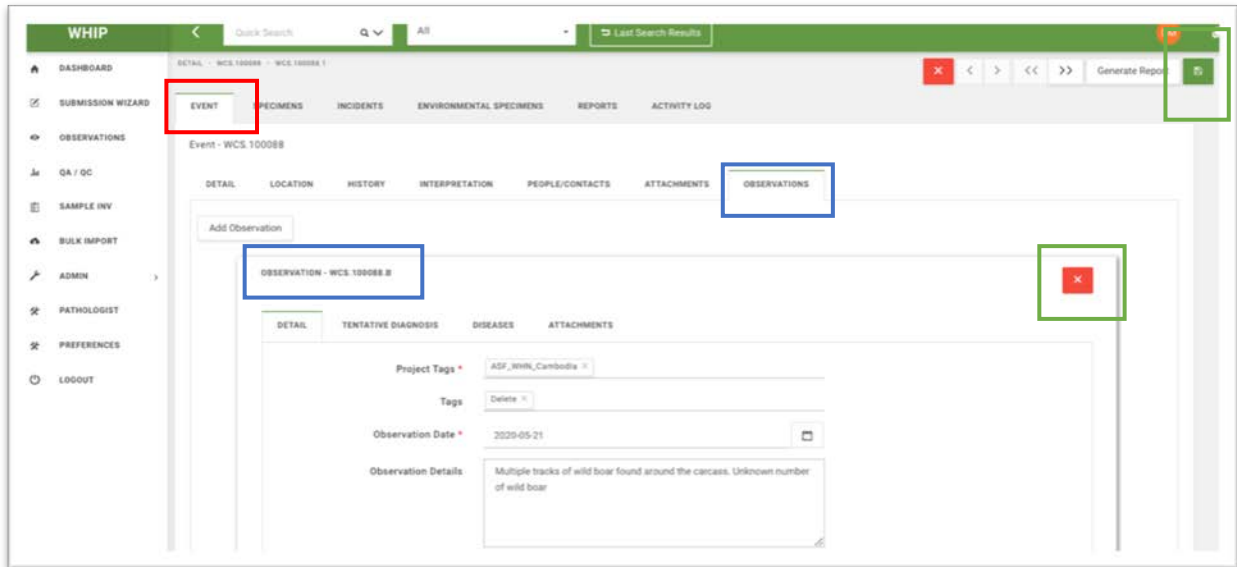
DELETING EVENTS

To delete an entire Event, go to the Event Tab to check the current Event displayed. Click on the red-cross in the top-right of the Graphical User Interface. Then, confirm the deletion in message displayed. Click the “Save” button on the top-right of the screen.



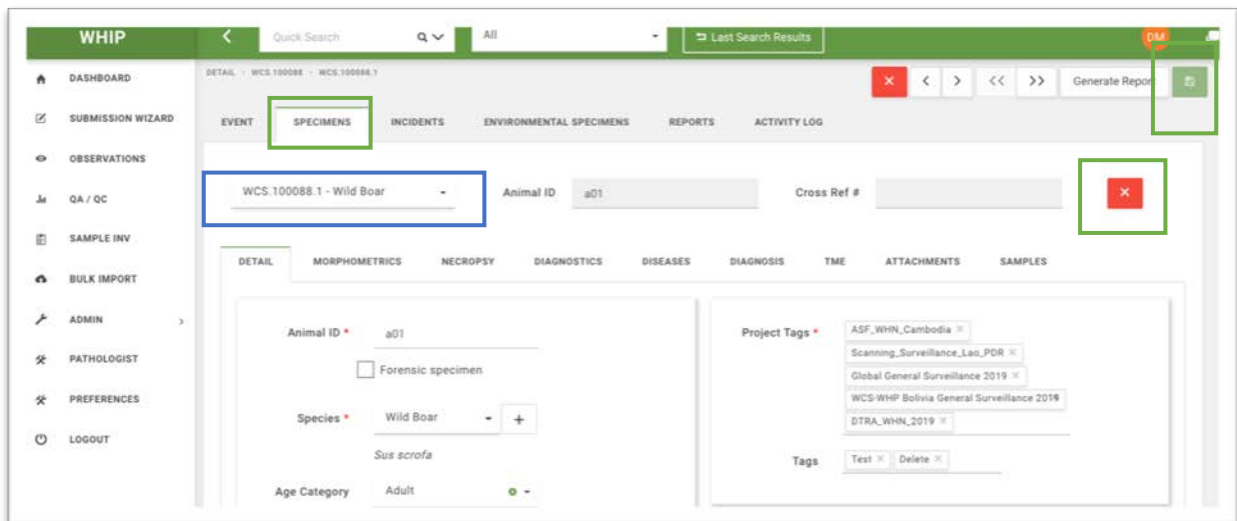
DELETING OBSERVATIONS

To delete an Observation, go to the Event-Observations Sub-Tab. Find the Frame of the Observation to be deleted and click on the red-cross in the top-right of the corresponding Frame. Then, confirm the deletion in message displayed. Click the “Save” button on the top-right of the screen.



DELETING SPECIMENS

To delete a Specimen, go the Specimens Tab. Select the appropriate Specimen of the current Event using the Specimen Menu. Then click on the red-cross in the top-right of the corresponding Frame. Confirm the deletion in message displayed. Click the “Save” button on the top-right of the screen.



DELETING ENVIRONMENTAL SPECIMENS

To delete an Environmental Specimen, contact your WHIP focal point. This function will be added in the short-term.

DELETING SAMPLES OR ENVIRONMENTAL SAMPLES

To delete a Sample or Environmental sample, contact your WHIP focal point. This function will be added in the short-term.

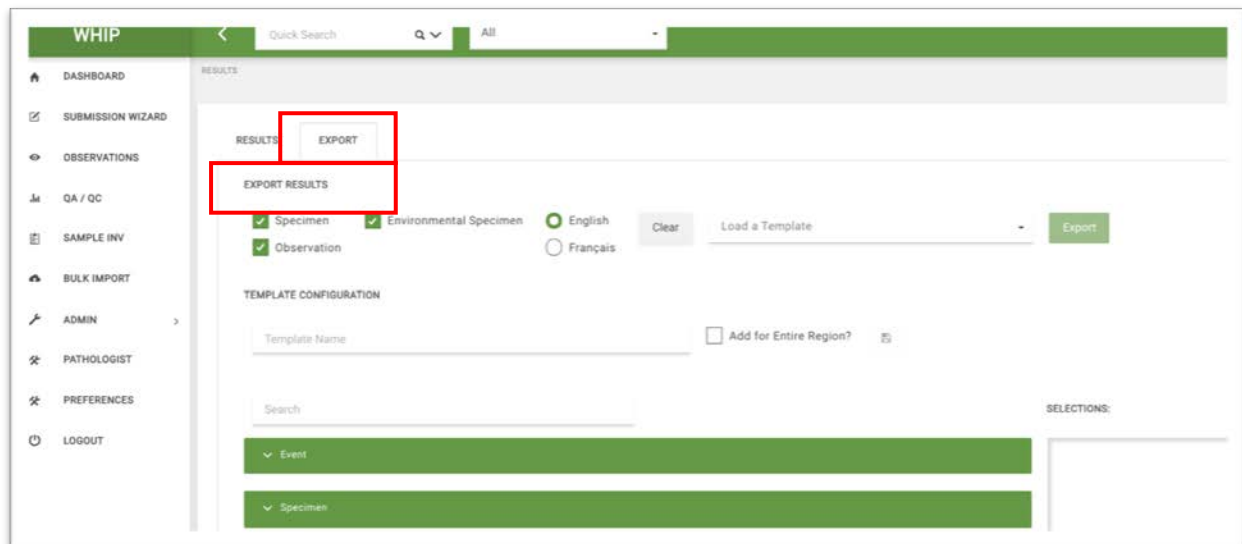
DELETING TESTS

To delete a Pathogen Test conducted on a specific Sample or Environmental Sample, go to the Specimen-Diseases Sub-Tab or Environmental Specimen- Diseases Sub-Tab. Select the appropriate Pathogen Tab holding the Pathogen Test to be deleted. Find the specific Pathogen Test for the selected disease based on the Fields of the Pathogen Test Frames. Click on the red-cross in the top-right of the corresponding Pathogen Test Frame. Confirm the deletion in message displayed. Click the “Save” button on the top-right of the screen.

The screenshot displays the WHIP system interface. The top navigation bar includes a search bar and a 'Last Search Results' button. The left sidebar contains a navigation menu with options like DASHBOARD, SUBMISSION WIZARD, OBSERVATIONS, QA / QC, SAMPLE INV, BULK IMPORT, ADMIN, PATHOLOGIST, PREFERENCES, and LOGOUT. The main content area is divided into several tabs: EVENT, SPECIMENS (highlighted with a red box), INCIDENTS, ENVIRONMENTAL SPECIMENS, REPORTS, and ACTIVITY LOG. Below the tabs, there is a form for specimen details, including 'WCS.100088.1 - Wild Boar', 'Animal ID: a01', and 'Cross Ref #'. The 'DISEASES' sub-tab is highlighted with a blue box. Below this, a 'DISEASE INVENTORY' table is shown with columns for 'Tested', 'Method', 'Results Received', 'Result', 'Status', 'Sample Source', and 'Sample ID'. The table lists diseases such as African swine fever, Nipah virus, Rabies, and West Nile Virus. Below the table, there is a 'Select a Disease to Add' dropdown. At the bottom, a detailed view for 'AFRICAN SWINE FEVER' is shown, including fields for 'Testing Lab', 'Lab Reference Number', 'Sent For Testing', 'Results Received', 'Sample Source', 'Testing Method', and 'Test Result'. A red 'X' button is located in the top right corner of this detailed view frame, highlighted with a red box.

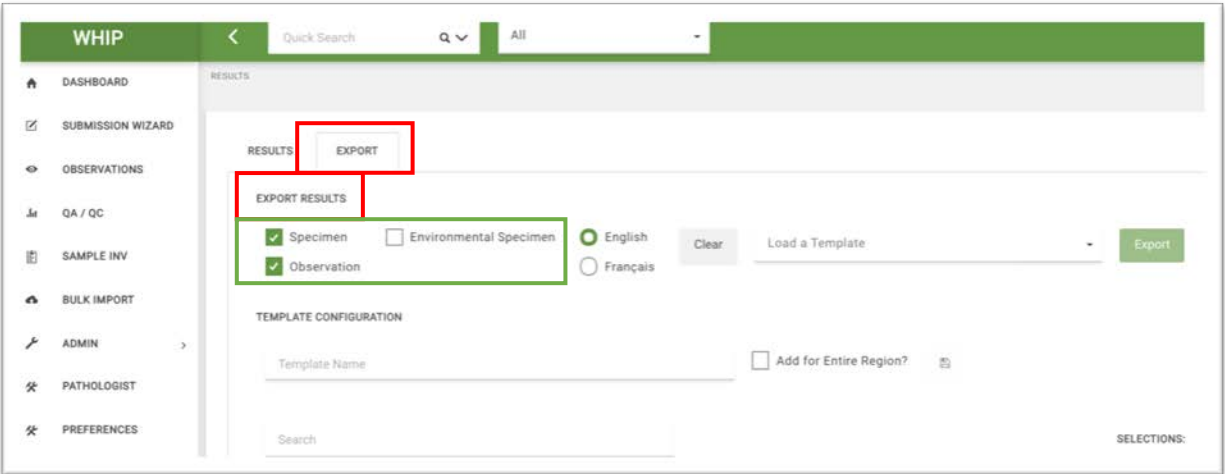
EXPORT DATA FROM WHIP

WHIP can export data to an Excel file that can be opened, manipulated, and analyzed in Excel or imported into any other statistical software. To export data from WHIP, use the Quick Search or the Advance Queries tool. Once the “**Results**” Window is displayed, select the “**Export**” Tab to open the “**Export Results**” Frame. In this Tab it is possible to: i) select the export of Observations, Specimens, or Environmental Specimens; ii) select the language of the export (English or French); and iii) prepare, save, and load an export template configuration. Complete these steps to configure the Excel file with the exported data.



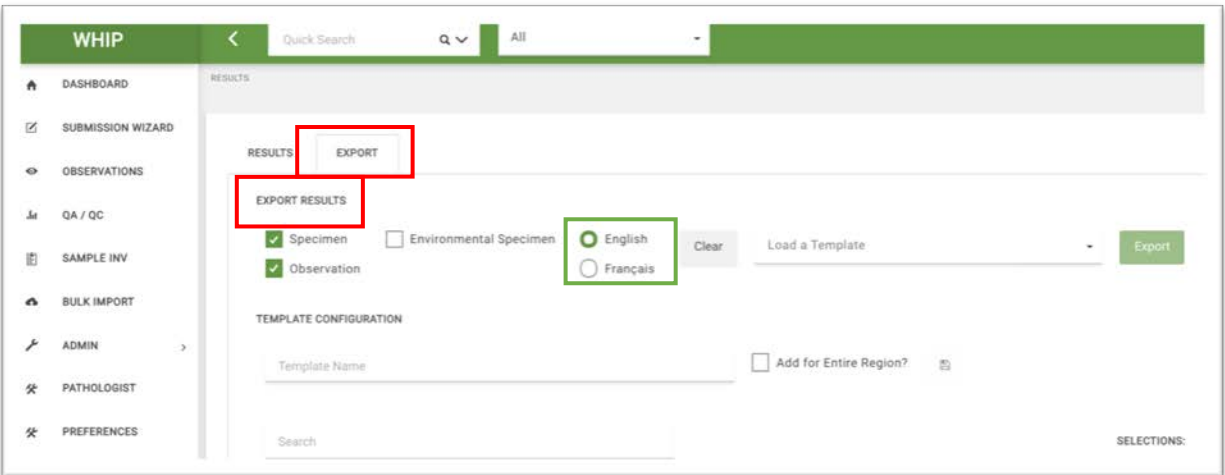
SELECT TO EXPORT OBSERVATIONS, SPECIMENS, OR ENVIRONMENTAL SPECIMENS

To choose the export of Observations, Specimens, or Environmental Specimens, click on the corresponding checkmarks on the top-left of the **Export Results** Frame. For example, click on the Observations and Specimens checkmarks to export data of the Events, Observations, and Specimens only.



SELECT THE LANGUAGE OF THE EXPORT TEMPLATE

To select the language of the export template click on the English or French options on the top of the **Export Results** Frame. For example, selecting English:

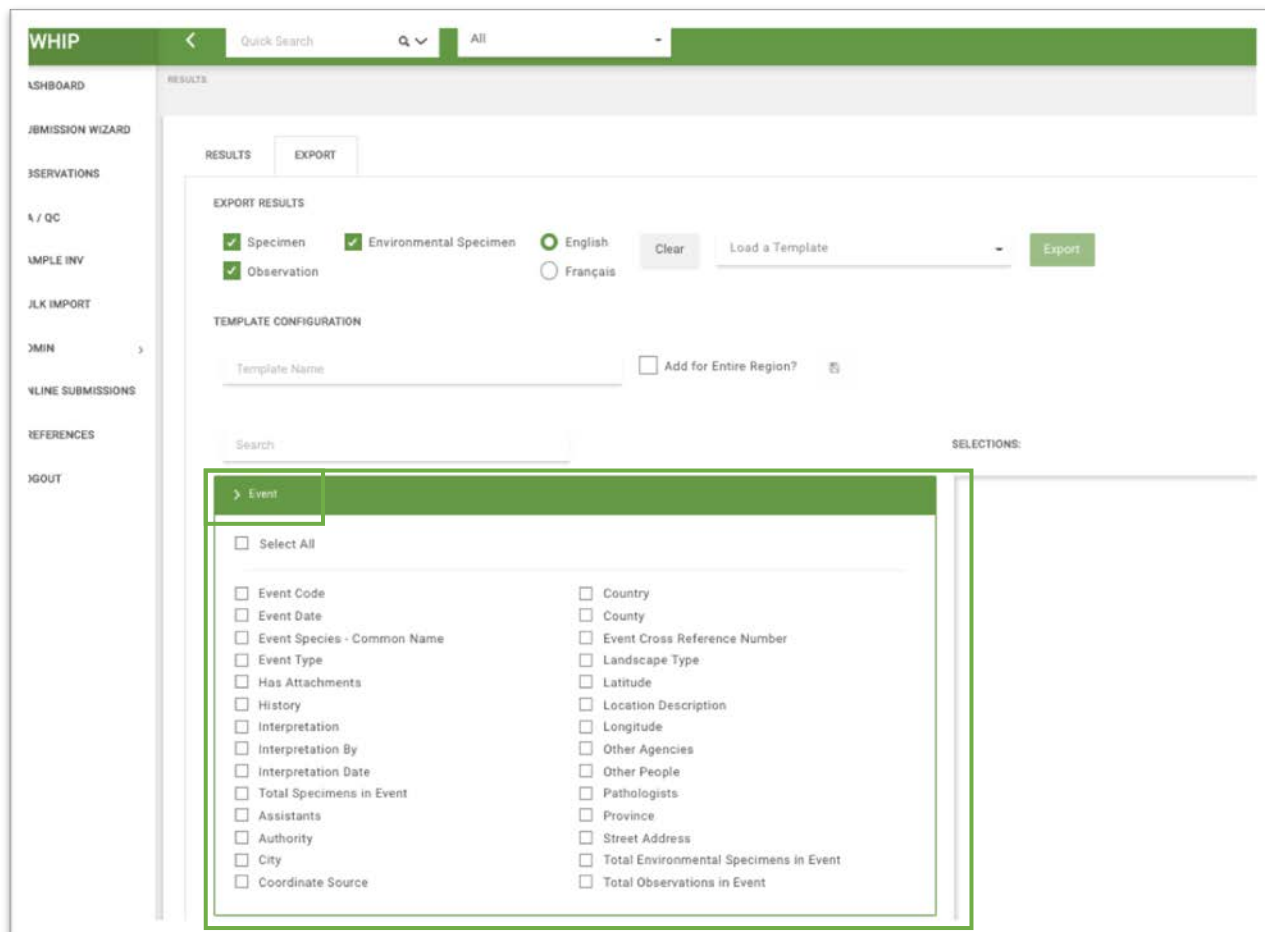


CREATE THE EXPORT TEMPLATE CONFIGURATION

WHIP can create a customized export template. Here users can select which Fields are included in the exported Excel file and the order of the columns. In the **Export Results** Frame, the Fields are grouped in the Sub-Frames “Event”, “Observation”, “Specimen”, “Environmental Specimen”, “Identifiers”, “Diagnostics”, “Pathology”, “Necropsy”, “TME”, “Diagnosis”, “Sample Inventory”, “Diseases”, and “Metadata”:

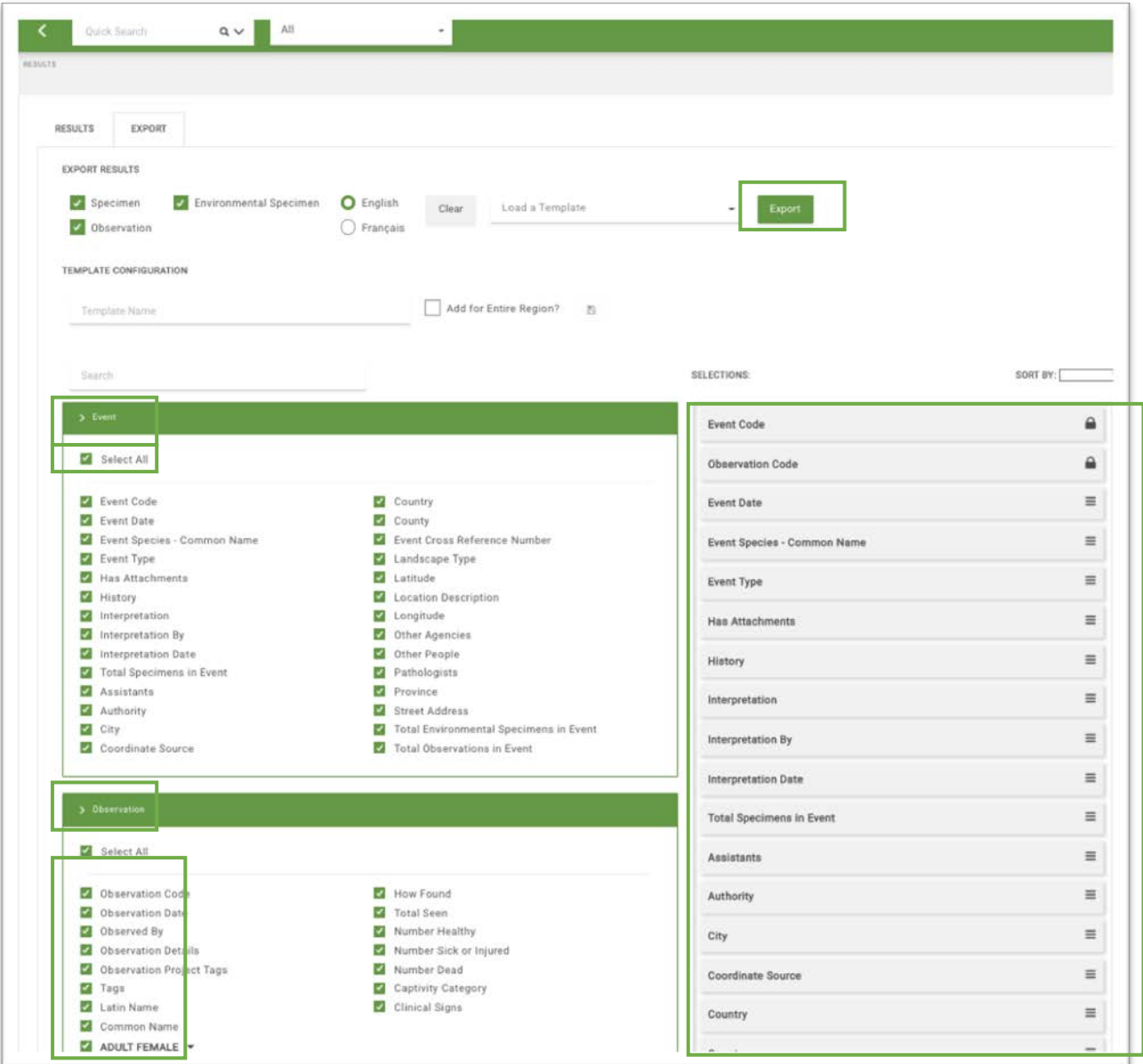
The screenshot displays the 'EXPORT RESULTS' configuration page. At the top, there are two tabs: 'RESULTS' and 'EXPORT', with 'EXPORT' selected and highlighted by a red box. Below the tabs, the 'EXPORT RESULTS' section is highlighted with a green box. It contains several options: 'Specimen' (checked), 'Environmental Specimen' (checked), 'English' (selected radio button), 'Clear' button, 'Load a Template' dropdown menu, and 'Français' (unselected radio button). An 'Export' button is located to the right. Below this is the 'TEMPLATE CONFIGURATION' section, which includes a 'Template Name' input field and an 'Add for Entire Region?' checkbox. The main area is divided into two columns: 'FIELDS' on the left and 'SELECTIONS' on the right. The 'FIELDS' column contains a list of sub-frames, each with a green bar and a downward arrow: Event, Observation, Specimen, Environmental Specimen, Identifiers, Diagnostics, Necropsy, TME, Diagnosis, Sample Inventory, Diseases, and Metadata. A green box highlights the entire 'FIELDS' and 'SELECTIONS' area.

Click on the down arrow of the Sub-Frames to display the Fields within each (see below):



In each Sub-Frame, users can select specific Fields by clicking on the checkmark boxes to the left of each Field name. Refer to the [Data Dictionary](#) for details on any specific Field. All the Fields in a Sub-Frame can be selected by clicking “Select All”. Specific Fields can be searched across the Sub-Frames by typing key search words in the “Search” bar above. For example, typing “Specimen” returns all the Fields in the Specimen Sub-Frame and all Fields with this word in their name in the remaining Sub-Frames.

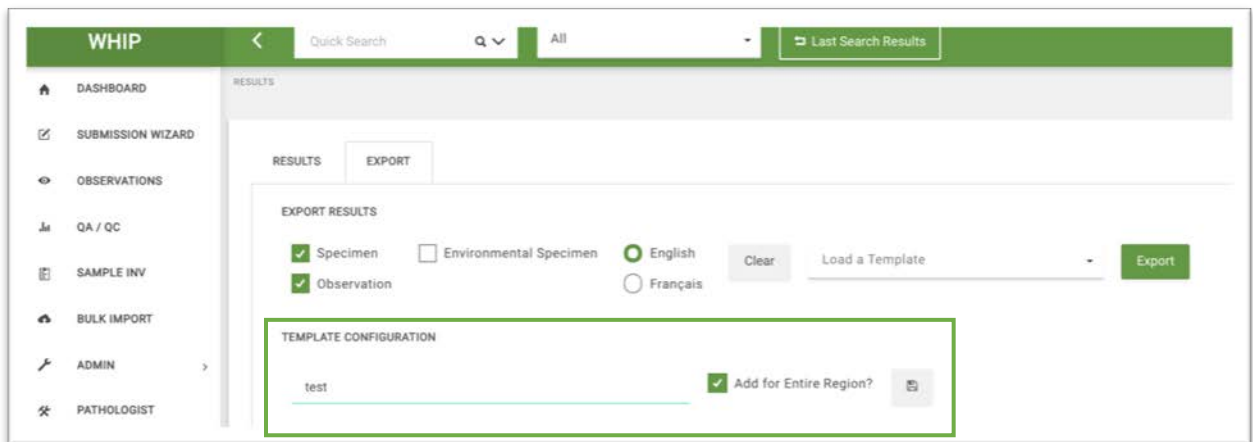
Selected Fields are shown in the “**Selections**” Frame on the right as buttons. The order of the columns on the exported Excel file is modified by moving the grey buttons within the “**Selections**” Frame up and down. The order of buttons with a lock icon, such as the Event Code, cannot be modified. To move a button, click and drag it to the desired position, and release. For example, the selection of all the Fields under the “Event” Sub-Frame and the first two Fields under the “Specimen” Sub-Frame look like this:



The exported Excel file will have three sheets (the “Observations sheet, the “Specimen” sheet and the Environmental Specimens sheet) with all the Fields in English. All the Event-associated Fields under the “Event” Sub-Frame are repeated in both sheets and the “Date Created”, “Detail”, “Name”, and “Age” Fields of the “Specimen” Sub-Frame are only present in the “Specimens” sheet. The order of the columns in the exported Excel file will follow the order shown in the “Selections” Frame starting with “Event Code”. To export the formatted Excel file, click on the “Export” button above the “Selections” Frame (see above).

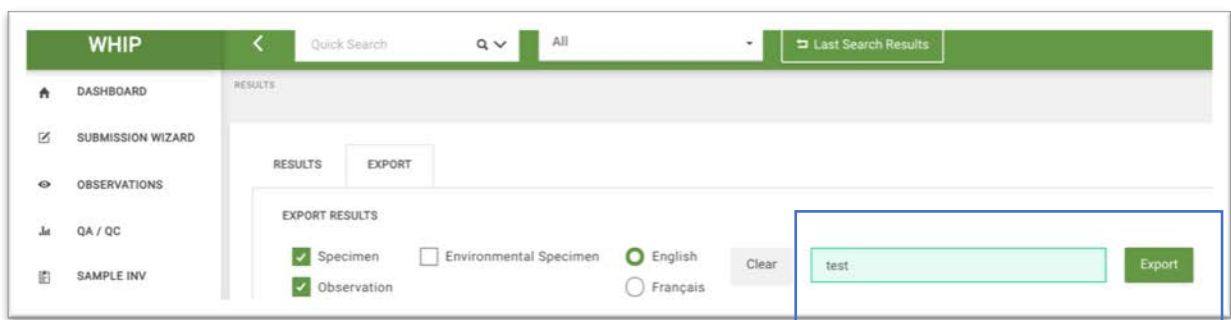
SAVE THE EXPORT TEMPLATE CONFIGURATION

To save the Export Template Configuration, go to the Template Configuration Area in the **Export Results** Frame and name the Export Template Configuration. Naming the Export Template Configuration unlocks the button with floppy disk icon to the right. Check the “Add for the Entire Region?” button to make the template available for all the users that have the same data permissions, and click on the grey button with a floppy disk icon to save.



LOAD THE EXPORT TEMPLATE CONFIGURATION

To use an Export Template Configuration again, use the “Load a Template” bar left to the “Export” button of the “Export Results” Frame. Type the name of the “Export Template Configuration” to use and click on the “Export” button. Users can search for templated created by other users that have the same data permissions.



SPECIAL FIELDS IN WHIP

PROJECT TAGS

Project Tags is a field available in the Event-Observations-Detail secondary Sub-Tab, the Specimens-Detail Sub-Tab, and the Environmental Specimens-Detail Sub-Tab. It functions to **categorize Observations, Specimens, and Environmental Specimens into different funding sources, surveillance types, and structured studies.**

Every Observation, Specimen, and Environmental Specimen should receive a Project Tag for the funding agency and at least one Project Tag for the surveillance type. The funding agency Project Tag has the structure “Agency_Group_Year” with “Agency” representing an acronym of the funding agency or donor supporting the surveillance activities (e.g., “DTRA” for the Defense Threat Reduction Agency). The “Group” corresponds to the network or agency responsible for managing wildlife surveillance (e.g., “WHN” in the case of “WildHealthNet” or “CWHC” in the case of the Canadian Wildlife Health Cooperative in Canada), and “Year” represents the starting year of the surveillance activities funded by the “Agency”. For example, “DTRA_WHN_2019” categorizes Observations, Specimens, or Environmental Specimens that were observed or collected as part of surveillance activities funded by DTRA that started in 2019.

The surveillance types are **Targeted Surveillance, Outbreak Investigation, and Scanning Surveillance.**

Targeted Surveillance is an activity designed to identify a specific pathogen in sick, dead, or healthy wild species, in their products (e.g., feces), or in potential fomites (e.g., water or soil). These activities do not respond to a spatio-temporal cluster of sick, dead, or healthy animals, but they are based on planned field trips to a wetland, market, rehabilitation center, protected area, etc. Observations, Specimens, and Environmental Specimens collected during these field trips receive a “Targeted Surveillance” Project Tag. These Project Tags follow the structure “Pathogen/Toxin_Group_Country” with “Pathogen/Toxin” representing an acronym of the pathogen or toxin searched for (e.g., “AIV” for Avian Influenza virus and “ASF” for African Swine Fever). The “Group” corresponds to the network or agency responsible for managing wildlife surveillance (e.g., “WHN” in the case of “WildHealthNet” or “CWHC” in the case of the Canadian Wildlife Health Cooperative in Canada), and “Country” represents the country where the surveillance activity was conducted. For example, “AIV_WHN_Cambodia” categorizes Observations, Specimens, or Environmental Specimens that were observed or collected as part of targeted surveillance for Avian Influenza virus conducted by WildHealthNet in Cambodia.

Outbreak Investigation is an activity designed to identify the cause of disease, injury, or death of a spatio-temporal cluster of sick or dead wild animals. Observations, Specimens, and Environmental Specimens collected during these surveillance activities receive a “Outbreak Investigation” Project Tag. These Project Tags follow the structure “Outbreak_Group_Country” with “Outbreak” fixed, “Group” corresponding to the network or agency responsible for managing wildlife surveillance (e.g., “WHN” in the case of “WildHealthNet” or “CWHC” in the case of the Canadian Wildlife Health Cooperative in Canada), and “Country” representing the country where the outbreak investigation was conducted. For example, “Outbreak_WHN_Laos” categorizes Observations, Specimens, or Environmental Specimens that were observed or collected as part of an outbreak investigation conducted by WildHealthNet in Laos.

Scanning Surveillance is the opportunistic recording, collection, and sampling of wild animals, their products (e.g., feces), or potential carriers of harmful pathogens or toxins (e.g., water, soil, vectors). This activity could happen when a wildlife health team is conducting Targeted Surveillance activities or an Outbreak Investigation or while other groups whose primary mandate is not wildlife health surveillance are working on locations with access to wildlife, their products, or potential carriers of harmful pathogens or toxins. For example, Observations, Specimens, and Environmental Specimens, such as dead wild boars or wild boar feces opportunistically recorded or collected while a wildlife health team is conducting targeted surveillance for New Castle Disease in a wetland with waterfowl or an Avian Influenza Virus outbreak investigation in wild birds. Additional examples include the recording and sampling of dead tigers by Rangers patrolling a protected area or a dead tortoise at a rehabilitation center sent to a wildlife health team for necropsy. Observations, Specimens, and Environmental Specimens opportunistically collected receive a “Scanning Surveillance” Project Tag with the structure “Scanning_Surveillance_Country” with “Scanning_Surveillance” fixed and “Country” representing the country where the opportunistic collection occurred. For example, “Scanning_Surveillance_Vietnam” categorizes Observations, Specimens, or Environmental Specimens that were opportunistically observed or collected in Vietnam.

A Structured Study is the recording, collection, and sampling of wild animals, their products (e.g., feces), or potential carriers of harmful pathogens or toxins (e.g., water, soil, vectors) under a specific design. The design could involve repeated sampling across different and consistent study units (e.g., traps within sample locations, sample locations within grid cells, grid cells within seasons). In this case, Observations, Specimens, and Environmental Specimens receive a “Structured Study” Project Tag with the structure “Host/Reservoir/Fomite_Pathogen/Toxin_Country_Year”. Within the Project Tag structure “Host/Reservoir/Fomite” represents the taxa of surveyed host, biotic or abiotic reservoir, or

potential abiotic fomite (e.g. “Wetland” for studies sampling wetland sediment or water). “Pathogen/Toxin” represents an acronym of the pathogen or toxin searched for in the study (e.g., “AIV” for Avian Influenza virus and “ASF” for African Swine Fever). “Country” represents the country where the study was conducted and “Year” represents the starting year of the study. A structured study receives its own Project Tag in addition to those of the funding agency and type of surveillance. For example, a structured study in Vietnam that started in 2020 to assess Avian Influenza virus seasonally in two wetlands with repeated sampling locations receives the Project Tag “Wetland_AIV_Vietnam_2020”.

Project Tags is a fixed multi-choice field so several options can be given. Each Observation, Specimen, and Environmental Specimen receive at least one funding agency Project Tag and at least one surveillance type Project Tag. However, more than two Project Tags are sometimes required. For example, rodents sampled in a market during surveillance activities targeting *Rickettsia* sp. and coronaviruses receive the Project Tags “Rickettsia_WHN_Country” and “Corona_WHN_Country” for a total of three Project Tags.

Fixed multi-choice attributes do not allow the addition of new options by users, so to add new Project Tags (funding agencies or surveillance types) contact the WHIP data focal point or an administrator. Project Tag creation requires providing metadata following the guidance in this [document](#). Once proposed Project Tags are assessed for appropriateness and metadata quality are approved they will be added to the list of options.

IDENTIFIERS

Identifiers are a special type of field in WHIP for Observations, Specimens, and Environmental Specimens (“Detail” Sub-Tab) that only appear when Targeted Surveillance, Outbreak Investigation, or Structured Study Project Tags are selected. Identifiers depend on these Project Tags. Compare the two images below:

DETAIL DIAGNOSTICS DISEASES DIAGNOSIS SAMPLES ATTACHMENTS

ENVIRONMENTAL SPECIMEN - WCS.100088:1

Project Tags *

Species - +

Type * -

Field Storage -

Notes

DETAIL DIAGNOSTICS DISEASES DIAGNOSIS SAMPLES ATTACHMENTS

ENVIRONMENTAL SPECIMEN - WCS.100088:1

Project Tags *

AIV_WHN_VIETNAM

Surveillance or Outbreak Unit -

Species - +

Type * -

Field Storage -

Notes

Adding the Project Tag “AIV_WHN_Vietnam” (targeted surveillance for Avian Influenza by WildHealthNet in Vietnam) displays the “Surveillance or Outbreak Unit” field immediately below. “Surveillance or Outbreak Unit” is used to categorize Observations, Specimens, and Environmental Specimens in specific Targeted Surveillance activities (e.g., field trips or missions) or specific Outbreak Investigations. The “Surveillance or Outbreak Unit” follows the format “Key_Place_Month_Year”. “Key” refers to a keyword that helps quickly identify the Targeted Surveillance or Outbreak, for example, “Powerlines”, the name of a Market, or the main taxa involved in an outbreak. “Place” is where the surveillance activity or outbreak occurred. “Month” and “Year” provide information of the date of the surveillance activity or outbreak with a written and numeric formats, respectively (e.g., “January” and 2019).

The Surveillance or Outbreak Unit Identifier is a written single-choice list field so a single choice can be selected but users can freely add new options to the list associated with the corresponding Project Tag by typing it in the provided field.

The Surveillance or Outbreak Unit Identifier does not appear for a Scanning Surveillance Project Tag.

Structured Study Project Tags can open a flexible number of Identifier Fields to categorize the Observations, Specimens, and Environmental Specimens into different units of the study design. Following the example of the Avian Influenza virus study given in the previous section, Identifiers such as “Season”, “Wetland Name”, and “Sampling Location within Wetland” appear after selecting the Project Tag “Wetland_AIV_Vietnam_2020” to further help categorize the data.

Note that on request Identifiers can be further customized according to a Project Tag.

TAGS

Tags are written multi-choice list Fields designed to categorize data following any user-defined criteria. Users are free to create and add as many tags as they want by entering new options as strings or selecting existing ones. Tag use, meaning, and tracking is left to the user as metadata are not required.

OBSERVER, FINDER, SUBMITTING PERSON, RECEIVER, PEOPLE, AND NECROPSY PERFORMED BY

These fields are present in several Sub-Tabs but they all request a person as the response. To complete these fields, type the name or last name of the corresponding person. If a person is already listed in the database, their information can be selected from a dropdown menu:

Add a new person to the list by clicking on the “+” button to the right of these fields. Enter the required information in the new window that appears:

Full Name Search Search Person Name

First Name *

Surname *

Title Dr, Mr, Mrs, etc.

Affiliation

Credentials B.S., M.S., M.D., etc.

Email * example@email.com

Home Phone * 999-999-9999 ext. 99999

Work Phone * 999-999-9999 ext. 99999

Cell Phone * 999-999-9999 ext. 99999

Fax 999-999-9999 ext. 99999

Street Address

City

ADD CANCEL

Completion of the required fields unlocks the “Add” button. Click “Add” to save a new person and close the window. Return to the corresponding field to enter the new person just added to the list.

The image shows a software window titled "Add Person" with a close button (X) in the top right corner. The window contains a form with the following fields and values:

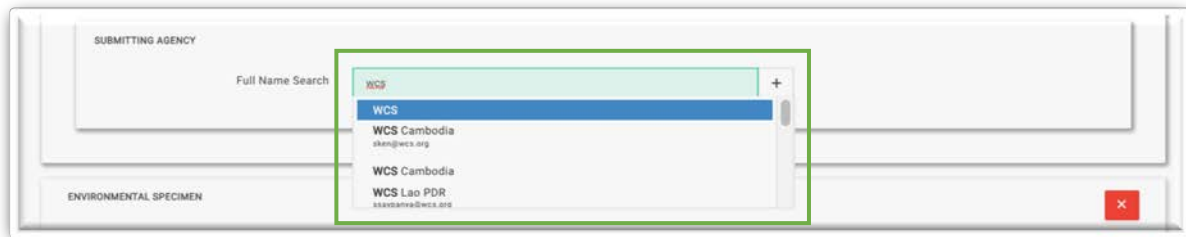
- Full Name Search:** Search Person Name (dropdown menu)
- First Name:** Test
- Surname:** Test
- Title:** Dr, Mr, Mrs, etc.
- Affiliation:** (empty)
- Credentials:** B.S., M.S., M.D., etc.
- Email:** example@email.com
- Home Phone:** Test
- Work Phone:** 999-999-9999 ext. 99999
- Cell Phone:** 999-999-9999 ext. 99999
- Fax:** 999-999-9999 ext. 99999
- Street Address:** (empty)
- City:** (empty)

At the bottom right of the form, there are two buttons: "ADD" and "CANCEL". The "ADD" button is highlighted with a green box.

To view the information of a listed person, type the name in the “Full Name Search” field and select the corresponding individual. The remaining fields will be automatically populated with the selected person’s data.

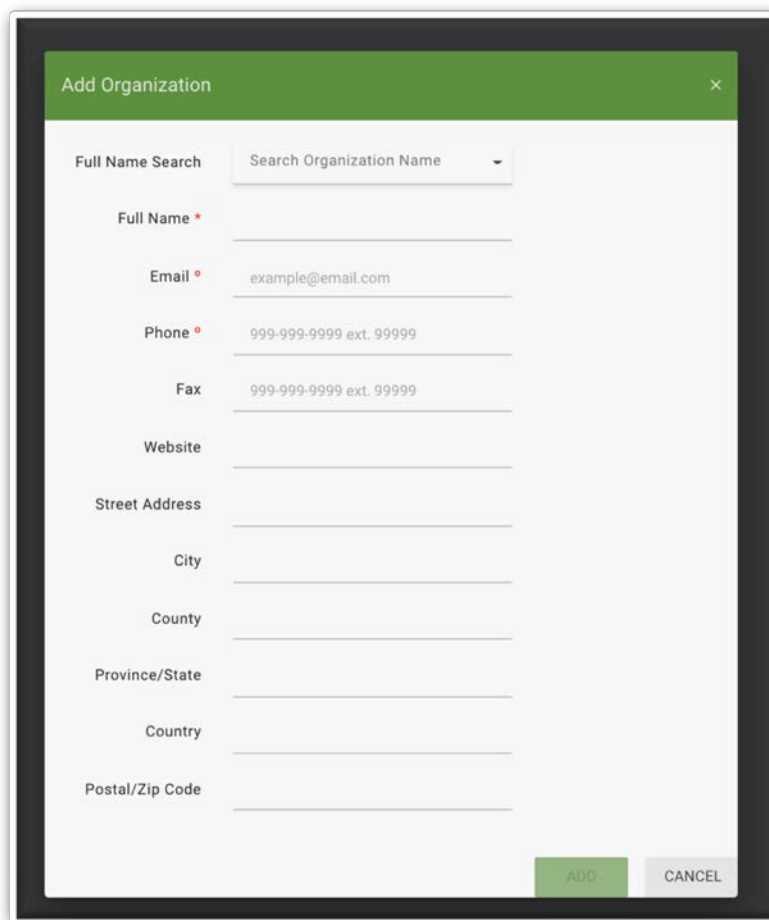
SUBMITTING AGENCY AND ORGANIZATIONS

These fields are present in some Sub-Tabs but they all request an organization as the response. To complete these fields, type the name the corresponding organization. If the organization is already listed in the database, their information can be selected from a dropdown menu:



The screenshot shows a form with two main sections: "SUBMITTING AGENCY" and "ENVIRONMENTAL SPECIMEN". A "Full Name Search" field is highlighted with a green box. A dropdown menu is open, showing a list of organizations: "WCS", "WCS Cambodia", "WCS Cambodia", and "WCS Lao PDR". A red "X" button is visible in the bottom right corner of the form.

Add a new organization to the list by clicking on the “+” button to the right of these fields. . Enter the required information in the new window that appears:



The screenshot shows a "Add Organization" form with a green header and a close button (X). The form contains the following fields:

- Full Name Search: Search Organization Name (dropdown)
- Full Name *
- Email °: example@email.com
- Phone °: 999-999-9999 ext. 99999
- Fax: 999-999-9999 ext. 99999
- Website
- Street Address
- City
- County
- Province/State
- Country
- Postal/Zip Code

At the bottom right, there are two buttons: "ADD" (green) and "CANCEL" (grey).

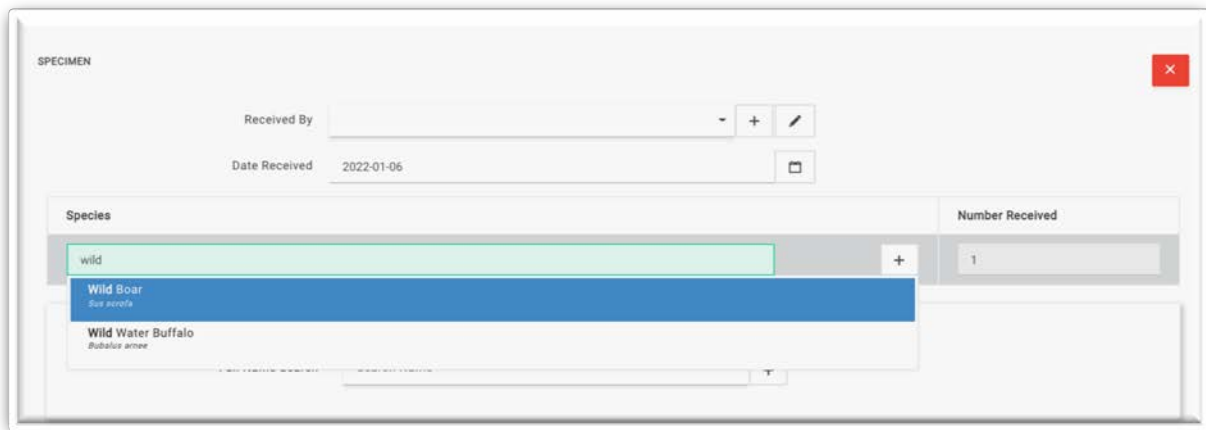
Completion of the required fields unlocks the “Add” button. Click “Add” to save a new organization and close the window. Return to the corresponding field to enter the new organization just added to the list.

The image shows a screenshot of a web application window titled "Add Organization". The window has a green header bar with the title and a close button (X). Below the header, there is a search section with a label "Full Name Search" and a dropdown menu "Search Organization Name". The main form contains several input fields, each with a red asterisk indicating it is required. The fields are: "Full Name" (containing "Test"), "Email" (containing "example@email.com"), "Phone" (containing "Test"), "Fax" (containing "999-999-9999 ext. 99999"), "Website", "Street Address", "City", "County", "Province/State", "Country", and "Postal/Zip Code". The "ADD" button is highlighted with a green box, and the "CANCEL" button is visible next to it.

To view the information of a listed organization, type the name in the “Full Name Search” field and select the corresponding organization. The remaining fields will be automatically populated with the selected organization’s data.

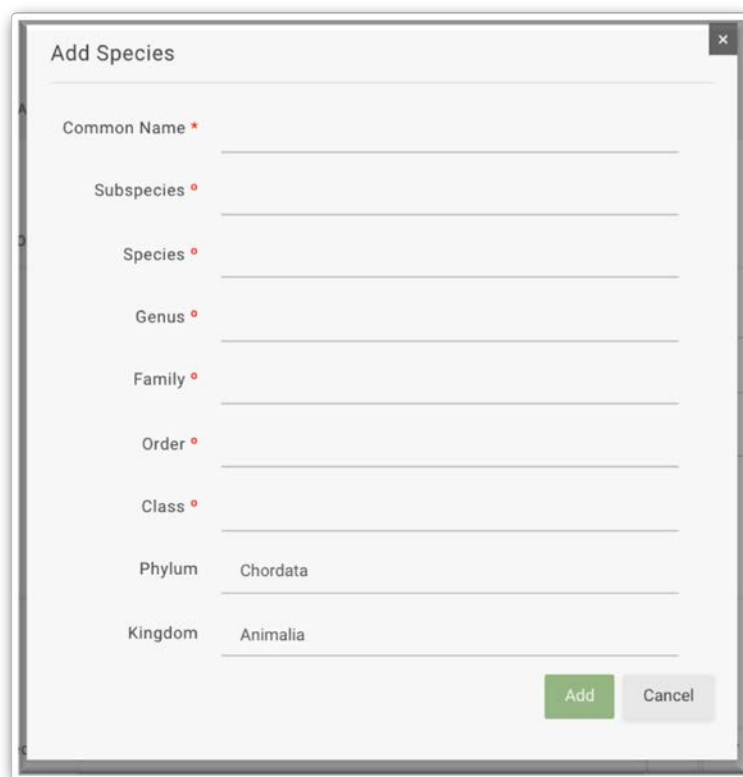
SPECIES

The “Species” field is present in some Event-Detail, Event-Observation, Specimens-Detail, and Environmental Specimens-Detail Sub-Tabs. To complete these fields, type the species name in English (the common name) or the scientific name. If the species is already listed in the database, the species can be selected from a dropdown menu:



The screenshot shows a form titled "SPECIMEN" with a red close button in the top right corner. The form contains several fields: "Received By" with a search icon, "Date Received" with the value "2022-01-06" and a calendar icon, and a table for species. The table has two columns: "Species" and "Number Received". The "Species" column has a dropdown menu open, showing the text "wild" in a light green box. Below it, two options are visible: "Wild Boar" with the scientific name "Sus scrofa" and "Wild Water Buffalo" with the scientific name "Bubalus arnee". A "+" button is located to the right of the dropdown. The "Number Received" column has a text input field containing the number "1".

Add a new species to the list by clicking on the “+” button to the right of these fields. Enter the required information in a new window that appears:



The screenshot shows a dialog box titled "Add Species" with a close button in the top right corner. The dialog contains several text input fields for taxonomic information: "Common Name *", "Subspecies", "Species", "Genus", "Family", "Order", "Class", "Phylum" (with the value "Chordata" pre-filled), and "Kingdom" (with the value "Animalia" pre-filled). At the bottom right of the dialog are two buttons: "Add" (in green) and "Cancel".

Completion of the required fields unlocks the “Add” button. Click “Add” to save a new species and close the window. Return to the corresponding field to enter the new species just added to the list.

The image shows a software window titled "Add Species". It contains a form with the following fields and values:

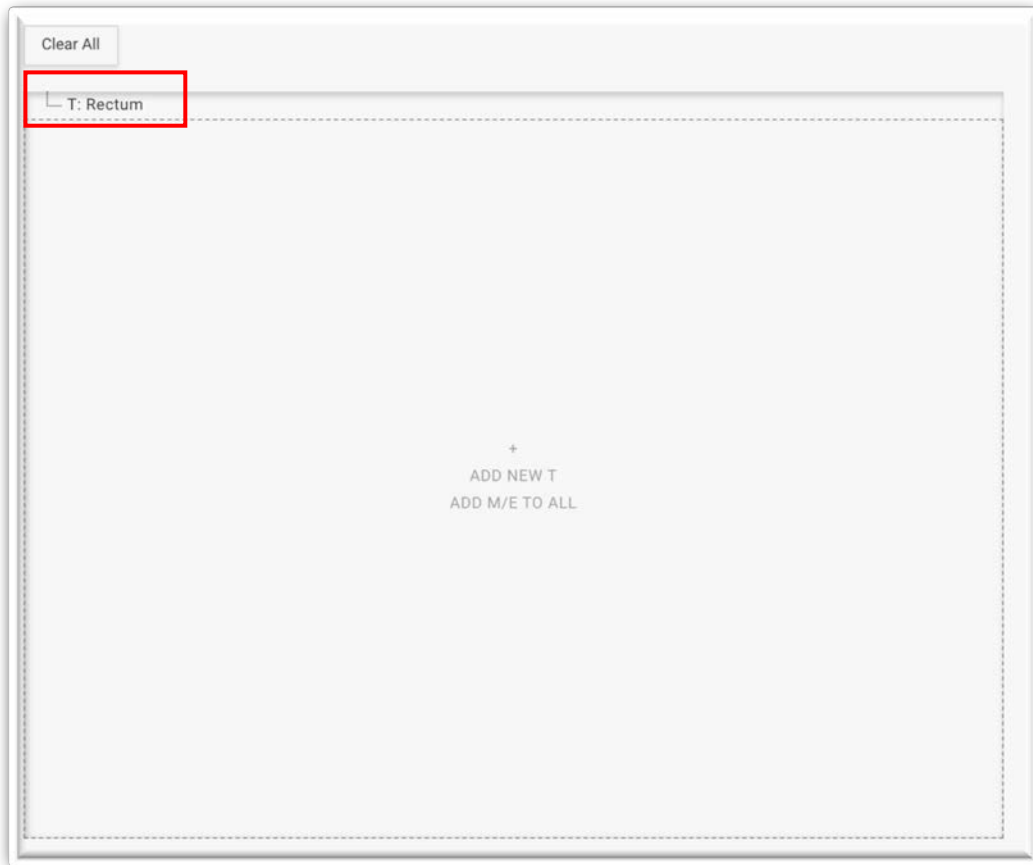
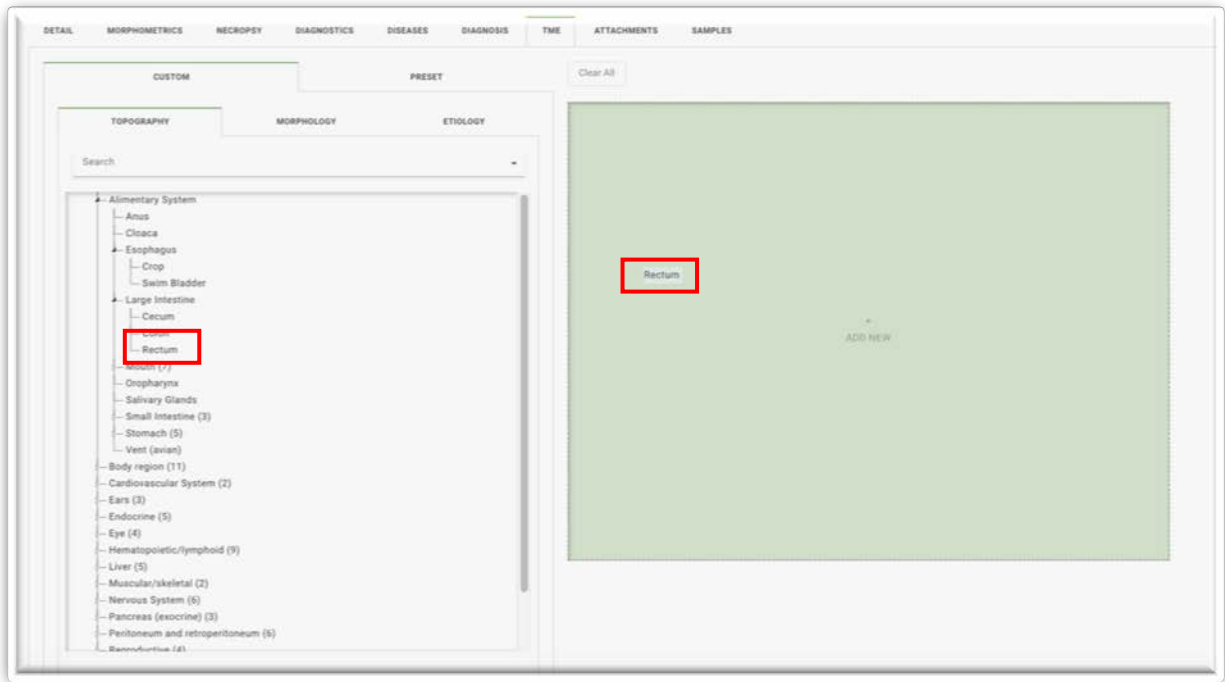
| | |
|---------------|----------------|
| Common Name * | Donkey |
| Subspecies ° | |
| Species ° | Africanus |
| Genus ° | Equus |
| Family ° | Equidae |
| Order ° | Perissodactyla |
| Class ° | Mammalia |
| Phylum | Chordata |
| Kingdom | Animalia |

At the bottom right of the form, there are two buttons: "Add" (highlighted in green) and "Cancel".

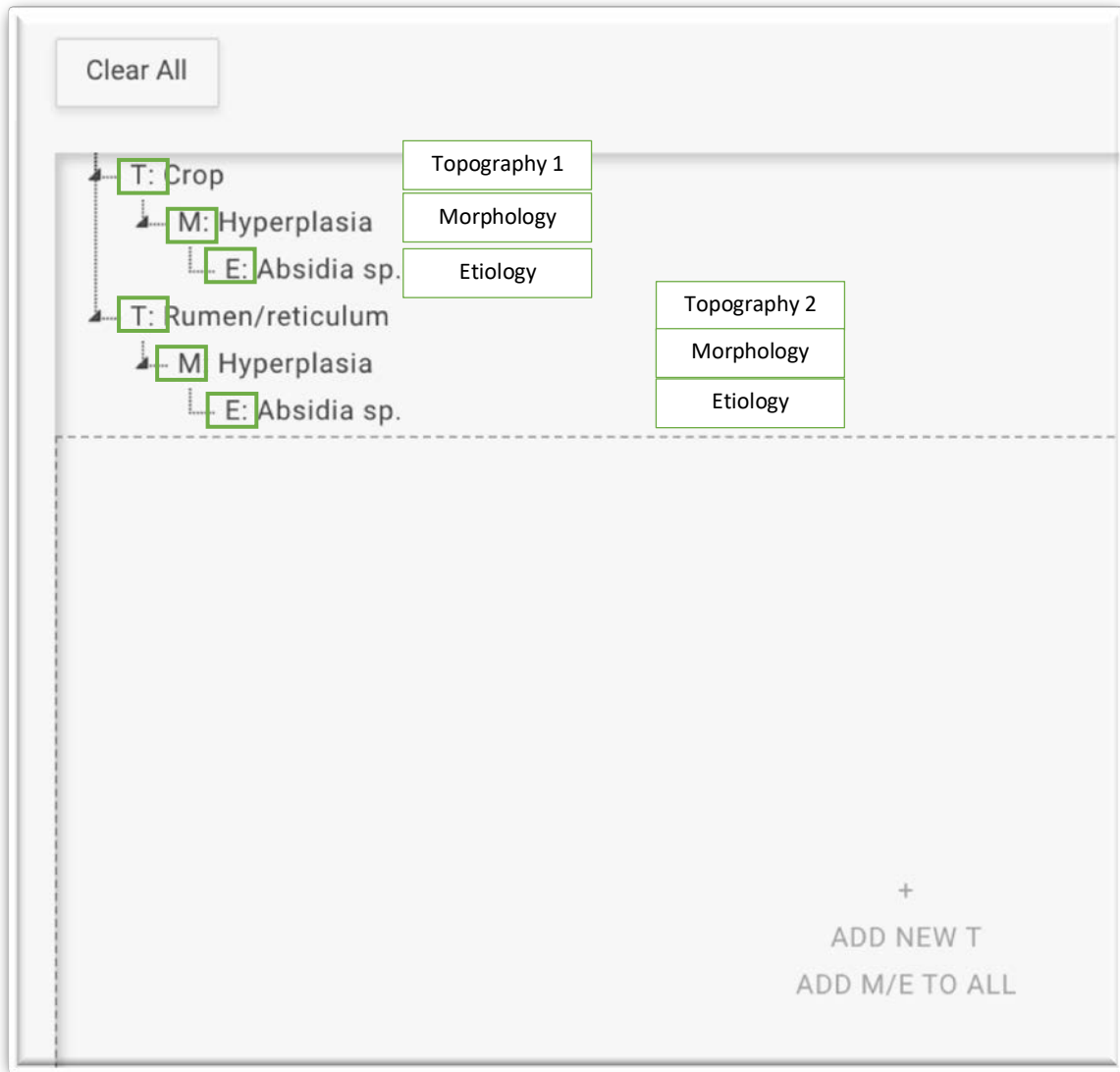
CUSTOM TOPOGRAPHY, MORPHOLOGY, AND ETIOLOGY

These Fields are intended for use by veterinary pathologists.

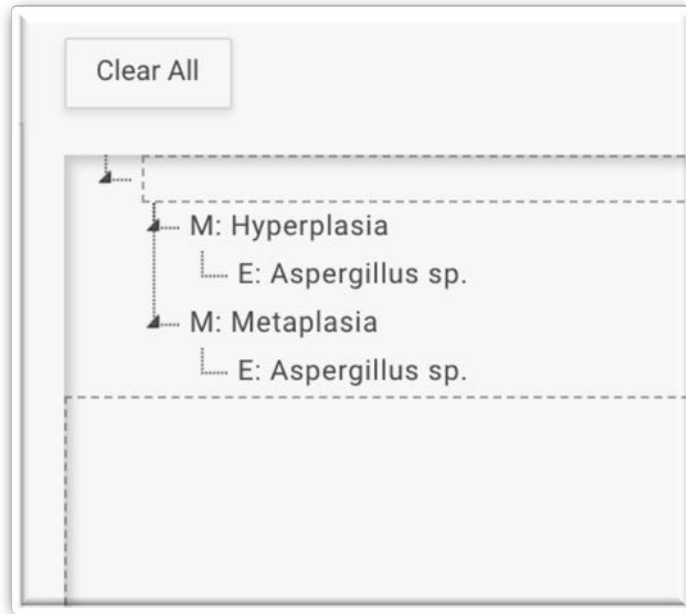
The “Topography”, “Morphology”, and “Etiology” Fields are Multi-Tree Fields present in the “Specimens - TME - Custom” Tertiary Sub-Tab and they are used to describe necropsy findings using a standardized system. To record this information, navigate each Multi-Tree to the desired term by clicking the white arrows in nodes and expanding the first, second, and the third levels of each Multi-Tree or use the search function above. Once the term is located, use the mouse pointer and hover above it. The pointer icon will become a hand. Click on the desired option, drag it to the “+Add New” Frame to the right of the screen, and release the mouse button. The added term will be shown on the top of the frame (see below) and after the first term is added the Frame appears as “Add New T - Add M/E to All”.



As the “Add New T – Add M/E to All” name suggests each topographic term added to this Frame seeds a new combination of topography, morphology, and etiology terms. Each combination appears in the upper half of the “Add New T – Add M/E to All” Frame. When morphology and etiology terms are dragged to the “Add New T – Add M/E to All” Frame and more than one combination has been seeded, then the morphology and etiology terms are added to each combination. Check the letters “T”, “M”, and “E” to identify the terms associated with each level:



Similarly, if several morphology terms are dragged to the “Add New T – Add M/E to All” but no topography is included, then each morphology term seeds a new combination of morphology and etiology terms. When etiology terms are dragged to the “Add New T – Add M/E to All” Frame and more than one combination has been seeded, then the etiology terms are added to each combination:



Finally, if several etiologies are added in the absence of topography or morphology, then they are grouped together:

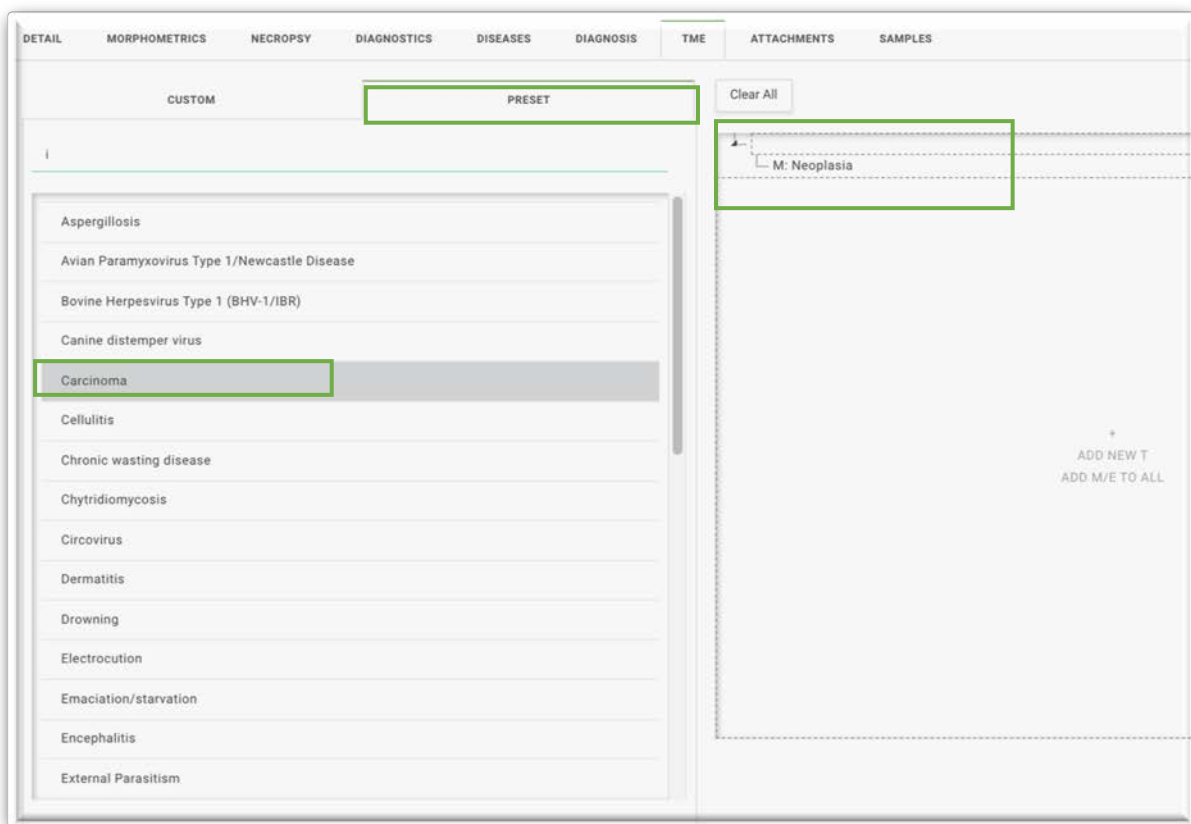


Topography, morphology, and etiology options are not mandatory, so data in the “Add New T – Add M/E to All” Frame can receive data for all of them, for a pair of them (e.g., topography and etiology only), or for only one them.

PRESET TOPOGRAPHY, MORPHOLOGY, AND ETIOLOGY

These Fields are intended for use by veterinary pathologists.

The “Specimens - TME - Preset” Tertiary Sub-Tab has a list of diseases and syndromes with predefined topography, morphology, or etiology terms. To describe the location, morphology, or etiology of the lesions found during a necropsy using the list of diseases or syndromes on the Preset Tertiary Sub-Tab, double-click on a specific list option. The information regarding the topography, morphology, or etiology of the lesions will be shown on the “Add New T - Add M/E to All” Frame to the right.



It is possible to complement the predefined topology, morphology, or etiology of the lesions with the choices available in the “Specimens - TME – Custom” Tertiary Sub-Tab. If more than one topography is seeded, then the morphology and etiology options will be added to all

topographies. Similarly, If more than one morphology is seeded in the absence of topography, then the etiology options will be added to all morphologies.

ANIMAL ID

The Animal ID field is present on the top of the “Specimens” Tab and it is an external identification code for a Specimen. In the case of WildHealthNet the “Animal ID” field follows the structure presented on this [document](#).