CTAP

QGIS - ArcReader Interface Specification

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1 Introduction

CTAP provides an interface to high-quality interactive maps in QGIS or in ArcReader (authored using ESRI's ArcGIS Desktop product and published with the ArcGIS Publisher extension).

To display a map, CTAP will extract camera location and its associated information from CTAP and write into specific shape file(s). CTAP then starts QGIS or ArcReader depending on the selection and display the information.

To view the GIS map from CTAP you will need to have QGIS or ESRI's ArcReader program installed on your PC.

The purpose of this document is to describe each of the maps used by CTAP, providing the name of the project and pmf file, and the name(s) of the shape files that are used to communicate with QGIS or ArcReader.

2 Published Map Files

The QGIS project or ArcReader published map files and the shape files that CTAP uses to communicate with the maps should be placed in the CTAP folder called "Maps". It is recommended that any other layers used by the maps be placed in that folder or its sub-folders.

Each QGIS project or ArcReader published map file should reference its layers using relative addressing. This will then enable CTAP programme, together with the maps, to be placed in any location in your PC's file system.

In QGIS 2.0 and above, the relative reference path can be set as follows:

- Under Project menu select Project Properties
- Under General tab select "save paths" option as "relative".

The relative reference path can be set in ArcGIS as follows:

- Open the project in ArcGIS
- Under File menu select Document Properties
- Then select Data Source Options
- Then select "Store Relative Path Names to Data Sources".

In CTAP you can select the coordinate system, either in UTM projection or decimal degrees, for the camera trap location information to written into the shape files.

CTAP uses fixed names for the project and published maps and the camera location shape files that it employs for the communications channels.

2.1 Camera station location map

This map is generated from "Camera Stations->Show Camera Stations on a Map". It can display the locations of the camera stations.

QGIS project / ArcReader Published Map Filename

QGIS: Camera stations.qgs
ArcReader: Camera stations.pmf

Communication Layer

Camera_trap_locations.shp
This is a point shape file. CTAP will write the actual camera station coordinates to this file along with the following fields:

Field Name	Description
Station	Camera station label.
Altitude	Camera station altitude information if filled in.
Slope	Camera station slope information if filled in.

Habitat	Camera station habitat information if filled in.
Aspect	Camera station aspect information if filled in.
Terrain	Camera station terrain information if filled in.
NumOpDays	The number of days the camera station was operational.
NumDepDays	The number of days the camera(s) was deployed.
NumEvents	The number of wildlife events at the camera station.

Camera_trap_locations (planned).shp
This is a point shape file. CTAP will write the planned camera station coordinates to this file along with the following field:

Field Name	Description
Station	Camera station label.

2.2 Camera station sampling effort 'symbol' map

This map is generated from "Analysis and Reports->Sampling Effort->Camera Stations->Show Camera Stations on a Map". It can display the camera station locations symbolised according to survey effort at three levels:

1) Failed: where camera(s) failed to operate.
2) Camera station operation below the value defined in the CTAP analysis parameters "Camera performance threshold".
3) Camera station operation above the value defined in the CTAP analysis parameters "Camera performance threshold".

QGIS project or ArcReader Published Map Filename

QGIS: Camera station sampling effort (symbol report).qgs
ArcReader: Camera station sampling effort (symbol report).pmf

Communication Layer

Camera_trap_locations.shp
This is a point shape file. CTAP will write the camera station coordinates to this file along with the following fields:

Field Name	Description
Status	Survey effort: 0: where camera(s) failed to operate. 1: Camera station operation below the value defined in the CTAP analysis parameters option "Camera performance threshold". 2: Camera station operation above the valued defined in the CTAP analysis parameters option "Camera performance threshold".
Station	Camera station label.
NumOpDays	The number of days the camera station was operational.
NumDepDays	The number of days the camera(s) was deployed.
NumEvents	The number of wildlife events at the camera station.

2.3 Camera station sampling effort 'pie chart' map

This map is generated from "Analysis and Reports->Sampling Effort->Days Sampled->Show Camera Station Sampling Effort on a Map". It can display the camera station location symbolised with survey effort as a pie chart.

QGIS project or ArcReader Published Map Filename

QGIS: Camera station sampling effort (pie chart report).qgs
ArcReader: Camera station sampling effort (pie chart report).pmf

Communication Layer

Camera_trap_locations.shp
This is a point shape file. CTAP will write the camera station coordinates to this file along with the following fields:

Field Name	Description
Status	Value between 0 -100 (percentage of days camera station was operational).
Status1	Value between 0 -100 (percentage of days camera station was not operational).
Station	Camera station label.
NumOpDays	The number of days the camera station was operational.
NumDepDays	The number of days the camera(s) was deployed.
NumEvents	The number of wildlife events at the camera station.

2.4 Species "trapping rate" distribution map

This map is generated from "Analysis and Reports->Species/Taxa->Distribution->Show Distribution for Selected Species on a Map". It can display the species trapping rate, species normalised trapping rate, number of species events, number of days camera station was deployed, number of days camera station was operational at each camera station.

QGIS project or ArcReader Published Map Filename

QGIS: Species RAI.qgs
ArcReader: Species RAI.pmf

Communication Layers

Camera_trap_locations.shp
This is a point shape file. CTAP will write the camera station coordinates to this file along with the following fields:

Field Name	Description
Station	Camera station label.
NumEvents	The number of species events at the camera station.
NumOpDays	The number of days the camera station was operational.

NumDepDays	The number of days the camera(s) was deployed.
TrapRate	The species trapping rate at the camera station.
TrapRateNo	The species normalised trapping rate (normalisation based on the selection in CTAP) at the camera station.
Scale	The species normalised trapping rate between 0-100 at the camera station.

The 'Camera_trap_locations.shp' and 'Camera_trap_locations (planned).shp' communication files are provided in the software dropbox folder in the subfolder 'Map Reference Layers'.