# Member Node Description: OTS Tropical Science Data Portal (OTS)

Version 1.0 02/09/17 Carolina Murcia & Oscar Madrigal

## General

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| Name of resource: | OTS Tropical Science Data Portal (OTS) |
| URL(s): | <https://metacat.tropicalstudies.org/metacatui/> |
| Institutional affiliation(s): | Organization for Tropical Studies |
| Primary geographic location: | OTS Office in Costa Rica (San Pedro, Costa Rica) |
| Project Director & contact info: | Dr. Mahmood Sasa  Palo Verde Research Station Director  [Msasamarin@gmail.com](mailto:Msasamarin@gmail.com) |
| Technical Contact & contact info: | Oscar Madrigal, [oscar.madrigal@tropicalstudies.org](mailto:oscar.madrigal@tropicalstudies.org) |
| Age of resource: | Since 2016/08/01 |
| Funding support: | This node was created with support of NSF. However, operation costs are not currently funded externally. |
| Proposed Unique Identifier: | urn:node:OTS |

## Content

### Content description/collection policy (1 paragraph, domain and spatial/temporal coverage, uniqueness of content, exclusions, as applicable):

This DataONE node archives data generated at the Organization for Tropical Studies research stations.

The organization for Tropical Studies is a U.S. based non-profit consortium located in the Duke University campus, and composed of over 60 academic and research institutions from the US, Costa Rica, South Africa, Mexico, Peru and Australia. Its mission is *“to provide leadership in education, research and the responsible use of natural resources in the tropics”*. To this end, OTS offers intensive field courses for undergraduates, graduate students, and natural resource professionals in tropical biology and related disciplines in Costa Rica and South Africa, which generate data, at the same time that trains new generations in tropical science. OTS also maintains research stations in three ecologically diverse ecosystems in Costa Rica, where hundreds of research projects have taken place and continue to do so, increasing our knowledge of tropical ecosystems and landscapes:

**La Selva Research Station,** located in the Caribbean lowland, is recognized internationally as one of the premier sites in the world for ongoing research in lowland rain forests. In particular, work on climate change and its impact on biodiversity in tropical wet forests has become a significant area of study at the station.

**Palo Verde Research Station,** located in the northwestern Pacific lowlands, is known for its deciduous dry forest, freshwater marsh, and extensive wetlands. Research on the ecological and social processes occurring within the park and in the surrounding region of the Lower Tempisque Basin is helping to protect the park’s wide array of ecosystems and its biodiversity as well as having significant ramifications on similar parks around the world.

**Las Cruces Biological Research & Wilson Botanical Garden**, located on Costa Rica's southern Pacific slope, is renowned for its extensive collection of palms, bromeliads, and endangered plants. Las Cruces is part of the La Amistad Biosphere Reserve and is a key site in the study of restoration ecology and biological corridors.

**This node has been created to assist in the compilation of data collected at these three stations over the last 50 years by a collective of researchers and by OTS staff.**

### Types of data (complex objects, text, image, video, audio, other):

The OTS DataONE node accepts any type of research data generated at OTS Research Stations. This typically includes ecological, evolutionary, and environmental data in text, tabular, raster, and vector formats. It also includes all data from OTS biophysical monitoring system. However, as research conducted out of these stations expands to other areas of knowledge in tropical science, we will accept data generated in the context of studies from disciplines beyond biology.

The node accepts data in any format, but because OTS cannot provide migration services at this point, we recommend that you save the data in a stable file format. This is: \*.txt or \*.csv formats for text and tabular data respectively. That will ensure that your data file will be accessible in the future. Files size is limited to 100 MB.

### Data and metadata availability (rights, licensing, restrictions):

Data are publicly available for download and reuse following the intellectual rights statement provided by the data contributor with each data set.

### Option for embargo (yes/no, duration):

Embargoes are determined by each individual researcher who owns and posts their data, but it is OTS policy to restrict this period to 2 years. Data generated by OTS biophysical monitoring stations does not have embargo.

### Size of holdings (number and size of datasets, mean and median granules (files) per dataset):

Not quantified yet-

### Please describe recent usage statistics, if known, including information on annual data product downloads, annual number of users, annual number of data products used in publications:

Not available.

## User interactions

### How does a user contribute data? (what can be deposited, how are data prepared, are specific software required, documentation/support available)

Data can be contributed by any researcher who has conducted research at an OTS research station in Costa Rica or is in possession of data collected at any of those facilities.

Data can be current or collected at any time in the past. We encourage researchers close to retirement to archive their data in this node to ensure its long-term viability.

Data are prepared by contributing scientists and can be uploaded via this site <http://metacat.ots.ac.cr/metacat/metacat> or through a free app called Morpho <https://knb.ecoinformatics.org/#tools/morpho>. Morpho runs in Windows, Linux and Mac environments, and requires the last version of Java®.

We recommend that metadata is uploaded using the Morpho metadata application because it will produce the most complete data description. Morpho is also a very agile platform based on EML.

More detail on data submission can be found at: <https://metacat.ots.ac.cr/instructions.rar>

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### How does a user acquire / access data?

Data can be searched and downloaded directly through DataONE´s portal at <https://www.dataone.org/find-data>

### What user support services are available (both for depositing and accessing/using data)?

Users can download self-guided instructions from [this site](https://metacat.ots.ac.cr/instructions.rar). It contains guidance for first time users, as well as the Morpho user guide and Metacat users. For special inquiries, please contact [informatica@tropicalstudies.org](mailto:informatica@tropicalstudies.org)

### How does the resource curate data at the time of deposit?

OTS provides no data curation at this time. All data is curated at the time of deposit by the person uploading it.

## Technical characteristics and policies

### Software platform description, incl. data search and access API(s):

The OTS DataONE node uses Metacat ( <http://knb.ecoinformatics.org/knb/docs/>) on a Linux server running Apache Server and Apache Tomcat.

Service reliability (including recent uptime statistics, frequency of hardware refresh, if known):

No statistics available at this time.

Preservation reliability (including replication/backup, integrity checks, format migration, disaster planning):

The OTS DataONE node is managed by the Information Technology Department of the Organization for Tropical Studies in San José, Costa Rica. Full backups of the servers are done using bacula.

The data is also replicated to the Knowledge Network for Biodiversity (KNB) Metacat instance.

User authentication technology (incl. level of create/modify/delete access by users):   
Users authenticate via a KNB account. KNB account creation instructions can be downloaded from [this site](https://metacat.ots.ac.cr/instructions.rar).

### Data identifier system and data citation policy, if available:

At this point no Document Object Identifiers (DOI) are assigned to data packages. Each data package should have a unique name. To cite data packages, find the recommended citation at <https://metacat.ots.ac.cr/metacat/> for each data package.

### Metadata standards (**including** provenance):

Ecological Metadata Language (EML). See <http://knb.ecoinformatics.org/software/eml/>

## Capacity/services to DataONE

### At what functional tier will you initially be operating? (see http://bit.ly/MNFactSheet for definitions)

**Tier 1: Read only, public content**

**Tier 2: Read only with access control**

**Tier 3: Read/write using client tools**

**Tier 4: Able to operate as a replication target**

### If you can host data from other member nodes, what storage capacity is available?

Not at this time. However OTS is open to discuss explicit agreements.

### Can you provide computing capacity to the broader network? If so, please describe.

Not at this time

## Other Services

### What other services or resources (such as expertise, software development capacity, educational/training resources, or software tools) can be provided of benefit to the broader network?

None at this time