Bioversity International/UNEP-GEF Project
"*In situ*/On farm conservation and use of agrobiodiversity (fruit crops and wild fruit species) in Central Asia"

Regional Workshop on *Information and Communication Technologies (ICT)*

28 - 30 March 2011

Tashkent, Uzbekistan

CONTENT:

Bioversity International/UNEP-GEF Project
"*In situ*/On farm conservation and use of agricultural biodiversity (Fruit Crops and Wild Fruit Species) in Central Asia"

REGIONAL WORKSHOP
on Information and Communication Technologies (ICT)

Tashkent, Uzbekistan
28-30th March 2011

Executive summary

Regional Workshop on Information and Communication Technologies (ICT) was organized was organized within the Bioversity International/UNEP-GEF Project "In Situ/On Farm Conservation and Use of Agricultural Biodiversity (Horticultural Crops and Wild Fruit Species) in Central Asia" on the 28-30th of March, 2011 in Tashkent, Uzbekistan. Representatives of project partners from Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan participated in the workshop.

Day 1. Monday. 28th March 2011

Opening session

Muhabbat Turdieva, Regional Project Coordinator, opened the Workshop and welcomed all the participants. In her welcoming speech, she emphasized the importance of Information and Communication Technologies for the project, considering that at the present stage of the project, the development of the information web portal is one of the major goals of the project. The main priority of this portal is to provide access to the information obtained in the result of the project, not only for project partners, but also for other persons for which this information will be useful for the efficient use and conservation of agricultural biodiversity. Muhabbat Turdieva also introduced the invited instructors - Massimo Buonaiuto, Multimedia/Web Specialist, Paul Quek, Scientist of Documentation/Information, and Isabel Lapena, Regional Consultant on Access and Benefit Sharing. Following the introduction of all other participants, Muhabbat Turdieva noted that participants from Turkmenistan could not participate in the workshop due of bureaucratic difficulties encountered in obtaining a visa in their country. However, it was said that the National Project Implementation Unit in Turkmenistan will provide all the materials for this workshop so that they will be aware of the purpose and outcomes of the workshop. At the end of her speech, Muhabbat Turdieva briefed the workshop program and gave the word to Massimo Buonaiuto. The list of participants and the workshop program are attached in Annexes 1 and 2.

Massimo Buonaiuto, multimedia/web specialist, welcomed the participants, and emphasized some of his main tasks and responsibilities in Bioversity International. He also explained in details what the participants will be involved during the two days of regional workshop.

Then Massimo Buonaiuto presented to the participants a presentation on the web program Typo3. (Annex 3) In his presentation, Mr. Buonaiuto explained to the participants that Typo3 - a Content Management System (CMS) with open source and free software license written in PHP. The website structure is represented in Typo3 page tree. On each page there can be added content elements - small pieces of information: text, text + image, images, tables, clean html, plugins, etc. The system Typo3 includes a text editor (HTML and Word), spell check, change cancellation, history of changes, internal search engine, versioning, function of multiple files uploading, workspaces, etc. Massimo Buonaiuto also demonstrated to the representatives Typo3 login system and frontend / backend interfaces on the example of the account of Paul Quek. Technical support for the given system of CMS is Bioversity Web Helpdesk, which is represented by Massimo Buonaiuto (multimedia/web specialist), Simon Mori (web developer) and Valentina Barbieri (web designer). The above-mentioned service of technical support supports 170 users and more than 2000 webpages in Typo3. Then Massimo Buonaiuto demonstrated the convenience and ease in managing files, creating new pages, sections, news blogs, explaining that the program is designed specifically for those users who are not technical experts in information technology. During the demonstration of Typo3, the participants asked whether it is possible to increase or decrease the font of the text while viewing the content in this program. Mr. Buonaiuto explained that changing the font size is possible only through the configuration browser (Mozilla Firefox, Internet Explorer, Opera, etc.). Also, the participants proposed to add the interface in Russian to facilitate the work in the software.

Day 2. Tuesday. 29th March 2011

Massimo Buonaiuto welcomed all the participants and highlighted the program of the day. Then he presented his second presentation, aimed at working efficiently on the Internet. (Annex 4) During his speech, he listed some advices from the qualified experts in developing and publishing a successful and effective web site, which highlighted the critical rules of correct formatting of the content and design of web pages. Also the instructor mentioned the innovative techniques and their application, new trends and the role of social networks as well as other media in the sphere of web publishing. At the end of his presentation, Massimo Buonaiuto demonstrated the website *www.gapminder.org* to visually explain to the participants the importance of raw data, which have the important role in developing global scientific databases and statistics.

Afterwards, the participants were given practical exercises to strengthen their knowledge in Typo3. During the exercises, participants wondered whether the user of one country can make changes to the information of another country. The lecturer

explained that a user who wants to make changes or additions to the information of another country must agree this first with the National Focal Point of the respective countries.

Next Massimo Buonaiuto gave a presentation on the Global Portal on Crop Wild Relatives, which is available at *www.cropwildrelatives.org*. (Annex 5) The portal was developed using Typo3 as the result of the project "In situ conservation of wild relatives of horticultural crops through better information management and its practical application", which was supported by UNEP-GEF and implemented by Bioversity International from 2004 to 2010. The partner organizations of the project consisted of BGCI, BLE, FAO, IULCN and UNEP-WCMC, and its partner countries included Uzbekistan, Madagascar, Armenia, Bolivia and Sri Lanka. In his presentation, Massimo Buonaiuto demonstrated the participants the main sections of the web portal of the project, namely: homepage, e-learning modules, news blog, photo gallery, publications section, built-in Google search engine and the scientific databases available on the website. He also explained the program Darwin Core, with which web portal databases are equipped, and which in essence is the extension of Dublin Core. Darwin Core (version 1.4) was developed by Biodiversity Information Standards team, which is also known as the Taxonomic Databases Work Group (TDWG). The purpose of the Darwin Core program is to support information sharing on geographical distribution of organisms and physical existence of biotic species in collections.

Day 3. Wednesday. 30th March 2011

Muhabbat Turdieva, Regional Project Coordinator, opened the third day of the Workshop and presented the program of the day. Then, she along with Isabel Lapena, Regional Consultant on Access and Benefit Sharing, presented a model of Information Sharing Agreement, which is aimed on information management of the Central Database. (Annex 6) On this agreement, the following issues were discussed: the purpose of the agreement, the parties to the agreement and their obligations, types of information (for open and restricted access), conditions for information sharing and dissemination in restricted access, as well as maintaining the website. Muhabbat Turdieva mentioned that there are two types of users that will use the information on the website: project partners and non-project partners (third parties). The information published on the website, should be agreed and determined for which type of users it is purposed. The above-mentioned agreement must be signed by all the parties, which will provide information. Isabela Lapena presented a more detailed definition of the agreement and walked through each issue in the agreement. She mentioned that the agreement was originally called the Memorandum of Understanding. The main purpose of this agreement is to create opportunities for further cooperation in the future. And the purpose of the discussion of the final version of this agreement is to ensure that the agreement is acceptable to all. The important point discussed was the mention of the fact that after seven years, the information provided in the restricted access will be available to the public.

Next, the participants were given time to get acquainted thoroughly with the agreement. After the acquaintance with the agreement, the participants wondered whether a national focal point must be represented by one person, on what has been said that national focal point can be also represented by an institution. Then Paul Quek presented a table with information on the elements of Darwin Core. During the presentation of the table. Paul Quek said that there are more than 60 elements of Darwin Core, but most of them will not be used. Dilmurad Razikov, consultant on information and communication issues, showed some tables on which Darwin Core is based, and the scheme of data route organization.

Next on the provided Excel tables, the participants identified which information will be of public access and which will be of restricted access. In allocating the level of access it was focused not only on the usefulness of the information to the public, but also on the confidentiality of the information on individual farms. The final version of the table in Annex 7 (public access information is marked in yellow, information available exclusively for the project partners marked in red, information available only when you receive permission from the respective parties is marked in purple).

Muhabbat Turdieva closed the workshop and thanked all the participants for their hard work and participation. All participants were awarded with certificates of participation and gifts from Bioversity International.

Annex 1

Bioversity International/UNEP-GEF Project
"*In situ*/On farm Conservation & Use of Agricultural Biodiversity (Fruit Crops & Wild Fruit Species) in Central Asia"

Regional Workshop on
Information and Communication Technologies (ICT)
28-30 March, 2011
Tashkent, Uzbekistan

LIST OF PARTICIPANTS

##	Name	Country	Affiliation	Position	Mail address	Contact details
1	Massimo Buonaiuto	Italy	Function/Communications & External Relations/ Information Technologies Unit, Bioversity International	Multimedia/Web Specialist	Via dei Tre Denari 472/a, Maccarese, 00057 Rome	Tel: +39 066118406 E-mail: m.buonaiuto@cgiar.org
2	Paul Quek	Malaysia	Diversity for Livelihoods Programme, Bioversity International	Scientist, Documentation/ Information	P.O. Box 236, UPM Post Office, 43400 Serdang	Tel: +60 3 89423891 Fax: +60 3 89487655 E-mail: p.quek@cgiar.org
3	Muhabbat Turdieva	Uzbekistan	Diversity for Livelihoods Programme, Bioversity International	Regional Project Coordinator	c/o ICARDA, P.O. Box 4564, 6, Osiyo Str., 100000 Tashkent	Tel.: +998 71 2372171 Fax: +998 71 1207120 E-mail: m.turdieva@cgiar.org

##	Name	Country	Affiliation	Position	Mail address	Contact details
4	Isabel Lapena	Spain	Policy and Law Unit, Bioversity International	Regional Consultant on Access and Benefit Sharing	Torija 6 3E, 28013 Madrid	Tel.: +34 915599844 E-mail 1: i.lapena@cgiar.org E-mail 2: isalapena@gmail.com
5	Bayan Esbolaeva	Kazakhstan	Academy of Agricultural Sciences of the Republic of Kazakhstan	Assistant to National Project Coordinator	30b, Satbaev Str., 050057 Almaty	Tel.: +7 727 2453590 Fax: +7 727 2436411 E-mail 1: abd_kazakh@mail.ru E-mail 2: esbolaeva.bayan@mail.ru
6	Kadirjan Mukin	Kazakhstan	Kazakh Research Institute of Farming and Plant Industry	Manager on Information and Technical Support	1, Erlepesov Str., Almalybak Village, Almaty Province	Tel.: + 7 727 3883925 Mob.: +7 701 7687745 E-mail: mukin@mail.kz
7	Emilbek Turgunbaev	Kyrgyzstan	Innovation Center of Phytotechnologies of National Academy of Sciences	Computing Engineer, Web Designer of the Project	265 a, Chuy Avenue, 720071 Bishkek	Tel.: +996 312 641947 Mob.: +996 550 973319 E-mail: binut@mail.ru
8	Aybek Dolotbakov	Kyrgyzstan	Plant Resources Ecology Laboratory, Innovation Center of Phytotechnologies of National Academy of Sciences	Researcher	265 a, Chuy Avenue, 720071 Bishkek	Tel.: +996 312 641947 Mob.: +996 552 140499 / 771 494929 E-mail: abd_kyrgyz@mail.ru
9	Azamat Asanbaev	Kyrgyzstan	Plant Cultivation Technologies Laboratory, Innovation Center of Phytotechnologies of National Academy of Sciences	Junior Researcher	265 a, Chuy Avenue, 720071 Bishkek	Tel.: +996 312 646276 Mob.: +996 773 434143 E-mail: aza_akmuz@mail.ru

##	Name	Country	Affiliation	Position	Mail address	Contact details
10	Svetlana Shamuradova	Tajikistan	Research Institute of Forestry	Academic Secretary	9/1, Balami Str., Dushanbe	Tel.: +992 907 930267 E-mail: shamuradova@mail.ru
11	Khursandi Safaraliev	Tajikistan	Nursery Department, Research Institute of Horticulture of Tajik Academy of Agricultural Sciences	Head	21A, Rudaki Str., Dushanbe	Tel.: +992 907 700704 E-mail: bogparvar@mail.ru
12	Aslamchon Kurbanov	Tajikistan	Nursery Department, Research Institute of Horticulture of Tajik Academy of Agricultural Sciences	Junior Researcher	21A, Rudaki Str., Dushanbe	Tel.: +992 918 624849 E-mail: bogparvar@mail.ru
13	Azamat Gulyamov	Uzbekistan	Fruit Crops Breeding Department, Research Institute of Horticulture, Viticulture and Wine-making named after R.R. Shreder	Junior Researcher	P.O. Kensay, Tashkent District, Tashkent Province	Tel.: +998 71 2202682 Mob.: +99898 3055570 E-mail: abd_uzbek@mail.ru
14	Shukhrat Akhmedov	Uzbekistan	Fruit and Berry Crops and Grapevine Department, Uzbek Research Institute of Plant Industry	Junior Researcher	P.O. Botanika, Kibray District, Tashkent Province	Tel.: +998 71 2642374 Mob.: +998 93 5884716 E-mail: axmedovshuhrat@gmail.com
15	Mansurbek Kholmurotov	Uzbekistan	Forestry Department, Tashkent State Agrarian University	Junior Researcher	2, Universitetskaya Str., 100140 Tashkent	Tel.: +998 71 2604800 Fax: +998 71 2603860 Mob.: +998 90 7708177 E-mail: mansur1111@mail.ru

##	Name	Country	Affiliation	Position	Mail address	Contact details
16	Dilmurad Razikov	Uzbekistan	Diversity for Livelihoods Programme, Bioversity International	Consultant on Information and Communication Aspects	c/o ICARDA, P.O. Box 4564, 100000 Tashkent	Tel.: +998 71 2372171 Fax: +998 71 1207120 Mob.: +998 90 1746960 E-mail: r.dilmurad@cgiar.org
17	Irina Mitrofanova	Uzbekistan	Diversity for Livelihoods Programme, Bioversity International	Consultant on Designing the Project Website	c/o ICARDA, P.O. Box 4564, 100000 Tashkent	Tel.: +998 97 7158378 E-mail: imitrafonova@yahoo.com
18	Ulugbek Artikov	Uzbekistan	Diversity for Livelihoods Programme, Bioversity International	Assistant to Regional Project Coordinator	c/o ICARDA, P.O. Box 4564, 100000 Tashkent	Tel.: +998 71 2372171 Fax: +998 71 1207120 Mob.: +998 93 5640101 E-mail: u.artikov@cgiar.org

Annex 2

Bioversity/UNEP–GEF Project
"*In situ*/On farm conservation and use of agricultural biodiversity (Horticultural Crops and Wild Fruit Species) in Central Asia".

Regional Workshop on Information and Communication Technologies (ICT)

28-30 March 2011
Tashkent, Uzbekistan,

PROGRAMME

Day 1. Monday, 28 March 2011	
9:00-10:00	Opening session and introduction **Muhabbat Turdieva** Regional Project Coordinator Bioversity International
10:00-11:00	Lecture on http://CentralAsia.bioversity.asia Fruits Portal and Typo **Massimo Buonaiuto** Multimedia/Web Specialist Bioversity International **Paul Quek** Scientist, Documentation/Information Bioversity International
11:00-11:30	***Coffee break and group photo***
11:30-12:30	Lecture on http://CentralAsia.bioversity.asia Fruits Portal and Typo (continued) **Massimo Buonaiuto** Multimedia/Web Specialist Bioversity International **Paul Quek** Scientist, Documentation/Information Bioversity International
12:30-14:00	***Lunch***
14:00-15:00	Accessing Typo3 backend. Backend functions **Massimo Buonaiuto** Multimedia/Web Specialist Bioversity International

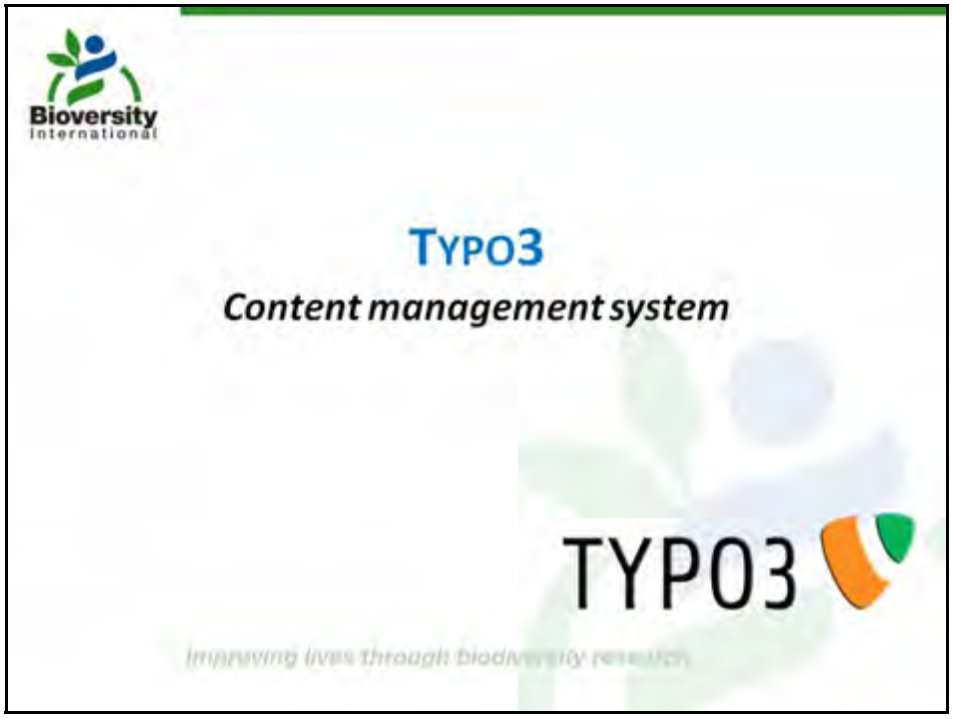
	Paul Quek Scientist, Documentation/Information Bioversity International
15:00-15:30	***Coffee break***
15:30-17:00	Accessing Typo3 backend. Backend functions (continued) **Massimo Buonaiuto** Multimedia/Web Specialist Bioversity International **Paul Quek** Scientist, Documentation/Information Bioversity International
Day 2. Tuesday, 29 March 2011	
9:00-11:00	Being on the Internet – Suggestions on how to write online content and introduction to social media **Massimo Buonaiuto** Multimedia/Web Specialist Bioversity International
11:00-11:30	***Coffee break***
11:30-12:30	Practical updating **Massimo Buonaiuto** Multimedia/Web Specialist Bioversity International **Paul Quek** Scientist, Documentation/Information Bioversity International
12:30-14:00	***Lunch***
14:00-15:00	Practical updating (continued) **Massimo Buonaiuto** Multimedia/Web Specialist Bioversity International **Paul Quek** Scientist, Documentation/Information Bioversity International
15:00-15:30	***Coffee break***
15:30-17:00	Introduction to scientific databases for the project (using CWR portal databases and Darwin Core) **Massimo Buonaiuto**

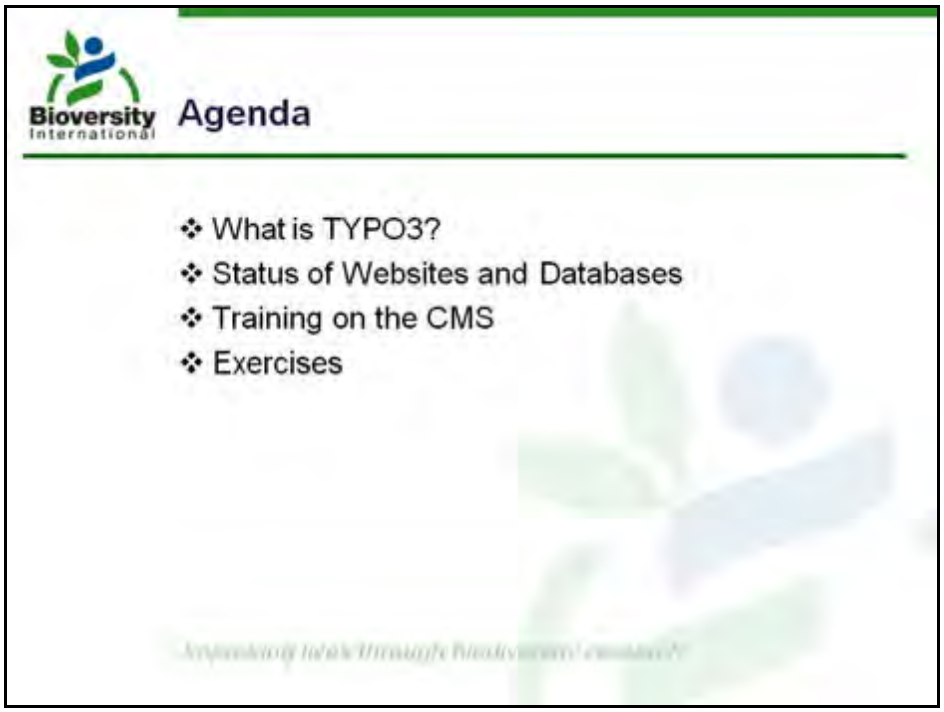
	Multimedia/Web Specialist Bioversity International
Day 3. Wednesday, 30 March 2011	
09:00-10:00	Introduction to Information Agreement: Type of information to be of 1) Open access 2) Available only to partners 3) Available only to third parties upon permission (may be part of the data) **Muhabbat Turdieva** Regional Project Coordinator Bioversity International **Isabel Lapena** Regional Consultant on ABS Bioversity International
10:00-11:00	Q&A on Darwin Core. Discussion on central database and decision on data to be compiled **Paul Quek** Scientist, Documentation/Information Bioversity International **Dilmurad Razikov** Consultant on Information and Communication Aspects Bioversity International
11:00-11:30	***Coffee break***
11:30-12:30	Discussion on central database and decision on data to be compiled **Paul Quek** Scientist, Documentation/Information Bioversity International **Dilmurad Razikov** Consultant on Information and Communication Aspects Bioversity International
12:30-14:00	***Lunch***
14:00-16:00	Information agreement and Action plan development **Muhabbat Turdieva** Regional Project Coordinator Bioversity International **Paul Quek** Scientist, Documentation/Information Bioversity International

	Isabel Lapena Regional Consultant on ABS Bioversity International
15:00-15:30	***Coffee break***
15:30-16:00	Information agreement and Action plan development (continued) **Muhabbat Turdieva** Regional Project Coordinator Bioversity International **Paul Quek** Scientist, Documentation/Information Bioversity International **Isabel Lapena** Regional Consultant on ABS Bioversity International
16:00-17:00	Closing ceremony
19:00	***Farewell Dinner at "Sarbon" restaurant***

"Typo3: Content Management System (CMS)"

Massimo Buonaiuto,
Bioversity International





What is TYPO3?

TYPO3 is a Content Management System (CMS)…
…is a web application designed to make it easy for non-technical users to add, edit and *manage* a website.

TYPO3

TYPO3 in Bioversity International

Advantages of publishing web sites in TYPO3 with Bioversity International:

- Web pages and database records centrally managed
- Easy management of pages and content of the website
- No need of editors like Microsoft Word to publish content
- Support from Bioversity Web Helpdesk

TYPO3

Bioversity International and Typo3

- 16 websites
- 8 databases

Bioversity and hosted web sites

- Bioversity International web site
- RECSEA-PGR
- SANPGR
- EA-PGR
- Central Asia Temperate Fruits
- Tropical Fruits Portal
- EUFGIS
- EUFGIS Portal
- EUFORGEN
- AEGIS
- ECPGR
- Musa Genomics
- Central Crop Collecting Missions Repository
- Eurisco
- Crop Wild Relatives Global portal

Bioversity Web Helpdesk

- 170 frontend/backend users supported
- 450 requests in 2010
- More than 2,000 active web pages in Typo3

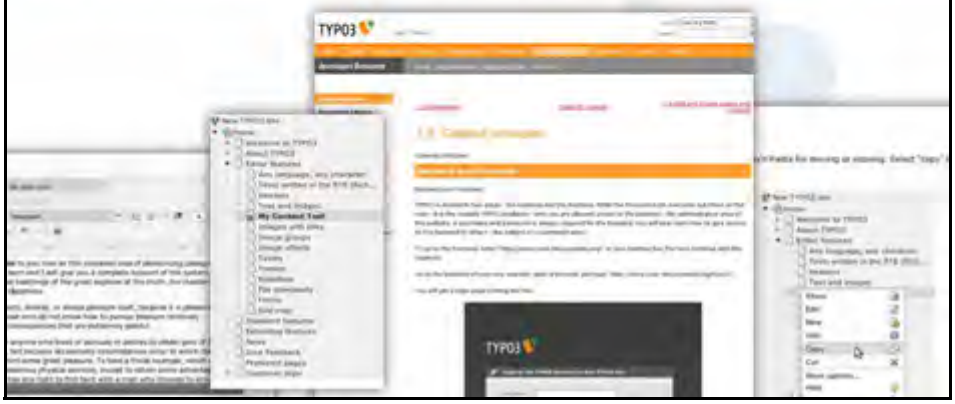
Bioversity Web Unit

- Massimo Buonaiuto: Multimedia Web/Specialist
- Simone Mori: Web Developer
- Valentina Barbiero: Web Designer / Help Desk Assistant

Training on the CMS

You can access online trainings on Typo3 at

http://typo3.org/documentation/document-library/tutorials/doc_tut_quickstart/1.0.0/view/1/3/



Training on the CMS

Users for Central Asia web site:

- Aziz Annamamedov
- Abdihalil Kayimov
- Mitrofanova Irina
- Petr Prohorenko
- Raul Karychev
- Zulfira Imamkulova
- Paul Quek
- myself

Training on the CMS

Login Area

Frontend Interface

Backend Interface

Improving lives through biodiversity research

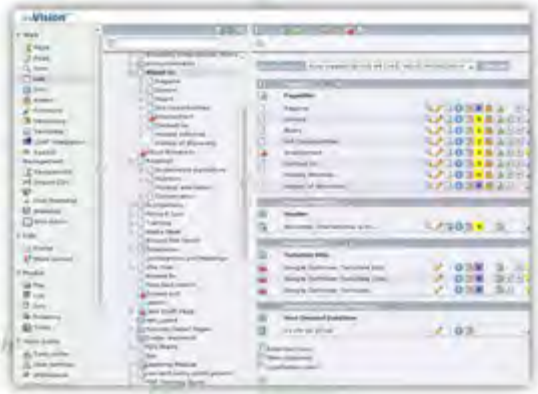
Training on the CMS

Backend Structure

Typo3 backend menu

Pagetree of the website

Working area



Training on the CMS

Media

Upload files inside CMS

How to manage the files

Mass Upload

Training on the CMS

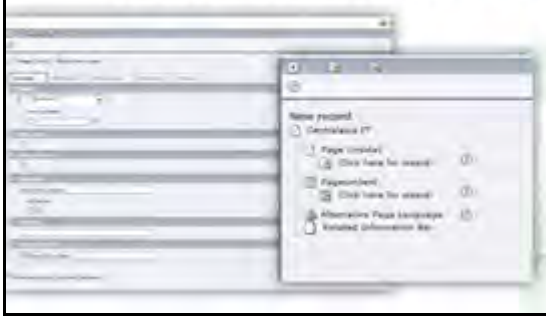
Page

What is a page in TYPO3?

Description of the fields (type, title, navigation title, etc)

Creation of subpages

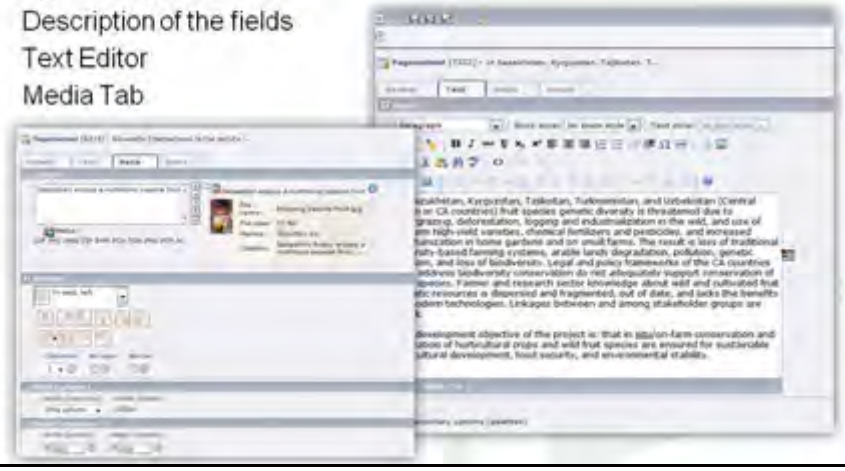
Display version/History functionality



Training on the CMS

Page content

- Type of page content
- Description of the fields
- Text Editor
- Media Tab



Training on the CMS

Related Information Bar

- How to create new related information bar
- How to work in a website

Training on the CMS

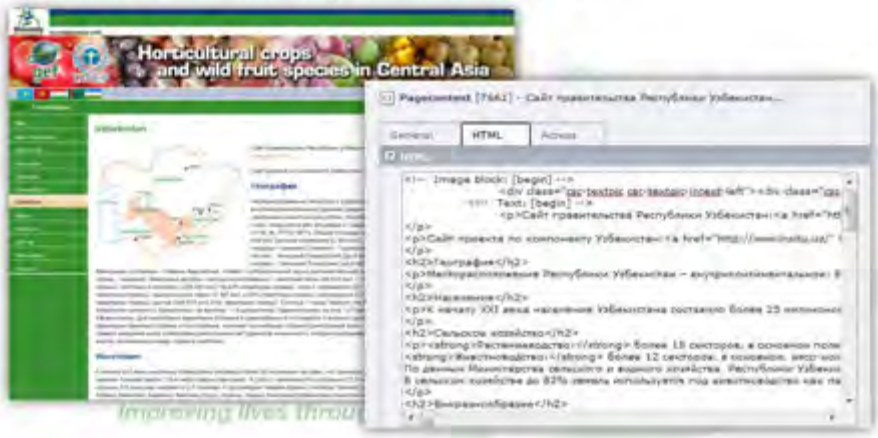
Workflow

- Difference between DRAFT and LIVE workspace
- Reviewer and publisher users
- Versioning of the element
- How to publish a page in the website

Training on the CMS

Alternative Language Page

How to create alternative page content in Russian



10 Exercises on the CMS

1. In Media > File upload new image and rename it with your surname.
2. Create a page with surname as title and a new subpage.
3. Insert the following content elements in the page:
   - Simple Text without images
   - Text with image on the right
   - Text with image centered aligned
4. Create a table of content (menu/sitemap element) for the page
5. Insert, in the page, a related information bar

10 Exercises on the CMS

6. Insert a content in the subpage with the structure indicated below:
   - Header
   - Text with image on the left
   - Table with 2 columns and 4 rows
   - Youtube video
7. Make the subpage hidden in the navigation menu
8. Translate an existing English page in Russian
9. Create a new subpage linking to an external web link
10. Delete the subpage created

"Being on the Internet: An Exciting Challenge"

Massimo Buonaiuto,
Bioversity International

Web Publishing

Top 10 Tips

From Bioversity Web editor *Samantha Collins*

Improving lives through biodiversity research

1. Keep it short

Q. How long do you take to decide if a web site is useful?

A. 5 seconds

Q. What is the average time spent on any web page?

A. 30 seconds

A general rule is that web text should be **at least** 50% shorter than printed text

2. Know your audience

Who is your audience?

Why do they come to your website?

How do they come to your website?

What do they need when they get there?

Can they find it quickly?

3. Scanning web pages

84% of users **do not read web pages**, they scan them.

Eye patterns

Source: Jakob Neilson

Making your webpage scan friendly

Highlight keywords

Use meaningful subheadings

- Introduce one idea per paragraph
- Use bulleted lists (no full stops)
- Change colours to denote links
- Use visuals – pictures, videos, buttons and logos

Conservation

Improving lives through biodiversity research

Conservation

Improving lives through biodiversity research

Bioversity International

Conservation

Improving lives through biodiversity research

Bioversity International

Improving lives through biodiversity research

4. Be credible

Add links to external sources to support what you are saying or to give visitors access to more information.

For more information, visit: www.writingfortheweb.com

You will not lose visitors

Visitors will trust you and come back to your site.

5. Don't use the passive voice.....

A conference was organized by Bioversity to celebrate the International Day for Farmers

Get Active!
Bioversity organized a conference to celebrate the International Day of Biodiversity

and ....

.....avoid unnecessary verbs

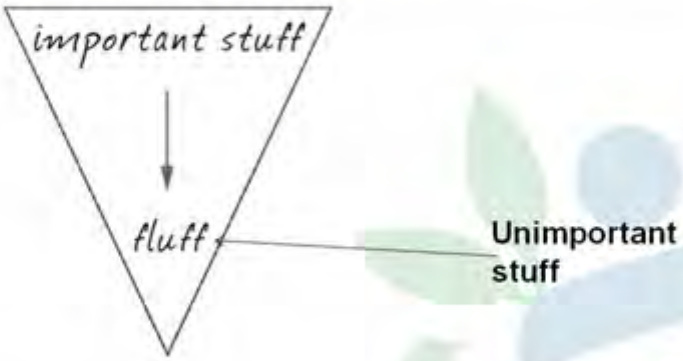
The project aims to study crop diversity in the Andes

The project will study crop diversity in the Andes.

Following the experiment, we came to the conclusion that children like chocolate.

Following the experiment, we concluded that children like chocolate.

6. Get to the point [1/2]



6. Get to the point [2/2]

Important Stuff

Unimportant Stuff

Getting to the point ...

Compare…

Bioversity, with support from organization x, organization y and organization z, organized a conference to celebrate the International Year of Biodiversity.

The day was a great success with speakers from all around the world xxxxxxxxxxxxxxxxxxxxxx

Getting to the point …2

Bioversity organized a conference to celebrate the International Year of Biodiversity. The day was a great success with speakers from all around the world

xxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxx

Bioversity would like to thank organization x, organization y and organization z for their support.

7. Use plain language

….. that your audience will understand the first time they hear it.

Avoid jargon and unexplained acronyms especially on the first level of your pages.

Consider **your international audience**. For example, if your site is in English, visitors may not be native English speakers or may be using a translator tool

Some examples .....

You can throw readers by using idiomatic expressions and verbs so hang up your metaphors and avoid clichés like the plague.

In a nutshell - take the bull by the horns and use simple language so it all becomes a piece of cake for everyone.

Or..... Keep it simple so everyone can understand

8. The search engine

Search engines, like Google, read and index your pages so that people searching for content can find relevant pages quickly and easily.

When you write content you can help search engines help users to find your pages.

9. Keywords

One way is by using 'keywords' in your title and at the start of your page.

We have just published a report on agricultural biodiversity that discusses the threats posed by climate change.

Bioversity International's new agricultural biodiversity report discusses the threats posed by climate change.

Agricultural biodiversity, according to Bioversity International's new report, is under threat from climate change.

But in moderation!

Bioversity International has just published a report on agricultural biodiversity. Bioversity International is a global leader in agricultural biodiversity research, as agricultural biodiversity is an important global issue.

In fact Bioversity International scientists are very worried about the loss of agricultural biodiversity.

Search engines (and readers) will quickly decide your site is not interesting....

Name the files

Make sure any files or photos or named properly.

Compare:

Annual Report

Bioversity International Annual Report 2010

Name the photos

007hy.jpg

Apricot, Armenia.jpg

8. Engage visitors

People like to interact with your content.

Good Web Writing .....

Is like a conversation

Answers people's questions

Lets people grab info and go

Ginny Redish, Letting Go of the Words

Emerging trends in web publishing [1/9]

Are news global?

- Most of the news is locally distributed: 90% is local
- In 1970s, 35-40% of news was international. Today it is 12-15%
- Most popular news websites cover the same recycled content (14,000 news of Google News referred to only 24 events)

Source: Ethan Zuckerman - Listening to global voices, Alisa Miller - shares the news about the news*
*Report last year, Pew and Colombia J-School

Emerging trends in web publishing [5/9]

World Land Mass

Improving lives through biodiversity research

Emerging trends in web publishing [6/9]

U.S. News map (February 2007)
(Density-equalizing map)

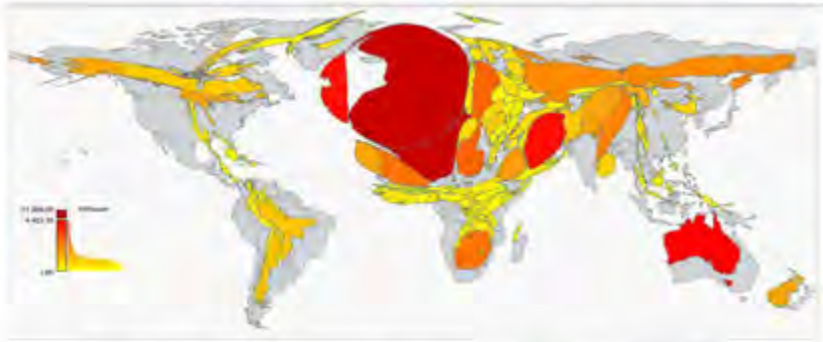
Improving lives through biodiversity research

Emerging trends in web publishing [7/9]

NON - U.S. News map (February 2007)
(Density-equalizing map)

Improving lives through biodiversity research

Emerging trends in web publishing [8/9]



Daily Mail newspaper - news world spreading

Emerging trends in web publishing [9/9]

Wikipedia is not global!

Innovative tools and adoptions

- Tools are often not adopted because we are not confident and aware of its usage

"If I had asked people what they wanted, they would have said faster horses", Henry Ford

Innovative tools and adoptions

- New technologies (Facebook, Twitter, Cloud computing, new database standards, etc.)
- New methodologies (visualization of databases, seeking synergies with *influencers* in Facebook, etc.)

Social media [1/8]

Improving lives through biodiversity research

Social media [2/8]

Beyond a simple Like

Social media [3/8]

- Today Facebook has over 500 million users
- Social media spread content following different rules and strategies of traditional communication:

  Best strategy for social media [via "*influencers*"] = Best strategy to avoid flu spreading in a network of friends [vaccinate people with more friends!!]
  Cost savings of this strategy: ~80%

Social media [4/8]

Market content in Social Networks:

- You like this., Friends, Recommendations and Fans pages can damage your brand!

- ….do not market content!
- Open 2 ways communication channel
- Seek "influencers" to facilitate content spreading
- Apply emotional and virus marketing with high impact messages

Analysis of new media tools [5/8]

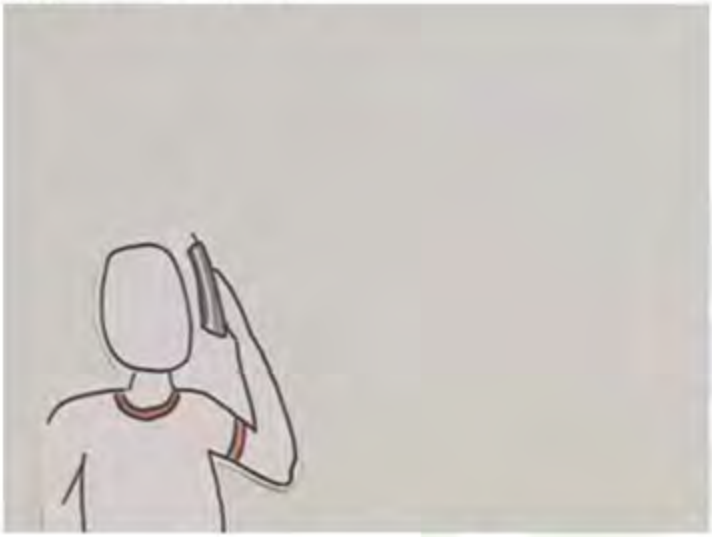
Challenging innovative media tools means understanding context and usage

… and define targeted strategies

Twitter [6/8]

"a service for friends, family, and co–workers to communicate and stay connected through the exchange of quick, frequent answers to one simple question: **What are you doing?**"

Twitter [7/8]



Twitter from Business Perspective [8/8]

- Develop and promote your project or brand
- Interact with your customer base
- Track what people are saying about you organization and project
- Create interest around upcoming events
- Promote other content you've created, including seminar, podcasts, publications, etc
- Develop direct relationship with other websites, journalist, scientist, etc.

Compete in web publishing

Compete online means:

- Combine resources and strategies for a higher impact
- Approach innovative tools and processes

Publishing scientific databases [1/6]

How can we actively promote scientific data using only search masks?

Publishing scientific databases [2/6]

- Business model behind the web publishing of databases online is changing quickly

Publishing scientific databases [3/6]

- **Tim Berners-Lee**, *inventor of the Internet*

"Don't hug your data…
We need your unaltered raw data!"

Publishing scientific databases [4/6]

- Users want to use your RAW DATA!
- Publish data only with search masks today closes opportunities to compete online

Publishing scientific databases [5/6]

- Mashing up free web services allows to combine private data with public data

Publishing scientific databases [6/6]

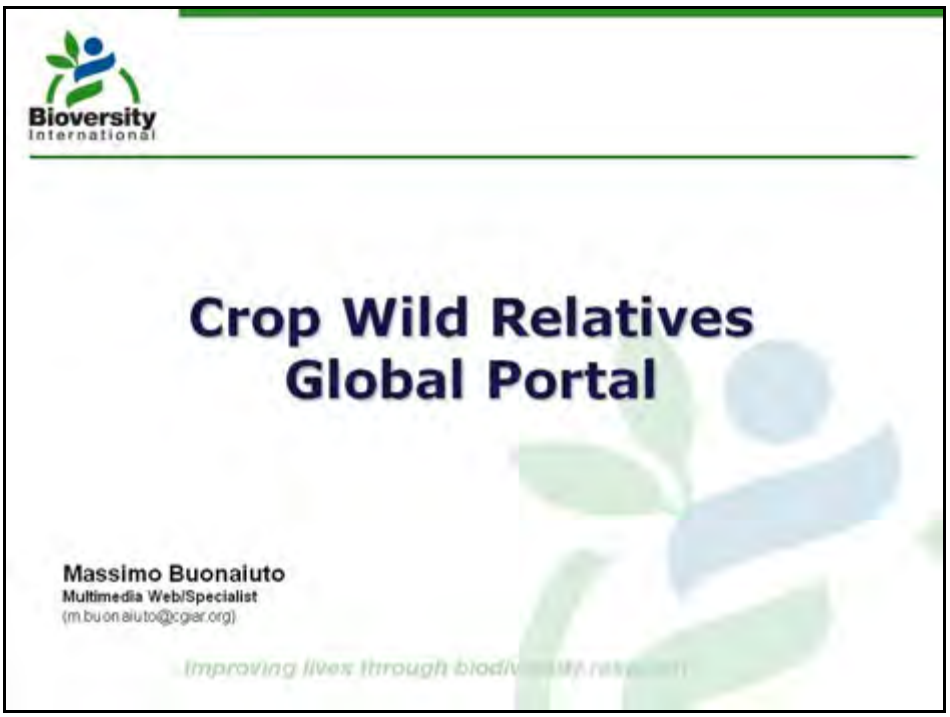
- Visualizating data…

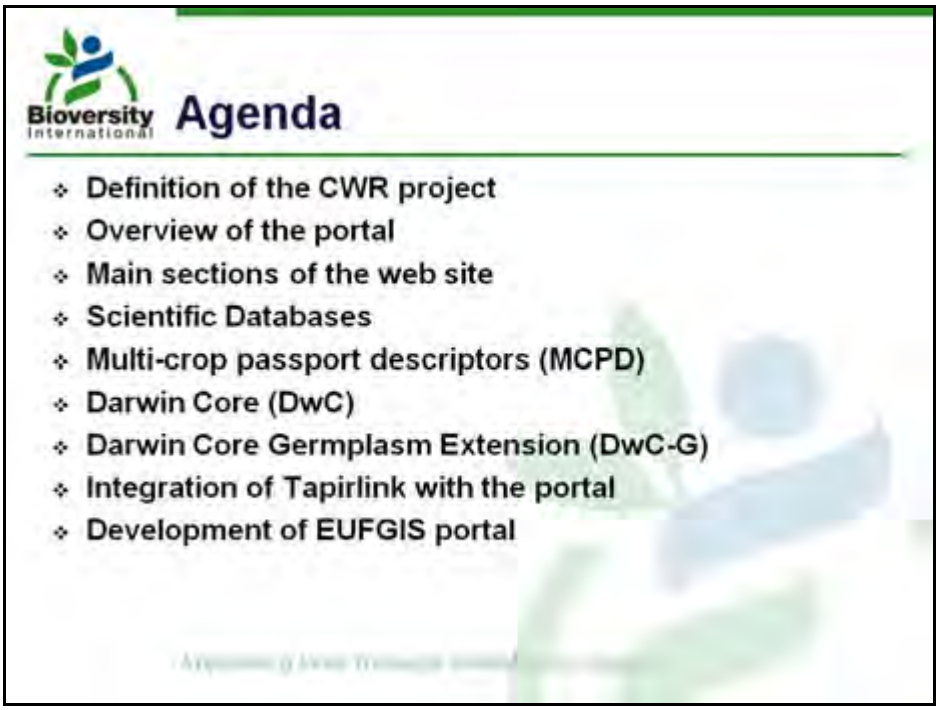
700 indicators from the FAO

Thank you!

"Crop Wild Relatives Global Portal"

Massimo Buonaiuto,
Bioversity International





CWR - The project

- Title: *In situ* conservation of crop wild relatives through enhanced information management and field application
- Supported by UNEP/GEF
- Implemented by Bioversity International
- April 2004 – February 2010
- Partner countries
  - Uzbekistan, Madagascar, Armenia, Bolivia, Sri Lanka
- Partner organizations
  - BGCI, BLE, FAO, IUCN, UNEP-WCMC

Crop Wild Relatives Portal [1/6]
Home page

http://www.cropwildrelatives.org

Crop Wild Relatives Portal [2/6]
eLearning Modules

Planning and partnership building

Conservation is the result of an intense planning process which requires coordination, prioritization and communication. Effective planning and partnerships can lay the foundation for successful in situ conservation.

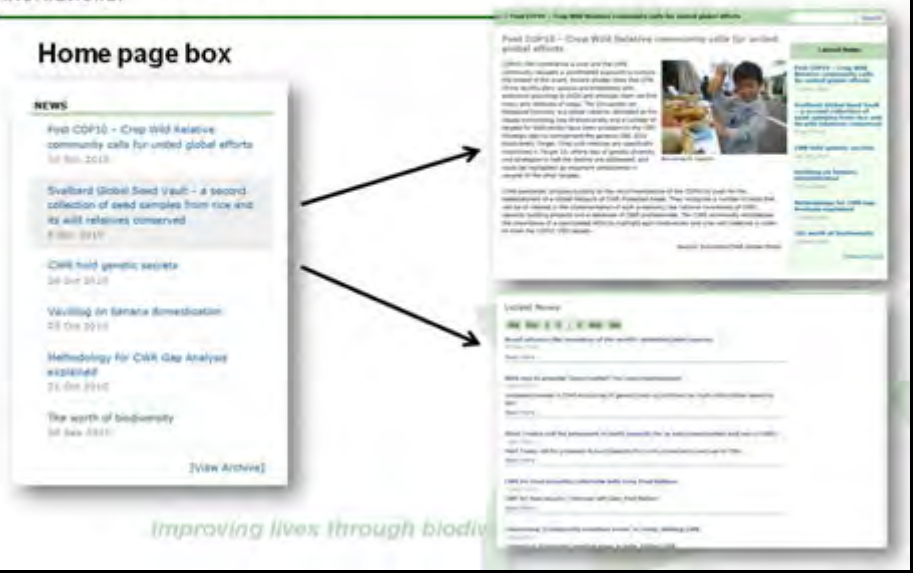
http://www.cropwildrelatives.org

Crop Wild Relatives Portal [2/6]
eLearning Modules

http://www.cropwildrelatives.org

Crop Wild Relatives Portal [3/6]
News Room

Home page box



Crop Wild Relatives Portal [4/6]
Image Gallery

http://www.cropwildrelatives.org

Crop Wild Relatives Portal [4/6]
Image Gallery as template for all web sites

from: http://www.cropwildrelatives.org

Crop Wild Relatives Portal [5/6]
Search using Google technology

Better retrieval of data adopting Google technology embedded in the portal:

Simple search

Advanced search with associated web sites

Crop Wild Relatives Portal [6/6]
Publications ordered by categories

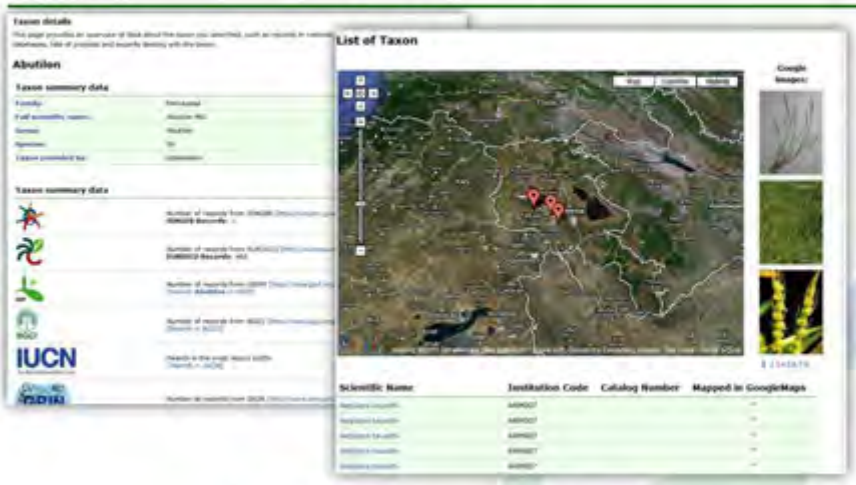
http://www.cropwildrelatives.org

Crop Wild Relatives Portal [1/2]
Search Mask

CWR Global Portal can manage data on projects, experts and institutes involved in the CWR research

http://www.cropwildrelatives.org

Crop Wild Relatives Portal [2/2]
Search Mask - Results



from http://www.cropwildrelatives.org

Crop Wild Relatives Portal

Crop Wild Relatives database is based on MCPD (Multi-crop Passport Descriptors) extended with Darwin Core 1.4

MCPD – Multi-crop Passport Descriptors

- The List of **Multi-crop Passport Descriptors (MCPD)** is a reference tool developed jointly by IPGRI and FAO to provide international standards to facilitate germplasm passport information exchange across crops.
- The descriptors aim to be compatible with IPGRI crop descriptor lists and with the descriptors used for the FAO World Information and Early Warning System (WIEWS) on plant genetic resources (PGR).

Why MCPD is important in the exchange of crop data?

CWR with Darwin Core

- Designed by **Biodiversity Information Standards**, aka Taxonomic Databases Working Group **(TDWG)**

- A vocabulary of terms to facilitate the discovery, retrieval and integration of information about organisms, their spatiotemporal occurrence, and the supporting evidence housed in biological collections.
- Designed to facilitate the exchange of information about the geographic occurrence of organisms and the physical existence of biotic specimens in collections.

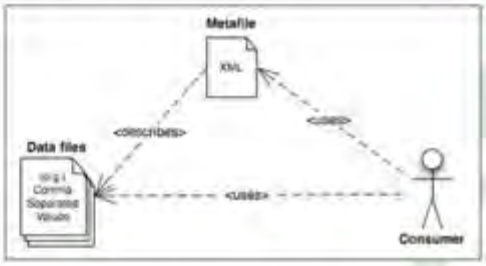
Darwin Core standard

- The Darwin Core should be viewed as an extension of the Dublin Core for biodiversity information.
- The purpose of these terms is to facilitate data sharing
  - a well-defined standard core vocabulary
  - a flexible framework
  - to maximize re-usability

http://rs.tdwg.org/dwc/

Darwin Core specifications

- includes a glossary of terms (properties, elements, fields, columns, attributes, or concepts) intended to facilitate the sharing of information about biological diversity by providing reference definitions, examples, and commentaries.



DwC Extensions

- The Darwin Core can be extended by adding new terms to share additional information which may be discipline-specific:

- **Darwin Core Germplasm** (DwC-G) includes additional terms for plant genetic resources and in particular the germplasm seed samples maintained by gene banks worldwide.
- **MCPD + Darwin Core = Darwin Core Germplasm**

DwC Germplasm Extension

The DarwinCore Germplasm Extension

- additional terms
- to describe germplasm samples
- maintained by genebanks worldwide

DwC Germplasm Extension

The terms of the Darwin Core Germplasm extension are grouped by class:

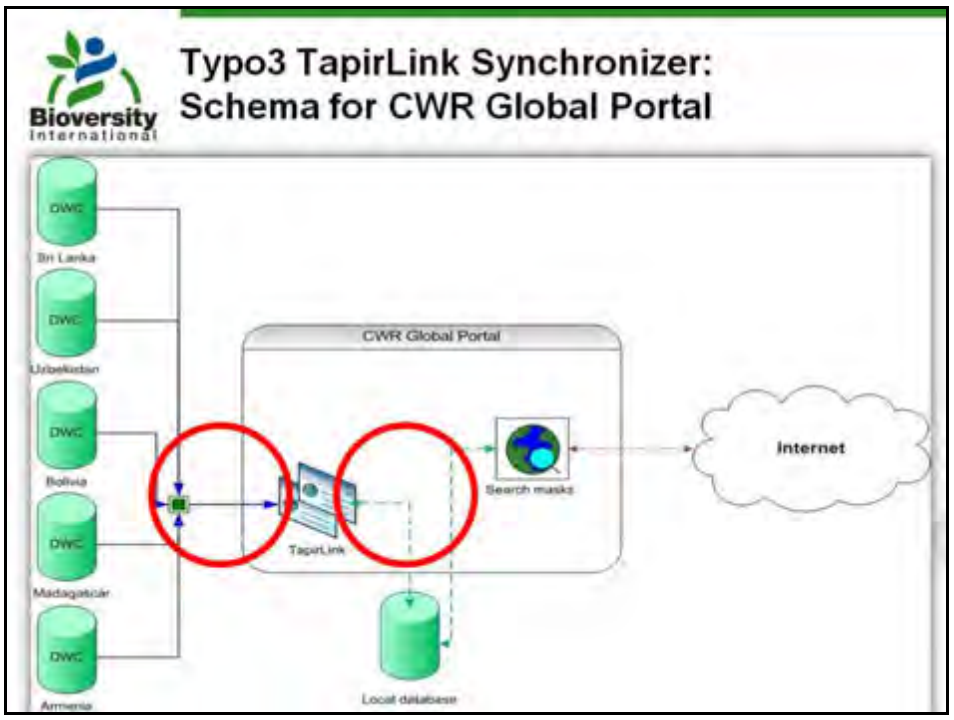
- Dataset
- Taxon
- Specimen (Accession)
- Collecting Event
- Breeding Event
- Safety Duplication
- Trait Measurements (C&E)
- Treaties and Regulations

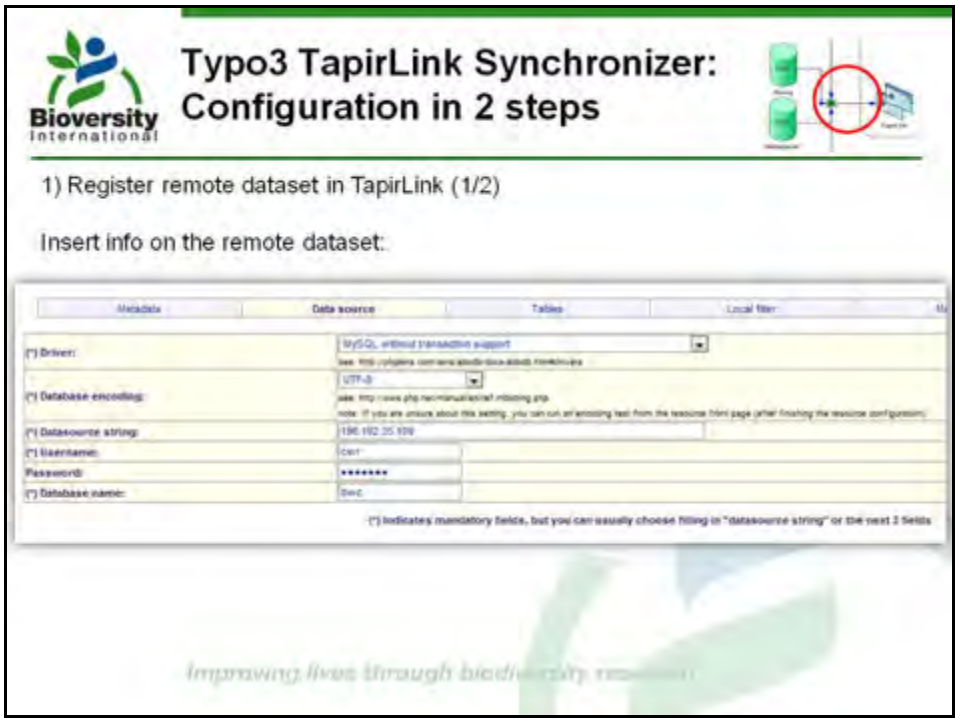
Typo3 TapirLink Synchronizer for scientific databases: Overview

- Component of Typo3 to synchronize local databases with remote datasets using TAPIR protocol and TapirLink web application

- Content providers now have one interface for :
  1) Web pages
  2) Database records
  3) Synchronize databases

- Unlimited remote datasets


Typo3 TapirLink Synchronizer:
Schema for CWR Global Portal
Bioversity International
DWC
Sri Lanka
DWC
Uzbekistan
DWC
Bolivia
DWC
Madagascar
DWC
Armenia
CWR Global Portal
TapirLink
Search masks
Local database
Internet


Typo3 TapirLink Synchronizer:
Configuration in 2 steps
Bioversity International
1) Register remote dataset in TapirLink (1/2)
Insert info on the remote dataset:
Metadata
Data source
Tables
Local filter
(*) Driver:
(*) Database encoding:
(*) Datasource string:
(*) Username:
Password:
(*) Database name:
(*) Indicates mandatory fields, but you can usually choose filling in "datasource string" or the next 3 fields
Improving lives through biodiversity research

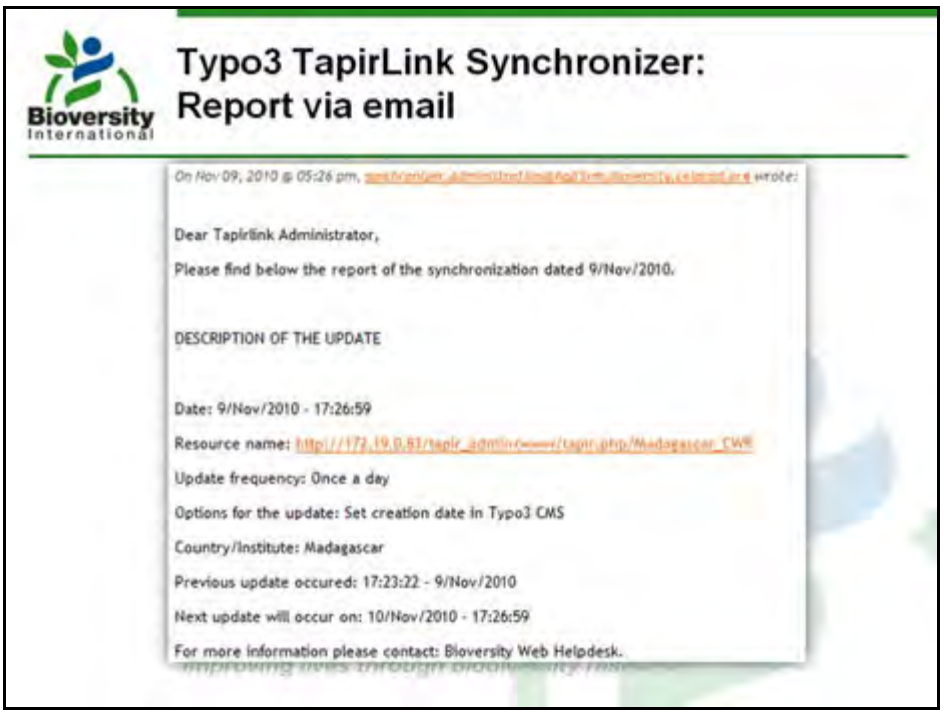
Typo3 TapirLink Synchronizer: Configuration in 2 steps

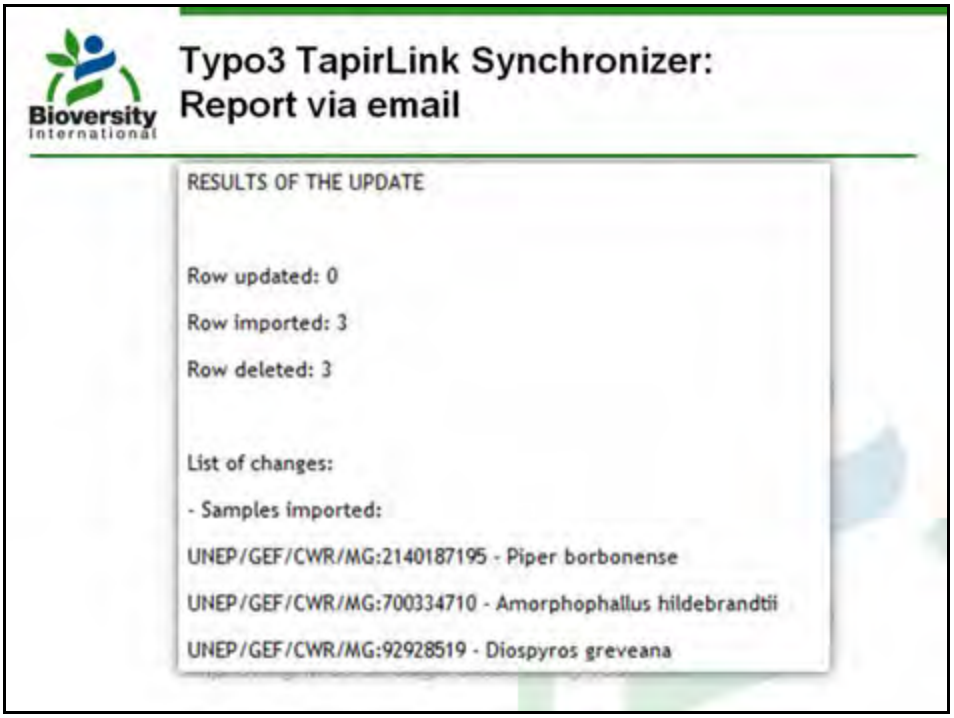
1) Register remote dataset in TapirLink (2/2)

Map the remote database using Darwin Core 1.4 schema

Typo3 TapirLink Synchronizer: Configuration in 2 steps

2) Manage TapirLink connections in Typo3


Typo3 TapirLink Synchronizer:
Report via email
On Nov 09, 2010 @ 05:26 pm, wrote:
Dear TapirLink Administrator,
Please find below the report of the synchronization dated 9/Nov/2010.
DESCRIPTION OF THE UPDATE
Date: 9/Nov/2010 - 17:26:59
Resource name:
Update frequency: Once a day
Options for the update: Set creation date in Typo3 CMS
Country/Institute: Madagascar
Previous update occured: 17:23:22 - 9/Nov/2010
Next update will occur on: 10/Nov/2010 - 17:26:59
For more information please contact: Bioversity Web Helpdesk.


Typo3 TapirLink Synchronizer:
Report via email
RESULTS OF THE UPDATE
Row updated: 0
Row imported: 3
Row deleted: 3
List of changes:
- Samples imported:
UNEP/GEF/CWR/MG:2140187195 - Piper borbonense
UNEP/GEF/CWR/MG:700334710 - Amorphophallus hildebrandtii
UNEP/GEF/CWR/MG:92928519 - Diospyros greveana

EUFGIS Portal

http://portal.eufgis.org/

EUFGIS Portal: Access to data
Search mask

EUFGIS Portal: Access to data
Aggregate values for results

Records found: 1097

You can view the search result in [HTML] format or using [Google Maps].

Countries (no. of units)

Austria (280);	Belgium (38);	Bosnia and Herzegovina (112);	Bulgaria (6);
Croatia (30);	Czech Republic (32);	Denmark (60);	Estonia (10);

Species (no. of populations)

Abies alba (102);	*Acer campestre* (5);	*Acer platanoides* (8);	*Acer pseudoplatanus* (40);
Alnus glutinosa (17);	*Alnus incana* (4);	*Betula pendula* (14);	*Betula pubescens* (12);
Carpinus betulus (15);	*Castanea sativa* (2);	*Fagus sylvatica* (121);	*Frangula alnus* (16);
Fraxinus angustifolia (2);	*Fraxinus excelsior* (33);	*Fraxinus ornus* (1);	*Larix decidua* (30);
Malus sylvestris (15);	*Ostrya carpinifolia* (2);	*Picea abies* (187);	*Picea excelsa* (5);
Picea omorika (7);	*Pinus cembra* (32);	*Pinus halepensis* (1);	*Pinus heldreichii* (2);
Pinus mugo (1);	*Pinus mugo var.pumilio* (4);	*Pinus mugo var.rostrata* (3);	*Pinus nigra* (17);
Pinus strobus (1);	*Pinus sylvestris* (46);	*Populus nigra* (3);	*Populus tremula* (36);
Prunus avium (30);	*Prunus cerasifera* (2);	*Prunus padus* (7);	*Pseudotsuga menziesii* (1);
Pyrus pyraster (1);	*Quercus cerris* (3);	*Quercus petraea* (48);	*Quercus pubescens* (2);
Quercus robur (98);	*Sorbus aucuparia* (25);	*Sorbus domestica* (1);	*Sorbus intermedia* (3);
Sorbus torminalis (7);	*Taxus baccata* (32);	*Tilia cordata* (16);	*Tilia platyphyllos* (9);
Ulmus glabra (15);	*Ulmus laevis* (2);	*Ulmus minor* (2);	

EUFGIS Portal: Access to data
Detailed reports

Detail page for Unit number: *FRA00001* and Target species: *Abies alba*

Go back to the previous page - Go back to the Search page

Map | Satellite | Hybrid | Terrain

Country of the unit :	France
Unit number:	FRA00001
National gene conservation unit number:	Donon
Province or state:	ALSACE
Department or county:	BAS-RHIN
Municipality:	GRANDFONTAINE
Local name :	FD du Donon
Latitude :	48°30'0"N

EUFGIS Portal: Geographical web mapping

Improving lives through biodiversity research

Thank you!

Improving lives through biodiversity research

INFORMATION SHARING AGREEMENT

THIS AGREEMENT dated ……..is made BETWEEN:

(NAME OF ORGANIZATION WITH LEGAL PERSONALITY on behalf of COUNTRY (address)
1. Kazakhstan
2. Kyrgyzstan
3. Tajikistan
4. Turkmenistan
5. Uzbekistan
6.Bioversity International ("Bioversity") is the operating name of the International Plant Genetic Resources Institute, which is an independent international research organization supported by the Consultative Group on International Agricultural Research (CGIAR) with full international juridical personality established under an international agreement (the Agreement on the Establishment of the International Plant Genetic Resources Institute) to which 54 Governments are Party. Its administrative offices are at **XXXX.**

BACKGROUND

This agreement regards the collaboration on sharing and dissemination of the information and data resulting from the UNEP/GEF Project "*In Situ*/On-Farm Conservation and Use of Agricultural Biodiversity (Horticultural Crops and Wild Fruit Species) in Central Asia". The main purpose of the Project has been the conservation and sustainable use of horticultural crops and wild fruit species genetic diversity in Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan through addressing the problem of inadequate information, coordination and knowledge, thereby contributing to the elimination of the other major barriers to conserving fruit genetic resources (unsustainable use of wild fruit species and loss of traditional diversity-based farming systems).

As a result, better information and knowledge on wild resources; on the number and quality of horticultural crops and their genetic resources, distribution, conservation, and use has been attained. Therefore, knowledge about levels and distribution of fruit species genetic diversity, and the value of this diversity for sustainable agriculture and ecosystem health have been enhanced in order for them to be used to strengthen national and regional policies and legislation towards the conservation and sustainable use of agrobiodiversity.

Main features during the implementation of the project have been the good collaboration and coordination among national partners in sharing knowledge and experience and in strengthening links among scientists and farmers. The present Information Sharing Agreeement reflects this desire of continuous collaboration among national parties, so that existing linkages among institutions will continue in the future through enabling facilitated access to data, publications and resources that have been developed as a result of the Project and regional collaboration is increased towards agrobiodiversity conservation.

In consideration of the foregoing, the parties agree as follows:

1. DEFINITIONS

1.1. Information:

- Information: data and metadata, scientific information and research findings resulting from the activities carried out as part of the project and registered in any written form.
- Primary data: Data collected through eco-geographic, household (HH) surveys and focus group discussions (FGD) as well as other activities carried out as part of the project.

Central Data Base: Project website or digital data base held by Bioversity which stores the Information as defined above.

1.2. Parties that manage the information

- Project Coordinator: Institution in charge of coordinating the implementation of the project, i.e. Bioversity.
- National Executing Agencies (herinafter NEA): Institutions in charge of implementing the project at the national level.
- National Focal Point (herinafter NFP): person designated by the National Executing Agency with capacity to provide the information to the Central Data Base and take decisions about third parties access and use of the Information.

2. OBJECTIVE

The objective of this Information Sharing Agreement is to provide a framework for the provision, storage, sharing and dissemination of the Information resulting from the project and to set forth the terms and conditions under which the Parties will share and disseminate such Information between themselves and to third parties.

3. OBLIGATIONS

3.1. The National Executing Agency (NEA) will:

3.1.1. Designate a National Focal Point (NFP) for the provision or maintenance of the information stored in the Central Data Base; Each Party shall designate one or two people with capacity to

a. get access to the Information stored in the Central Data Base on behalf of the Party
b. be consulted and make decisions about third parties' access People designated for each institution: University: ……..;

3.1.2. Ensure that the NFP will coordinate the execution of the responsibilities under this agreement and act as the main point of contact between the NEA and Bioversity;

3.1.3. Acquire and manage the appropriate data of the Project, inter alia for upload onto the Central Data Base;

3.1.4. Define the appropriate data of the country to be incorporated into the Central Data Base;

3.1.5. Obtain any necessary permissions from third parties to allow the data to be made publicly available in the Central Data Base;

3.1.6. Provide the data to Bioversity;

3.1.7. Provide only non-confidential data that is not subject to any restrictions to be incorporated into the Central Data Base;

3.1.8. Update and provide the data in the Central Data Base uploading format at least once a year;

3.2.Bioversity will: (MUHABBAT: should be discussed with Mauricio and Paul and relevant staff at Bioversity to clarify Bioversity's role in the maintenance of the database)

3.1.1. Compile into Central Data Base the data uploaded from the NFP;

3.1.2. Provide public access to the database via a website, and maintain this website and its user interfaces in consultation with and on behalf of the NFP of the NEA;

3.1.3. Manage the tools and means to facilitate data to be uploaded from NEA to Central Data Base and provide access to these tools and means to the NEA;

3.1.4. Provide technical guidance on data inclusion and data quality;

3.1.5. Manage the legal basis for access to Project website and use of data (disclaimers, copyright notifications, terms of use etc.) and prominently display on the Project website the terms of use of the data;

3.1.6. Not alter, modify, or otherwise change, the data in any way if the quality standards are met;

3.1.7. Not claim ownership over any data provided by the NFI;

3.1.8. Not express any opinion on the data when making them publicly available;

3.1.9. Acknowledge that the NEAs are the source of the data on Central Data Base;

3.1.10. Encourage users to acknowledge Project website as the source of the data accessed through the Project website and will prominently display the "terms of use" on the Project website.

4. INTELLECTUAL PROPERTY

Neither the receipt of data nor its publication through Central Data Base shall affect whatever intellectual property rights the National Executive Agencies may hold with respect to the data.

5. CONDITIONS FOR INFORMATION SHARING WITH THIRD PARTIES

All the Parties will have access to the Central Data Base and all the Information stored in such data base under the following terms and conditions.

5.1. National Executive Agency that is provider of the information will be able to reproduce and distribute the Information originated/provided by the National Executive Agency itself, without any need to obtain permission from the other Parties.

5.2. Third parties' access to the Central Data Base, publication and dissemination of the Information stored in the Central Data Base or of the Central Data Base itself shall be made after obtaining the approval from the National Executive Agency that provided the Information.

5.3. The Parties have the right to make available to third parties with or without permission of other Parties the Information they have individually provided to the Central Data Base.

5.3. If the Parties decide to grant access to the Central Data Base to a third party, concrete terms and conditions applicable to the access and use of the Information by such third party will be decided jointly by all the Parties.

5.6. Parties agree that once the Information from the Central Data Base is made available to the public without limitations or restraint, Parties will have non-exclusive, royalty-free licenses to use, reproduce and distribute such Information, without any need to obtain permission from one another.

6. DISSEMINATION OF INFORMATION

6.1. The Parties will recognize the other Parties and financing organizations through citation, indicating links and referring to the source of information.

6.1. Parties will publicize the access to the Central Data Base by including links to the appropriate website in their scientific publications arising from the use of the Information stored in the Central Data Base

6.2. When disseminating and publishing the Information or any research finding based on such Information, the Parties will recognize the other Parties through citation, acknowledge or reference to the source of information as well as UNEP-GEF and any other donor as financial supporters of the project.

6.3. Parties will make efforts to ensure that third parties publicly recognize the Parties as the authors of the Information as well as UNEP-GEF and any other donor as financial supporters of the project.

7. EFFECT, AMENDMENT AND TERMINATION OF AGREEMENT

7.1 This Agreement will enter into effect on the date of signing by at least two Parties and is open for signing by other Parties participants. In this case the agreement will enter into force on the date of signing.

7.2 The terms of this agreement can be amended upon written agreement by all the Parties.

7.3 Any Party may unilaterally renounce the agreement by giving the depositary of the Agreement at least thirty (30) days prior written notice of intent to terminate the Agreement.

7.4 For new associated Parties the Agreement will enter into effect on the moment of signing by those Parties.

8. SETTLEMENT OF DISPUTES

Any disputes or differences of any kind arising between the Parties during the implementation of this Agreement shall be settled amicably upon consultation between all Parties in accordance with tenor and intent of this Agreement.

DATE AND SIGNATURES

Date: _____

Signature: _____

Name: _____

Title: _____

On behalf of the [ORGANIZATION WITH LEGAL PERSONALITY]

Date: _____

Signature: _____

Name: _____

Title: _____

On behalf of the [ORGANIZATION WITH LEGAL PERSONALITY]

Date: _____

Signature: _____

Name: _____

Title: _____

On behalf of the [ORGANIZATION WITH LEGAL PERSONALITY]

Date: _____

Signature: _____

Name: _____

Title: _____

On behalf of the [ORGANIZATION WITH LEGAL PERSONALITY]

Date: _____

Signature: _____

Name: _____

Title: _____

On behalf of the [ORGANIZATION WITH LEGAL PERSONALITY]

Table of Elements in Darwin Core

Element	Description	Nillable	Type	Min Value	Max Value	Record level elements in Russian
	Record-level Elements					
GlobalUniqueIdentifier	A Uniform Resource Name (URN) as a unique identifier for the specimen or observation record. In the absence of a persistent global unique identifier, construct one in the form: "[InstitutionCode]:[CollectionCode]: [CatalogNumber]" Example: "FMNH:Mammal:145732"	no	string			Uniform Resource Name (URN) (Универсальный идентификатор ресурса) как уникальный идентификатор для записи об образце или исследования. При отсутствии пос тоянного глобального уникального идентификатора, конструируйте один в форме: "[InstitutionCode]: [CollectionCode] :[CatalogNumber]" Пример: "FMNH: Mammal:145 732"
DateLastModified	The last date-time of publication when any of the data for the record were modified from the previous publication of that record. When publishing a record for the first time, use the publication date-time. Returns values as ISO 8601 date and time. (cf. http://www.w3.org/TR/xmlschema-2/#isoformats and http://www.iso.org/iso/en/prods-services/popstds/dateandtime.html Example: November 5, 1994, 8:15:30 am, US Eastern Standard Time" would be "1994-11-05T13:15:30Z"	no	dateTime			Дата/время последней публикации, когда каждые из данных для записи были изменены с предыдущей публикации этой записи. При публикации записи в первый раз, используйте дату и время публикации. Возвращает значения как дата и время ISO 8601. (см. http://www.w3.org/TR/xmlschema-2/ # isoformats иhttp://www.iso.org/iso/en/prods-services/popstds/dateandtime.html Пример: 5 ноября 1994 года, 8:15:30 AM, Восточное стандартное время США будет выглядеть как "1994-11-05T13:15:30Z"
BasisOfRecord	A descriptive term indicating whether the record represents an object or observation. Examples:	no	string			Описательный термин, указывающий, что именно представляет собой запись - объект или наблюдение. Примеры:

Element	Description	Nillable	Type	Min Value	Max Value	
	PreservedSpecimen- A physical object representing one or more organisms, part of organism, or artifact of an organism. synonyms: voucher, collection, lot.					**PreservedSpecimen** (Сохранившийся образец) - физический объект, представляющий собой одного или несколько организмов, часть организма, или ар тефакт организма. Синонимы: поручитель, коллекция, участок земли.
	FossilSpecimen- A physical object representing one or more fossil organisms, part of fossil organism, or artifact of a fossil organism.					**FossilSpecimen** (Ископаемый образец) - физический объект, представляющий собой одного или несколько ископаемых организмов, часть ископаемых организмов, или артефакт ископаемых организмов.
	LivingSpecimen- An organism removed from its natural occurrence and now living in captivity or cultivation.					**LivingSpecimen** (Живой образец) - организм, удаленный со своей естественной среды обитания и в настоящее время живущий в неволе или культивации.
	HumanObservation- A report by a known observer that an organism was present at the place and time.					**HumanObservation** (Человеческое наблюдение) - отчет известного наблюдателя о состоянии организма на определенном месте и времени.
	MachineObservation- A report by a monitoring device that an organism was present at the place and time.					**MachineObservation** (Автоматизированное наблюдение) - отчет контрольного устройства о состоянии организма на определенном месте и времени.
	StillImage- An photograph, drawing, painting.					**StillImage** (Статическое изображение) - фотография, рисунок, живопись.
	MovingImage- A sequence of still images taken at regular intervals and intended to be played back as a moving image; may include sound.					**MovingImage** (Движущееся изображение) - последовательность статических изображений, снятых с регулярным интервалом и предназначенных для воспроизведения как движущееся изображение; может включать звук.
	SoundRecording- An audio recording.					**SoundRecording** (Звуковая запись) - аудио запись.
	OtherSpecimen- Any type of specimen not covered by any of the categories above.					**OtherSpecimen** (Другие образцы) - любой тип образца, не включенного в вышеуказанные

Element	Description	Nillable	Type	Min Value	Max Value	
						категории.
InstitutionCode	The code (or acronym) identifying the institution administering the collection in which the organism record is cataloged. No global registry exists for institutional codes; use the code that is "standard" at your institution or in your discipline.	no	string			Код (или аббревиатура) учреждения, управляющей коллекцией, в которой запись об организме каталогизирован. Отсутствует глобальный реестр для институциональных кодов: используйте код, который является "стандартом" в вашем учреждении или вашей дисциплине.
CollectionCode	The code (or acronym) identifying the collection within the institution in which the organism record is cataloged.	no	string			Код (или аббревиатура) коллекции в рамках учреждения, в котором запись об организме каталогизирован.
CatalogNumber	The alphanumeric value identifying a record within the collection. It is highly recommended that each record be uniquely identified within a collection by this value. It is also recommended that each record be uniquely identified in a global context by the combination of InstitutionCode, CollectionCode and CatalogNumber.	no	string			Буквенно-цифровое значение записей в коллекции. Настоятельно рекомендуется, что каждая запись уникально идентифицированна в коллекции используя эти значения. Рекомендуется также, что каждая запись уникально идентифицированна в глобальном контексте с сочетанием InstitutionCode (код учреждения), CollectionCode (код коллекции) и CatalogNumber (номер каталога).
InformationWithheld	Brief descriptions of additional information that may exist, but that has not been made public. Information about obtaining the withheld information should be sought from the administrative contact identified in the provider resource metadata (curator, collection manager). Examples: "specific locality information given only to nearest county", "ask about tissue samples", "georeferences given only to nearest degree"	yes	string			Краткие описания дополнительной информации, которые могут существовать, но которые не были обнародованы. Информация о получении удерживаемых данных должна быть получена от административного контактного лица, определенного в метаданных ресурсов поставщика информации (куратор, менеджер коллекций). Примеры: "конкретная информация данной местности предоставляется только ближайшей области", "спросить об образцах ткани", "геоссылки предоставляются только ближайшему уровню родства"

Element	Description	Nillable	Type	Min Value	Max Value	
Remarks	Free text comments accompanying the object or observation record.	yes	string			Свободные текстовые комментарии, сопровождающие запись об объекте или исследовании.
	Taxonomic Elements					**Таксономические элементы**
ScientificName	The full name of the lowest level taxon to which the organism has been identified in the most recent accepted determination, specified as precisely as possible, including name-author, year or authorship, sensu or sec. (according to or following) author, and indication of uncertainty. Conceptually equivalent to a full taxonomic identification as given by the identifier (verbatim). Does not include the identifier name or date of identification. Examples: "Coleoptera" (an Order), "Vespertilionidae" (a Family), "Manis" (a Genus), "Ctenomys sociabilis" (Genus + SpecificEpithet), "Ambystoma tigrinum diaboli" (Genus + SpecificEpithet + SubspecificEpithet), "Quercus agrifolia var. oxyadenia (Torr.) J.T. Howell" (Genus + SpecificEpithet + InfraspecificRank + InfraspecificEpithet + ScientificNameAuthor).	no	string			Полное имя таксона самого низкого уровня, к которой организм был определен в самом последнем принятом определении, который указан как можно точнее, включая имя автора, год авторства, смысл этого слова (согласно или последовательно автору), а также указание неопределенности. Концептуально эквивалент к полной таксономической идентификации, данным идентификатором (дословно). Не включает идентификатор имени или даты идентификации. Примеры: "Coleoptera" (отряд), "Vespertilionidae" (семья), "Manis" (род), "Ctenomys sociabilis"(род + видовой эпитет SpecificEpithet), "Diaboli Ambystoma tigrinum" (род + видовой эпитет SpecificEpithet + подвидовой эпитет SubspecificEpithet), "Quercus agrifolia var. oxyadenia (Torr.) JT Howell" (род + видовой эпитет SpecificEpithet + внутривидовая категория InfraspecificRank + внутривидовой эпитет InfraspecificEpithet + автор научного названия ScientificNameAuthor).
HigherTaxon	The combination of names of taxonomic ranks less specific than Genus. "LIKE" query operations on this element will search for a substring that might match any of the higher taxon names. This element may contain the scientific name of any supra-specific taxon, including subfamily, tribe, subgenus, etc.	yes	string			Сочетание названий таксономических классов менее конкретно, чем род. Операции запроса "LIKE" по этому элементу будут искать подстроку, которая может соответствовать любой из высших таксономических названий. Этот элемент может содержать научное название любого сверхспецифического таксона, в том числе подсемейства, поколения, подрода

Element	Description	Nillable	Type	Min Value	Max Value	
						и т.д.
Kingdom	The name of the kingdom in which the organism is classified.	yes	string			Наименование мира (растительный/животный), в котором организм классифицирован.
Phylum	The name of the phylum (or division) in which the organism is classified.	yes	string			Наименование типа (или отдела), в котором организм классифицирован.
Class	The name of the class in which the organism is classified.	yes	string			Наименование класса, в котором организм классифицирован.
Order	The name of the order in which the organism is classified.	yes	string			Наименование отряда, в котором организм классифицирован.
Family	The name of the family in which the organism is classified.	yes	string			Наименование семейства, в котором организм классифицирован.
Genus	The name of the genus in which the organism is classified.	yes	string			Наименование рода, в котором организм классифицирован.
SpecificEpithet	The specific epithet of the scientific name applied to the organism.	yes	string			Специфический эпитет научного названия, применяемого для организма.
InfraspecificRank	The infraspecific rank (subspecies, variety, forma) of the InfraspecificEpithet. Examples: "subsp.", "var.", "forma".	yes	string			Внутривидовая классификация (подвиды, сорта, формы) IntraspecificEpithet (внутривидового эпитета). Например: "subsp." (подвид), "var." (сорт), "forma" (форма).
InfraSpecificEpithet	The infraspecific epithet of the scientific name applied to the organism.	yes	string			Внутривидовой эпитет научного названия, применяемого для организма.
AuthorYearOfScientificName	The author of the ScientificName and the year of publication, if known. More than one author can be listed in a concatenated string. Should be formatted with parentheses and year according to the conventions of the applicable nomenclatural code.	yes	string			Автор ScientificName (научного названия) и год издания, если известно. Более одного автора могут быть перечислены в каскадных строках. Формат должен включать скобки и год в соответствии с конвенциями применимого номенклатурного кода.

Element	Description	Nillable	Type	Min Value	Max Value	
NomenclaturalCode	The nomenclatural code under which the ScientificName is constructed. Examples: "ICBN", "ICZN", "BC", "ICNCP", "BioCode"	yes	string			Номенклатурный код, в соответствии с которым ScientificName (научное название) построено. Примеры: "ICBN", "МКЗН", "BC", "ICNCP", "BioCode"
	Identification Elements					**Элементы идентификации**
IdentificationQualifer	A standard term to qualify the identification of the organism when doubts have arisen as to its identity. Examples: "cf.", "aff.", "subspecies in question"	yes	string			Стандартное условие для того чтобы квалифицировать определение организма, когда возникают сомнения относительно его идентфкации. Примеры: "cf.", "aff.", "подвиды в вопросе"
	Locality Elements					**Элементы месторасположения**
HigherGeography	The combination of all geographic elements less specific than locality. "Like" query operations on this element will search for a substring that might be in any of the higher geography elements.	yes	string			Сочетание всех географических элементов являются менее конкретными, чем местные. Операции запроса "LIKE" по этому элементу будет искать подстроку, которые могут быть в любой из высших географических элементов.
Continent	The full, unabbreviated name of the continent on which the organism was collected or observed.	yes	string			Полное несокращенное название континента, на котором организм был собран или исследуется.
WaterBody	The full, unabbreviated name of the body of water in or over which the organism was collected or observed.	yes	string			Полное несокращенное название водоема, под или над которым организм был собран или исследуется.
IslandGroup	The full, unabbreviated name of the island group in which the organism was collected or observed.	yes	string			Полное несокращенное название группы островов, в которой организм был собран или исследуется.
Island	The full, unabbreviated name of the island on which the organism was collected or observed.	yes	string			Полное несокращенное название острова, на котором организм была собран или исследуется.
Country	The full, unabbreviated name of the country or major political unit in which the organism was collected or observed.	yes	string			Полное несокращенное название страны или крупной административно-территориальной единицы, в которой организм был собран или исследуется.

Element	Description	Nillable	Type	Min Value	Max Value	
StateProvince	The full, unabbreviated name of the state, province, or region (*i.e.*, the next smaller political region than Country) in which the organism was collected or observed.	yes	string			Полное несокращенное название области, провинции или региона (например, следующей наименьшей административно-территориальной единицы, чем страна), в котором организм был собран или исследуется.
County	The full, unabbreviated name of the county, shire, or municipality (*i.e.*, the next smaller political region than StateProvince) in which the organism was collected or observed.	yes	string			Полное несокращенное название округа, графства или муниципалитета (т.е. следующей наименьшей административно-территориальной единицы, чем StateProvince), в котором организм был собран или исследуется.
Locality	The full, unabbreviated name of the locality where the organism was collected or observed. This element need not contain geographic information provided in other geographic elements.	yes	string			Полное несокращенное название местности, где организм был собран или исследуется. Этому элементу необязательно содержать географическую информацию, содержащуюся в других географических элементах.
MinimumElevationInMeters	The minimum or actual elevation at which the collection or observation was made. Use negative values for locations below sea level. Examples: 75 (for an elevation of 100 +- 25 meters). 100 (for an elevation between 100m and 200m).	yes	double			Минимальная или фактическая высота, на которой организм был собран или исследован. Используйте отрицательные значения для локаций ниже уровня моря. Примеры: 75 (для высоты 100 + - 25 метров). 100 (для высоты между 100 и 200 м).
MaximumElevationInMeters	The maximum or actual elevation at which the collection or observation was made. Use negative values for locations below sea level. Examples: Examples: 125 (for an elevation of 100 +- 25 meters). 200 (for an elevation between 100m and 200m).	yes	double			Максимальная или фактическая высота, на которой организм был собран или исследован. Используйте отрицательные значения для локаций ниже уровня моря. Примеры: 125 (для высоты 100 + - 25 метров). 200 (для высоты между 100 и 200 м).
MinimumDepthInMeters	The minimum or actual depth at which the collection or observation was made. Use positive values for locations below the surface. Examples: 0 (for a depth of up to 10m). 50 (for a depth between 50m and 100m).	yes	double			Минимальная или фактическая глубина, на которой организм был собран или исследован. Используйте положительные значения для мест ниже поверхности. Примеры: 0 (при глубине до 10 м). 50 (на глубине от 50 м и 100 м).

Element	Description	Nillable	Type	Min Value	Max Value	
MaximumDepthInMeters	The maximum or actual depth at which the collection or observation was made. Use positive values for locations below the surface. Examples: 10 (for a depth of up to 10m). 100 (for a depth between 50m and 100m).	yes	double			Максимальная или фактическая глубина, на которой организм был собран или исследован. Используйте положительные значения для мест ниже поверхности. Примеры: 10 (при глубине до 10 м). 100 (на глубине от 50 м и 100 м).
	Collecting Event Elements					**Элементы процесса сбора**
CollectingMethod	The name of, reference to, or brief description of the method or protocol under which the collecting event occurred. Examples: "UV light trap", "mist net", "bottom trawl"	yes	string			Название, ссылка, или краткое описание метода или протокола, при которых процесс сбора было произведено. Примеры: "ловушка с ультрафиолетовым излучением", "паутинная сеть для ловли мелких птиц", "донный трал"
ValidDistributionFlag	A flag ("true" or "false") that indicates whether the locality information represents a valid distribution occurrence for a specimen. Specimens taken from captivity and showing the captive location should use the value "false".	yes	boolean			Флажок ("true" (верно) или "false" (неверно)), который указывает представляет ли информация по местности действительное возникновение распределения для образца. Образцы, взятые из неволи и указывающие неестественного местонахождения должны использовать значение "false" (неверно).
EarliestDateCollected	The earliest date-time (Common Era calendar) in a date-time period during which an organism or group of organisms was collected or observed. If the event is recorded as occurring at a single date-time, populate both EarliestDateCollected and LatestDateCollected with the same value.	yes	DateTimeISO?			Самая ранняя дата-время (по календарю нашей эры) в периоде даты-времени, в течение которого организм или группа организмов была собрана или исследована. Если событие регистрируется как происходящие в единой дате-времени, заполните EarliestDateCollected и LatestDateCollected одинаковым значением.
LatestDateCollected	The latest date-time (Common Era calendar) in a date-time period during which an organism or group of organisms was collected or observed. If the event is recorded as occurring at a single date-time, populate both EarliestDateCollected and LatestDateCollected with the same value.	yes	DateTimeISO?			Самая поздняя дата-время (по календарю нашей эры) в периоде даты-времени, в течение которого организм или группа организмов была собрана или исследована. Если событие регистрируется как происходящие в единой дате-времени, заполните EarliestDateCollected и LatestDateCollected одинаковым значением.

Element	Description	Nillable	Type	Min Value	Max Value	
DayOfYear	The ordinal day of the year on which the object or observation was collected (1 for January 1, 365 for December 31, except in a leap year, in which case it is 366). If the EarliestDateCollected and LatestDateCollected do not occur on the same day, do not populate DayOfYear.	yes	integer	1	366	Порядковый день в году, во время которого объект или исследование было собрано ("1" для 1 января, "365" для 31 декабря, за исключением в високосный год, в этом случае оно будет "366"). Если EarliestDateCollected и LatestDateCollected не происходят в один и тот же день, не заполняйте DayOfYear.
Collector	The name(s) of the collector(s) of the original data for the object or observation. The primary collector or observer, if designated, should be listed first.	yes	string			Имя (имена) коллектора(ов) исходных данных для объекта или исследования. Первичный коллектор или исследователь, если назначен, должен быть перечислен в первую очередь.
	Biological Elements					**Биологические элементы**
Sex	The sex of the biological individual represented by the catalogued object or observation. Examples: "male", "female", "hermaphrodite", "gynandromorph", "monoecious", "dioecious", "not recorded", "indeterminate", "transitional"	yes	string			Пол биологической особи представлен каталогизированным объектом или исследованием. Примеры: "самец" (male), "самка" (female), "гермафродит" (hermaphrodite), "гинандроморф" (gynandromorph), "однодомный" (monoecious), "двудомный" (dioecious), "не указан" (not recorded), "неопределенно" (indeterminate), "переходный" (transitional)
LifeStage	The age class or life stage of the biological individual represented by the catalogued object or observation. Examples: "adult", "mature", "juvenile", "eft", "nymph", "seedling", "seed", "egg"	yes	string			Возрастной класс или стадия жизни биологической особи, представленного каталогизированным объектом или исследованием. Примеры: "взрослый" (adult), "зрелый" (mature), "несовершеннолетний" (juvenile), "тритон" (eft), "личинка" (nymph), "саженец" (seedling), "семя" (seed), "яйцо" (egg),
Attributes	List of additional measurements or characteristics for which there is no existing semantic element, but which the provider nevertheless feels the need to share. Examples: "Tragus length: 14mm; Weight: 120g", "Plants 1-1.5 meters tall; flowers yellow; uncommon".	yes	string			Список дополнительных измерений или характеристик, для которых отсутствует семантический элемент, но которыми поставщик тем не менее чувствует гнобходимость поделиться. Примеры: "козелка - длина: 14 мм, вес: 120 г", "растения 1-1.5 метра, цветы желтые; необычные".
	References Elements					**Элементы ссылок**

Element	Description	Nillable	Type	Min Value	Max Value	
ImageURL	A Universal Resource Locator reference to digital images associated with the specimen or observation.	yes	anyURL			Universal Resource Locator (Универсальный Ресурсный Локатор) ссылается на цифровые изображения, связанные с образцом или исследованием.
RelatedInformation	Free text references to information not delivered via the conceptual schema, including URLs to specimen details, publications, bibliographic references, etc.	yes	string			Свободные текстовые ссылки на информацию не сопоставляются через концептуальную схему, включая URL-адреса для деталей, публикаций, библиографических ссылок и т.д. по образцу
	Record-level Elements					**Элементы уровня записи**
CatalogNumberNumeric	The CatalogNumber as a numeric value, if applicable. This element allows searching on numeric ranges of CatalogNumbers. Example: 145732.	no	double			CatalogNumber как числовое значение, если применимо. Этот элемент позволяет осуществлять поиск в числовых диапазонах номеров каталогов (CatalogNumbers). Пример: "145732".
IdentifiedBy	The name(s) of the person(s) who applied the ScientificName to the object or observation. Example: James L. Patton.	no	string			Имя (имена) лица (лиц), которые применили ScientificName на объект или исследование. Пример: "Джеймс Л. Паттон"
DateIdentified	The date-time in the Common Era calendar in which the object or observation was identified as being a member of the taxon given in the ScientificName.	no	dateTime			Дата и время по календарю нашей эры, во время которой объект или исследование было определено как часть таксона, приведенного в ScientificName.
CollectorNumber	An identifying string applied to the object or observation at the time of collection. Serves as a link between field notes and the object or observation.	no	string			Идетифицирующая строка, применяемая к объекту или исследованию во время сбора. Служит связующим звеном между полевыми заметками и объектом или исследованием.
FieldNumber	An identifying string applied to a set of objects or observations resulting from a single collecting event.	no	string			Идентифицирующая строка, примененная к набору объектов или исследований в результате одного процесса сбора.
FieldNotes	One of a) a flag indicating the existence of, b) a reference to (such as a URL or literature citation), or c) the actual free text content of notes taken in the field about the specimen or observation.	no	string			Один а) флажок, указывающий присутствие, б) ссылка (например, на URL или цитирование литературы), или в) фактическое содержание свободного текстового содержания заметки, сделанные в поле о образце или исследовании.
VerbatimCollectingDate	The verbatim original representation of the date (and time) information for the collecting	no	string			Дословное исходное представление информации о дате (и времени) для процесса

Element	Description	Nillable	Type	Min Value	Max Value	
	event. Example: "spring 1910".					сбора. Пример: "Весна 1910 ".
VerbatimElevation	A text representation of the altitude in its original format in the source database. Example: "1000+- meters".	no	string			Текстовое представление высоты в оригинальном формате в исходной базе данных. Пример: "1000 + - метров".
VerbatimDepth	A text representation of the depth in its original format in the source database. Example: "100 to 200 ft below sea level".	no	string			Текстовое представление глубины в оригинальном формате в исходной базе данных. Пример: "100 до 200 футов ниже уровня моря".
Preparations	A concatenated list of preparations and preservation methods for the object. Examples: "skin", "skull", "skeleton", "whole animal (ETOH)", "tissue (EDTA)".	no	string			Каскадный список препаратов и методов сохранения объекта. Примеры: "кожа", "череп", "скелет", "целое животное (этанол)", "ткань (ЭДТА)".
TypeStatus	A list of one or more nomenclatural types (including type status and typified taxonomic name) represented by the object. Example: "holotype of *Ctenomys sociabilis*. Pearson O. P., and M. I. Christie. 1985. Historia Natural, 5(37):388".	no	string			Список из одного или нескольких номенклатурных типов (включая состояние типа и типичных таксономических названий), представленного объектом. Пример: "голотип Ctenomys sociabilis. Pearson O.P., и M.I. Christie. 1985 Historia Natural, 5 (37): 388".
GenBankNumber	GenBank Accession number(s) associated with the biological individual(s) referred to by the cataloged object.	no	string			Номер(а) пополнения генобанка, связанные с биологической особью(ями), указанных в каталоге объекта.
OtherCatalogNumbers	A list of previous or alternative fully qualified catalog numbers for the same object or observation, whether in the current collection or in any other.	no	string			Список предыдущих или альтернативных полностью определенных номеров каталогов для одного и того же объекта или исследования, будь то в текущей коллекции или в любой другой.

Element	Description	Nillable	Type	Min Value	Max Value	
RelatedCatalogedItems	One or more GlobalUniqueIdentifiers (cf. http://wiki.tdwg.org/twiki/bin/view/DarwinCore/GlobalUniqueIdentifier) of related objects or observations, optionally preceded by the nature of the relationship. Examples: "(sibling of) URN:catalog:MVZ:Mammal:1234", "(endoparasite of) URN:catalog:FMNH:Bird:41321", "(sheet 2 of 2) URN:WTU:VascularPlants:353087".	no	string			Один или несколько GlobalUniqueIdentifiers (глобальных уникальных идентификаторов) (см. http://wiki.tdwg.org/twiki/bin/view/DarwinCore/GlobalUniqueIdentifier) связанных объектов или исследований, предпочтительно с предшествующим характером отношений. Примеры: "(sibling of) URN:catalog:MVZ:Mammal:1234", "(endoparasite of) URN:catalog:FMNH:Bird:41321", "(лист 2 из 2) URN:WTU:VascularPlants:353087".
Disposition	The current disposition of the cataloged item. Examples: "in collection", "missing", "voucher elsewhere", "duplicates elsewhere".	no	string			Текущее расположение каталогизированного наименования. Примеры: "в коллекции", "отсутствует" "свидетельство в другом месте", "дубликаты в другом месте"
IndividualCount	The number of individuals present in the lot or container. Not to be used for observations.	no	nonNegativeInteger			Число лиц, присутствующих в группе или контейнере данных. Не использовать для исследований.
	Geospatial Elements					**Картографические элементы**
DecimalLatitude	The latitude of the geographic center of a location where an event occurred (organism collected, observation made), expressed in decimal degrees. Positive values are North of the Equator, negative values are South of the Equator. Describes the point-radius representation of the location, along with DecimalLongitude, GeodeticDatum, and CoordinateUncertaintyInMeters. Example: -41.0983423	no	double	-90	90	Широта географического центра локации, где был произведен процесс (сбора организма, исследования), выраженная в десятичных градусах. Положительные значения к северу от экватора, отрицательные значения к югу от экватора. Описывает представленную локацию в точках радиуса, вместе с DecimalLongitude, GeodeticDatum, и CoordinateUncertaintyInMeters. Пример: -41,0983423

Element	Description	Nillable	Type	Min Value	Max Value	
DecimalLongitude	The longitude of the geographic center of a location where an event occurred (organism collected, observation made), expressed in decimal degrees. Positive values are East of the Greenwich Meridian, negative values are West of the Greenwich Meridian. Describes the point-radius representation of the location, along withDecimalLatitude, GeodeticDatum, and CoordinateUncertaintyInMeters. Example: -71.0943235	no	double	-180	180	Долгота географического центра локации, где был произведен процесс (сбора организма, исследования), выраженная в десятичных градусах. Положительные значения к востоку от Гринвичского меридиана, отрицательные значения к западу от Гринвичского меридиана. Описывает представленную локацию в точках радиуса, вместе с DecimalLatitude, GeodeticDatum, и CoordinateUncertaintyInMeters. Пример: -71,0943235
GeodeticDatum	The geodetic datum to which the latitude and longitude refer. If not known, use "not recorded". This concept should be vocabulary-controlled. Example: "WGS84"	no	string			Геодезические данные, к которым относятся широта и долгота. Если они не известны, используйте "not recorded" ("не указан"). Эта концепция должна лексически контролироваться. Пример: "WGS84"