

Dissemination Summary



INQUIRE

**Inquiry-Based Teacher Training
for a Sustainable Future**





Willison, J. Derewnika, L. & Vergou, A. 2013

Recommended citation:

Willison, J. Derewnika, L. & Vergou, A. 2013. (2013) INQUIRE project dissemination report. London: BGCI

The following institutions are partners in the INQUIRE project:

- University of Innsbruck, Austria
- Royal Botanic Gardens, Kew, UK
- King's College London, UK
- Museo delle Scienze, Trento, Italy
- University of Sofia, Bulgaria
- Agencia Estatal Consejo Superior de Investigaciones Cientificas, Spain
- University of Bremen, Germany
- Jardin Botanique de la Ville de Bordeaux, France
- National Botanic Garden of Belgium
- Schulbiologisches Zentrum, Hannover, Germany
- Natural History Museum Botanical Garden, Norway
- Coimbra Botanic Garden, Portugal
- Moscow State University Botanical Garden, Russia
- University of Lisbon, Portugal
- Botanischer Garten, Rhododendron - Park, Botanika, Bremen, Germany
- Botanic Gardens Conservation International, UK
- Universidad de Alcala, Spain



INQUIRE Dissemination Summary

Contents

●	Introduction	5
●	Dissemination in international and national conferences and other activities	6
●	INQUIRE publications	10
●	INQUIRE conference	11
●	INQUIRE website	12
●	Press releases	16
●	E-newsletters	18
●	INQUIRE social media – Facebook and Twitter	20
●	INQUIRE promotional materials	23
●	INQUIRE leaflets	23
●	INQUIRE film	23
●	INQUIRE banners	24
●	Conclusions	26
●	Annex 1: International and National conferences and other events in which the INQUIRE Partners have participated	27
●	Annex 2: INQUIRE paper Publications (printed and on-line articles)	36
●	Annex 3: INQUIRE conference programme	37
●	Annex 4: Summary conclusions of the INQUIRE conference	39
●	Annex 5: INQUIRE leaflet example (Bulgarian)	44
●	Annex 6: INQUIRE course (example of the KEW leaflet, UK)	45
●	Annex 7: INQUIRE banner example (Portuguese)	46

NOTE: The EU is not responsible for the contents of this publication



About the INQUIRE Project

INQUIRE was a three year project (2010 -2013), within the 'Science in Society' Programme of the European Commission, focusing on Inquiry-Based Science Education and involving 17 partners in 11 European countries. The project was generously funded by the European Union under the 7th Framework Programme. Fourteen botanic gardens were involved in the project and individually developed and evaluated their own IBSE teacher training course. INQUIRE was coordinated by Innsbruck University Botanic Garden, Austria, with support from Botanic Gardens Conservation International (BGCI), King's College London, UK and the University of Bremen, Germany.

For more information about INQUIRE visit: www.inquirebotany.org





Introduction

INQUIRE aims to reinvigorate Inquiry-Based Science Education (IBSE) in the Formal and the Learning Outside the Classroom (LOtC) education systems throughout Europe. Run by botanic gardens in 11 countries, INQUIRE teacher training courses demonstrate how IBSE can inspire students about science and help address biodiversity loss and climate change. The dissemination activities of the INQUIRE project intended to promote the INQUIRE courses, inform about the progress and outcomes of the project and, ultimately, widely encourage the implementation of IBSE. In particular, dissemination activities supported the following objectives of the project:

- To introduce IBSE in formal and informal settings, on a large scale
- To establish a key network of educators, teachers, teacher trainers and researchers for the revival of IBSE
- To bridge the gap between educational researchers and practitioners
- To make the case for inquiry and context-based learning

The purpose of this report is to provide an overview of the dissemination events and activities during the INQUIRE project years 2010-2013. This report provides a final and updated account of the dissemination activities and complements the following documents:

- D6.1 Dissemination Plan submitted in month 4 of the project (March 2011), in which each Partner provided their planned dissemination activities on a national and international basis.
- Interim report, month 1-18 of the project, submitted to the EU in July 2012. The interim report provided an account of the progress of the dissemination activities in the first 18 months of the project.

This report focuses on the following main dissemination activities and methods:

- Dissemination in international and national conferences and other activities
- INQUIRE publications
- INQUIRE conference
- INQUIRE website
- Press releases
- E-Newsletters
- INQUIRE social media-Facebook and Twitter
- INQUIRE promotional materials
 - INQUIRE leaflets
 - INQUIRE film
 - INQUIRE banners



Dissemination at international and national conferences and other activities

In order to promote and raise awareness of INQUIRE, share its aims and goals and share information between Partners and society in general, the Partners implemented various activities throughout the duration of the project. Through national and international conferences, meetings and other events, Partners built on their networks and gained support for the project.

INQUIRE was represented by Partners at a total of 135 national and 56 international conferences and events (*see Tables 1 and 2*). National conferences took place in all 11 Partner countries, while international conferences were hosted in 22 countries across the globe, from Europe to Asia, Africa, North America, South America and New Zealand, enabling the dissemination of IBSE beyond the European context and maximising the project's impact. Participation of the INQUIRE Partners at conferences contributed to bridging the gap between research, policy and practice in science education, which was one of the project objectives. These conferences were organised by a range of institutions and organisations and, hence, reached a wide range of audiences including teachers, educators, policy makers and researchers.

A common focus of conferences, at which INQUIRE was represented, was educational research. An example is the European Conference on Educational Research (ECER) conference that was held in Istanbul, Turkey, in September, 2013. Another common theme was science education research, exemplified by the ESERA conferences, held in France and Cyprus in September, 2011 and 2013 respectively. Many of the conferences attended focused on science education, such as the Association of Science Education (ASE) International conference in Liverpool, UK, held in January, 2012. Conferences like EuroGard VI, held on Chios, Greece in May, 2012 and BGCI's 8th International Congress on Education in Botanic Gardens, organised in Mexico City in November, 2012, were aimed at botanic garden professionals. Other conferences included those associated with other LOTC sites and cultural institutions. Other themes included: (a) IBSE – the national conference in Ancona, Italy in December, 2012 for example focused on 'Inquiry-Based Science Education and integration of experimental science: examples and reflections on teaching practice'; (b) science communication – the Science Communication Conference, organised by the British Science Association, was held in London, UK, in May 2012; and (c) purely science-based conferences like the 6th Planta Europa Conference "Actions for wild plants", held in Kraków, Poland in May, 2011.

Additionally, Partners attended 12 conferences and special events organised by the EU and other EU projects, such as the Fibonacci Project conference in Leicester, UK on 26th and 27th April, 2012, and the European Commission Open Day in Brussels, Belgium on 4th May, 2013. These were unique opportunities to share best practice and network between EU initiatives that promote IBSE and aim to increase the interest of young people in science, as well as showcase the value of science to society.

Partners carried out a range of activities to represent the INQUIRE project at conferences, including oral presentations, posters, workshops, demonstrations of IBSE activities, the dissemination of leaflets and staffing stands that provided information about the INQUIRE project and courses.

Partners also represented the INQUIRE project by holding or participating in one-off meetings related to science education and by giving interviews to the media.

Details about the national and international conferences, and other events where INQUIRE was represented and the methods used as a vehicle to disseminate information can be found in *Appendix 1. Tables 1 and 2* (below) provide an overview of the information included in *Appendix 1*. while *Images 1-3* illustrate some of the activities.



Image 1: Partners LFU and KEW's stand at EU Commission Open Door Day, Brussels, Belgium. 04/05/2013



Image 2: UBG workshop at Green Fes conference: Man, Society, Nature – sustainable Development, Varna, Bulgaria 18/05/2013 - 21/05/2013



Image 3: MSU oral presentation at the 3rd International Conference Living in Harmony: Botanic Gardens and Society, Tver, Russia 13/09/2013 – 16/09/2013

Table 1: National conferences and other dissemination events and activities and types of dissemination methods

Partner institution	Activities		Workshops	Posters	Leaflets	Stands presenting information	Demos & Activities	Other dissemination events & activities
	Total number of conferences	Oral presentations						
LFU	8	8	1	1		1		
BGCI	3	2	1		1			
KCL	3	2	1		1			● Meeting ● Lecture
MUSE	17	8	3	1		4		
KEW	12	5	3			4	3	● NUCLEUS meeting ● Meeting with 3 education staff from garden, Gijon, Spain.
CSIC & UAH	7	4	1	3	7			● Activities at 'science week'
UnihB	5	4		2	0		1	
UBG	8	3	2	3	3		1	● Meeting: secondary school teachers & school directors in Sofia, Varna & the regions
NBGB	14	10	2			4	3	● Training
SBZH	20	21	1	5	5		1	
BORD	8	9		1				
FCTUC	2	2	1	1	2			
MSU	13	9	3	3	3	2		● Meetings (3) ● Seminar ● Webinars (2) ● Open lessons (12) ● Interviews & lessons for INQUIRE film
NHM	5	4					2	● Meetings (8)
BGRHB	12	11	2		1			
UL	2	2						● IBSE methodology- short course ● National forum
Total	135	103	21	20	22	15	11	

Table 2: International conferences and types of dissemination methods

Partner institution	Total number of conferences	Countries	Activities					Demos & Activities
			Oral presentations	Workshops	Posters	Leaflets	Stands presenting information	
LFU	16	Belgium (5), Poland, France, Italy (2), UK, Germany (2), Netherlands, Romania, Cyprus, Turkey	11	1	3	4	2	
BGCI	10	Belgium, UK, France, Greece, Mexico, Poland, U.S.A, Sweden, Morocco, New Zealand	2	1	3	5		
KCL	7	UK (2), France (2), Poland, Cyprus, Turkey	7					
MUSE	10	Poland (2), Belgium, Greece (3), Netherlands, Spain, Czech Republic, Slovenia	7	4				
KEW	8	Spain, UK (3), Mexico, Belgium, Italy (2)	2	5	1	1	1	2
CSIC&UAH	2	Portugal (2), Nicaragua	3			1		
UniHB	8	Germany (2) UK (2), Ireland, Turkey, Cyprus, Italy	7	3				
UBG	1	Romania	1					
NBGB	1	Belgium			2			
SBZH								
BORD	3	France, Belgium, UK	3	1	2			
FCTUC	5	Portugal, Greece, Italy, UK, Spain	8	1	4			
MSU	5	Ireland, Mexico, UK, Russia (2)	4	2	4	1		
NHM	3	Greece, UK, Mexico	1	2	2			
BGRHB	1	UK			1			
UL	2	Mexico, Portugal	1	1				
Total	56	22	57	20	23	12	3	2



INQUIRE Publications

In addition to raising its profile by attending national and international conferences and other one-off events, the INQUIRE project also published its outcomes in print and online journal articles, special journal issues, books and other publications. This form of dissemination will ensure the long-lasting impact of INQUIRE, since these publications will continue to be in use after project has ended. Some of the publications were initially produced to support the INQUIRE course participants and these are now available for use by other practitioners, researchers and policy makers. Publications are available on the INQUIRE website resources section (<http://www.inquirebotany.org/en/resources.html>) and are distributed through e-mail lists, the INQUIRE social media and SCIENTIX. Seminal and definitive publications of the project include the following deliverables, special issues and books (Table 3):

Table 3: Publications of the INQUIRE project

Publication type	Example
Deliverables	<ul style="list-style-type: none"> ● INQUIRE courses participants' feedback ● INQUIRE course manual ● Literature Review: Current understanding of IBSE ● Train the Trainer Course manual ● Proceedings of the INQUIRE conference ● INQUIRE Quality Management Report ● External Evaluation report ● Ethical Issues Guidelines ● Recommendations from Consortium Meetings
Special journal issues	<ul style="list-style-type: none"> ● Roots (2012) Inquiry-Based Science Education, Vol.9:2, BGCI, London, UK ● Roots (2012) Professional Development for Educators, Vol.10:1, BGCI London, UK
Book	<ul style="list-style-type: none"> ● Tavares, C. (2013) <i>'A alga que queria ser flor/The algae who wanted to be a flower'</i>, FCTUC, Coimbra, Portugal

Not only do these publications represent the output of the INQUIRE Partnership they are also evidence of the Partners' success in collaborating and producing high quality written outputs as part of their effort to reinvigorate IBSE. An overview of the INQUIRE printed and on-line publications is included in Annex 2.



INQUIRE conference

To mark the efforts of the INQUIRE project in reinvigorating IBSE across Europe, the INQUIRE conference was held at Royal Botanic Gardens, Kew on 9-10th July, 2013. The two-day event was organised to celebrate the project's successes, reflect on its challenges and bring together researchers and professionals from schools and LOtC centres to discuss the current status and future of IBSE in Europe.

124 delegates from 13 countries gathered at the INQUIRE conference, which stimulated discussions and reflections on IBSE. The programme comprised four keynote speeches, 60 workshops, paper and poster presentations and a networking session. Following the conference, 35 delegates participated in a one-day tour to Oxford, to learn about the education programme run at the University of Oxford Botanic Garden. The running themes of the conference events and activities were:

- Inquiry-Based Science Education
- Reflective Practice
- Professional Learning Communities
- Evaluation of IBSE
- Student perspectives on IBSE
- Developing training courses in LOtC sites

The conference was successful in bridging the gap between research and practice by bringing together academics and practitioners and reinforcing the links between informal and formal education systems by bringing together teachers and educators from LOtC sites. The conference was also successful in creating stronger connections between the participants of the INQUIRE courses across Europe and between the INQUIRE and other EU projects.

Four European projects related to science education and professional development were represented at the conference. In more detail, the conference included:

- 3 presentations/workshops from PATHWAY
- 1 presentation from Natural Europe
- 1 presentation from GreeNET
- Keynote from Doris Jorde, S-TEAM

Moreover, during a World Café session, practitioners and academics were engaged in rounds of discussions and generated new ideas for promoting the INQUIRE courses and more importantly for promoting IBSE further at local and national level. This shows how the conference as a whole was an excellent example of an opportunity to amass and share the expertise and experience of its delegates. The conference programme and conclusions may be found in the Dissemination summary report's annexes (*Annex 3 and 4*). The conference proceedings comprise deliverable D6.4 and are also published on the INQUIRE website.

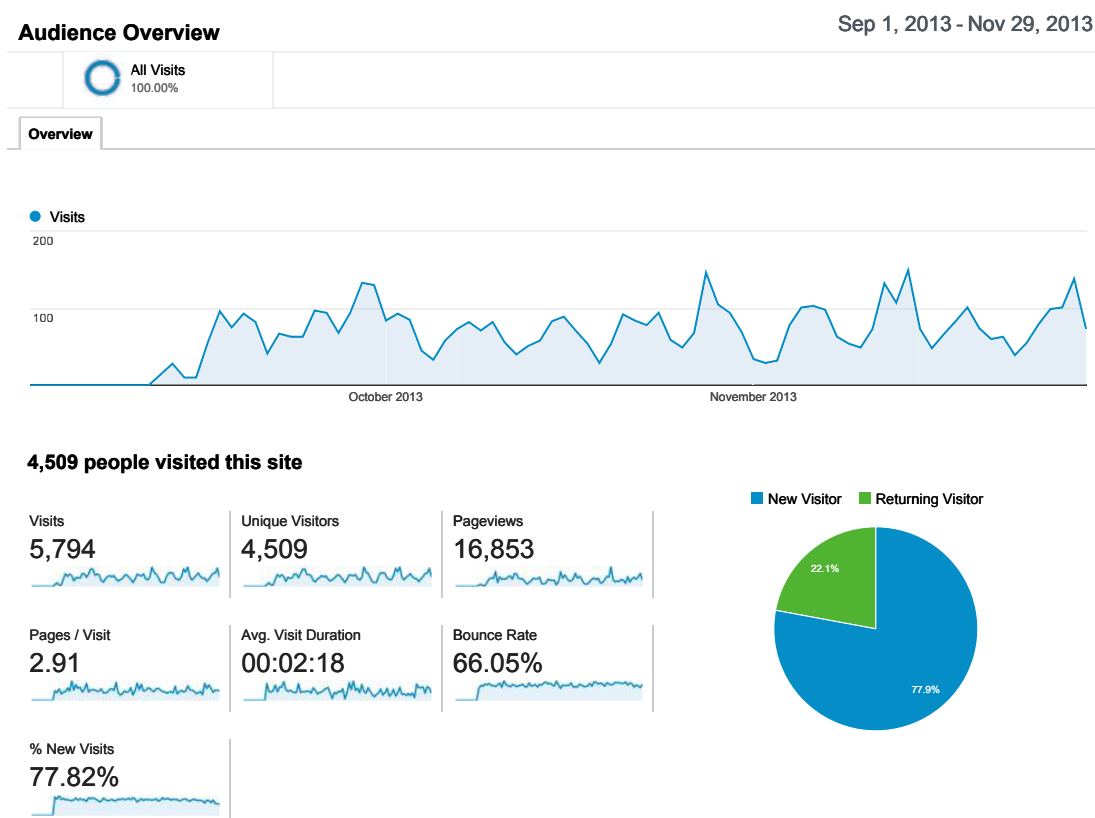


INQUIRE website

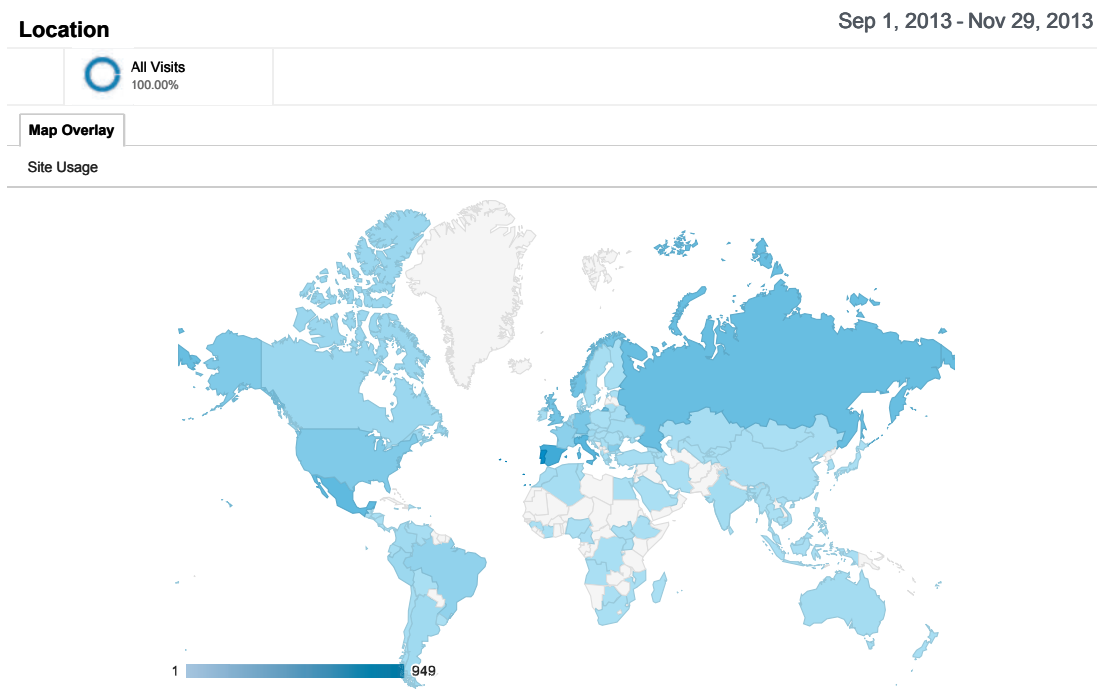
The INQUIRE website www.inquirebotany.org is the main communication platform for the INQUIRE project. Its purpose is to develop communities of practice in IBSE in 11 countries where learning extends beyond the attendance of the IBSE sessions run by the botanic gardens. The website was launched in September 2011 in 10 languages: Bulgarian, Dutch, English, French, German, Italian, Norwegian, Portuguese, Russian and Spanish. Every Partner is responsible for uploading country-specific information to the website in their native language. Content of general relevance is translated into different languages.

The website is aimed at teachers and educators and contains news, discussions and resources, together with a section dedicated to Partner course information. Teachers and educators may locate INQUIRE courses being run in their own countries, in addition to overviews and details of every course. It also provides resources and assignments for INQUIRE course participants, as well as enabling trainers to keep in touch with course participants during periods when no sessions are being run at gardens/museums.

Figure 1: Audience overview of the INQUIRE website (all languages pages)



Map 1: Countries where the INQUIRE website users are located



Country / Territory	Visits	Pages / Visit	Avg. Visit Duration	% New Visits	Bounce Rate
	5,798 % of Total: 100.00% (5,798)	2.91 Site Avg: 2.91 (0.00%)	00:02:18 Site Avg: 00:02:18 (0.00%)	77.89% Site Avg: 77.80% (0.11%)	66.07% Site Avg: 66.07% (0.00%)
1. Portugal	949	2.65	00:02:06	67.23%	67.33%
2. Spain	604	4.06	00:03:45	61.26%	52.98%
3. Italy	480	4.52	00:03:24	77.92%	53.12%
4. Mexico	432	1.20	00:00:59	95.14%	85.19%
5. Russia	379	3.78	00:03:36	60.69%	57.26%
6. Norway	324	2.59	00:02:12	82.41%	65.74%
7. United Kingdom	315	3.62	00:03:14	59.37%	54.29%
8. Germany	283	3.31	00:02:03	87.63%	69.26%
9. United States	240	1.67	00:00:49	92.92%	82.08%
10. Bulgaria	220	3.22	00:02:48	70.45%	60.91%

Moreover, the website is the main platform to disseminate project updates, the project deliverables and other outputs of INQUIRE Partners' work. Links to the INQUIRE deliverables and other resources are also disseminated through SCIENTIX. In addition, the website includes information about other EU projects, developments in science education research and practice at a European level, as well as science news about biodiversity, climate change, plant research and plant conservation.



The website is also supported by the monthly newsletters, Facebook, Twitter and YouTube accounts. Statistics in relation to the use of and engagement with the website are available only for the last 2.5 months of the project (11th September to 30th November, 2013), because it was during this time that the Google analytics tracking function was set up. Since the data covers that limited period, it may only be construed as indicative, rather than representative of the entirety of visits to the website since its launch.

Over the final 2.5 months of the project, a total of 5,794 visits were made to the INQUIRE website. 77.9% of these were unique visitors, while returning visitors accounted for 22.1%. The number of return visits suggests that almost a quarter of the website users find it a useful resource (see *Figure 1*).

Table 4: The 10 most visited pages on INQUIRE website, September - November 2013

Page	Pageviews	Unique Pageviews	Avg. time on Page	Entrances	Bounce Rate	%Exit
	16,890 % of Total: 100.00% (16,890)	12,648 % of Total: 100.00% (12,648)	00:01:12 Site Avg: 00:01:12 (0.00%)	5,815 % of Total: 100.00% (5,815)	66.09% Site Avg: 66.09% (0.00%)	34.43% Site Avg: 34.43% (0.00%)
1. /en/	517	376	00:01:45	292	32.19%	28.63%
2. /pt/news/seminaractivelearning-inscienceteachingwhatadvantages-758.html	378	321	00:04:16	275	78.55%	74.60%
3. /es/discussions/questionsto-conservebiodiversity152.html	345	291	00:05:08	290	84.83%	84.35%
4. /es/	303	222	00:01:21	177	31.64%	28.38%
5. /pt/news/seminaractivelearning-inscienceteachingwhatadvantages756.html	260	226	00:03:09	209	81.82%	74.62%
6. /en/resources.html	206	152	00:01:20	16	50.00%	15.05%
7. /de/	185	171	00:02:02	162	73.46%	68.65%
8. /es/course_overview.html	182	133	00:01:12	64	76.56%	45.05%
9. /it/course_overview.html	177	118	00:01:05	86	41.86%	33.90%
10. /es/resources.html	175	117	00:00:55	38	76.32%	24.57%

An overview of the countries from which users visited is provided in *Map 1*. This is evidence that the website has a global reach, from Canada, the US and Mexico to South Africa, Russia and New



Zealand. During the final 2.5 months, Portugal, Spain and Italy provided the majority of website visitors. Among the top 10 countries which made up the global audience, Mexico and the US were included. The most popular language pages throughout this period were English, Spanish, Portuguese, Italian, and Russian.

A number of factors may account for these findings. For example, science teachers and educators from countries that speak these languages are more reliant on the web to improve their practice. Moreover the popularity of the specific language pages may also be a reflection that these were the INQUIRE project pages that were populated most regularly.

Google analytics on the popularity of specific pages of the website showed that, since September 2013, the English INQUIRE home page has been the most frequently visited page (*see Table 4*). Based on the 100 most visited pages: 25 have been news pages, 22 resources pages and 14 discussion items pages. This suggests that the most dynamic sections of the website, namely those pages that are being updated regularly (news, discussion and resources), receive the most visits.



Press releases

Press releases are an important media vehicle for communicating a project's news to wider audiences. INQUIRE planned from the outset to produce two press releases a year, six over the entire project. These were to be distributed, in English, to the national and international scientific and public media and also translated by Partners for further dissemination at their national levels.

The first two press releases addressed the INQUIRE project launch (sent out in month 4-March 2011) and the INQUIRE website launch (sent out in month 11-April, 2012). Although distributed at national and international levels, their success in generating press coverage was limited. Subsequently it was decided that a more effective approach would be to increase the frequency of newsletters from the INQUIRE website and to set up and manage Facebook and Twitter accounts (please see the sections dedicated to newsletters and social media for further information).

Regardless of the change in strategy, some Partners did find press releases an effective means of

Table 5: Overview of the number of INQUIRE press releases including examples

Topic	Total Number of press releases sent from all Partners	Example	
		Partner Institution	URL
Launch of the INQUIRE project	10	BGCI	http://www.eurekalert.org/pub_releases/2011-03/uoi-hlt030211.php
Course announcements (including: Pilot, TtT & INQUIRE courses)	6	CSIC &UAH	http://www.rjb.csic.es/jardinbotanico/ficheros/documentos/pdf/pubrjb/diariorjb6.pdf
Partner meetings	2	UBG	https://www.uni-sofia.bg/index.php/bul/novini/novini_i_s_bitiya/zaklyuchitelna_srescha_po_proekt_inquire
Updates and news	5	CSIC &UAH	http://www2.uah.es/diariodigital/index.php?option=com_content&task=view&id=5307&Itemid=43
Other	2	UBG	http://www.dokumentacia.com/%D0%BF%D1%80%D0%BE%D0%B5%D0%BA%D1%82-inquire-%D0%B7%D0%B0-%D0%BE%D1%82%D0%BA%D1%80%D0%B8%D0%B2%D0%B0%D1%82%D0%B5%D0%BB%D1%81%D0%BA%D0%BE%D1%82%D0%BE-%D1%83%D1%87%D0%B5%D0%BD%D0%B5/
Total	25		



promoting aspects of the project and they continued to produce them throughout the duration of the project. Overall, 25 press releases were produced during the project. The main topics addressed were: the launch of the project, course announcements, updates about Partner meetings and updates about the progress of the project. A summary of press releases produced, together with examples is provided in *Table 5*.



E-newsletters

Newsletters are important for nurturing and sustaining communities of stakeholders in projects like INQUIRE. In line with the original project proposal, an electronic newsletter was compiled and sent out every four months, to inform subscribers (botanic garden educators, teachers and school authorities) about new developments in the project and highlight any materials that may be relevant to them. These were to be translated into all Partner languages and distributed in 11 European countries. However it became evident, after publication of the first newsletter, that this was an inefficient method of disseminating news. It was decided, therefore, that from month 14 of the project (January 2012) an automatic electronic newsletter would be published monthly in every Partner language, updating recipients with news and discussions from the INQUIRE website. This complemented the dissemination of news through Facebook and Twitter and superceded the press releases.

Table 6: Overview of subscribers and statistics of the INQUIRE newsletter

Language	Subscribers	Open rate	Click rate
English	111	28.4	11.6
French	40	41.5	16.1
Dutch	82	43.7	19.3
Bulgarian	44	46.6	22.6
German	59	36	18
Spanish	172	30.1	13.9
Norwegian	101	32.2	16.5
Portuguese	131	43.7	21.6
Italian	203	41.2	18.3
Russian	57	48.3	27.6
Total	1000		

The newsletters have been distributed through MailChimp, an e-mail marketing service provider, and its recipients included INQUIRE course participants across Europe and general users of the INQUIRE website (science education professionals, for example). It should be noted that the newsletters provided extra support for the teachers and educators attending the INQUIRE courses. The INQUIRE newsletters collectively (in all ten languages) currently reach 1000 subscribers every month. An overview of subscribers and statistics relevant to the newsletter is presented in *Table 6*. The table



shows the number of subscribers to each language version of the newsletter and includes information about the open rate (how many newsletter subscribers opened or viewed the electronic newsletter) and the click rate (the proportion of the subscribers who followed a hypertext link in the newsletter directing them to the INQUIRE website). Based on the evidence presented in *Table 1*, the Italian, English and Portuguese versions are the most heavily subscribed to.

Mailchimp also provides average statistics by industry, thus enabling comparisons to be made between the INQUIRE newsletter and other newsletters in the Education and training sector. According to Mailchimp, the statistics for Education and training sector newsletters are: open rate 36.1% and click rate 3.4. It may therefore be inferred that, relative to the Education and training sector, the INQUIRE newsletters are successfully engaging their subscribers. The most successful language newsletters in terms of engagement with users have been the Russian, Portuguese and Bulgarian versions.



INQUIRE social media – Facebook and Twitter

In order to optimise their audience reach, in both variety and numbers, several INQUIRE Partners launched Twitter and Facebook pages that could be accessed through the INQUIRE website. However some Partners decided that the relative unpopularity of these social networking sites in their own countries meant that their efficacy as disseminators of information was limited, and they elected to share information using other means.

English, Italian, Spanish and Portuguese Partners launched dedicated Facebook pages, while NHM used the UiO page and UBG employed the UBG page to disseminate information relevant to the INQUIRE project. Similarly, NHM used the UiO to deliver INQUIRE information through Twitter, while English, Italian and Spanish Partners set up dedicated Twitter accounts. Links to these pages may be found in *Table 7*.

Table 7: Links to INQUIRE Partners Facebook and Twitter

Language	URL Facebook	URL Twitter
English	https://www.facebook.com/InquireBotany?fref=ts	https://twitter.com/INQUIREBOTANY
Italian	https://www.facebook.com/pages/INQUIRE-Italia/221537364550949?fref=ts	https://twitter.com/INQUIREItalia
Spanish	https://www.facebook.com/InquireEspana?fref=ts	https://twitter.com/InquireSpain
Portuguese	https://www.facebook.com/INQUIREPortugal?fref=ts	
Norwegian	https://www.facebook.com/utdanningsvitenskap?fref=ts	https://twitter.com/unioslo_uv
Bulgarian	https://www.facebook.com/pages/%D0%A3%D0%BD%D0%B8%D0%B2%D0%B5%D1%80%D1%81%D0%B8%D1%82%D0%B5%D1%82%D1%81%D0%BA%D0%B8-%D0%91%D0%BE%D1%82%D0%B0%D0%BD%D0%B8%D1%87%D0%B5%D1%81%D0%BA%D0%B8-%D0%93%D1%80%D0%B0%D0%B4%D0%B8%D0%BD%D0%B8University-Botanic-Gardens/160156180704908?ref=hl	

The purpose of using social media was to communicate with course participants and other interested parties and promote the INQUIRE website, the project and its aims. Along with reports and resources from the INQUIRE website, resources from other IBSE projects, other relevant papers and related information was also disseminated through these sites.

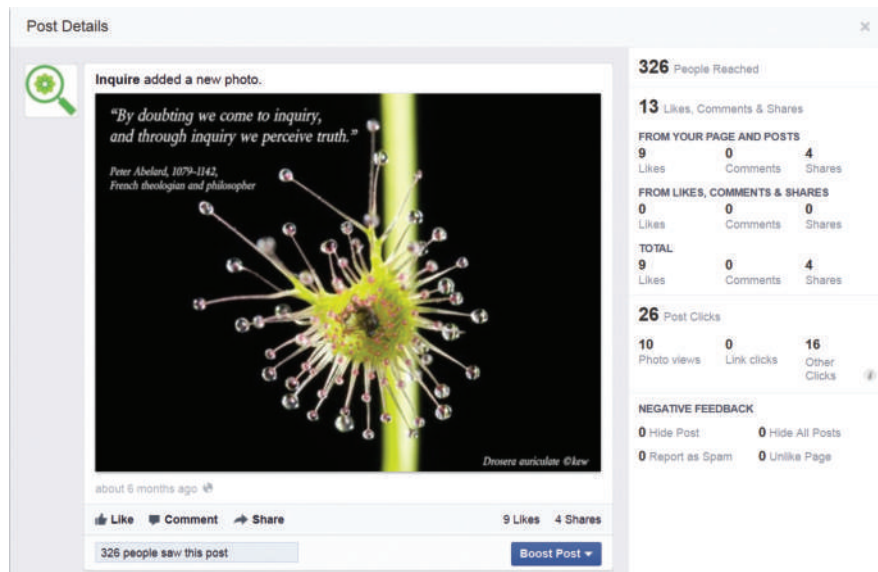


Image 4: Facebook post including a quote about inquiry

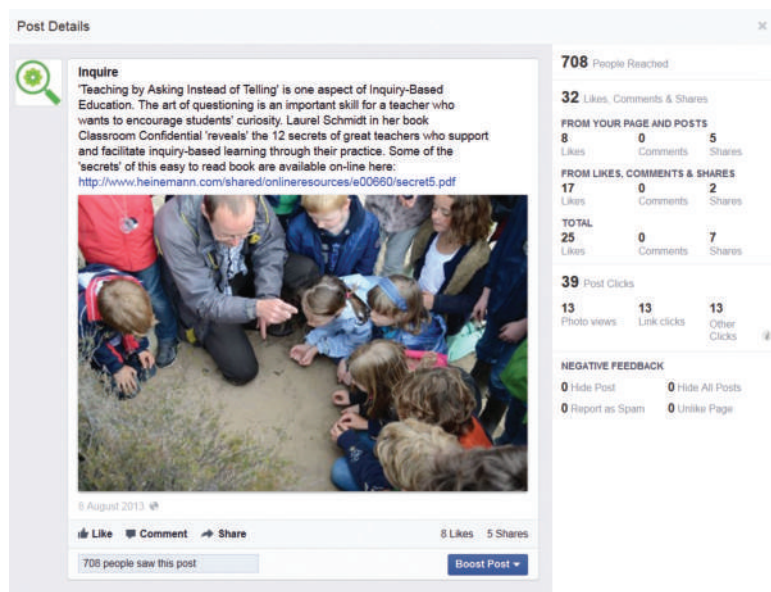


Image 5: Facebook post about an inquiry-based learning resource

The most popular Facebook posts characteristically contained links to resources or eye-catching photographs. A selection of examples from the most widely-accessed posts, as well as a summary of their popularity may be seen in images 4-6.



Image 6: Facebook post about the INQUIRE conference

Although a total of 1,574 Tweets were made from dedicated INQUIRE accounts, the Partners' Facebook pages were able to reach a larger audience than Twitter – 694 Facebook 'likes' compared with 488 Twitter followers. A breakdown of the Facebook 'likes' and Twitter followers, for each INQUIRE account, may be found in *Table 8*.

Table 8: Overview of Facebook 'Likes', Tweets and Twitter followers

Language	Facebook 'Likes'	Twitter Followers	Tweets
English	244	197	388
Italian	264	48	797
Spanish	79	246	389
Portuguese	107	N/A	N/A
Total	694	491	1,574

INQUIRE promotional materials

INQUIRE leaflets

In order to promote the INQUIRE project to botanic gardens, informal science education institutions, national school boards, teacher training centres, schools and the public, an INQUIRE leaflet has been produced in 10 languages (see *Annex 6* for an example of the leaflet in Bulgarian). The leaflet was used to disseminate the project in general and encourage teachers and educators to enroll in the INQUIRE teacher training courses and the INQUIRE Train the Trainers courses.

The INQUIRE leaflet and its translation in 10 languages has been included in the Deliverable 6.2 INQUIRE information leaflet, which was submitted to the EU in month 13 (December, 2011). 8,000 copies of the leaflet were printed (3,500 copies in English which were split between Partners, and 500 leaflets each were produced in the nine Partner languages).

In addition, some Partners have produced leaflets that provided more detailed information on the course contents (see *Annex 6* for an example from KEW, UK).

The leaflet was a particularly useful tool for dissemination at national and international events and activities. For example, Partners handed the leaflet to the teachers who visited their sites with their school, to encourage them to enroll on an INQUIRE course. The leaflets were also sent to LOtC institutions to encourage them to run INQUIRE courses and attend a Train the Trainer course. The leaflets were used in conferences to promote the project and to encourage delegates to visit the website and use it as a resource to apply IBSE in their practice. Leaflets were also handed out when Partners attended other Science Education related meetings.

INQUIRE film



To endorse botanic gardens as locations for IBSE and to encourage teachers to sign up for the INQUIRE courses, two short promotional films were produced, one of approximately seven minutes and a shorter, minute-long, summary video. The target audience is teachers and botanic garden educators. The films frame the INQUIRE project in relation to its educational and environmental aims, as well as showcasing outdoor IBSE activities and, through interviews, introducing educators and their students. The film was shot in five different Partner languages and subtitled in all ten. It is envisaged that the film



will continue to be used by Partners to disseminate the outcomes of the project and promote the INQUIRE courses that they will continue to run in their institutions after the project has ended.

All videos have been uploaded onto YouTube (see *Table 9*). Links were sent to each Partner to allow them to disseminate it through the INQUIRE website, via the resources:

(<http://www.inquirebotany.org/en/resources/inquire-film-232.html>) and News

(<http://www.inquirebotany.org/en/news/inquire-film-757.html>) sections,

and through their Facebook and Twitter pages.

Table 9: INQUIRE films links to YouTube

Language	URL – 1 minute film	URL – 7 minute film
Dutch	http://www.youtube.com/watch?v=-K70onqcMXE	http://www.youtube.com/watch?v=u2fmyD6MjAk
Spanish	http://www.youtube.com/watch?v=2zlmbiBAiEQ	http://www.youtube.com/watch?v=sUhnFhsVPs4
Russian	https://www.youtube.com/watch?v=OXrS9dXmgPI	http://www.youtube.com/watch?v=OXrS9dXmgPI
Portuguese	http://www.youtube.com/watch?v=kC9orLS7u8o	http://www.youtube.com/watch?v=iPoiTyiOm8c
Norwegian	http://www.youtube.com/watch?v=RWiHBEuWndI	http://www.youtube.com/watch?v=3gnbthQtAQ8
Italian	http://www.youtube.com/watch?v=w-YWuyeMGrw	http://www.youtube.com/watch?v=0thfZn9YSmE
German	http://www.youtube.com/watch?v=Dwx53qtR30c	http://www.youtube.com/watch?v=dgfBRBe1GOc
French	http://www.youtube.com/watch?v=OjhuIWlpj2U	http://www.youtube.com/watch?v=MSHxUhlGQTY
English	http://www.youtube.com/watch?v=BeCpJ2JRGms	http://www.youtube.com/watch?v=IBCIL2NdSRM
Bulgarian	http://www.youtube.com/watch?v=ErDof1HjhBI	http://www.youtube.com/watch?v=vI_D16L2I3E

INQUIRE banners

As part of the preparations for the INQUIRE conference, INQUIRE banners were created in all Partner languages. The banners were displayed around the conference venue (see *Images 7 and 8*) and, at the end of the conference, were donated to the Partners, for them to use in their own dissemination activities at conferences and other events. Seventeen banners were created in 10 languages and an example of an INQUIRE banner may be seen in *Annex 7*.



Image 7: INQUIRE banner displayed during the poster session at the INQUIRE conference



Image 8: INQUIRE banner and film displayed at the INQUIRE stand during the 8th National Science Festival, MSU, Russia, October 2013



Conclusions

The INQUIRE project has been committed to disseminating information in relation to the project's progress and outcomes and in line with latest developments in IBSE research, policy and practice in Europe and worldwide. The INQUIRE team regard dissemination as crucial to achieving a long-lasting impact and to encourage the uptake of IBSE as widely as possible.

All Partners contributed to the dissemination of INQUIRE by employing a variety of methods, from conference presentations to uploading information onto the INQUIRE website and using social media. Drawing on Partners' expertise and backgrounds, INQUIRE was able to promote IBSE to a wide range of audiences: educational authorities linked to national education systems, science teachers, LoTc educators and social and natural sciences researchers. Also and importantly, the dissemination outputs such as the INQUIRE publications, website, leaflets and films will continue to support Partners' in the future running of their INQUIRE courses and comprise a strong element of the project's legacy.

Annex 1: International and National conferences and other events in which the INQUIRE Partners have participated

Annex 1:

(a)

Partner	International conferences and other events	National conferences and other events
LFU	<ul style="list-style-type: none"> ● SCIENTIX conference, Brussels, Belgium 6-9/05/2011 (1 person - stand and oral presentation) ● ECSITE Conference, Warsaw, Poland 26-28/5/2011 (1 person - workshop) ● ESERA conference, Lyon, France 5/9/2011-9/9/2011 (1 person - leaflets) ● International Congress of Alpine Botanic Gardens, Trento, Italy, 13/09/2012 – 14/09/2012 (1 person – oral presentation) ● CARN/IPDC Conference 2012 – Towards Creative Action: Transformations and Collaborations, Ashford, UK, 23/11/2012 -25/11/2012 (1 person – oral presentation) ● Comenius Thematic Meeting on Literacy, Math & Science, Brussels, Belgium, 06/12/2012 - 07/12/2012 (1 person – poster and leaflets) ● MASCIIL Project Kick off Meeting, Freiburg, Germany, 28/01/2013 – 01/02/2013 (1 person – leaflet) ● New Perspectives in Science Education Conference, Florence, Italy, 13/003/2013 – 15/03/2013 (1 person - oral presentation) ● INSTEM Conference, Amsterdam, Netherlands, 17/03/2013 -20/03/2013 (1 person – poster) ● Science education in School Conference, Galati, Romania, 18/04/2013 – 21/04/2013 (1 person – oral presentation) ● EU Commission Open Door Day, Brussels, Belgium, 04/05/2013 (1 person - stand) ● ProCoNet Meeting, Brussels, Belgium, 10/06/2013 – 11/06/2013 (1 person – leaflets) ● ESERA-Conference, Nicosia, Cyprus, 02/09/2013 – 07/09/2013 (1 people – oral presentation (2)) ● ECER Conference, Istanbul, Turkey, 09/09/2013 – 14/09/2013 (1 person – oral presentation) ● International Meeting of the Section Didactics of Biology (FDdB), Kassel, Germany, 16/09/2013 – 20/09/2013 (2 people – oral presentation (2)) ● SECURE conference, Mechelen, Belgium, 23/11/2013 – 24/11/2013 (1 person – oral presentation) 	<ul style="list-style-type: none"> ● Austrian Association of Research and Development in Education OEFEB meeting, Innsbruck, Austria, 24/05/2021 -25/05/2012 (2 people – oral presentation (2)) ● European Discourses, EPSO, Fiss, Austria, 27/08/2012 – 30/08/2012 (2 people – oral presentation & workshop) ● AECC Summer School, Spital am Pyhm, Austria, 09/07/2012 – 12/07/2012 (1 person – oral presentation) ● Fachdidaktik meeting, School of Education, Innsbruck, Austria, 08/03/2013 (2 people – oral presentation (2)) ● Botanical Seminar University of Graz, Austria, 23/04/2013 (1 person – oral presentation) ● Botanical Seminar University of Linz, Austria, 25/04/2013 (1 person – oral presentation) ● Österreichische Gesellschaft für Fachdidaktik OGD, Klagenfurt, Austria, 23/09/2013 (2 people – poster) ● INQUIRY Day, Vienna, Austria, 11/11/2013 – 12/11/2013 (1 person – stand)
BGCI	<ul style="list-style-type: none"> ● SCIENTIX conference, Brussels, Belgium 9/9/2011 (2 people – poster & paper presentation & leaflets) ● Fibonacci conference, University of Leicester UK 26-27/4/2012 (1 person – oral presentation & leaflets) ● Ecsite Annual conference, Toulouse, France 31/05/2012-02/06/2012 (1 person – poster) ● Eurogard VI, Chios, Greece 28/05/2012-02/06/2012 (3 people – workshop) ● BGCI's 8th International Congress, Mexico City, Mexico 12/11/2012 - 16/11/2012 (2 people- leaflets) ● SBG Seminar, Katowice, Poland 17/07/2012 – 19/07/2012 (1 person- Oral presentation) ● The Longwood Graduate Program in Public Horticulture, Annual Symposium, Delaware, USA 14/03/2013 (1 person- Leaflets) ● ECSITE annual conference, Gothenburg, Sweden 06/06/2013 – 08/06/2013 (1 person-leaflets) ● 7th WEEC, Marrakech, Morocco 09/06/2013 – 14/06/2013 (1 person- Leaflets) ● 5th GBGC, Dunedin, New Zealand 20/10/2013 -25/10/2013 (1 person – poster) 	<ul style="list-style-type: none"> ● BGEN annual conference, Harlow Carr, Yorkshire, 23-25/11/2011 (2 people – oral presentation) ● Science Communication Conference, London, UK 14-15/05/2012 (1 person – oral presentation) ● PlantNetwork annual conference, Cambridge, UK 11/04/2012 – 12/04/2012 (1 person- Leaflets)

Annex 1:

(b)

Partner	National conferences and other events	
KCL	<ul style="list-style-type: none"> ● Fibonacci conference, University of Leicester, UK 26-27/4/2012 (2 people – oral presentation) ● Ecsite Annual conference, Toulouse, France 31/05/2012-02/06/2012 (2 people – oral presentation) ● Seminar Deep education for a sustainable future in non-formal settings, Poland, July, 2012. (1 person – oral presentation) ● INQUIRE conference 9, Kew, UK 09/07/2013 -10/07/2013 (1 person – oral presentation) ● Ecsite conference, Toulouse, France, 06/06/2013 – 08/06/2013 (2 people – oral presentation) ● ESERA 2013, Nicosia, Cyprus, 02/09/2013 -07/09/2013 (2 people – paper presentation) ● ECER, Istanbul, Turkey, 10/09/2013 – 13/09/2013 (2 people – paper presentation) 	<ul style="list-style-type: none"> ● MA Science Education KCL, London, UK march, 2012 (1 person – lecture) ● Science Communication Conference, London, UK British Science Association, 14 & 15 May 2012 (1 person – workshop) ● TISME conference, London, UK 13/06/2012 (1 person – oral presentation)
MUSE	<ul style="list-style-type: none"> ● Annual Meeting of the European Consortium of Botanic Gardens EBGC, organised by the Silesian Botanic Garden, Katowice, Poland, 21/05/2011 (1 person – oral presentation) ● International Conference of Botanic Gardens „Back to the Eden - the Challenges for Contemporary Gardens”, Ustroń-Mikołów, Poland, 22-23/5/2011 (1 person – oral presentation) ● 6th Planta Europa Conference “Actions for wild plants”, Kraków, Poland, 23-27/5/2011 (1 person – oral presentation) ● Annual Meeting of the European Consortium of Botanic Gardens EBGC, organised by the Silesian Botanic Garden, Meise, Belgium, 03/12/2011 – 04/12/2011 (1 person – oral presentation) ● Eurogard VI, Chios, Greece 28/05/2012-02/06/2012 (1 person – workshop) ● Annual Meeting of the European Consortium of Botanic Gardens, Chios, Greece, 26/05/2012 (1 person – oral presentation) ● FLORIADE 2012, International horticultural exhibition, Venlo, Netherlands, 15/06/2012 (3 people – workshop) ● Annual Meeting of the European Consortium of Botanic Gardens, Gijón, Spain, 01/12/2012 – 02/12/2012 (1 person – oral presentation) ● Annual Meeting of the European Consortium of Botanic Gardens, Prague, Czech Republic, 24/05/2013 – 26/05/2013 (1 person – oral presentation.) ● European conference: Science and Sustainability through outdoor learning, Planica, Slovenia, 27/11/2013 – 30/11/2013 (2 people – workshop) 	<ul style="list-style-type: none"> ● Open days at the museum for local schools MUSE “Tre giorni per la scuola, organised by museo delle scienze, Trento”, Italy, 20/09/2010 – 22/09/2010 (3 people – stand) ● Annual meeting of National network of Botanic Gardens, Parma, Italy 16/04/2011 (3 people – oral presentation) ● Annual meeting of the Italian Botanical Society, Genoa, Italy 21-24/09/2011 (1 person – poster) ● Annual meeting of the Italian Association of Science Museums “XXI Congresso ANMS - “La ricerca nei musei scientifici” Padova, Italy 9-11/11/2011 (1 person – oral presentation) ● National Training course on visitor interpretation for Botanic Gardens and nature reserves, Villa Carlotta, Como, Italy, 7-9/11/2011 (2 people – stand) ● Annual Meeting of Italian Botanic Gardens Network Meran, Italy 18/5/2012 (2 people – workshop) ● 22nd Congress of the Italian society for Ecology (SITE), Alessandria, Italy, 10/09/2012 – 13/09/2012 (1 person – oral presentation) ● Congress “Le giornate della scienza - Education in Science”, Camerino, Italy, 06/09/2012 – 08/09/2012 (3 people – oral presentation) ● Open days at MUSE for local schools, Trento, Italy, 25/07/2012 – 27/09/2012 (3 people – stand) ● 3rd national congress on education 2.0.3° convegno nazionale Education 2.0 organised by EDUCA, Firenze, Italy, 26/10/2012 (1 person – oral presentation) ● Annual meeting of the Italian association of science museums, Firenze, Italy, 14/11/2012 – 16/11/2012 (1 person – oral presentation) ● Convegno “Didattica delle scienze nella scuola post-riforma e costruzione di una cittadinanza scientifica. Inquiry- based science education ed integrazione delle scienze sperimentali: esempi e riflessioni sulla pratica docente” Ancona, Italy, 17/12/2012 – 18/12/2012 (2 people – workshop) ● L'integrazione delle scienze e la didattica laboratoriale: Il Cannocchiale di Galileo, Fiesole, Italy, 11/03/2013 – 13/03/2013 (2 people – oral presentation) ● Annual Meeting of Italian Botanic Gardens Network, Pisa, Italy, 06/06/2013 (1 person – oral presentation) ● celebrative congress for the 30 years of Valbonella Botanic Garden, Italy, 06/06/2013 (1 person – oral presentation) ● Open days at MUSE for local schools, Trento, Italy, 24/09/2013 – 25/09/2013 (3 people – stand) ● National congress, Bergamo, Italy, 17/10/2013 – 18/10/2013 (1 person – workshop)

Annex 1:

(c)

Partner	International conferences and other events	National conferences and other events
KEW	<ul style="list-style-type: none"> ● Botanic gardens and Conservation seminar, Gijón, Spain 18/03/2012 (1 person – Oral presentation) ● Association of Science Education (ASE) International conference, Liverpool, UK 5-7/01/2012 (2 people – workshop, stand, poster) ● International Diploma in Botanic Garden Education, Kew, UK 26/04/2012 -27/04/2012 (2 people – workshops) ● BGCI Education Congress, Mexico City, Mexico 11/11/2012 – 15/11/2012 (3 people – workshop) ● EU Science Fair, Brussels, Belgium 03/05/2013- 04/05/2013 (4 people – stand & demonstration) ● INQUIRE workshop for museum educators, Trento, Italy 02/10/2013 (1 person in association with A. Vergou BGCI, S.Kapelari, Innsbruck and C. Bonami – workshop) ● INQUIRE conference 9, Kew, UK 10/07/2013 (1 person – workshop) ● Botanic Garden education Network for Italy/And Bergamot Science Festival, Bergamot, Italy 18/11/2013 -19/11/2013 (1 person – oral presentation & activity) 	<ul style="list-style-type: none"> ● Growing Schools Conference, Coventry, UK 23/03/2011 (1 person – stand & demonstration) ● BGEN annual conference, Harlow Carr, Yorkshire, 23-25/11/2011 (2 people – workshop) ● LICE, London, UK 07/11/2011 – 10/11/2011 (2 people – oral presentation) ● ASE Annual Conference, Liverpool, UK 04/01/2012- 07/01/2012 (2 people – stand & activity) ● Biosciences Evening and OCR invitation evening, Kew, UK 03/03/2012 (3 people – oral presentation & stand & demonstration) ● Diversity Heritage Group Meeting, London, UK 23/03/2012 (1 person – oral presentation) ● Growing Schools Conference, Wisley, UK 28/03/2012 (1 person – stand & demonstration) ● Growing Schools Conference, Essex, UK 19/03/2013 (1 person – workshop) ● LAWHF meeting, Weymouth, UK 26/04/2013 (1 person – oral presentation) ● PGCE at IOE, Kew, UK 03/06/2013 -11/06/2013 (2 people – course) ● Educational Growing: Growing Education Conference, London, UK 05/07/2013 (1 person- workshop) ● Historic House Association Education Seminar, 19/09/2013 (1 person- oral presentation)
CSIC & UAH	<ul style="list-style-type: none"> ● XI Symposium de la Asociación Ibero-Macaronésica de Jardines Botánicos Faial, Portugal 15-19/06/2011 (1 person – oral presentation) ● Curso introductorio sobre técnicas de jardinería, Jardín Botánico Ambiental, Universidad Nacional Autónoma de Nicaragua-León, Nicaragua 28/10/2011 – 02/11/2011 (1 person – oral presentation) ● Pilots Training Course for Museum Explainers Educators and Young Scientists involved in outreach programmes, Lisbon, Portugal 17/09/2012 – 21/09/2012 (1 person – oral presentation & leaflets) 	<ul style="list-style-type: none"> ● II Congreso de Docentes de Ciencias, Universidad v Complutense de Madrid 06/06/2012 08/06/2012 (1 person – oral presentation and leaflets) ● III Jornadas Técnicas de los Jardines Botánicos (AIMJB), Jardín Botánico Juan Carlos I, UAH, 06/06/2012 - 08/06/2012 (2 people – oral presentation, poster and leaflets) ● III Simposio de Museología Científica, Madrid, Spain 03/10/2012 – 04/10/2012 (2 people – leaflets) ● XII Simposio de la Asociación Ibero Macaronésica de Jardines Botánicos, Gijón, Spain 08/05/2013 – 13/05/2013 (1 Person – oral presentation, leaflets & poster) ● Technical Conference on Environmental Education, Vitoria-Gasteiz, Spain, 13/06/2013 (1 person – workshop & leaflets) ● XX Biennial of the Royal Society of Natural History, Madrid, Spain 04/09/2013 – 07/09/2013 (5 people – poster & leaflets) ● II Encuentro de Equipamientos de Educación Ambiental, Segovia, Spain 25/11/2013 - 27/11/2013 (1 person – oral presentation & leaflets)

Annex 1:

(d)

Partner	International conferences and other events	National conferences and other events
UniHB	<ul style="list-style-type: none"> 41st Annual Meeting of the Ecological Society of Germany, Austria and Switzerland, Oldenburg, Germany 12-15/9/2011 (1 person – oral presentation) 2nd INQUIRE Partner meeting, Bremen, Germany 27/09/2011 - 29/09/2011 (1 person – oral presentation) FIBONACCI conference, Leicester, UK 26/04/2012 – 27/04/2012 (6 people – workshop) ESTABLISH Science and Mathematics Education Conference (SMEC-2012), Dublin, Ireland 7-9/06/2012 (1 person – workshop) Annual international conference, Florence, Italy 14/03/2013 – 15/03/2013 (1 person – paper presentation) INQUIRE Teacher Conference, Kew, UK 09/07/2013 – 11/07/2013 (6 people – workshop & paper presentation) Nicosia, Cyprus 02/09/2013 – 07/09/2013 (1 person – paper presentation) IOSTE Eurasian Regional Symposium and Brokerage Event HORIZON 2020, Antalya, Turkey 30/10/2013 – 01/11/2013 (1 person – paper presentations (2)) 	<ul style="list-style-type: none"> MNU annual conference, Bremerhaven, Germany 17/09-18/09/2011 (2 people – oral presentation) Conference of the German Society of Environmental Conversation, Vilm, Rügen, Germany 12-15/8/2011 (2 people – oral presentation) Annual GDGP conference, Hannover, Germany, 17/09/2012 – 19/09/2012 (2 people – Poster) MNU Conference, Bremerhaven, Germany 17/11/2012 (2 people – oral presentations (2) & demonstration) 2. Bildungsforum, Bremerhaven, Germany 06/03/2013 (4 people – poster)
UBG	<ul style="list-style-type: none"> Black Sea Cross Border Cooperation, Eforia, Romania 11/05/2012 (1 person – oral presentation) 	<ul style="list-style-type: none"> UzanaPoljanaFest – green ideas in action, Gabrovo, Bulgaria 16/07/2011 – 17/07/2011 (3 people – activity & poster) "Buskers Play Out" Fest, Sofia, Bulgaria, 17/09/2013 (1 person – poster) VII National Conference of Botany, Bulgarian Botany Society, University of Sofia, Bulgarian Academy of Sciences and others 29-30/09/2011 (2 people – oral presentation, poster) National Conference on the "Modern goals for education in physics in secondary schools and universities", Gabrovo, Bulgaria, 5-8 April 2012. (1 person – oral presentation) II Autumn scientific and educational forum, Sofia, Bulgaria 24/11/2013 – 25/11/2013 (1 person – leaflets) Workshop on biodiversity for students from National High school of natural science, Sofia, Bulgaria 02/05/2013 (2 people – workshop & leaflets) Green Fest: Man, Society, Nature – sustainable Development, Varna, Bulgaria 18/05/2013 – 21/05/2013 (2 people- workshop and leaflets) International Science Forum "Traditions and innovation in education", Sofia, Bulgaria 01/11/2013 – 03/11/2013 (1 person – oral presentation)

Annex 1:

(e)

Partner	International conferences and other events	National conferences and other events
NBGB	<ul style="list-style-type: none"> ● 26th Benelux conference on education for sustainable development, Brussels, Belgium 28/11/2012 (1 person – poster) 	<ul style="list-style-type: none"> ● WIN network Association of Flemish Science Communicators, 9-6-2011 (2 people – oral presentation) ● VBTA Association of Belgian Botanic Gardens and Arboreta 20-9-2011 (1 person – oral presentation) ● Viaamse NME-dag (Flemish Day of Nature, Sustainability and Environmental Education) 14 – 2 – 2012 (2 people – oral presentation, workshop) ● Happening on IBSE organized by Artevelde Hogeschool, Ghent, Belgium 21/03/2012 (2 People – stand & workshop) ● Personal presentation of the project for staff of 5 Primary Schools, Meise, Belgium September, 2012 (1 person – oral presentation) ● VALEVE- Association of Flemish Science Teachers, Antwerp, Belgium, November, 2012 (1 person – oral Presentation) ● Leermiddelbeurs (Market on educational tools), Leuven, Belgium 19/04/2013 – 20/04/2013 (2 people – stand) ● Teacher training school, Ostend, Belgium, 15/04/2013 (1 person – oral presentation) ● Introduction in IBSE for pre-service teachers of Artevelde Hogeschool, Meise, Belgium 10/05/2013 (2 people – oral presentation & activity) ● GRUNDTVIG: VIP day for teachers, Meise, Belgium 06/06/2013 (2 people – stand) ● Meeting with pedagogical advisors of OVSG, Brussels, Belgium 20/09/2013 (2 people – oral presentation) ● VIP-day for teachers, Meise, Belgium 28/09/2013 (2 people – demonstration) ● STEM-dag Technopolis (conference for STEM teachers), Mechelen, Belgium 08/10/2013 (2 people – oral presentation & stand & activity) ● Meeting with pedagogical advisors of VVKSO, Meise, Belgium 09/12/2013 (2 people – oral presentation & activity)

Annex 1:

(f)

Partner	International conferences and other events	National conferences and other events
SBZH		<ul style="list-style-type: none"> ● German Core Working Group "Pedagogical Staff at Botanical Gardens", Hannover, Germany 05/02/2011 – 05/02/2011 (1 person – oral presentation) ● Meeting of the regional Environmental Education Centers of Lower Saxony, Hannover, Germany, 16/05/2011 (1 person – oral presentation) ● The whole German Working Group "Pedagogical Staff at Botanical Gardens", Hannover, Germany, 20/05/2011 – 22/05/2011 (1 person-oral presentation) ● German Core Working Group "Pedagogical Staff at Botanical Gardens" Bremen, Germany, 22/06/2011 – 24/06/2011 (1 person – oral presentation & Poster) ● Headmaster conference for schools in the region of Hannover, Germany July, 2011 (1 person – oral presentation & paper) ● Umweltforum (Environmental Forum), Tharandt, Germany 22/09/2011 (1 person – oral presentation & demonstration) ● Annual Meeting of the German speaking association of Botanical Gardens in Tharandt, Germany 26-28/09/2011 (1 person – oral presentation) ● Rio+20 Meeting, Sustainability in Education, Congress center, Germany, 8/12/2011 (1 person – oral presentation) ● Regular Advanced Teacher Training Courses, Hannover, Germany, 20 dates, 2011 (3 people – poster & oral presentation & paper) ● German Core Working Group "Pedagogical Staff at Botanical Gardens", Botanical Garden Osnabrück 3/2/2012 (1 person – oral presentation, workshop) ● Meeting of the Regional Environmental Education Centers of Lower Saxony, Hannover, Germany, June, 2012 (1 person – oral presentation) ● Headmaster conference for schools in the region of Hannover, Germany, June, 2012 (1 person – oral presentation) ● Umweltforum (Environmental Forum), Hannover, Germany 16/09/2012 (1 person – oral presentation & poster & leaflet) ● Annual meeting of the German speaking Botanical Gardens' educators network 'Botany à la carte', Mainz, Germany 20/09/2012 – 23/09/2012 (1 person – oral presentation) ● Meeting of the SBZH contact teachers for the plant set deliveries, Hannover, Germany November, 2012 (1 person – oral presentation & leaflet) ● Regular Advanced Teacher Training Courses, Hannover, Germany, 10 throughout 2012, (3 people – oral presentation, poster & leaflet) ● Colloquium of nature science and pedagogy, Braunschweig, Germany, 09/01/2013 (2 people – oral presentation) ● "Ideen Expo", Hannover, Germany, 23/08/2013 – 30/08/2013 (SBZH pedagogical staff – leaflet, paper & oral presentation) ● Environmental forum, Hannover, Germany, 01/09/2013 (1 person – oral presentation, poster & paper) ● Conference of Germany, 09/09/2013 (1 person – oral presentation & leaflets)

Annex 1:

(g)

Partner	International conferences and other events	National conferences and other events
BORD	<ul style="list-style-type: none"> • "Sud expert plantis", Foreign affairs Ministry, Paris, 29/04/2011 (1 person – oral presentation) • EU Science Fair, Brussels, Belgium 03/05/2013- 04/05/2013 (1 person – oral presentation & poster & workshop) • INQUIRE conference 9, Kew, UK 09/07/2013 -10/07/2013 (2 people – oral presentation & poster) 	<ul style="list-style-type: none"> • Event organised by Jardin botanique de Bordeaux, France. 08/03/2011 & 07/04/2011 (3 people – oral presentation & paper) • Event organised by Jardin botanique de Bordeaux, France. 20/06/2012 (2 people – oral presentation) • Event organised by GRAINE Aquitaine, Yvaignes, France. 03/11/2013 – 05/11/2013 (1 person oral presentation & poster) • Event organised by Jardin Exotique de Monaco, France. 11/06/2012 – 15/06/2012 (1 person – oral presentation) • Event organised by Strasbourg botanical garden and university, France. 28/02/2013 - 28/02/2013 (1 person – oral presentation) • Event organised by Société Nationale d'Horticulture de France, Paris. 14/02/2013 (1 person – oral presentation) • Event organised by Conservatoire national botanique de Brest, France. 13/06/2013 (1 person – oral presentation) • Event organised by Jardin botanique alpin du Lautaret, France. 08/07/2013 -10/07/2013 (1 person – oral presentation)
FCTUC	<ul style="list-style-type: none"> • Symposium AIM Jardins botanicos, Azores, Portugal, 15-19/6/2011 (1 person – poster) • EUROGARD VI, Chios Island, Greece 28/5-26/2012 (1 person – oral presentation, workshop) • 5TH WORLD CONFERENCE on Educational Sciences, Rome, Italy, 05/02/2013 – 08/02/2013 (7 people – oral presentation via Skype) • INQUIRE conference 9, Kew, UK 09/07/2013 -10/07/2013 (7 people – oral presentation (3) poster (3)) • 6th International Conference of Education, Research and Innovation (ICER 2013), Seville, Spain. 18/11/2013 – 20/11/2013 (3 people – oral presentation via Skype (2)) 	<ul style="list-style-type: none"> • FORUM INQUIRE – COIMBRA 2012, Portugal. 21/11/2012 – 22/11/2012 (1 person – oral presentation, leaflets, workshop & poster) • FORUM INQUIRE – COIMBRA 2013, Portugal. 04/11/2013 – 05/11/2013 (1 person – oral presentation & leaflets)



Annex 1:

(h)

Partner	International conferences and other events	National conferences and other events
MSU	<ul style="list-style-type: none"> ● Science and Mathematics Education Conference (SMEC -2012), Dublin, Ireland 7-9/06/2012, ESTABLISH (2 people – workshop) ● BGCI's 8th International Congress on Education in Botanic Gardens, Mexico City, Mexico. 12/11/2012 – 16/11/2012 (1 person – oral presentation) ● First congress of the CIS Council of Botanic Gardens under the International Association of Academies of Science, Moscow, Russia. 19/06/2013 – 20/06/2013 (2 people – oral presentation) ● INQUIRE conference 9, Kew, UK 09/07/2013-10/07/2013 (6 people – oral presentation & posters (4) & workshop) ● 3rd International Conference «Living in Harmony: Botanic Gardens and Society – Dialogue without Borders», Tver, Russia. 13/09/2013 – 16/09/2013 (2 people – oral presentation & workshop) 	<ul style="list-style-type: none"> ● Soils and Biosphere: Sustainable Development, MSU Biology Museum, Moscow, Russia. 15/03/2011 – 15/03/2011 (1 person – oral presentation) ● National Convention of Biology Teachers, St.Petersburg University, Ministry of Education and Science, Moscow State University, Moscow, 28-30/6/2011 (3 people – poster & leaflets) ● Botanic Gardens in the Developing World: Theory and Practice, Moscow, Russia. 05/07/2011 – 07/07/2011 (2 people – oral presentation) ● 6th National Science Festival, Moscow, Russia. 08/10/2011 – 09/10/2011 (2 people – Poster) ● National conference "Botanical Garden - 305 years of work and history", Moscow, Russia. 07/12/2011 (2 people – oral presentation) ● Conference for teachers and educators: " New educational programs of the Moscow State University and school education", Moscow State University, Moscow 10/12/2011 (1 person – oral presentation & poster) ● Interuniversity regular seminar «Methodology of education for a sustainable development», Moscow, Russia. April, 2012 (1 person – oral presentation) ● Conference «Methodology of ecological education», Moscow, Russia. 16/05/2012 (1 person – workshop & leaflets) ● Annual scientific-practical conference, Moscow, Russia. 22/09/2012 (1 person – oral presentation) ● 7th National Science Festival, MSU, Russia. 12/10/2012 – 14/10/2012 (3 people – oral presentation & workshop) ● Moscow teacher's and educators conference "Lesson in the Museum", Russia. 25/09/2013 (1 person – oral presentation) ● 8th National Science Festival, MSU, Russia. 13/10/2013 – 15/10/2013 (4 people – stand & leaflets & stand & workshop) ● 3rd scientific and methodological conference: "New MSU Education Programmes and School Education", Moscow, Russia. 16/11/2013 (1 person – Oral presentation)
NHM	<ul style="list-style-type: none"> ● EUROGARD VI, Chios Island, 28/5-2/6/2012 (1 person – workshop and poster) ● BGCI's 8th International Congress on Education in Botanic Gardens, Mexico City, Mexico. 12/11/2012 – 16/11/2012 (1 person) ● INQUIRE conference 9, Kew, UK 09/07/2013 -10/07/2013 (5 people – paper & posters & workshop) 	<ul style="list-style-type: none"> ● Museums-pedagogisk fagdag "Museum Education day," Oslo, Norway 11/4/2011 (1 person – oral presentation) ● Naturfagkonferansen 2011, Oslo, Norway. 20/10/2011 (1 person – oral presentation) ● Museums-pedagogisk fagdag "Museum Education day" 26/3/2012 (2 people – oral presentation & demonstration) ● Forskerfrøkonferanse Conference for kinder garden- and preschool, Oslo 04/02/2013 (1 person – oral presentation) ● Museums-pedagogisk fagdag "Museum Education day," Oslo, Norway. 18/03/2013 (1 person – demonstration)


Annex 1:

(j)

Partner	International conferences and other events	National conferences and other events
BGRHB	<ul style="list-style-type: none"> ● INQUIRE conference 9, Kew, UK 09/07/2013 - 10/07/2013 (2 people – poster) 	<ul style="list-style-type: none"> ● 15th Advanced Training Meeting of Botanical Garden education centres in Mainz, Germany 20 – 22/5/2011 (2 people – oral presentation) ● Conference of the German Society of Environmental Conversation, Vilm, Rügen, Germany 12-15/8/2011 (3 people – oral presentation) ● 58th MNU Meeting in Bremerhaven, Germany National congress 17/09-18/09/2011 (3 people – oral presentation) ● Annual Meeting of the German speaking association of Botanical Gardens in Tharandt, Germany 22nd – 25th September 2011 (1 person - oral presentation) ● Scientific Directors of Botanic Gardens, Tharandt, Germany. 24/09/2011 (1 person – oral presentation) ● 2 Meetings Advisory-Group, Hannover and Bremen, Germany. January, October, 2012 (1 person – workshop) ● German Core Working Group "Pedagogical Staff at Botanical Gardens", Oldenburg, Germany, 3-4/2/2012 (2 people – oral presentation) ● Scientific Directors of Botanic Gardens, Göttingen, Germany. 17/02/2012 (1 person – oral presentation & leaflets) ● Members of bBR e.V., Bremen, Germany. 10/03/2012 (1 person – oral presentation) ● INQUIRE Workshop, German Core Working Group "Pedagogical Staff at Botanical Gardens", Bremen, Germany. 22/06/2012 – 24/06/2012 (3 people – workshop & oral presentation) ● Members of bBR e.V., Bremen, Germany. 09/03/2013 (1 person – oral presentation) ● 13th National Meeting of PhD students in Biology education in Muehlheim, Germany (1 person – oral presentation)
UL	<ul style="list-style-type: none"> ● BGCI's 8th International Congress on Education in Botanic Gardens, Mexico City, Mexico. 12/11/2012 – 16/11/2012 (poster) ● International Congress on ITC and education, Lisbon, Portugal. 14/11/2013 (2 people – oral presentation) 	<ul style="list-style-type: none"> ● Event at Botanic Garden, UL June 2011 (3 people – oral presentation) ● Meeting with Santilana Publishers, Lisbon, Portugal. July 2012 (1 person – oral presentation)
Total	56 International conferences	135 National conferences

Annex 2: INQUIRE paper Publications (printed and on-line articles)

Annex 2: INQUIRE paper Publications (printed and on-line articles)

Partner	Newspaper	Journal	Online
LFU		1 - E.g. http://www.bgc.org/files/Worldwide/Education/Roots_PDFs/Roots9.2.pdf	1- http://www.uibk.ac.at/pointhnews/2011/neue-schule-forschend-lernen.html.de
BGCI		2 - E.g. http://www.bgc.org/files/Worldwide/Education/Roots_PDFs/Roots9.2.pdf	
KCL		1 - E.g. http://www.bgc.org/files/Worldwide/Education/Roots_PDFs/Roots9.2.pdf	1 - http://www.inquirebotany.org/en/news/special-issue-of-roots-bgc-i-s-education-review-on-tbse-307.html
MUSE		1 - E.g. http://www.bgc.org/files/Worldwide/Education/Roots_PDFs/Roots%2010:1-%20Professional%20development.pdf	
KEW		'Issue 39, (Spring 2011): http://www.kew.org/kewscientist/past-issues.html	8
CSIC&UAH	1		9
UniHB	1- http://www.kreiszeitung.de/lokales/bremen/arbeiten-schle-forscher-1148599.html	3 - E.g. http://www.aulis.de/files/materials/downloads_links/BioS_2013_6_V_72.pdf	1
UBG	1	1- http://www.bgc.org/files/Worldwide/Education/Roots_PDFs/Roots9.2.pdf	10 - E.g. http://www.ubg-bg.com/index.php?option=com_content&view=article&id=7&Itemid=13&lang=en
NBGB			13
SBZH			3
BORD		1 - http://www.reseau-orfee.org/IMG/pdf/Edito_SommaireWeb.pdf	
FCTUC	2 - E.g. 		34 - E.g. http://www.asbeiras.pt/2012/09/formacao-em-biodiversidade-e-sustentabilidade-no-botanico-de-coimbra/
MSU			2
NHM			1 - E.g. http://www.nhm.uio.no/om/aktuelle-saker/2012/utforsk.html
BGRHB			3
UL	1		7
Total	6	16	93

INQUIRE

www.inquirebotany.org



Annex 4: Summary conclusions of the INQUIRE conference



‘Raising standards through inquiry: Professional development in the Natural Environment’

The EU funded INQUIRE project has been developing and offering teacher training courses in 11 European countries over a period of three years, with the aim of reinvigorating Inquiry-Based Science Education (IBSE) across Europe. INQUIRE is also intended to link informal and formal education systems and bridge the gap between researchers, practitioners and policy makers, as well as establishing a European network of IBSE practitioners to support and encourage each other in implementing IBSE.

To mark these efforts the INQUIRE conference was held at Royal Botanic Gardens, Kew on 9-10th July, 2013. The two-day conference was organised to celebrate the project’s successes, reflect on its challenges and bring together researchers and professionals from schools and LOtC centres to discuss the current status and future prospects of IBSE in Europe.

The 124 delegates from 13 countries who gathered at the INQUIRE conference engaged in valuable discussions and reflections on IBSE. The conference programme comprised four motivational keynote speeches, 60 workshops, paper and poster presentations and a networking session. Following the conference, 35 delegates took an inspirational one-day tour of Oxford to learn about the education programme run at the University of Oxford Botanic Garden and visit the city’s historical sights. Some of the salient issues, around the conference themes, that emerged over the two days are highlighted here:

1. Inquiry-based science education outdoors

Responding to the need of teachers and educators, one of the principal conference themes focused on practical examples of IBSE that can be implemented in both outdoor and classroom environments. Workshop and paper presentations showcased how IBSE activities are capable of being both hands-on and minds-on. Examples included an activity from Italy designed to engage students in investigating the



origin of different fibres and foster in them an appreciation of the importance of plants in the clothes they wear and the textiles they use in their everyday life. An activity from Spain encouraged students to investigate the quality of the honey they consumed, inviting them to question whether the labeling on the honey jars is accurate. Inquiries may be instigated using a variety of techniques. For example, London's Horniman Museum and Gardens, as part of the EU's PATHWAY project, advocates the use of objects for exploration. Learners practice their inquiry skills through games ranging from blindfolded Pictionary to creating a story about the life of an object. All these examples demonstrated that simple, relatively brief activities are capable of delivering effective IBSE. And it also became clear that plant-based activities, focusing mainly on climate change and biodiversity loss, are capable of being linked to other, non-scientific curriculum subjects. This was illustrated by an activity from Moscow looking at the symmetry of leaves, which helped develop students' mathematical skills, while an activity by Uni-Bremen examined the food in our diets and questioned how environmental friendly our decisions around food sourcing and production are. This encouraged the development of students' decision making and citizenship skills.

2. Reflective practice

Different strategies may be employed to stimulate reflection by teachers and educators on their perceptions of IBSE and how they put it into practice. The reflective process, according to Ljuba Pencheva, responsible for the INQUIRE course in Bulgaria, may be regarded as the ability to set aside ego and, as if we were inhabiting a magical space, to see ourselves from an outsider's perspective. Bulgarian teachers and educators are encouraged to practice psychodrama group therapy, a strategy that gives them the opportunity to share their professional challenges and re-enact them as if they were happening in the 'here and now'. As part of the PATHWAY project in the UK, teachers have been encouraged to reflect on their understanding of IBSE during a one-day workshop. Participants were asked to define IBSE and provide examples from their practice, develop a list of criteria and use these in reviewing IBSE lessons. This reflective activity revealed that perceptions of IBSE by teachers and educators varied, especially around the degree of input a teacher should provide to students. Although participants supported IBSE in theory, they queried its logistical implications – the 'how' of implementing inquiry.

3. Professional learning communities

The idea of Professional learning communities is linked to the term Communities of Practice (CoP) (Lave and Wenger, 1991) which describes a group of people who, through sharing information and experiences, learn from each other and develop themselves professionally. A CoP established among teachers who work together to refine their teaching and who are also supported by academics or more experienced practitioners, appears to be a highly effective professional development approach in science education. Similarly, European networks of teachers and educators employ various activities and media to establish a learning community that aims to develop practice in IBSE and environmental and outdoor education. Through focus groups, seminars and summer schools, the GreeNET network connects more than 1000 teachers across Europe and aims to promote green careers by sharing best

practice and providing training in environmental education. Museo delle Scienze in Italy has developed an information gateway, i-CLEEN, that supports collaboration between science teachers and researchers in the development of inquiry-based resources on climate and energy. As part of the INQUIRE course in Austria, teachers and educators were encouraged to extend their social network and provide mutual support in developing their IBSE skills. Research showed that the participants had a 'shared value and vision', which was evident in their co-creation of IBSE resources. Their initiative to work in small-groups also evidenced their 'collective learning'. Furthermore the course managers supported the learning community by organising more frequent meetings for course participants and emphasising that there is no single-way to implement IBSE. These interventions led to increased social interactions among the trainees and the sharing of a greater variety of knowledge and resources.

4. Evaluation of IBSE

Teachers, educators and academics recognise that IBSE poses many conceptual, logistic and technical challenges for student assessment. INQUIRE course participants in the UK also indicated that having to teach to a prescribed curriculum, or an examination mark scheme were barriers to applying IBSE. In response to practitioner concerns, Royal Botanic Gardens, Kew has developed an outdoor IBSE activity that successfully imparts simple field study techniques to students who investigate the distribution of plant species in a given area. This activity shows that it is possible to facilitate inquiry-based learning for assessment against a tight examiner marking scheme, such as the Advanced-Level student assessment that precedes university entry. As well as acquiring concrete examples of how to assess IBSE activities, teachers and educators also need to develop their evaluative capacity further. During the INQUIRE course in Italy, participants were trained in clarifying the meaning and purpose of evaluation. This addressed both formative and summative methodologies and participants learned how to use a variety of techniques – concept cartoons, forums, diaries, questionnaires, concept maps, portfolios of evidence, interviews and observations.

5. Student perspectives on IBSE

IBSE is intended to enable young people to become independent learners and follow their own interests in what they would like to learn. But what do young people actually learn when they participate in IBSE activities in school or at an LOTC site? At the Garden of Stairs at the University Botanic Garden in Oslo, children learn, through experience, about the concepts of landscape, gravity and orientation. Children run up the hill, climb steps and design original stairs. Stimulated by their educators' questions, they engage in discussions and formulate speculations and new questions, such as: what happens to my body? why is it easier to run down than to run up a hill? what is the difference between hills and stairs? Children are able to understand and experience their environment while having fun, reacting spontaneously to tasks and being excited about what they learn. At the National Museum of Natural History and Science at Lisbon University and as part of the project Natural Europe, young people follow digital educational pathways – on-line IBSE activities that integrate learning in the school with learning in the museum. During the assessment of the activities, young people reported increased knowledge and interest in natural science through their use of digital tools and by their participation in IBSE



activities that bridge informal and formal education.

6. Developing training courses in LOtC

The INQUIRE conference emphasised different aspects of planning and delivering successful teacher training on IBSE. One of the challenges for the providers of professional development for teachers is how to disseminate information effectively and attract the interest of potential trainees. In a World café session at Kew, conference delegates brainstormed the best methods to promote the INQUIRE courses. There was widespread agreement that the support of policy makers and education authorities in promote the INQUIRE course was important, particularly in using their communication channels to disseminate information to teachers and educators and also to obtain funding. Face-to-face contacts and the use of social media were seen as important in advertising a training course, while the contribution of high-profile individuals could influence practitioners to register for INQUIRE courses. The World Café session produced a raft of suggestions for implementing IBSE across Europe and these included: providing support to teachers in schools by encouraging them to share their experiences; by introducing IBSE into national curricula; using on-line platforms to disseminate good practice and by offering IBSE experiences to families and the community.

Key congress thoughts

Throughout the INQUIRE conference, teachers, educators and academics involved in IBSE training shared their passion about implementing IBSE and debated the challenges of fully integrating this pedagogy into teaching practice. Posters, workshops and paper presentations amply demonstrated that there is no single recipe for applying IBSE. Instead a range of different IBSE approaches and methodologies are capable of successful application in both school and LOtC sites. The keynote and closing speeches of the conference provided further stimulus for discussion and reflection on IBSE. They made it clear that by providing experiences in outdoor learning environments, including gardening activities, IBSE can have a positive impact on student achievement, learning motivation and personal development. Teachers often report that lack of time, training and funding, as well as fears around child-safety, are impediments to teaching young people outdoors. But it was also apparent that the most effective schools were those able to integrate LOtC into their school structures. The 'real' barriers to LOtC were identified as: teacher perceptions of the role of education and effective pedagogy, their self-efficacy, the commitment of teachers and school leaders to the process and the relationship between schools and providers.

The provision of outdoor activities and IBSE should not be regarded as an initiative undertaken by individuals in isolation. In order to ensure wider implementation of IBSE, LOtC sites should establish collaborations with schools, educators should work closely with teachers, practitioners should work with researchers and the informal education sector should join forces with the formal sector. The INQUIRE project has demonstrated how it is possible to build these collaborations, through consortia of botanic gardens, natural history museums and universities who have been developing and running professional development courses. Botanic gardens and museums have also demonstrated that they are excellent



locations for training in IBSE, because of their plant collections, their outdoor spaces and their expertise in plant science. Lastly, the legacy of the INQUIRE project extends beyond the provision of professional development courses, to encompass organisational change in botanic gardens and museums that have built up their expertise in IBSE. Several of these are currently integrating IBSE into a whole spectrum of public engagement activities that range from the interpretation signs and guided tours to school and adult education programmes. IBSE has the potential to foster inquiring minds within the wider public, too, and should not be limited to meeting the needs of a particular audience.

Annex 5: INQUIRE leaflet example (Bulgarian)



Страни, които работят в INQUIRE проекта

В проекта участват следните партньори:

- Университет Инсбрук, Ботаническа градина, Австрия
- Botanic Gardens Conservation International, Обединеното Кралство
- Museo delle Scienze, Тренто, Италия
- Royal Botanic Gardens, Kew, Обединеното Кралство
- Universität Bremen, Didaktik der Biologie, Bremen, Германия
- Университетски Ботанически градини при СУ „Св. Климент Охридски“, България
- Унищшен Биологически Център, Хановер, Германия
- Ботаническа градина на Бордо, Франция
- Lomonosov Moscow State University Botanical Garden, Русия
- Национален Исторически Музей, Ботаническа градина, Норвегия
- King's College London University, Обединеното Кралство
- Ботаническа градина на Университета в Лисабон, Португалия
- Национална Ботаническа градина на Белия, Португалия
- Ботаническа градина на Университета в Коимбра, Португалия
- botanika GmbH, Bremen, Германия
- Държавна Академия Върховен Съвет за Научни изследвания (OSIC), Италия
- Крапска Ботаническа Градина Хуан Карлос I, Университет в Алакала, Испания

Сайтът на INQUIRE е на 10 езика и предлага платформа за разпространение на информация и ресурси относно откривателското учене; насърчава диалога между Партньорите и учителите. Моля, посетете ни: www.inquirebotany.org



За повече информация относно INQUIRE в България, свържете се с: ubg@inquirebotany.org



INQUIRE се финансира от Европейския Съюз по 7та Рамкова Програма



INQUIRE



Откривателско учене (IBSE)

Обучение за учители за използване на Откривателското учене в преподаването на научните дисциплини

www.inquirebotany.org

INQUIRE е тригодишен проект, фокусиран върху откривателското учене (IBSE), в който участват 17 партньори от 11 европейски страни. Проектът се финансира от Европейския съюз по 7та рамкова програма.



Ботаническите градини са едни от най-вдъхновяващите културни, научни и учебни институции на Европа. Те съдържат впечатляващо разнообразни сортове от растения и растителни артефакти и гледат в себе си обширни ботанически, етно-ботанически и градинарски знания и умения.

Чрез курсовете INQUIRE ботаническите градини обучават стотици учители да развият професионалните си умения в откривателско учене, да отразяват, премислят и подобряват практиката си. Работейки заедно, учители и обучители ще развият една нова и възвуща „общност на практикуващите“. Обученията INQUIRE са фокусирани върху биоразнообразието, климатичните промени и устойчивото развитие, в подкрепа на преподаването на най-големите глобални проблеми на 21 век.



Четиридесет ботанически градини участват в проекта и всяка от тях разработва 60 часово обучение на учители по откривателско учене с подкрепа от страна на организацията Botanic Gardens Conservation International (BGCI) и два много уважавани университета – Кингс коледж Лондон (King's College London), Обединеното Кралство и Бременски университет, Германия. Проектът се координира от Университета в Инсбрук, Австрия



В резултат от обучението, учители и обучители ще претворят наученото от тях в класовете си. Предлагайки широка гама от реален житейски опит и в контекста на „обучение извън класната стая“, IBSE педагогиката ще повиши интерес към естествения свят и ще учи децата как да мислят като учени.



INQUIRE подкрепя развитието на научната грамотност в Европа. Пространствата за учене на открито като ботанически градини, зоологически градини и влажни зони предлагат уникални места, където децата да натрупат опит в откривателското учене от първа ръка.



INQUIRE

Annex 6: INQUIRE course (example of the KEW leaflet, UK)

INQUIRE at Kew

Aims of the course

The INQUIRE course is being offered to 15 secondary science teachers and five botanic garden educators. The course comprises 60 hours of training, delivered through Kew science and education experts. A variety of educational resources will be explored and the course will include a class or group visit to Kew Gardens to undertake an inquiry-based investigation.

Teachers and botanic garden educators will:

- 1 Develop a working understanding of the advantages and disadvantages to students and teachers of using Inquiry Based Science Education (IBSE).
- 2 Experience IBSE learning and usable resources in classroom and outside settings.
- 3 Pilot and evaluate their own developed IBSE lesson at Kew Gardens with a group of their students.
- 4 Have the opportunity of enrichment lectures and tours on biodiversity, conservation and sustainability and climate change.
- 5 Take part in an online course discussion forum.
- 6 Provide evidence of learning through an end of project assignment using a chosen presentation format.

Are you a teacher of Key Stage 3 science or geography?

Are you interested in Climate Change, Sustainability, Inquiry Based Learning and Learning Outside the Classroom?

Are you interested in self development?

Then this course is for you.

To find out more and book your place contact:

Gail Bromley g.bromley@kew.org
OR
Sue Hunt s.hunt@kew.org
OR
schools@kew.org

Kew


ROYAL BOTANIC GARDENS



CPD at Kew

Is your school interested in

- Free science or geography teacher CPD?
- Climate change and sustainability?
- Using inquiry based learning?
- Developing 'Learning Outside the Classroom'?

Kew is looking for 15 teachers and five botanic Garden Educators to join them for the second pilot INQUIRE course. This programme is suitable for both NQTs and experienced teachers.





Enjoy learning in the unique and exciting setting of Kew, surrounded by amazing teaching resources.

Explore new activities like plant identification, micro-propagation, field studies and phenology. Access our unique course website where you can research and review published resources and where you can share your own lesson plans, ideas and views not only with educators in the UK – but in our ten partner countries across Europe.

The course will start on October 10th 2012 and finish in June 2013.

Course participants will be invited to the final International Congress at Kew in July 2013.

We are delighted to be a partner in this exciting adventure along with 17 partners in 11 European countries.






Who will benefit?

Students:
IBSE has long been associated with increase in understanding and learning, resulting in more engagement.

Teachers:
The programme would suit both NQTs and experienced teachers wanting to expand their subject knowledge and sharpen their IBSE skills. Teachers will gain resources, which will be directly transferable into the classroom.

Science and Geography Departments:
Greater subject and pedagogical knowledge can be disseminated through the department.

Schools and Botanic Gardens:
New skills development will offer a variety of learning models that will enhance learning across all student abilities.

Assessment via:
A portfolio to include reflective writing, written exercises, research and analysis of materials on line, photos, videos, links to online forums and blogs to which the student has contributed.

Activity	Description
Three full days of training at Kew Gardens (10 October 2012, 17 January 2013, 24 April 2013)	Training to include IBSE investigations in biodiversity, conservation and climate change through activities, lectures, field studies, practicals and tours.
Self study (including online activities and completion of assignments) (15 hrs)	Self study to include online research, reading, reflective writing and online forums. Part of the self study section will be developed through a series of short assignments set at the end of each on site Kew day.
Visit to Kew Gardens with students (Free for class) (May / June) and evaluation (8 hrs)	Teachers will bring their students (class) to Kew Gardens and deliver their own IBSE investigation. Educators will deliver their own IBSE investigation at their own site. Teachers/Educators and their observers will evaluate the success of their visit and activity.
Portfolio of Evidence as final assignment (15 hrs)	Teachers will produce evidence that they have achieved the outcomes of the course. (various formats acceptable).



Annex 7- INQUIRE banner example (Portuguese)






O PROJETO INQUIRE
ESTÁ A REVIGORAR A
APRENDIZAGEM ATIVA NO
ENSINO DAS CIÊNCIAS

www.inquirebotany.org



Apoiado por




































Students learning outside the classroom at NBGB, Belgium



Dissemination Summary

Supported by

