



Grant Agreement no: 316 558

Project acronym: **Volcanoes' Night**

Project full title: **“La Noche de los Volcanes – an awareness raising night for the work of volcanologist and geologist scientists”**

**Seventh Framework Programme
THEME FP7 – PEOPLE – 2012 – NIGHT**

Deliverable D3. Report on impact assessment (PU)

Due date of deliverable: last month of the project
Actual submission date: together with the draft management report

Start date of the project: 01.05.2012.

Duration: 7 months

Coordinator: La Palma Research Centre S.L.

The objective of this report and WP3 was to assess the impact of the awareness raising campaign (WP1) and activities of the Night (WP2) itself in both quantitative and qualitative terms and to collect best practices for successful organisation of similar events (e.g. events promoting science and the work of scientists in a relatively rural environment; events supporting specifically the work of volcanologists and geologist scientists) in the future. Success was evaluated against the expectations (organisers, EU, public and researchers) with the overall long-term purpose of identifying the types of promotional methods and activities that proved the most effective towards the achievements of the objectives.

Targeted audience of the event

In general, the widest possible participation of people of all ages were encouraged, however, specific target audiences were anticipated to take part at different activities according to a different schedule. Therefore the programme of the event was designed accordingly in a way to facilitate the participation of certain groups, such as families with kids, employees working late etc. by trying to adjust to their normal living schedule. For that reason fun activities targeted kids and/or families were organised as part of the preparatory actions and/or during the early afternoon while the later part of the evening (starting from 21:00) rather focussed on adults, allowing the participation of late-workers (here on the island many people work late until 20:00 in the afternoon on week-days).

Primary audience – local Spanish-speaking citizens of the island of all age groups regardless their scientific background (mainly inhabitants of the southern villages of Fuencaliente, Mazo, Las Manchas and Puerto Naos as well as the population of the three major towns of El Paso, Los Llanos and Santa Cruz), all living within an afternoon trip reach from the venue).

Secondary audience – foreign (mainly German) speaking community of the island (learned people, age 50+) and tourists as well as the population of other Canary Islands, principally the mobile generation ages of 30-40 (with special attention to the neighbouring island of Tenerife, from where the venue could be reached by a day-trip).

Tertiary audience – Spanish speaking community of the world with special interest towards the topic, from mainland Spain to Chile. This group was targeted on an “informative level” during the awareness campaign.

Tasks undertaken during WP3

- Identification of indicators for assessing the achievement of the objectives;
- Setting up a 10-point questionnaire and guidelines for interviews (random polls) – surveys during the event;
- Organisation of the collection of answers, on site and in some cases (e.g. researchers) before and after the event;
- Collection of feedback from researchers, industry and media representatives having taken part in the event (suggestions, comments, observations, rating of the event etc.) surveys after the event;
- Data processing and drafting conclusions;
- Communication of results towards the research community in order to set up good practice and to facilitate the organisation of replica events in the future.
- Presenting the results at the MAKAVOL International Conference on El Hierro, 10-15 October, 2012.

The evaluation methods used for collecting data on the impact of the event were focused on assessing the following:

1. The change in Participants' understanding of the work of geologist scientists and the impact of their work on society – via survey and face-to-face interviews during the event.
2. The change in enthusiasm in scientists for public engagement and foster long-term commitment – via emailing and personal interviews during and after the event.

Building on the local experience of the Advisory Board members (INVOLCAN and Cabildo de La Palma), underlined by the general lack of feedback during the awareness campaign (through emailing and phone calls) assessment is mainly based on inquiries on site by using the following methods:

- Starting from 19:30 (after My Day presentations of researchers) towards the Science Café until the end visitors were asked to take part in 10-point facilitated questionnaire. Altogether 62 filled in, representing app. 6 % of the total attendants.
- Face-to-face interviews; those participants, who took part at least three of the core activities were asked further questions on what they have enjoyed the most, what they had learned about the work of geologists and also to give general remarks and suggestions on the continuation of the event. Altogether 24 participants were interviewed this way.
- Personal discussion and email communication with researchers before and after the event and during the MAKAVOL Conference on El Hierro.

More specifically the survey taken during the event was focussed on collecting information to assess:

- the typology of visitors (age, gender, nationality, educational background);
- the preliminary awareness of people on popular science events, including previous Researchers' Nights;
- most successful awareness raising methods and reasons for participation;
- the most interesting programme elements and satisfaction of visitors;
- the initial and change of opinion of people, in particular regarding the public perception of geologist scientist and their work;
- the public support of such popular science events in the future.

Face-to-face interviews left more room for individual expressions and thus were focusing on collecting data for the qualitative assessment as well as general comments and suggestions for the continuation of the event both from the participants and from the professionals.

Description of the current situation

According to the organisers knowledge (including the Advisory Board) no investigations have been carried out on the public perception of researchers of this specific field on a European level. No existing data is offered by Eurobarometer neither science communication events focussing on the promotion and assessment of volcanologist and other geoscientists have been held in Europe so far*¹. From this perspective Volcanoes' Night was a pilot event in

¹ However, a public opinion *Survey on the Perception of Engineers and Geoscientists* was conducted in BC, Canada in 2008. Almost the identical public opinion poll was repeated in 2011. Results of these studies (also in terms of comparison of any changes) are available at: http://www.geology.utoronto.ca/Members/miall/miall_bib/pdfs/ISI-000261047300007.pdf

Europe. This fact was underlined by discussions exchanged with the professionals via emails before the event and personally during the El Hierro Conference, where the first outcomes of the event were presented to the researcher’s community. Therefore the assessment of the current situation may only rely on the data collected during the course of the project, with special attention to the information gained during the event via questionnaires and face-to-face interviews with the public and with the scientists.

Evaluation of facts and figures

Media evaluation

Volcanoes’ Night was the first Researchers’ Night event organised on the island and also the first single project on the Canary Islands. Accordingly major efforts were used to raise awareness of the media as main channel towards promotion to the general public. Short notices on the project indicating date, location and the main programme elements were sited in local online and offline magazines and on radio already starting from middle of June. The highest media attention of course was accomplished in September (during the course of the last three weeks before and right after the event), when a series of press releases, articles, radio and TV interviews were published and projected. In total:

- 34 notices in local offline and online magazines
- 10 radio announcements on Planeta Vivo Radio (on Sundays between 13 May and 23 September)
- 7 radio interviews with project organisers and talks about the project on Radio Cadena SER, Canarias Radio La Autónomaica and Canal 11
- 7 major printed articles in local and regional newspapers such as: Diario de Avisos, El Día, El Apuron, Canarias 7, Canarias Ahora etc.
- 3 announcements on local TV and feedback before and after the event

The robust campaign estimated to have reached virtually the entire population of the Island (86 thousand people) and estimated that about another 100 thousand people (inhabitants of the other islands as well as tourists) got aware of the project.



Samples of promotional material and media appearances

For more details on the awareness raising campaign and on promotional materials used, please see D 1.

Number of collaborators and sponsorship

In order to facilitate implementation and to be as cost efficient as possible project partners took all possible efforts to gain sponsorship for the event and at the same time raise awareness about the project. Work under this domain started already during the negotiation stage in the beginning of April by contacting banks, local shops, car rental companies etc. via phone calls, emails summarising the objectives of the project. However, due to the current economical crisis that just hit Spain the possibilities remained limited. Nevertheless 8 different entities contributed directly or indirectly (e.g. by providing free or discounted service) to the implementation of the project.

Web statistics

Despite the robust awareness campaign websites visits were a below expectations. Until the end of October 3027 (out of which 2189 single) website visits visiting 9008 pages were realised. However, the geographical and language data show well-balanced results in reaching the different target groups. The site attracted visitors from all over Europe with over 400 visitors from Germany and even from the world including countries of South-America and the U.S. The main pages visited: activities, about the project, the Spanish and German introductory page, gallery, the news section and the volcano excursions. Due to lower than expected visit rate organisers following the suggestions of the Advisory Board did not develop a new project Facebook page but rather used the existing highly visited sites of the co-organising partners as a main communication channel in order to maximize the impact (INVOLCAN, Sodepal around 10 000 regular followers from all over Europe and the world).

Number of participants

Unfortunately the very first big rain of the season just hit the island on the day of the event. "Bad weather" has a very different impact on the local population than compared to the rest of Europe. On La Palma it is very difficult to mobilise people if it rains and there is wind and "cold". The reason for this is that for 95% of the year weather is really nice and there are plenty of fiestas, so most of the local people do not see a reason to leave their homes when the weather turns bad. Accordingly the rainstorm that arrived on 28 September had a visible negative impact on the level of attendance.

Despite these unfavourable meteorological conditions the impression of the organisers, municipal officials, Cabildo representatives, the Advisory Board and the Media was that the event turned out to be a success. Especially the local officials were surprised at the relatively high number of participation (about a thousand people all through the Night), and expressed their satisfaction several times during the event. The majority of the participants, who decided to attend despite the unfavourable weather conditions participated in several (3-5) activities and stayed late, until the end.

For more details on the number of participants for each activity please see D 2.

Material exhibited

As the event was organised in an outermost region, materials providing information about research and educational possibilities, programmes offered by the EU and presenting success of national and regional projects supported by the EU had a special importance. In total 22 different types of EU and national project publications were displayed in Spanish, German and additional 6 types in English (in dozens & hundreds of copies each type) including project posters and leaflets and the oral presentation of two regional projects (MAKAVOL and the TROPOS project). Altogether 6 Spanish geology related companies exhibited their services and software products that highlighted the links between geological science and business as well as provided an outlook on how geological knowledge could be used for society. Due to the tough economic situation several other companies could not participate even though they all liked the idea itself.

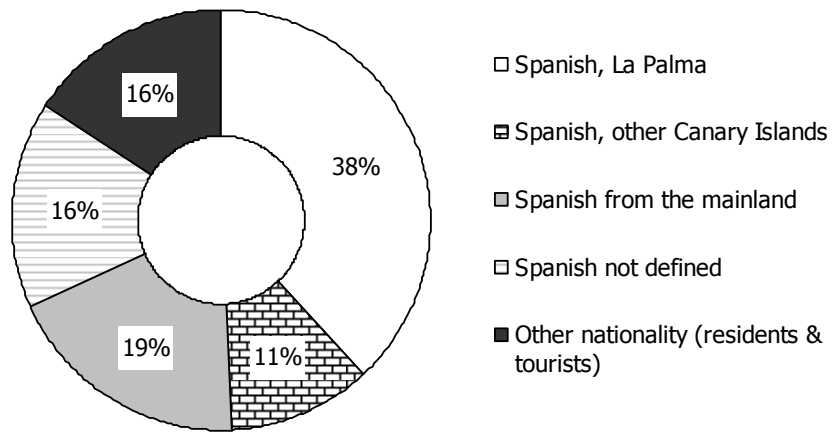
Detailed statistical analysis of the survey

Typology of visitors

Impressions of the organisers underlined by the results of the detailed evaluation show that there was no difference between the involvement of genders (47,62 % male and 52,38 % female), neither significant disparity in the age of attendees, all age groups were presented almost to an equal extent (around 20 %). People of ages 30-40 were slightly more represented (34, 92 % of the attendees). However, a considerable divergence was identified in the educational background of the participants. Although, the event primarily promoted the participation of the local inhabitants of all age groups regardless of their scientific background – and this fact was underlined several times throughout the awareness raising campaign –, and just secondly the involvement of middle-aged culture-seekers (including local foreign and Tenerife residents, tourists etc.) the majority of the attendees, 65,07 % had a university or college degree and only 3,17 % was with primary background.

To sum it up the typical participant of Volcanoes' Night was a middle-aged (34,92%) from La Palma with higher educational background (65,07 %), a 'culture vulture', who had an initial special interest in the topic of geology & volcanology (81, 54 %) in general or in one of the activities.

However, it needs to be mentioned that local foreign residents as well as tourists (Spanish speaking and foreigners as well) were also highly represented.



Nationality of visitors

Most successful awareness raising methods and reasons for participation

The ultimate motivation of participation was marked as personal interest in the topic (geology and volcanology) in general (76,92 %) or special interest in one of the activities (4,62 %). Despite the fact Volcanoes' Night was the first event under the science communication domain in the history of the island², only 16,92 % of the attendees marked that they came because as it was something "new".

Concerning the awareness raising methods the disperse use of different media turned to be a good strategy. Although fiestas and other events are normally advertised via posters and leaflets and this means of advertisement also played an important role in the awareness raising campaign of Volcanoes' Night, the use of Internet (online magazines) and social media turned to be very important especially among the younger generation. Taking into account the nature of the event location (the primary target groups of the islanders, living in a relatively small and closed community) alternative ways of promotion, such as 'gossiping' also took an important role in awareness raising. In order of importance 1. posters & flyers, 2. chat with friends & colleagues and the 3. Internet turned out to be the most successful means of awareness raising. To the question *'Where did you first hear about Volcanoes' Night?'* 25,68 % indicated that via posters & leaflets, 22,97 % marked "by friends or colleagues" and 21,62 % stated that via the Internet (including social media). There is no significant correlation in between the different methods used and the gender, age groups reached, however, as expected the Internet and social media played more important role in addressing the younger generation (37,5 % among people under age 30) and its role in reaching older people was forgettable (none of the people, who filled in the questionnaire chose the Internet as a source). Posters & flyers played relatively low role – in comparison with responders with secondary background (30%) – in reaching people with higher educational background, who were rather informed via the Internet (26,09 %) and the printed media (21,74 %).

Most popular programme elements and satisfaction of visitors

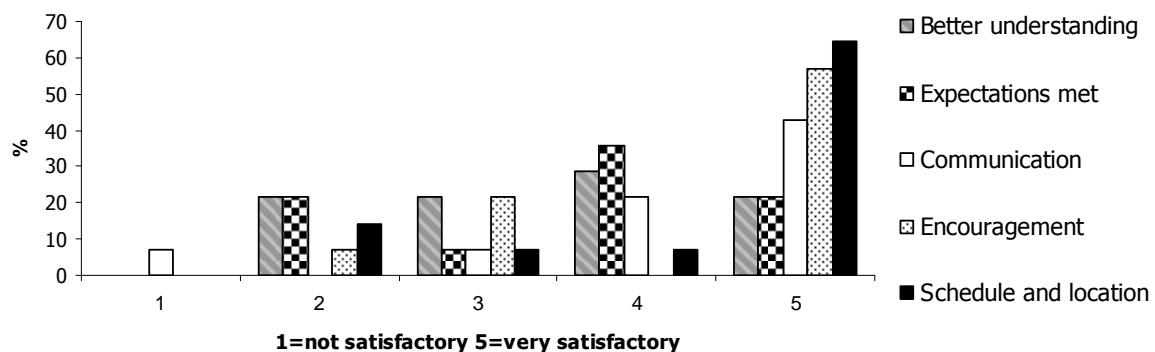
In general, the impression gained during the event was that the proposed programme and implementation kept the audience interest. People, who decided to attend despite the unfavourable weather conditions, were very interested and participated in more activities than organisers & researchers had originally expected. This was underlined by the questionnaire results, according to which, almost two-third of the responders (64, 52 %) attended 3 or more activities, the most popular actions were:

- Science Café (58,06 % of the questioned attendees participated)
- Movie Theatre (56,45 % of questioned attendees participated)
- Volcano Memories (48,39 % of questioned attendees participated)
- My Day presentations (40,32 % of questioned attendees participated)

The level of satisfaction was evaluated based on the feedback of those repliers, who participated in at least 5 activities, including the My Day presentations and the Science Café (22, 58 % of the repliers). 64, 29 % of the responders marked 4 and 5 on the way how the scientists communicated, 57, 14 % on how much the researchers encouraged the participation of the audience and on how much the proposed activities accomplished their

² There are though regular educational activities such as 'Canarias una ventana volcánica en el Atlántico' organised. More information: <https://www.facebook.com/pages/Canarias-una-ventana-volc%C3%A1nica-en-el-Atl%C3%A1ntico/144267072275619>

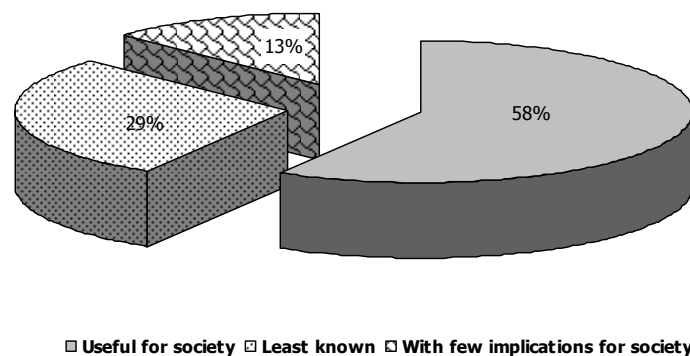
expectations. The chart below shows the exact percentages of answers on each statement indicated under question 6 of the survey.



Level satisfaction of responders taking part at least 5 core activities (Question number 6 of the survey)

Initial and change of opinion of people, in particular regarding the public perception of geologist scientist and their work

58, 73 % of the responders had found the work of geologist scientists useful for society already before participating in the event, while 28, 57 % thought that their work is not known sufficiently and 12, 7 % considered that their work has few implications for society. No one thought that the work of geoscientists is boring.



Responders' initial opinion on the work of geoscientists before having attended the event.

After participating in the event the opinion of these last two groups (who originally stated that the work of geologist scientists is not known sufficiently or it has little implications for society – 41, 27 %) has changed as follows:

73, 08 % of the responders marked that his/her opinion has improved and find the work of these scientists more interesting and useful for society or his/her opinion is different as has more knowledge on their job.

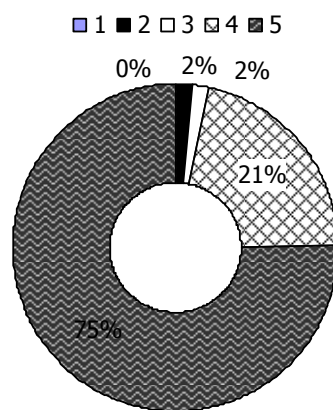
Moreover 58, 33 % of the opinion of those, who initially had positive opinion on the work of geologist scientists further improved after taking part at the event.

Public support of such popular science events in the future

As Volcanoes' Night was the first Researchers' Night organised on the island itself, and the first single project of this kind on the Canary Islands³, organisers asked the attendees if they had ever participated or at least had heard about this initiative. Results show that for 75,8 % of the responders, Volcanoes' Night was the first time having got informed about Researchers' Night.

In total 74,2 % of the responders, and 80,9 % of those, who for the first time participated at Researchers' Night found the concept of Volcanoes' Night an excellent and useful idea (marked 5 on 1-5 scale) and all but one person would recommend to other people to attend a similar event in the future.

1 = bad idea 5 = excellent idea



Responders opinion the concept of Volcanoes' Night on scale 1 -5.

Evaluation of face-to-face interviews with participants and personal discussions with researchers

Participants

The interviewed persons on the question what new they had learned about the work of geoscientists, among others, mentioned that they were interested to find out that the work of these geoscientists is so diverse and that it involves so much often adventurous travelling experience, which requires very good stamina and sometimes other very special skills (e.g. communicating in several foreign languages). Many noted that it was fascinating to see that there are so many young women dedicated to this job and doing all types of field work activities together with men. The majority of the remarks on what they would have done differently were made on administrative issues such as reallocation of certain programme elements so that people could participate in more activities. As a whole all of the interviewed persons were very positive about the event and found his/her participation well-worthy and would offer to other people to attend a similar event in the future. Below some of the quotations:

³ In the last 3 years, as part of other Spanish projects, small scale local events have been organised in Las Palmas (but without single website or with solid regional promotional campaign).

I really enjoyed the My Day presentations as they gave me an insight view on how these people work, what is behind their ideas and results you can see presented from time to time on TV.

For me the most interesting was to find out that being a volcanologist/geologist requires a good stamina and special skills (language, artistic and also social). I had imagined before that these people more like office/laboratory people.

For me the Science Café was the most interesting part. The topics were all very unique but nicely complemented each other. I was mostly interested in the topic of future landslides as this is a big issue for La Palma.

I really liked Carmen Romero's presentation and the way how she introduced her topic during the Science Café. She really involved us in thinking with together with her. For some time I felt I am a volcanologist too 😊.

The whole programme was very interesting and I was particularly happy about the volcanic memories as these mean so much to us, local people. I think this was the best link between us and the scientists and I really learned a lot.

I liked the idea itself and the programme as it is. Hope to participate next year as well. The programme had a good balance of rather fun such as the Wine Tasting and more learning-like activities such as the Science Café. I enjoyed them all.

Everything was really nice and I was surprised to find out that so many young women are dedicated themselves to geosciences. I would not had expected this before.

I thought that it is not boring, but I would have never expected that the work of geoscientists is so diverse.

Just would like to note that this event meant a lot to this island, and especially to the town of Fuencaliente. Thanks for the possibility of participating. I truly learned a lot.

However, some complaints were made on the tight schedule and on the simultaneous nature of some of the activities.

We really wanted to take part the Movie Theatre but by the time the Science Café was over the projections had been stopped as well.

It is a pity that we could not listened to the My Day presentations – I have heard that they were great – but we had a ticket for the first Wine Tasting.

Even though organisers tried to prepare the final agenda in way that most suits to the need and possible working schedule of the primarily target audience (local inhabitants with no reference to their scientific background) some people remarked on the general schedule:

Came right after work and still for me it was impossible to take part any of the activities started earlier than 20:00⁴.

Unfortunately, I need to work tomorrow⁵ so I cannot stay any longer (said at 22:00) even though I would like to listen the next presentation).

⁴ On the Island (similarly to mainland Spain) many shops, restaurants and bars closed to the afternoon siesta and reopen at 5 pm and close at 8 pm or even later.

⁵ On the Island many shops, restaurants, bars etc. are open on Saturdays.

Some other made note on bad weather conditions, though necessary measures were taken, and some of the activities had been reallocated accordingly.

We expected more sun. It would have been much more fun for the kids to be outside as originally indicated in the programme.

Nothing I could add. Everything was perfect as it is expect the rain and cold.

The rain and cold a bit ruined our trip around the rim of the volcano. It was hard to hear the scientist in the wind.

Researchers

The feedback gathered during personal talks and via emailing (both during and after the event) showed that almost all researchers, who took part in the event had already been involved with public engagement and felt that it is a necessary role, however, their experience was mainly related and limited to communication of volcanic risk and outreach of reducing volcanic hazard. Participating Volcanoes' Night, an event where their work and they are in the spotlight was a new experience for them. As a whole they gained good practice with the public during the night and quite a lot of researchers mentioned that this experience had encouraged them to take part in public engagement as well as review how they present their work in the future. The public appreciated the Volcano Excursions as well as interacting with real volcanologists during the Science Café. All shared the feeling that the event was very pleasant and valuable, and should be run again. Though the event was perceived as a success, especially from qualitative perspective, the overall schedule and location of certain activities engendered suggestions for improvements.

When asking scientists about their experiences in public engagement and particularly how they felt about Volcanoes' Night, many gave positive comments but also recommendations on how to deal with difficulties which arose due to the simultaneous schedule (e.g. with using a rather linear programme). Many researchers assured that it was a truly unique experience, the public were eager get to know more and interested in their job, asked good and sometime hard-to-answer questions (especially kids). Furthermore, even during the short breaks they had conversations in a nice informal setting, which encouraged different levels of questions. Several researchers also noted that having this varied audience was exciting and interesting, although at the same time challenging something they are normally not used to. Some quotes made by scientists.

It was good to see so many enthusiastic people of mixed age and background, who all seemed to have a good time. – Maria Dolores Perez.

This was a unique and very special event for such small location. Everyone has a right to access science – even those living in remote, isolated communities! – Nemesio M. Perez.

I almost missed trying the paella as I was in deep discussion with a small group of local German residents, to whom I gave an insight to my research topic even before my presentation. – Prof. Konradin Weber.

Attendees here were truly interested, which – based on my experience has gained so far at communication of volcanic risk events – I did not anticipate in advance. – Samara Dionis.

Thanks for inviting me to take part at this event. It was a very useful personal experience for me and I hope that you will organise similar events in the future. – Prof. Simon Day.

For me this event was very important as I got to know a new, different angle of public curiosity that not only the results of our work is interest people but also the way how we get these results and even the persons behind the job. – David Calvo.

I'm more confident now about engaging with the public and I learned a lot from this experience, which will definitely come useful next year, when The University of Dusseldorf will organise Researchers' night. – Prof. Konradin Weber.

In the Annex attached a copy of the 10-point facilitated survey, the abstract of the El Hierro Conference, the list of scientists, a copy of the presentation and 2 full page media articles.