

PUBLIC PARTICIPATION IN SNOW SCIENCE

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ABSTRACT: Public awareness of snow and avalanche science and hence a research-friendly society is and will become more and more important in an increasingly competitive market for research funds. Therefore, the Swiss Federal Institute for Snow and Avalanche Research SLF places great emphasis on Public Relations (PR). We present our research areas in an easy-to-understand manner that is attractive to as many non-professional groups as possible. This paper presents the activities and instruments we use, their costs, benefits, and further aspects. Finally, we work out the characteristics of successful PR in snow science and related subjects.

KEYWORDS: knowledge transfer, publicity, credibility, image improvement, awareness rising

1. INTRODUCTION

1.1 Why PR?

Public Relations at the Swiss Federal Institute for Snow and Avalanche Research SLF has two main targets: a) To advance public understanding of science and technology (PUST) and b) to reach a high level of publicity, awareness for relevance and credibility (PARC) of SLF in the public (including politicians, authorities, potential employers etc.).

PUST is knowledge transfer: We tell the people facts and figures about snow, natural hazards and alpine environment as well as about how science works. This does not bring any direct benefit for us. However, we are convinced that knowledge is not the private property of academically trained people, but belongs to everybody. To share it with the public is therefore a social responsibility (Stocklmayer et al., 2001) and everybody who is interested should have access to research results and the opportunity to communicate with scientists. Bearing in mind that most research is funded by the taxpayers, they should as well have the opportunity to learn more about it.

In addition, our information about avalanches is not only interesting, but very important for many people; awareness of avalanches is thus part of PUST.

As a long term effect of informing the public of our work we also hope that people obtain positive impressions about science and

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scientists and in particular about SLF. This links PUST to the other main target of PR at SLF: PARC, the aim of which is to reach a high level of publicity for SLF, a high level of public awareness for the relevance of the institute's work and a high level of the credibility. If the public and the policy makers know and accept our work, future funding, political support and a science-friendly environment are easier to obtain. Our best known products, the avalanche bulletins, can only be taken seriously if the institute's image is immaculate.

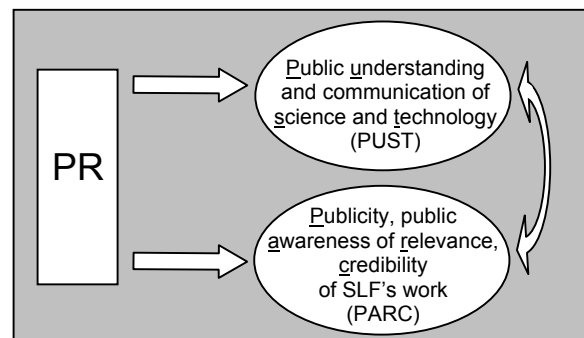


Figure 1: Main targets of PR at SLF

1.2 Target Groups

We have defined distinct target groups for our public relation activities:

- General public, taxpayers: to let them know how taxes are invested in science and to show the relevance of our research projects.
- Snow recreationists such as back country skiers or freeriders (mostly not avalanche professionals): they are a large user group of our avalanche warning products.
- Customers (people who have already

expressed their interest for our work): caring for existing customers is at least as important as gaining new ones.

- d) Inhabitants or tourists of mountain regions: snow, natural hazards and mountains are an important part of their environment. For a sustainable development of mountain regions understanding and knowing about the environment is important.
- e) Children and students: an important target group for all our avalanche warning products, because many of them freeride, often without any back-country education. Further they tell their parents (members of other target groups) about what they learned at SLF, and they are future taxpayers and potential future employees.
- f) Davos inhabitants (neighbours, authorities, etc.): For local anchorage and good relations within the community.

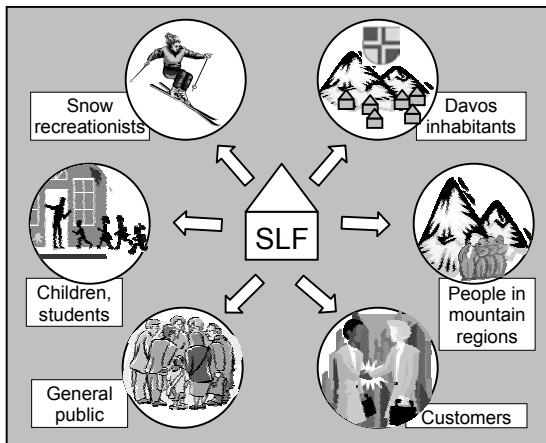


Figure 2: Target groups of PR at SLF

2. EXAMPLES OF PR ACTIVITIES

To address our target groups and meet our PR objectives we carry out a number of PR activities. The most successful concepts realized in 2002, 2003 and 2004 are presented here. Each activity is shortly described; a systematic overview can be found in table 1.

2.1 Guided Tours

We offer regular public guided tours, and special tours upon request, sometimes including lectures and excursions. A trained team of 35 employees of all branches of the institute guides the groups. Tours start with a multimedia show about the institute and continue with a tour

through the different areas of the institute (for example cold labs, avalanche warning room, ski lab). In particular, we try to attract school groups by offering e.g. tours with a special focus on avalanche accident prevention. Tours can be conducted in several languages on request (e.g. English, French, Italian).



Figure 3: Guided Tour

2.2 Interactive Exhibition

We have designed an exhibition about our main fields of activity and research topics for our entrance hall. The exhibition was inaugurated with an open house event (see 2.3) and can now be visited either during or after a guided tour or once a week at the public opening hours. The exhibition is composed of six stations which represent the five main topics of the SLF research branches. The sixth station gives an overview about the history and development of the institute. Each topic consists of an informational component and an activity component.

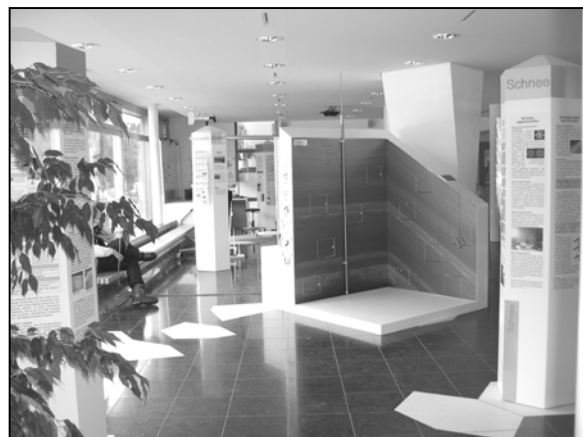


Figure 4: Exhibition in the SLF entrance hall.

2.3 Open House

The institute was opened to the public for two days in 2004. All teams provided insights into their daily work and into their research topics. The program contained presentations and talks, open offices and labs, a multimedia show, games, food and drinks, short excursions and many experiments either to watch or to be carried out by the visitors.

2.4 Events

We present SLF at large events like the alpine ski world championships in St. Moritz (2003), freeride-events (freestyle.ch) or fairs. Depending on the available space and the target groups, we present the whole SLF or only chosen themes, for example avalanche accident prevention. We present the topics in an interactive manner and offer opportunities to ask questions. As many people prefer not being forced to talk, emphasis is placed on visual presentations, e.g. our multimedia show.

2.5 Science Coffee

A Science Coffee is an informal discussion between the public, stakeholders and scientists about a topic with high relevance for society. In Switzerland, they are not yet well established. We held our first Science Coffee on the topic of “climate change and tourism” in summer 2004. In contrast to the usual concept, the venue was our own cafeteria. Public and experts sit in a mixed order, with tables and some drinks, so there is no ranking between “those who are supposed to talk” and “those who are supposed to listen”.



Figure 5: Science Coffee in the SLF cafeteria

2.6 Interactive Nature Trails

We installed two interactive nature trails in the Davos region, where our institute is located. The first trail, the “Winter experience trail” was designed for winter use along a main walking trail close to the town. The second trail, the “Mountain experience trail – an expedition with Prof. Evergreen” was designed for summer use along a more difficult hiking trail. Each trail consisted of about eight stations where people could stop and find out about certain subjects related to our research. The stations always had a direct relation to something people could see along the trail, and all information was offered combined with research activities such as experiments, observations, or measurements.



Figure 6: Summer experience trail – finding out about different mountain trees.



Figure 7: Winter experience trail – observing different types of avalanches.

2.7 Summer School

During school holidays, we offer summer school events to local children ranging from 9 to 14 years old. This is part of a local children's summer programme. We offer two different events, one called "Being a Snow Scientist" and the other "Expedition into Nature". Each takes half a day and addresses a group of maximum 15 children.

We offer a playful, fun and active learning atmosphere. Each programme is introduced with appealing research questions on children's level, e.g. "How is snow formed?". Experiments such as Hiramatsu's Apparatus (Hiramatsu 1998) help the kids to find the answers.

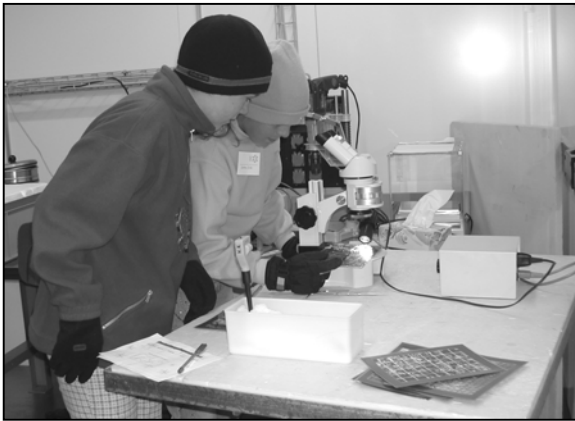


Figure 8: Summer school „Being a snow scientist“, snow investigation in the cold lab.

2.8 Media Relations

We act as an active interface between the media (newspapers, magazines, online, TV, radio) and our avalanche, snow and alpine environment experts. We promote topics that are important for the public and for SLF by sending out press-releases, organizing media conferences or calling a chosen journalist.

If journalists contact us, the PR team usually does not answer the questions itself, but organizes an expert as an interview partner. Quite often the journalists do not yet have an idea for their story. In these cases we help to develop it. This again gives us the opportunity to promote the topics we believe to be especially important.



Figure 9: TV shootings during snow profiling.

2.9 Internet

Our internet-site (www.slf.ch) can be distinguished in three parts: the avalanche danger warning part, the research part and the "forum". The avalanche warning part contains up-to-date information about the snow and avalanche situation and background information about avalanche danger. The research part informs about our projects and products and the "forum" gives the public the opportunity to ask questions online. The postings in the forum are sent to all subscribed users by e-mail. Reading the postings is also possible without subscribing to the forum.

2.10 Newsletter

SLF edits an electronic newsletter of about six to eight pages four times a year. Each edition has a main topic (e.g. permafrost or artificial snow). The newsletter has several rubrics, such as the editorial where the SLF opinion is explained; an article with facts; a description of a team, or portraits of SLF-employees. The newsletter is published exclusively on the internet. We inform subscribers of a new edition by e-mail, but the newsletter can also be read without subscribing to it.

An overview of the main characteristics of all activities is shown in table 1.

Table 1: Characteristics of the PR-activities

Activity	Main objective ¹	Target Groups ²	Location ³	Duration ⁴
Guided tours	PARC	a, b, c, d, e, f	in-house	temporary
Exhibition	both	a, b, c, d, e, f	in-house	permanent
Open house	PARC	a, b, c, d, e, f	in-house	temporary
Events	PARC	a, b	out of SLF	temporary
Science coffee	PUST	a, c, d, f	in-house	temporary
Nature Trail	PUST	d, e, f	out of SLF	permanent
Summer school	PUST	e, f	in-house	temporary
Media relations	both	a, b, c, d	independent	temporary
Newsletter	PARC	c, a	independent	permanent
Internet	both	b, a, c	independent	permanent

Activity	Interactivity ⁵	Form of contact ⁶	New contacts ⁷	Monetary costs ⁸	Efforts ⁹
Guided tours	interactive	direct	yes	low	low
Exhibition	interactive	indirect	no	high	high
Open house	interactive	direct	yes	high	high
Events	interactive	direct	yes	medium	medium
Science coffee	interactive	direct	no	medium	medium
Nature Trail	interactive	indirect	yes	high	high
Summer school	interactive	direct	no	low	low
Media relations	not interactive	indirect	yes	low	low to medium
Newsletter	not interactive	indirect	no	low	medium
Internet	interactive	indirect forum: direct	yes	low (maintenance)	medium

¹ PUST = Public understanding of science (knowledge transfer), PARC = reaching a high level of publicity, public awareness of relevance and credibility of SLF

² see chapter 1.2

³ location where the “customer” enjoys the activity: in-house = SLF area, out of SLF = outside SLF area, independent = no defined location

⁴ permanent > 3 months, temporary < 3 months

⁵ interactive, not interactive

⁶ direct = talks, discussions with scientists, indirect = through media

⁷ yes = activity reaches a lot of people who did not know about SLF before, no = reaches mainly people who knew already a lot about SLF

⁸ low < 1000 SFr./ 800 US\$, medium < 10'000 SFr / 8'000 US\$, high > 10'000 SFr / 8'000 US\$

⁹ low < 1 week, medium < 4 weeks, high > 4 weeks of working hours

3. RESULTS

Table 2 shows in comparison the number of visitors/readers, the benefits and considerable aspects referred to each activity.

Table 2: Results of PR-activities

Activity	Exact results	General benefits	Considerations
Guided tours	<ul style="list-style-type: none"> • 3000 visitors / year 	<ul style="list-style-type: none"> • bring many people to the institute • reach many target groups • raise interest for and comprehension of the products by getting insights 	<ul style="list-style-type: none"> • tourist areas might be favoured for the success
Exhibition	<ul style="list-style-type: none"> • 5 to 25 visitors / week, additional to guided tours 	<ul style="list-style-type: none"> • gives a general overview • provides knowledge • brings people to the institute • raises attractiveness of the institute • useful at guided tours 	<ul style="list-style-type: none"> • costly, complex, time-consuming to build up a sustainable, extensive exhibition
Open house	<ul style="list-style-type: none"> • 6000 visitors • 6 radio interviews • 2 TV reports • 10 newspaper articles 	<ul style="list-style-type: none"> • brings many people to the institute • reaches many target groups • interesting for the media • team building effect 	<ul style="list-style-type: none"> • costs (monetary and working hours) are rather high • the institute might get very crowded • all employees have to commit
Events	<ul style="list-style-type: none"> • depends on the event 	<ul style="list-style-type: none"> • reach many people for the first time • reach many people which are not familiar with research and who would never come to the institute 	<ul style="list-style-type: none"> • contacts are superficial
Science coffee	<ul style="list-style-type: none"> • 60 visitors / at the first event 	<ul style="list-style-type: none"> • brings public, local stakeholders and scientists together • shows relevance of the research to actual topics 	<ul style="list-style-type: none"> • reaches mainly people who are already familiar with science
Nature trails	<ul style="list-style-type: none"> • winter trail: approx. 30.000 visitors / 2 years • summer trail: approx. 5.000 visitors / 2 years 	<ul style="list-style-type: none"> • provide knowledge about natural phenomena • contribute to a tourist offer in terms of gentle tourism • cooperation possibilities with local organisations 	<ul style="list-style-type: none"> • costs (monetary and working hours) are high
Summer school	<ul style="list-style-type: none"> • 75 children / 2 years 	<ul style="list-style-type: none"> • knowledge transfer to children • positive access to research • local integration 	<ul style="list-style-type: none"> • short time programme = more general increase of awareness than deeper comprehension
Media relations	<p>per year:</p> <ul style="list-style-type: none"> • ~75 TV reports • ~40 radio reports • ~300 newspaper reports 	<ul style="list-style-type: none"> • reach very many people (quantity) • high credibility of media reports 	<ul style="list-style-type: none"> • no guaranty about the message that is provided • the impression is not sustainable
Newsletter	<ul style="list-style-type: none"> • 400 subscribers after two editions 	<ul style="list-style-type: none"> • pushes important topics • provides information independent of time and place 	<ul style="list-style-type: none"> • reaches only persons who have already had contact with the institute before
Internet	<ul style="list-style-type: none"> • > 3 Mio site-views / year • 200 persons subscribed to the forum 	<ul style="list-style-type: none"> • easily accessible for everyone • provides information to many people independent of time and place • the forum allows direct contact without coming to Davos 	<ul style="list-style-type: none"> • very little information about the customers • discussion in the forum can take objectionable directions

4. DISCUSSION

Our PR activities are a mixture of well known, tested methods (i.e. media relations) and activities that are new for SLF or generally new. The latter also entail new problems and noteworthy points that should be considered for future projects. For example there is an antithetic trend between quality and quantity: if we reach a broad public (e.g. by media), contact is mostly very shallow, hence not sustainable. Direct, personal contact (e.g. open house, science coffee etc.) leaves a permanent mark, but is quite time consuming if the number of persons per time is considered. As resources are limited, this dilemma is important to keep in mind.

In general it can be said that it is very difficult to reach people who are not yet biased towards science. This problem is approached with activities discovered by accident (e.g. nature trails on existing hiking paths).

Another critical item to handle is that most of our evaluations of the PR activities confine themselves to counting visitors, articles or site-views. We do not know for sure who the people are we talk to or what the message is they take home. With some activities (media) we are not even in control over the ostensible message. Installing a better evaluation system for the PR activities is difficult (extensive), but would improve the quality of the methods. Since people usually react positively on the keyword "SLF", we know that the public impression of SLF must be generally positive.

From individual feedback (oral, by e-mail, by letter) there are clear signals that people know SLF, that they think our work is important and that they have a positive attitude towards research; that they know about our topics and about mountains' particularities, and that they are aware about avalanche danger. This yield is difficult to measure by numbers, methods from the social sciences such as surveys are required. Even without exact numbers these signs tell us that we are on the right track towards fulfilling our main targets - improving public understanding of science and technology (including avalanche danger), reaching a high level of publicity, public awareness of the relevance of our work and the credibility of SLF.

Last but not least, it is important to keep in mind that our PR activities are supported directly and indirectly by many external partners, e.g. mountain guides, regional avalanche

services, back-country skiers or cantonal and local authorities. These partners and their positive attitude towards us and our products are invaluable.

5. CONCLUSIONS: WHAT IS MOST IMPORTANT TO BEAR IN MIND?

All the PR activities we described above were considered as at least "more or less effective". To find out about what made them successful, we searched for their similarities. We found the following common points:

5.1 Providing a dialogue

Many of our activities allow the public to meet scientists, to ask them questions and to discuss. This way we answer people's real questions, not only what we believe people might want to know. Thus we show that scientists are "normal" individuals and that they are interested in the questions and worries of the public.

5.2 Being very present (quantity)

The more often we or our institute is seen on TV or is written about in the newspaper, the more people know that we exist, what we do, and how we do it. This kind of contacts gives us quantity of contacts, and they make people curious to learn more.

5.3 Education and awareness rising

We have observed that people are interested in science, even though many do not like it at school. Snow and avalanches are fascinating phenomena that many people want to learn more about. If they are taught about those topics, they are pleased because they obtain something they want. This can easily be used for raising awareness in the context of avalanche accident prevention.

5.4 Providing insights

Everybody is curious. Hence we invite people inside our buildings and show what we do - and add the messages we want them to take home (be it PUST or PARC). It is a myth that people do not come because they are too shy to meet scientists.

5.5 Being part of society

In Switzerland it is often said that scientists live in an ivory tower – that they do not care about the outside world. By opening our house, by communicating with the public, by strengthening local cooperation and by involving the public in our work, we show that this is not true.

5.6 Being interesting

If we bore people, we lose them. Of course we believe our topics to be interesting; but that is not enough. The challenge is to present the content in a new, funny or astonishing way that is still scientifically correct.

Successful PR can be understood as a circle (see fig. 10): The institution invests time, money and knowledge for PUST- and PARC-activities. As a result, the public gains knowledge (including avalanche danger), appreciates the institution and trusts in it. This is expressed in political support and in funding for the institution.

6. SUMMARY: FORMULA FOR SUCCESSFUL PR

For long-term success, we need quantity and quality of contacts; new contacts and care for existing customers. For SLF, this means that media relations are one very important part (quantity, new contacts) on the one hand and guided tours (quality, customer care) as easiest

of the direct-contact methods on the other hand.

These activities are the basis of our PR. Other, special events (open house, science coffees...) are important in order to remain interesting, be it for our very loyal customers or for a new audience interested in a special form of event or a special topic.

We will continue with a mixture of new ideas and established activities as described in this paper. The challenge is to find the optimal mixture formula for all our target groups and to conceive enough ideas for new activities.

7. ACKNOWLEDGEMENTS

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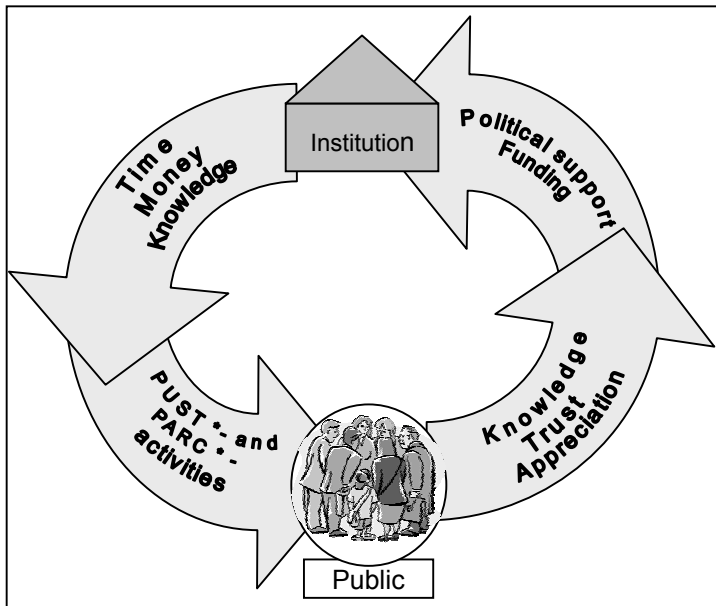


Figure 10: PR-Circle

* PUST: Public understanding and communication of science and technology

* PARC: Publicity, public awareness of relevance, credibility of the institution's work