

ACTIVITY REPORT 2012

SUMMARY

I. EHAS FOUNDATION
II. FOUNDATION ACTIVITY5
III. ACTIVITY AREAS OF INTERVENTION7
IV. ACTIVITY REPORT8
Coordination, monitoring and execution of cooperation projects
Coordination, monitoring and execution of research, training and dissemination projects11
Management and administration of the Foundation 16

I. EHAS FOUNDATION

EHAS Foundation is a non-profit institution, with official address in Madrid, Spain (Escuela Técnica Superior de Ingenieros de Telecomunicaciones. Cuidad Universitaria s/n. 28040), which aims at improving public Health care systems in remote areas through the application of appropriate information and communication technologies (ICT). EHAS started its activities in 1999 as a result of the collaboration between the Polytechnic University of Madrid and Engineers Without Borders (EWB), and since then, it has interconnected more than 200 Health-care facilities (both Health posts HPs, and centers HCs) with their reference hospitals in Peru, Colombia, Ecuador and Cuba. Along this time, the group of collaborators has broadened and nowadays, the EHAS Board of Directors includes also representatives from Rey Juan Carlos University, Catholic University of Peru and Cauca University in Colombia.

EHAS has worked specifically with primary care facilities of the public Health systems in developing countries. In rural instances, EHAS has operated in relatively well-equipped and well-staffed HCs, as well as remote and less-resourced rural HPs. These HPs are located in areas without roads nor fixed or mobile phone systems, and with very limited medical capabilities. EHAS has strained and succeed to create more effective communications systems between HCs and HPs, specially focusing on connecting medical staff in the most isolated HPs with their better-resourced counterparts in the HCs, in order to achieve four main results:

- improved the epidemiological surveillance system, since the previous system relied on late or erroneous reports;
- increased the diagnostic and treatment capacity in the most isolated HPs, allowing a quick and costless consultation with a proper doctor and better coordination of essential medicinal stocks;
- reduced the need to travel of patients and medical personnel, and thereby, reduced the costs (river travels are expensive) which offset the costs to deploy the infrastructure; and
- reduced the average time for the emergency transfer of patients, when the transfer is necessary.

In order to achieve these results, EHAS has supported the design, execution and maintenance of telecommunications infrastructures appropriate for each deployment context, which usually is unfriendly, like a forest or a mountains range. These telecommunications networks are based on alternative radio technologies, like HF (High Frequency), VHF (Very High Frequency) or WiLD (WiFi over Long Distances) that are adapted through FOSS (Free and Open Software Source) to the requirements of every Health 'micro-network'. Thanks to this solution, EHAS has extended voice and data connectivity to the most isolated environments. Access to Internet and PSTN (Public Switched Telephone Network) was achieved by distributing satellite or land-line connections available in cities located in a range up to 3500Km. Along the whole process, EHAS has always worked closely with local partners in every target country, like the Rural Telecommunication Group of Catholic University of Peru or the Telematics Department of Cauca University in Colombia.

Besides providing telecommunications' infrastructure and voice and data communications services between Health care centers, EHAS is now implementing projects working on telemedicine services for remote consultations and diagnostic through the application of specific tools, such as the remote ultrasound tests and epidemic vigilance systems and also the training of Health technicians on the use of this tools and the diagnostic concepts.

Once the network is properly functioning, EHAS transfers to the local and regional Health-care authorities the network control, which means training the users of the systems and preparing all constituents for the network's transfer. EHAS Foundation experience exhibits that using FOSS and open knowledge throughout the process of designing, constructing and maintaining telemedicine networks, allows such regional Health authorities to optimize their limited budgets and make the networks sustainable. FOSS also allows network administrators to reduce problems with viruses and licenses, and focus on many other kinds of hardware-network problems, like protecting communication devices in the areas where lightning storms are frequent and the humidity level is very high.

EHAS activity in this scope has already had a positive and relevant impact in the Health care process, specially related to the following achievements:

- Before EHAS implementation, the 93% of the Health-care personnel said that was impossible to make consultations, being the 95% of them who now says that making consultations in case of hesitation is quick and easy. And the number of consultations has increased on a 700%.
- The number of trips to deliver medical reports has been reduced to a quarter part of the number of trips needed before.
- The average time for transportation of urgent patients has been a 60% reduced.
- The children and maternal mortality ratio has decreased considerably in the intervention areas.

EHAS Foundation also works on research, training and dissemination projects about the ICTs application in the Health sector, using technologies to fight the inequity of access to Health-care services in remote areas from Latin America and other developing countries.

In the previous years, EHAS has been collaborating with Spanish and Argentinian universities and hospitals, working on the development tools for diagnostic systems to fight prevalent diseases suffered by children (respiratory illness and diarrhea) and to provide assistance to pregnant women.

A sample of those systems, is the wireless stethoscope on real time for areas without doctor, which permits that a remote doctor (usually the reference doctor) can listen to the breath and cardiac sounds of the patient, while watching at him/her, and being able to guide to the Health technician about the correct position of the stethoscope. It has also been developed a system for sending microscopy images (diarrhea), ultrasounds and fetal control. At the same time is being developed an ECG with the proper technology adapted to the rural environment.

Additionally, Rey Juan Carlos University, collaborating with EHAS Foundation, has created a Masters Course, including Doctorate program, on Telecommunication Network for Developing Countries, aiming to provide high qualification training to engineers from developing countries. The main goals of the master course are to achieve the multiplier effect through the trainings. The developed technology is all based in FOSS and the students can, this way, use it to solve problems in the remote rural areas in their countries.

EHAS Foundation also works on several publications and raising awareness activities about the importance of ICTs applied for the development of the Health sector.

II. FOUNDATION ACTIVITY

GOALS AND ACTIVITIES ESTABLISHED IN THE FOUNDATION STATUTES.

EHAS Foundation goals are:

- A) International Cooperation for the Development of the Information and Communication Technologies sector, applied to Health issues in countries from Latin America or other developing countries.
- B) Investigation and development of information society in order to improve the Health sector in countries from Latin America or other developing countries.

In order to achieve these goals, the Foundation can develop, according to the report and the yearly action plan, approved by the Board, general and specific activities that just in a descriptive way and without exhaustive pretension, are mentioned below.

General Activities:

1. The scientific investigation and technological development in the information and communication technologies sector, applied to Health

issues in countries from Latin America and other developing countries.

- 2. Training to technical and sanitary personnel on information and communication technologies, or on Health, using these information and communication technologies.
- 3. Promotion of exchange, creation of networks and cooperation agreements between universities, research centers, Health institutions and private or public institutions, that share the Foundation goals.
- 4. Dissemination of results, and successful or not successful experiences about information and communication technologies applied to Health issues.

Specific Activities:

- I. Innovative projects on information and communications infrastructure on developing countries.
- II. Innovative projects on tele-medicine services.
- III. Equipment resources for Health institutions.
- IV. Resources for communication and computer labs.
- V. Equipment development and applications on tele-medicine.
- VI. Development of trainings, conferences, congresses, seminars, symposium, discussion, trips, and study sessions.
- VII. Resources for scholarships and trips for students and teachers.
- VIII. Redaction, edition and distribution of leaflets, monographs and every type of publication, regular or not, for the information, training and dissemination.
- IX. Dissemination of experiences in congresses, conferences, seminars, meetings and scientific or cultural events.
- X. Dissemination of results to experts, in technical and sanitary publications, through traditional and electronic communication ways.
- XI. Awareness for people and institutions about the importance of information and communication technologies applied to Health issues in developing countries.

XII. Any other activities that the Board considers convenient to achieve the Foundation goals.

(Article 3. Foundation Statutes)

III. ACTIVITY AREAS OF INTERVENTION

EHAS Foundation is developing activities inside of the following diverse target area:

Region	Country	Partner
	Guatemala	Tulasalud Association
	Peru	Pontifical Catholic University of Peru
	Bolivia	Energética NGO. Energy for Development
Latin America	Ecuador	Private Technical University of Loja
	Argentina	Fundatel Foundation
	Colombia	Cauca University
	Uruguay	Republic University
	Paraguay	National University of Asunción
Europe	Spain	Rey Juan Carlos University
	Norway	University of Oslo

IV. ACTIVITY REPORT

1 COORDINATION, MONITORING AND EXECUTION OF COOPERATION PROJECTS

The output of the EHAS Development Program is to demonstrate, in different countries, the capacity of improvement of the Health Public system for primary services in rural areas from countries in Latin America, using the appropriate communication technologies and the access to information.

In 2012, EHAS Foundation has been implementing the following four cooperation projects:

Three of them are focused on the application of ITCs to improve Health issues related to pregnancy and children and maternal mortality reduction; and the fourth of them is approaching the Eco-tourism management with renewable energies and ITCs application.

Title: Healthy Pregnancy. Pregnancy Control in Rural Areas from Alta Verapaz using Portable Ultrasound and Quick Tests. Guatemala

Funded by: UPM (Polytechnic University of Madrid)

Grant: 40.000 Euro **Duration:** 1.5 years

Target area: Alta Verapaz, Guatemala. **Beneficiaries:** 1,000 pregnant women

Description:

The Health situation of the population in Guatemala has improved over the last decade. However, crucial differences remain between some regions of the country, especially regarding maternal Health in rural remote areas. Using itinerant Health brigades who carry out regular check ups in communities, the lack of Health services provided in these regions can be improved. However maternal and newborn mortality rates remain a problem of great importance. An example of this is rural Alta Verapaz, a large indigenous population with limited access to Health services, where 203 women and nearly 2,000 babies die for every 100,000 children born, an alarming contrast to a country like Spain where 6 women die for 100,000 labors.

The reason for this alarming rate is due to the serious pregnancy complications that are not detected in time, and result in difficult births performed in rural areas with serious deficiencies in Health care services. These obstetric problems and infections can be easily detected through quality Health controls with appropriate equipment such as the ones that exist in urban areas.

However, how can the important diagnostic tests, such as ultrasound, be carried out in places where there is no electricity? How can the medical tests for early detection of infections be carried out in isolated areas that prevent transferring blood samples to a lab without breaking the cold chain?

From EHAS Foundation with TulaSalud (our local partner) we intend to support the work of these itinerant Health brigades with technological equipment specially designed for use in rural areas. Health staff will be equipped with portable ultrasound with folding solar panels for power, and clinical analysis system using technology DBSS -Dry Blood Spot Screening- based in dried blood samples collected on filter paper, which is particularly appropriate for remote areas.

Combining both tests, ultrasound and analytical, a high quality control will be provided for pregnant women from these areas, a control as good as the ones performed in urban environments with better access to Health services.

Health care will be greatly strengthened by detecting 85% of emergencies in time, by improving treatments and, ultimately, avoiding the death of many pregnant women and newborns in these regions.

Title: Improvement of the Children and Maternal Health in the Napo River Basis, through the proper use of Information and Communication Technologies (ICTs). Peru

Funded by: AYUNTAMIENTO DE MADRID (Madrid City Hall)

Grant: 180,000 Euro **Duration:** 2 years

Target area: Loreto Department, Maynas Province, Peru

Beneficiaries: 43,150 women and 42,307 men

Description:

This project aims to take advantage of the telecommunication network from the Napo River Basis with the following goals:

- Improved the epidemiology vigilance (achieving that all information is sent by e-mail, so
 it will be on time and without mistakes);
- Increased of the solving capacity of the technicians from the most remote Health points (installing web cams in every Health point to provide direct communication between doctors and patients, installing also a stethoscope system to allow the doctors to listen pulmonary and cardiac sounds of the patients that are in the Health points, so that the web cam can transmit the rural microscopies images and implementing a remote control system for the fetal heart beat;
- Improved the control of emergency/urgent transfers (avoiding the unnecessary ones, decreasing the time delay and the wrong management); and
- Increased the income of the rural Health points, supporting the remote fulfill of forms in the case of services covered by Health insurances.

In this moment, the project is very solid. The network is functioning perfectly and the new guidelines and procedures for the use of ICTs have been approved and arranged, both by DIRESA (Public Health Regional Direction) and by the representatives of Napo Health Network. Most of the equipment is already bought and installed, and it has been implemented a capacity building training on the use of the new systems. Besides, it should be noted that this project has awaken great interest in DIRESA, Regional Government (GOREL) and the responsible of the Napo Health Network.

Title: Improvement of the Children and Maternal Health in the Napo River Basis through the proper use of ICT. Peru

Funded by: AECID (Spanish Agency of International Cooperation for Development)

Grant: 80,000 Euro **Duration:** 1.5 years

Target area: Loreto Department, Maynas Province, Peru

Beneficiaries: 43,150 women and 42,307 men

Description:

This project is an extension of the previous one, in order to obtain a wider impact with the grant from AECID that will specifically provide 5 Health points of a USB portable ultrasound probes, specially designed for this kind of environment, and the necessary training for using them in the pregnancy control. It will also install the equipment needed to connect the Health network with the Pastaza Topic ship. This ship provides ambulatory attention to more than 80 localities along the Napo River Basin, and the new equipment will allow it to coordinate its activities with the health establishments of the Napo River. A portable laboratory to diagnose tuberculosis will be developed and donned to the Pastaza Topic Ship in order to allow them to better diagnoses tuberculosis in very isolated communities.

Title: Renewable energy and ICT for green tourism in protected areas of Latin America.

Funded by: CYTED (IBERO-AMERICAN PROGRAM FOR SCIENCE, TECHNOLOGY AND

DEVELOPMENT)

Grant: 50,316 Euro **Duration:** 4 years

Target area: Peru, Ecuador and Bolivia

Description:

This research project, which started in June 2012, analyzes the requirements of the energetic and telecommunication services to be able to reach a sustainable tourism, and disseminate the knowledge among the interested agents from green tourism sector in Latin America, observing specially the protected natural areas, managed by local communities.

After a previous study-in-deep in the current scenario of the energetic component in the Ecotourism activities in Latin America, this project undertakes a group of actions to improve the economic sector sustainability:

- Catalog sustainable energy good practices and ICTs in Eco-tourism infrastructures;
- Develop user guides of sustainable energies in this sector, that are useful for the local communities involved in the management of areas with natural and cultural interest, frequently isolated from markets and with short information about new energetic technologies;
- Provide technical assistance about renewable energetic technologies and ICTs to the community associations determined to develop sustainable Eco-tourism ventures;
- Disseminate the sustainable energy good practices for Eco-tourism among local actors, local and regional authorities and the companies from the tourism sector, through seminars, and get it off;
- Develop four trial implementation projects in Peru, Ecuador and Bolivia.

Goals and indicators

Goal	Indicator	Quantity
Demonstrate the capacity of improvement of the public Health system for primary services in rural areas from developing countries using the appropriate communication and information technologies.	Projects executed in developing countries	3
ICTs application to green tourism ventures and guidelines for the communities that manage them.	Project executed in developing countries	1

Human resources needed

Type	Number	Hours per year
Salaried personnel	1	1760
Scholarship personnel	0	
Services contract personnel	0	
Voluntary personnel	2	400

<u>2 COORDINATION, MONITORING AND EXECUTION OF RESEARCH, TRAINING AND DISSEMINATION PROJECTS</u>

In 2012, EHAS Foundation has been implementing the following **research**, **training and dissemination projects:**

Title: TUCAN3G Research (Formulation and Approval)

Funded by: EU (European Union)

Grant: 102,880 Euro **Duration:** 2,5 years

Target area: Latin America (and trial project in Peru)

Description:

This project has been formulated and approved by the European Union in 2012, but it is scheduled to start in February 2013.

Recent years have witnessed a massive penetration of cellular telephony in developing countries. However, isolated rural areas (inhabited by low-income population) have generally been disregarded because classical access and back-haul technologies do not assure the return on investment. As communication is crucial in human development, finding innovative solutions to connect these areas is an utmost necessity.

TUCAN3G proposes to study, from the twofold technological and socio-economical perspectives, the progressive introduction of mobile telephony and data services in isolated rural areas of developing countries, by taking advantage of new wireless technologies for the access network (based on 3G femtocells, and its evolution to 4G) in outdoor scenarios, as well as WiLD (WiFi for Long Distances)-WiMAX-VSAT heterogeneous backhauling. Those promise to be key in the development of inexpensive, sustainable, energy efficient, self-organized and long-term self-sufficient solutions which result in a profitable business case. The project also proposes the installation of a demonstration platform in the Peruvian jungle to verify the solution, enable the verification of business model hypothesis and results, and serve as a general showcase.

Title: MASERATTI Research Network

Funded by: CYTED (IBERO-AMERICAN PROGRAM FOR SCIENCE, TECHNOLOGY AND

DEVELOPMENT) **Duration:** 4 years

Target area: Latin America

Description:

CYTED Program is funding the MASERATTI research network, which works on the research for the Improvement of the Sanitary Assistance in Rural Areas through Tele-medicine Application with Wireless Technologies.

EHAS Foundation is collaborating in this research network, and in this frame, it was published the following book: "Tecnologías de la Información y las Comunicaciones para zonas rurales Aplicación a la atención de salud en países en desarrollo" ("Information and Communication Technologies in rural areas and its Application for Health Care in developing countries"), that you can find (only Spanish version) in the link below on a PDF format.

http://www.fundatel.org.ar/maseratti/maseratti-web.pdf

Title: New procedures for the diagnostic of forgotten diseases using low cost telemicroscopy. Research (Formulation and approval)

Funded by: AECID (Spanish Agency of International Cooperation for Development)

Grant: 85,400 Euro **Duration:** 1.5 years

Target area: Spain-Peru (Napo River Basis)

Description:

During 2012, this project has been formulated and approved and it will start in April 2013.

The project will research about new procedures to analyze the remote diagnostic of some forgotten diseases (malaria, tuberculosis, leprosy) and other prevalent diseases in the area (parasitism, human papillomavirus), through the definition of very simple preparation protocols/guidelines of samples and the remote diagnostic by specialist with low cost telemicroscopy (the purpose is to obtain and validate a tele-microscopy system of 150 Euro at most).

The planned actions are:

- 1. Design and validate clinically the new preparation protocols/guidelines of samples, adapted to the conditions of the rural Health points (staff lacking preparation, points without electricity, refrigeration nor centrifugation).
- 2. Develop and validate clinically a remote tele-microscopy system and at a low cost.
- 3. Analyze and study the viability and sustainability of these new procedures in a real case scenario.

The research activities related to the actions 1 and 2 will be developed in Spain entirely. The action 3, evaluation in a real case scenario, will be developed in the Health Network from Napo River, in Loreto, Peru (where currently EHAS Foundation is installing tele-medicine services through the project funded by the Madrid City Hall and the Spanish Agency of International Cooperation for Development). It should be pointed that there will be a special attention to the dissemination of the results from the research, with the related perspective to the EHAS Foundation invest on knowledge and free software.

Title: DHIS2 - Health Information Systems. Research.

Funded by: Oslo University (Norway)

Target area: Spain-Norway-Latin America

Description:

During 2012, EHAS Foundation keeps on researching about Information Systems for Health, collaborating with the Oslo University (where DHIS2 is developed) in the completion of the following activities:

- Development of two studies to analyze the viability of DHIS2 in Peru (Viability Study for the Improvement of the Health Information System in the rural health points in Peru, using the DHIS2 software. Spanish version in the following link http://www.ehas.org/wp-content/uploads/2012/09/MemoriaMartaVila.pdf) and Mexico (Technical and Institutional Viability of the adaptation of the DHIS2 software to the Sanitary System in Chiapas, Mexico. Spanish version in the following link http://www.ehas.org/wp-content/uploads/2012/09/PFM-Cecilia-Janeth-Cruz-Colmenares-DHIS2-LQ.pdf).
- After analyzing the DHIS2 potential as the Information System for Health, it was developed an on-line seminar from Madrid to disseminate the DHIS2 in Latin America, with the participation of groups from Peru, Paraguay, Ecuador, Guatemala and Colombia. It was also developed a workshop in Oslo.
- As result of the previous activities we collaborated on the deployment of DHIS2 in Cauca (Colombia) and a student from EHAS went to Paraguay (funded by the Polytechnic University of Madrid, from November 2012 until May 2013) to analyze the possible implementation of the DHIS2 over there.

Title: WIFI Network Monitoring Systems Research. Scholarship

Funded by: Ministry of Education (Spain)

Duration: 8 months **Target area:** Spain

Description:

The scholarship receptor develop a research study about WIFI network monitoring systems, with the purpose of emulating the implementation of these systems in the future in the Napo

River Network, Peru.

Title: Spanish Cooperation Guide for the incorporation of ICTs in Health related interventions in cooperation for development. Publication

Funded by: AECID (Spanish Agency of International Cooperation for Development)

Grant: 50,000 Euro **Duration:** 1.5 years

Target area: Latin America - Africa

Description:

This guide is a trip to understand the role of ICTs in the human development, and the contributions and challenges of its integration in the Health systems.

First of all, it tended to understand the role on ICTs in the Cooperation for Human Development, and particularly, in the Spanish Cooperation. It has been summarized in several applications that ICTs have on Health, as in the management of Health points and the epidemiology vigilance, or in the quality of diagnostics and treatments. It has been also discussed what is and what is not worth it in ICTs for Health, meaning this, which technologies are appropriate for tele-medicine in rural areas from developing countries, respecting always the human development perspective for the beneficiaries and the strengthening of institutions.

It has been developed a review of projects that use ICTs for Health with the aim to know better their contexts, the technology that they are using, the goals that have been established and the results that have been achieved. The research of initiatives has been developed in Latin America and in five countries in Africa (Senegal, Mali, Niger, Mozambique and Ethiopia), inside of the geographical priorities of the Spanish Cooperation. According to the diversity of countries where Health systems and ITCs applications are present, they have been recollected by country.

You can find the guide in the following link:

http://www.aecid.es/galerias/que-hacemos/descargas/GUIA TICs SALUD.pdf

Title: Free and Open Source Software and Technology for Sustainable Development. Publication.

Funded by: United Nations University Press

Description:

EHAS Foundation has collaborated in the publication of the book "Free and Open Source Software and Technology for Sustainable Development" with the essay on chapter: Improving public Health-care systems in developing countries using FOSS.

The book has been edited by Sulayman K. Sowe, Govindan Parayil y Atsushi Sunami; and published by the United Nations University Press, pp. 262-285, ISBN-13: 978-92-808-1217-6). Access to the book in the following link:

 $\underline{http://unu.edu/publications/books/free-and-open-source-software-technology-for-sustainable-development.html}\\$

Title: ICTs for Change. Dissemination Program.

Funded by: Botin Foundation

Grant: 45.000 Euro **Duration:** 2 years **Target area:** Spain

Beneficiaries: Spanish organizations involved in social projects and environment protection.

Description:

The general objective of this project is to contribute to the strengthening of the third sector in Spain, facilitating the adaptation to the current economic and social context in the national and international scope.

In order to achieve this objective, the project pretends to use the possibilities offered by the ICTs with two main approaches:

- Use of ICTs to modernize the organization processes in the Spanish NGOs, update the flows and the internal communication mechanisms to improve the implementation.
- Increase the impact of projects developed by Spanish NOGs, with the introduction of innovative solutions based in ICTs inside the projects implementation.

With this project, EHAS Foundation has the aim to disseminate its experience using ICTs for development among other NGOs which want to improve their operational system and impact thanks to the advantages offered by these technologies, establishing alliances to guarantee the Foundation sustainability.

During 2012, it has been designed the actuation strategic plan and defined the representative collective for the Spanish NGOs that are beneficiaries, to facilitate the follow up of the impact and the sustainability of the project before its subsequent extension to large scale. In this first phase, it has been selected those organizations that work on cooperation for development of the Health sector, as they are professionally closer to establish contracts and identify their possible needs.

It has been developed some activities in order to awake the interest on ICTs for development and define EHAS as a referent in this field.

EHAS' corporative image and website have been renew, to give more visibility, and public events have also been developed with other organizations in order to share experiences on ICT field application and to start establishing networks. These events have been useful to collect contacts from different NGOs working on Health, that EHAS has meet to study the ICTs need in their projects and establish possible collaboration frames, that might be set during the second year of the project (2013).

During 2012, EHAS Foundation has also developed the following awareness and training activities:

- Lecture about Free Software in cooperation projects. Polytechnic University of Madrid.
 Master Course.
- Lecture about ICTs application for Health projects in developing countries. Polytechnic University of Madrid. Master Course.
- Lecture about ICTs application for Health projects in developing countries. Polytechnic University of Madrid. Telecommunications.
- Lecture about the use of ICTs to solve daily problems in developing countries. Jesus Maestro School. Technology class.
- Lecture in the Congress LAMIT2012: Latino-American Medical Information and Telemedicine. LAMIT aims to find answers and improve the modern knowledge of Medical Information and Tele-medicine, through the promotion, development, change, and the strengthening of the governments in Latin America. Improving also the levels of individual and collective Health, as well as promoting the services provided by the Health authorities in Latin America.

Goals and indicators

Goal	Indicator	Quantity
Raising awareness about ICTs application in cooperation projects for development on Health Issues	Awareness and Dissemination Activities	6
Research about the use of ICTs and Free Software application in developing countries in order to improve the situation in remote areas	Research projects and Publications	7

Human resources.

Туре	Number	Hours per year
Salaried personnel	1	880
Scholarship personnel	1	400
Services contract personnel	0	
Voluntary personnel	1	320

3.MANAGEMENT AND ADMINISTRATION OF THE FOUNDATION

In 2012, EHAS has kept on reinforcing the joint work with institutions that belong to the Board of the Foundation: Polytechnic University of Madrid, ONGAWA (before Engineers without Borders ApD), Pontifical Catholic University of Peru, Cauca University of Colombia and University Rey Juan Carlos of Madrid.

EHAS has also been actively working with other institutions, ones that have already participated in our projects (Technical University of Loja, Fundatel, TulaSalud, GOREL, etc.) and others for the extension of activities with other relevant actors (such as the National Maternal and Perinatal Institute of Peru, the Health Science Research institute from the National University of Asunción in Paraguay, etc.).

In order to guarantee the continuation of activities in the Foundation, EHAS has also research for new sources of funds, and have developed proposals to those interesting calls that adjust to the objectives and goals of the Foundation. As well, EHAS aims for networking, both autonomic and national level, through the FONGDCAM (Federation of NGOs for Development of Community of Madrid)

Goals and indicators

Goal	Indicator	Quantity
Manage and administrate efficiently the Foundation, strengthening the relation with other institutions and fighting for the achievement of the Foundation goals.	Annual Report of Foundation Activities	1

Human resources

Type	Number	Hours per year
Salaried personnel	1	880
Scholarship personnel	0	
Services contract personnel	0	
Voluntary personnel	1	400