

# DEVELOPING A HEALTHIER ENVIRONMENT UNDER WORLDWIDE ECONOMICAL CONSTRAINTS

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**Abstract** — *This is the 13<sup>th</sup>. Edition of SHEWC - Safety, Health and Environment World Congress, a congress that has been happening for 13 years. It is important to point out that despite all the difficulties and crises that countries and organizations have faced and still are it is a congress that can count with many organizations participation. It shows that it is an idea that encounters the expectations of scientific and research environment. This edition is very special because it is a joint venture of SHERO and the Portuguese Order of Engineers. These 2 organizations have been working together putting up a top scientific congress with quality and impact in academic and professional communities. SHEWC - Safety, Health and Environment World Congress'2013 has the collaboration of many scientists in the several fields of expertise, who have embraced the ideal of fostering the quality of life of human being.*

*Index Terms* — *Health, sustainability, environment, quality of life, safety, scientific research.*

## INTRODUCTION

More than ever safety is being taken seriously in every level of human life. It is not about only food safety, construction site safety or terrorism or car safety, name it and there are researchers studying and developing ways to make this world a safe place to live. It started on the 80s and it is a growing concern for rich and emerging nations alike. As the global financial crisis takes hold and awareness of climate change increases, more nations and companies are trying to invest in alternatives. The human population of the planet is estimated to now have passed 6 billion people. This can be seen as a success story, due to improved health care and reduced infant mortality while expanding life spans. However, a common concern is that as the population continues to increase, it will place more strain on the environment, on nations' ability to provide, economies to grow and society to flourish. Natural disasters such as earthquakes, tsunamis, and floods can often come at the least expected time. Others, such as hurricanes and cyclones are increasing in severity and destruction. Typically, the poor are the worst hit for they have the least resources to cope and rebuild. Infectious diseases continue to blight the lives of the poor across the world. An estimated 40 million people are living with HIV/AIDS, with 3 million deaths in 2004. Every year there are 350–500 million cases of

malaria, with 1 million fatalities: Africa accounts for 90 percent of malarial deaths and African children account for over 80 percent of malaria victims worldwide. Water problems affect half of humanity; More 660 million people without sanitation live on less than \$2 a day, and more than 385 million on less than \$1 a day; Access to piped water into the household averages about 85% for the wealthiest 20% of the population, compared with 25% for the poorest 20%. These numbers and facts posted by UNESCO shows a world scenario with lots of crisis that so far have not been defeated even counting with high technologies. These aspects lead to the assumption of political and economical facts that drive governments and social groups to the discussion and the seeking for solutions.

There are so many questions and so much that scientific community does not know yet! Anyway so far science and technology have contributed for the comprehension of so many aspects of the nature in which life is possible. Some important revealed data that deserves to be analyzed more deeply are: first that there is only one race, the human race; second the entire living beings share the same planet and they all can suffer the impacts of abusive use of natural resources. It is not easy to picture the future once selfishness is still a strong force in human nature, however surviving is also a strong force in human nature and that is one reason why so many actions in every level of life people are producing and implementing solutions for the vast list of issues in Safety, Health and Environment and all the Conferences SHEWC are forums for scientists, researchers and professionals of the several areas of human knowledge.

The 13<sup>th</sup> edition of the conference discusses all aspects of environment not only the use of water and land but also social aspects of engineering; the safety, the global economy impact on human development, the lawlessness and moral breakdown that people have been watched everywhere.

People live in the so called “society of knowledge and information” which brings all the benefits however at the same time the bad consequences of its existence. The technological illiteracy, the growth of the human population and the growth of resources used to support life are altering the social and economical environment in unprecedented ways. Environmental changes have serious consequences for life on earth and for future generations.

It is important to examine and look for new ways of improving environment as a whole. It is human beings acting in a way to make at the present a better world for future

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generations. It is not an easy task nevertheless fundamental for the fostering of development, progress, evolution and surviving.

**Safety, Health and Environment Research Organization** has emerged and maintained with the spirit and the desire to contribute for the formation of a citizen and a world in harmony with the nature.

Its history shows the development and the evolution of an organization formed by scientists and a researcher willing to play the important role in the society that it is inserted contributing as professionals and citizens for the welfare of the community.

## SHEWC MISSION

The Safety, Health and Environment Research Organization was born NPABS - "Baixada Santista" (now called Atlantic Forest Coast Region) Environmental Research Nucleus founded on October of 1999, governed by the Statute and for the reasonable laws to the entity type in that it is framed.

The history of this organization began with an idea shared by some researchers of creating a non governmental organization to foment the research mainly in the environment and health areas. That idea started from 1997 when some scientists organized scientific meetings and then finally the NPABS - Baixada Santista Environment Research Nucleus became a reality in October of 1999.

After many years of performance in the Atlantic Forest Coast Region the organization decided to organize and to accomplish a Congress with the objective to enlarge the performance of the Nucleus and to bring for the area what the accomplishments in researches in and for the country. So in 2001 CBPAS'2001 accomplished the first of a series of successful congresses. The theme of the first Congress was "Environment and Quality of Life". This conference promoted a forum for the popularization of researches and the most recent developments in the improvement of the environment and of quality of life [1].

With the enlargement of the activities of the Nucleus the members have decided to transform it, first in Brazilian NBPAS – Brazilian Health and Environment Research Nucleus and because of its international development, NBPAS has become the OPASS –Organization of Research in Safety, Health and Environment and finally SHERO – Safety, Health and Environment Research Organization.

Today SHERO - Safety, Health and Environment Research Organization is an Organization of the Civil Society of Public Interest, non profitable, with juridical personality of private right and uncertain time of duration.

It is a well structured organization with a small and structured team with several collaborators of universities and companies that are determined to make of it a serious and dynamic organization. Its first objective is to develop researches on environment and health, aiming the improvement of the life quality. Those researches contemplate basic and applied scientific aspects, with the integration of several areas of the knowledge. SHERO intends to collaborate in the sense of providing the area of a

technical training and of infrastructure for continuous environmental monitoring, in a way to guarantee in a permanent way the maintenance of the quality of life of the populations. O Nucleus tries to act in the areas of Agronomy, Anthropology, Green Areas, Architecture, Hydrographical Basis, Biology, Social sciences, Computation, Maintainable Development, Ecology, Echo tourism, Environmental Education, would Engineer, Phonoaudiology, Environmental Communication, Geology, Environmental Administration, Environmental Marketing, Medicine, Veterinary Medicine, Meteorology, Oceanography, Dentistry, Pollution, Fishes, Chemistry, Industrial and Urban Residues and of Health, Social Responsibility, Sanitation, Public Health, Remote Sensing, finally in all the areas of the knowledge that can collaborate for the environmental preservation.

## CONGRESSES TIME LINE

It is always interesting to look back and see the evolution of an idea, an investment like the accomplishment of such project as a congress. As mentioned before the Health and Environment Brazilian Congress - CBPAS, at first CBPA - Environment Brazilian Congress organized appeared as an idea to present for the community the Brazilian scientific works developed by researchers in the area of environment in a wider way than if it was doing until then.

This way, on September of 2001 (which theme was **Environment and Quality of Life**) its first edition happened, and counted with the several scientists' participation involved with problems of the environment, mainly of São Paulo State, especially because this was organized and accomplished by the effort of the group of members of SHERO - Safety, Health and Environment Research Organization, in its majority of the Baixada Santista, that has wanted to see this encounter to turn a reality.

In its subsequent edition, that happened on June of 2002 that theme was **The Environment in the Beginning of New Millennium** the contributions of the area of health were in a significant number and increasing considerably and so this led to the addition of the Health in the name of the Congress [2]. We have then, the Health and Environment Brazilian Congress that was accomplished in 2003 and whose theme was "**Environment and Health**", an involving theme that received equally valuable contributions [3]. The number of participants increased, reaching to 200 people, between master degree and under graduation students and scientists, besides the growing participation of works of other States of Brazil and, surprisingly, with works of out of the country also. The same happened in the following congresses as in 2004 (**The challenges of sustainable development**) [4]; 2005 (**Environment and Health in the "Zero Hungry Country"**)[5]; The following congresses were a success such that in order to attend the requirement of many people for 2006 it became the EHWC'2006 - Environment and Health World Congress (**Natural Resources for the Health of Future Generations**) that counts with the contribution of researchers from many countries as well as of many different areas of human knowledge. As it can be seen it is the evolution of hard work of a group committed with the goal of

fostering the dissemination and discussion of sciences and technology providing suggestions of actions and policies in environment and health matters [6].

SHEWC'2007 (**Resources and Responsibility**) [7] is the evolution of the last congresses with the addition of Safety as an accomplishment of a dynamic organization such as the Congresses, which every year count with different presenters and new ways to see the world by the perspective of sciences and technology. SHEWC'2008 (**The Global Challenge to promote Responsible Development**) happened in the so considered most beautiful city of Brazil, Rio de Janeiro counting with very interesting plenary sessions and a variety of very interesting papers [8].

In its ninth edition, the SHEWC'2009 (**Safety, Health and Environmental Issues and the Impact on Contemporary World**), already built with a significant number of good quality works coming from several areas of the country and from abroad, showing that it is solidifying as a scientific event of quality and importance [9].

SHEWC'2010 (**Converging towards sustainability**) shows the historical moment in which humanity is emerged, the chaos of challenging safety and environmental issues and the economical problems to overcome in a global dimension. No matter the challenges that tend to grow due to the globalization effects the case is that the organization of such congresses is very important for the scientific community. It constitutes in a space for a forum of discussions, ideas and proposals for the advancement of science to benefit humanity [10].

SHEWC'2011 has as the theme of the congress "**Socio-Ecological Issues Challenging Human Development**", a theme that as usual was on the top of the list of discussions in the community. It was another successful accomplishment that counted with very high quality papers. It happened in Sao Vicente City Hall that graciously embraced the project as its own and involving the Science and Technology Secretariat and Environmental Secretariat both of great importance in the city political scenario. Sao Vicente is the first city of the country, with a history of more than 400 years, which has an outstanding nature, a small city at the seashore of Sao Paulo state [11].

The last conference SHEWC'2012 has as the theme of the congress "**Sustainable Growth and Development: Challenges and Needs of the Twenty-First Century**" [12]. It happened in the cosmopolitan city of Sao Paulo, the capital city of Sao Paulo state, in one of the most important Universities, the FAAP – Armando Alvares Penteado Foundation that since 1947 has invested on education and culture.

### SHEWC'2013

SHEWC'2013 - Safety, Health and Environment World Congress is being promoted by SHERO - Safety, Health and Environment Research Organization and organized by COPEC - Science and Education Research Council, two organizations that understand the importance of the accomplishment of an event of this importance for the environmental community and for the citizen, not only as a

way of popularization and invigoration of the science and the technology. Its success proves that more and more companies and organizations, profitable or non-profitable they fall back upon the accomplishment of partner-cultural events, betting in the benefits of this tool for the execution of their strategic objectives, promotional or of technical-scientific popularization. For this year due to requests of many members and attendees as well as international entities, Safety, Health and Environment Research Organization and COPEC - Science and Education Research Council is accomplishing the SHEWC'2013 - Safety, Health and Environment World Congress that promises to be one more successful enterprise of quality.

Since the first edition the organizers as well as the participants believe that fostering ideas and debate is the key to coming up with the best possible solutions. That is what makes the congresses so rich and enticing once face to face debates can generate new ideas, new bonds and groups.



The present conference SHEWC'2013 has as the theme of the congress "**Developing a healthier environment under worldwide economical constraints**". The SHEWC'2013 aims to provide researchers with up-to-date information in safety, health and environment fields, counting with the presence of experts from across the globe. The ideas, opinions and professionals contributions are showed in lectures, plenary sessions, presentations of papers and workshops. As in every edition there is an opening session with the participation of promoters of the event and several authorities. At the end, in a closing session the main results of the event are presented.

It's a pleasure and a honor to have this edition of SHEWC in the Portuguese Engineering Order, in its north region building, in the middle of Porto, a city to enjoy, full of historical sites, museums, parks and caves, the place of Porto wine.

### PLACE OF CONGRESS



Porto is an enchanting city, established on the hills at the mouth of the Douro river. Designated an UNESCO World Heritage site for its historic buildings and outstanding monuments, highlights of Portugal's second largest city include the formidable Porto cathedral, the Torre dos Clérigos and the conspicuous Port wine lodges that dominate the hillside of Vila Nova de Gaia. Although largely

industrialised, Porto offers a compelling synthesis of ancient and contemporary attractions.

The province is a thriving commercial and industrial hub, filled with charming villages and prosperous towns. Take a drive along the coastline, stopping to explore the cosmopolitan resort of Espinho, sample freshly-caught seafood in the port of Matosinhos or take a gamble at the dazzling Casino da Póvoa. Head inland to the beautiful city of Amarante to try delicious pastries called papos de anjo and enjoy a stroll along the Tâmega River, which is lined with 17th century mansions.

## ORGANIZING SHEWC CONGRESSES



All the editions of SHEWC count with a publication of the collection of presented, peer reviewed and approved full papers by the Scientific Committee in electronic; additionally, a book of abstracts is published containing general information on the Congress and the abstracts of all of the presented works. As well as the Congress Proceedings they are registered at the National Library and they possess ISBN with international validity; besides, the proceedings have ISSN because they are also a periodic

For its technical organization, the Congress counts with the experienced specialists' of the most important national and international institutions. Their contributions in the evaluation of the submitted works and in the definition of the scientific program they are of priceless value.

The program of the Congress is built with workshops, an opening session, with the participation of promoters' of the event and authorities, followed by:

- Lectures guests - Brazilian Specialists and foreigners will bring their contributions through presentations, with time to assist the participants' questions;
- Round tables and Panels: The invited specialists' meet to discuss with the audience controversial themes for the area of environment and Health;
- Presentation of works - active Professionals in the market and researchers present the works that were submitted through the Call for Papers and selected by a scientific technical committee formed by specialists of the several areas. Those works present the last researches and reports of experiences.

At the end of the three days of works there is a closing session, when the results of the event are presented.

## PUBLIC OF THE CONGRESS

The public that frequents the Congresses and to whom it is designed are the community's members, the professionals involved with the most several environment and health areas, whose work is to promote the improvement of life quality and those who want to keep themselves informed.

Some of the activities developed by this public are:

- Representatives of governmental or private agencies responsible for the dissemination of information in programs, auditing and environmental enterprises.
- Authors of education material of the environmental areas.
- Producers or distributors of research equipments or laboratories.
- Specialists in services of information for students and educators of environmental and biological areas.
- Research centers supporters and/or centers of trainings that have need of competences in the environmental areas.



One of the peculiarities and that makes it an extremely interesting event is the transdisciplinarity that exists in treating the environmental and health subject where this is discussed and examined in all their aspects. The addition of safety was due to the necessity of studying and research ways to provide safety in order to diminish the impact on people's life. It is the prevention concept so that future problems can be avoided. The discussions are not limited to the biological and social, but they are discussed thoroughly and examined by the optics of the juridical sciences, of communication, marketing, engineering, physics, psychology, pharmaceutical and others.

## FINAL COMMENTS

All the Congresses accomplished until this year have been of excellent quality, receiving attention from the local community not only academic but also from politicians and local media. It is a Congress that began modest and that is attracting many researchers' attention not only of Brazil as well as from abroad counting with several contributions of other countries. The fact is that health, environment and safety are intimately related and that fundamental research is more relevant and needed than ever before. Nevertheless the biggest challenge is the promotion of sustainable development what leads to the development with responsibility and ethics It is the further step of science and technology development of 21st Century.

So SHEWC'2013 comes to promote not only a deep reflection about the human actions impact on environment and its consequences on health but also how to bring new ideas for the fostering of the professionals of the new millennium, which main characteristic is the awareness and the responsibility in the practice of their profession.

This event as all the previous ones seek essentially to debate and to discuss the environmental subjects in a wide way, realistic and based in methodologies and techniques strictly scientific, as well as to suggest solutions and alternatives for environmental problems.

It is important to point out the efforts of the organizers and the participants facing the difficulties of planning, developing and finance the congress that is scientific and of very good quality. Very good quality papers and the participation of many different attendees result in a congress with very

interesting discussions and the presentation of many projects that come to impact the academic community in the respective fields of expertise. No doubt that richness of the congress is in its diversity of topics and of course the contributions from the authors. It is always a different layout of dynamic in the presentations and in the interactions that overcome the expectations.

All participants appreciate the opportunity to interact with the authors, from many parts of the globe. The variety of papers shows the kaleidoscope of articles focusing the same issues Safety, Health and Environment.

The discussions resulted by the presentations are of great importance for the success of a scientific congress as it is and as important as the exchange of information and partnerships that this kind of event promotes.

Still the closing session is considered by the participants of great importance too once they can make a balance of their participation and also provide feed back to the organizers for the improvement of next editions.

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