

GHI Matters

The newsletter of the Global Harmonization Initiative



Message from the President

Many readers of this GHI Matters issue will have had a vacation since the publication of Issue 9 and others will be on vacation now or go very soon. It depends on where you live and determines if it is a winter or summer holiday. Regrettably, however, we have also members in countries where, due to local circumstances, political, geological or otherwise, there is no opportunity or time for a holiday. I hope and I am certain many hope with me that these situations will improve, and the sooner the better, which brings me to the subject of GHI Ambassadors. It is my pleasure to announce we now have also ambassadors in Ghana and Italy, and a second ambassador in Turkey. I welcome these new ambassadors heartily and I am certain our colleagues in these countries will notice their activities in GHI.

As usual, this issue includes practical information such as details about meetings that are relevant to GHI and those our ambassadors and officers are involved with such as: Nanotechnology (Coimbra PT, 3rd-4th September 2013), 20th International Congress of Nutrition (Granada ES, 15-20th September 2013), Food Quality, Safety and Hygiene (Skopje MK, 19-20th September 2013), Food Innovation and Development (INNOVA, Montevideo UY, 7-9th October 2013), Safety, Quality and Functionality of Food (Cancún MX, 4-8th November 2013) and Bio-based Technologies (EFFoST, Bologna IT, 12-15th November 2013).

Then, there is an article from Prof. Jamuna Prakash (third in a series) about the importance of training *all* food handlers, at all levels, to reduce the incidence rate of foodborne diseases.

On the nutrition side, you can read about WG Nutrition plans. Also, good to know for anyone looking for colleagues, there is now a 'Global Food Safety Stakeholders' database online and, talking about the internet, a short note about Lucia Anelich's website!

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GHI meetings and workshops are where the consensus happens!

Achieving consensus on the science of food regulations and legislation to ensure the global availability of safe and wholesome food products for all consumers.

Entirely new are a series of reports we intend to publish. The idea is readers will get a better feeling about what is going on in GHI and how GHI works. In this issue, you will find a report on the activities of one of our founding members, Dr Vishweshwaraiah Prakash.

A final note: It's my pleasure to be able to announce that Dr. Siân Astley has assumed the position of Editor-in-Chief of GHI Matters. I am, personally, very grateful to her and wish her success with the forthcoming newsletters and I would like to encourage you, the readers, to provide Siân with the useful information for GHI Matters (editor@globalharmonization.net).

I hope that the information provided is useful to you and I hope that you will be at one or more of the events discussed in this issue.

Huub Lelieveld, GHI President

POINTS TO PONDER: FOOD REGULATORY ISSUES AND NUTRITION SECURITY MANDATORY TRAINING IN FOOD SAFETY FOR ALL FOOD HANDLERS

My third article in this series relates to food regulations that can assist in mitigating food and nutrition insecurity and, in line with the previous comments, training of those handling food. Considering that food in unorganized sector is handled many times by unskilled, untrained personnel, basic training in food safety and hygiene is a must for cooks, waiters, cleaners and retailers. Appropriate training modules should be in the local language and developed countrywide according to the needs of businesses. Attending the training programme could be made compulsory for licensing. Initially, such a scheme would be resource intensive because of the need for trainers and facilities, but the effort would go a long way in improving food safety in general. The mass media could assist in communicating basic principles, and the modules tailored to business operations, e.g. vendors dealing with fruit juices needs to know how to handle fruits, hygiene during preparation and serving of juice and cleaning of serving utensil whilst a butcher has to learn about hygienic handling of meat and appropriate storage.



A presentation on food safety regulations during the NEEFood meeting in Kiev

GHI has legal non-profit entity status and its charter and constitution are registered in Vienna, Austria as the GHI-Association (ZVR453446383).

Good hygiene practices and manufacturing practice also apply to food retailors and caterers. Food handled well or preserved appropriately also preserves nutrients and is safe to eat, reducing post-harvest losses and reducing waste.

Training those who handle food is an essential component of food trade and should be mandatory for all involved in food business.

*Prof. Jamuna Prakash,
GHI Ambassador in India (jampr55@hotmail.com)
Department of Food Science and Nutrition, University
of Mysore, Mysore, India*

Training as discussed in the article above is extremely important and, although it may be expensive, saving through the reduction of food safety incidents far outweigh training costs, even if the impact is some time after initiation. Typically, this is a matter for IU-FoST and could possibly be carried out in cooperation with the ISEKI Food Association (IFA), a global food education organisation (www.iseki-food.net), because such an initiative needs to start with training the trainers. We also need to investigate what role GHI may play. To ensure this is not just another theoretical discussion, I have put the subject on the agenda of the forthcoming GHI Board Meeting and will discuss a proposal to be submitted to IUFoST and IFA.

Huub Lelieveld, President of GHI

Nanotechnology news

ISEKI Meetings and cooperation with the GHI WG Nanotechnology

Food nanotechnology is an area of emerging interest and opens up a whole new universe of possibilities for the food industry. In fact, nanotechnology offers new tools for innovation in the food industry and it will certainly improve our food in many ways. However, developing nanotechnology as a safe, effective tool for use in food science and technology also require that consumer confidence be addressed.

ISEKI has a special interest group in bionanotechnology" (<http://bit.ly/15X7WY7>) that has organised three workshops in different Europe cities (Milan - IT, Vienna - AT and Skiathos - GR). These workshops include lectures describing the most up-to-date research in the field and a half-day practical session during which participants learn more about some of the techniques applied in developing and characterising food grade nanomaterial.

The next workshop will be held on 3rd-4th September 2013 in Coimbra (PT) at the ESAC Polytechnique of Coimbra. For the programme and registration, please visit <http://bit.ly/13p2cR7>

Recently, contact has also been established with the GHI Special Interest Group on nanotechnology, and further initiatives will be announced soon.

For further information, please contact

Prof. Saverio Mannino

(Direttore, Centro Interdipartimentale di Ricerca sugli Alimenti, Milano Italy, Tel. 0250319221)

INNOVA 2013

From 7-9 October 2013, at the "Technological Laboratory of Uruguay" (Laboratorio Tecnológico del Uruguay, LATU) in Montevideo, the Sixth International Symposium on Food Innovation and Development, INNOVA 2013, takes place. Rosa Márquez Romero of the Food Safety Department of LATU, GHI Ambassadors in Uruguay is an active member of the Scientific Committee and the confirmed speakers include several GHI Officers. The symposium will cover emerging technologies, sustainability and health & wellness. For details, see <http://www.innova-uy.info/en/>.

Global food safety stakeholder database

With support from the Seventh Framework Programme of the European Union, a consortium of organizations involved in food safety has developed a global database of food safety stakeholders. The searchable online database, developed as part of the Collab4Safety initiative (www.collab4safety.eu), currently, holds more than 1400 registrations from more than 110 countries. The purpose of Collab4Safety is to address food safety challenges through the global integration of food safety research, training and policies. Registration is free and it takes less than three minutes. Details can be found at www.collab4safety.eu and you can search for registered members [here](#).

This database may be useful also for the Working Groups of GHI, facilitating the identification of experts who are not yet members of GHI, but may contribute to the consensus processes.

Why should you register in the database? Because registered stakeholders will:

- Be part of a global food safety community
- Increase the visibility of their profile and work
- Have access to the entire network, including profiles of other community members
- Enhance brokerage and collaborations with other community members
- Receive news about the findings and be invited to international events
- Have the opportunity to engage in consultation with researchers of the Collab4Safety project

Contact:

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GHI ACTIVITY REPORT - August 2012-July 2013

Between August 2012 and July 2013, Dr Prakash has given a number of talks and been busy with many projects in India. He chaired a session on the 'Probiotics Association of India', which highlighted the importance of probiotics and prebiotics in absorption of nutrients, at the IUFoST Annual Meeting (Iguaso, BR) and his keynote address on salt - a Unilever IUNS target - brought about the compendium 'The reduction in the consumption of salt for a better health'. He participated in the CSIR Open Day, and delivered a lecture on 'Food safety and nutrition' at Central Electro Chemical Research Institute (Tamil Nadu, IN). At a Food Science and Technology Conference in Brazil, Dr Prakash chaired a session about nutriceuticals, which prompted considerable discussion, particularly about the role and basis of basic nutrition and food safety.

Dr Prakash delivered a talk 'Traditional foods and food safety and harmonization, and the role of food safety in the food chain' at a meeting organised by Regulatory Authority Professional Society (RAPS, USA) focussing on traditional foods and ethnic foods and nutrition security as well as the need for harmonisation. He gave a talk at the Ministry of Agriculture, Forestry and Fisheries at the Government of Japan (Tokyo) emphasising retention of nutrients in processed foods, and discussed how regulatory control can improve food quality for global distribution through harmonization. During December 2012, he attended the IUNS Council Meeting (Granada, ES), and represented India at the 'Central Institute of Food Science and Technology' (Beijing, CN) where he also delivered a presentation on 'Food safety and harmonisation'.

In an effort to develop individuals in local India colleges, Dr Prakash has conducted workshops and given talks about 'application of science to promote value addition through training' to more than 2 000 people. His efforts in educational institutions around Bangalore, Mumbai and Mohali in Haryana (IN) have focussed on practical uses of aspects of nutrition in warding off malnutrition in rural areas and, in many cases, retention of nutrients through application of technology. Addressing the public at a lecture hosted by the Management Institute (IN), Dr Prakash talked about on lessons to be learnt from organisations successfully delivering food safety messages to hard-to-reach audiences.

Following the Golden Jubilee lectures (Mumbai, IN) in ICT and 'Food and nutrition challenges for the Industry', Dr Prakash presented 'Nutraceutical tomorrow' at a food industry conference in March 2013, and met up with several other GHI members including President Dr Huub Lelieveld. Dr. Prakash also attended the MoniQA International Conference (Budapest, HU) delivering the keynote presentation "Sustainable nutrition security through food security for health and wellness in developing countries by adaptable, accessible and affordable food technologies".

Invited to talk about the Food and Nutrition Security Bill on national television, Dr Prakash reiterated that good nutrition has to remain a priority. This Parliamentary bill will become legislation shortly, and is already working to improve food and nutrition security programmes in India. In addition to ensuring this bill was fit-for-purpose, Dr Prakash has put considerable effort into the introduction of nutrients and micronutrients in the on-going 'noon-meal programme' including daily milk (150 ml) and a banana once a week supplemented with iron and folic acid.

At the Indian Paediatric Society (New Delhi, IN), Dr Prakash delivered the inaugural address "Specialty diets in the management of inborn errors in metabolism in children", focussing on children in India. And, this year, his Golden Jubilee lecture, at the Central Institute of Fisheries Technology at Cochin (IN), was on the role of innovation in food from ocean and food safety.

Dr Prakash attended the Scaling up of Nutrition (SUN) meeting in Washington DC (USA) on behalf of IUNS, which considered the interface and networking of nutrition globally and how the virtual path for spreading awareness is working albeit slowly. Finally, he has joined a committee of the Indian Council of Medical Research (ICMR) and Indian Council of Agricultural Research (ICAR) addressing not only child malnutrition but also the first thousand days.

*Dr Vishweshwaraiah Prakash,
Distinguished Scientist of CSIR (India); Hon. Director of Research, Innovation & Development, JSS Technical Institutions Campus, Mysore – 570 006, India; Founding Board Member of GHI.
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Meetings with GHI involvement

20th International Congress of Nutrition

Granada (ES), 15-20 September 2013

There is a significant involvement from GHI at this meeting. In addition to presentations by GHI officers, there is also a GHI open meeting for everyone interested in food regulations based on sound science. This meeting will take place on Monday, 16th September (15:00-17:00) and there will be GHI Board members and GHI Ambassadors to answer your questions and discuss any matter of interest with you. If you would like to participate in the GHI open meeting, please send an email to the GHI Ambassador for Spain, Prof. Olga MartínBelloso (olga.martinbelloso@globalharmonization.net).

As always, this congress is organised by the International Union of Nutritional Sciences, IUNS. It is a



Dear GHI Ambassadors, Officers and Members

We have the honour of inviting you to the conference 'Food Quality and Safety and Hygienic Engineering and Design 2013 – Macedonia' (19-20th September 2013) in Skopje (MK).

Topics for this conference are very much related to GHI, and speakers include Huub Lelieveld (GHI President), Susanne Braun (GHI Working Groups Coordinator), Dmitry Kulyov and Sylvia Pfaf, both GHI Members.

Two sessions are dedicated to GHI activities:

Session 1: General GHI meeting

Aim: Spreading GHI goals, information, membership

Time: 10.30-12.10 (100 minutes)

Place: Continental - Hall 2

Attendees: GHI Ambassadors and GHI Members as well as conference delegates

Session 2: GHI Ambassadors Cooperation

Aim: Cooperation between GHI Ambassadors and exchange of their experience

Time: 13.00-15.00 (120 minutes)

Place: Continental - Hall 3

Attendees: GHI Ambassadors and other GHI Officers only

GHI Ambassadors, Officers and Members are welcomed to participate in conference sessions and at the Brokerage Event. We are encouraging all GHI members to use this opportunity to present work relevant to GHI aims, progress GHI Working Group activities, and network with likeminded colleagues from around the world.

For further details visit <http://www.jhed.mk/categories/view/436> or contact the organisers at contact@key.com.mk

To register, visit <http://www.jhed.mk/categories/naslovna/> and click on CONFERENCE REGISTRATION – fees are usually €200, but GHI members will be charged only €150.

With kind regards, Prof. Dr. Vladimir Kakurinov
GHI Ambassador for Macedonia



Safety, Quality and Functionality of food in the Food Industry and Food Service Towards a Culture of Quality in the Food Consumption

The 6th International Meeting CUCCAL will take place in Cancún (MX, 4-8th November 2013) and is organised by SOMEICCA (Sociedad Mexicana de Inocuidad y Calidad para Consumidores de Alimentos), which is chaired by Prof. Marco A. León Félix (GHI Ambassador in Mexico). There will be GHI meetings during this conference, details will follow later. Further information will be made available via the GHI Newsletter and website (www.globalharmonization.net) and the event website (<http://bit.ly/16A67N3>).



EFFoST 2013 Annual Conference Bio-Based Technologies in the context of European Food Innovation Systems

This year's conference takes place in Bologna (IT) on 12-15th November 2013. For detailed information visit <http://www.effost.org/home/annual-meeting/>

GHI was an initiative of EFFoST and the International Division of IFT. Financial support from EFFoST has facilitated registration of the GHI Association in Austria. Since its foundation, there have been GHI meetings in association with the EFFoST Annual Conferences, and this will be the case again this year. Details will be published in the next issue of GHI Matters. In addition, in September, all GHI members will receive, by email, an invitation with details for the GHI meetings during the EFFoST Annual Conference. You may wish to keep the dates free!



Meeting of GHI Officers in Kiev during a break of
the NEEFood Conference in Kiev

A lack of harmonization of Russian and European legislation for microbiological safety criteria of food-stuffs obstruct export of foods to the Russian Federation both from developed and developing countries ...

Foodstuffs and raw materials contaminated by pathogenic, toxigenic and spoilage microorganisms present hazard for human health. Failure of sanitary-hygienic conditions in processing, transportation, storage and distribution of processed products further contaminate food products with pathogenic and toxigenic microorganisms. In accordance with CAC/GL 21-1997, microbiological criteria should be developed in an easily understood and transparent way to meet the needs of conscientious trade.

Microbiological criteria should be subject to revision to ensure their relevance in view of emerging pathogenic microorganisms, changing technologies and modern understanding of scientific facts. Microorganisms that are included in these criteria should be identified as a pathogenic, spoilage or sanitary indicators for certain food products and technologies. Inclusion of microorganisms that have no importance in food products should not be included. Application of microbiological criteria should ensure products obtained under good hygienic conditions are, from a microbiological standpoint, safe for consumption.

The World Health Organization (WHO) together with FAO routinely deals with microbiological safety issues of foodstuffs. In 1974, the International Commission on Microbiological Specification for Foods (ICMSF) developed for the first time a scientifically substantiated plan to control and assess the quality and safety of different food products considering microbiological criteria based on a statistically proven sampling system with list of microbiological indicators, permissible levels and methods of analysis for each indicator. The sampling plan and acceptable limits for microorganisms were selected on the basis of risk to human health, conditions in which certain foods are stored, and how it is consumed. Thus, decisions can be made on the basis of a:

Two-class system categorising food products as acceptable or not acceptable - such a system should always be used for pathogenic and, often for, opportunistic pathogenic microorganisms

Three-class system categorising food products as acceptable, permissible or not acceptable - such a system is important when subjective indicators (e.g. SPC/APC cfu/g) measures are used for food microbial quality and safety or foodborne pathogenic bacteria are present

In the Russian Federation, two governmental bodies control quality and safety of food products, the 'Russian Consumer Inspection' and 'Russian Agricultural Inspection'. Products must comply with hygienic requirements for safety and nutritional value, which are described in the overarching sanitary-epidemiological Regulations SanPiN 2.3.2.1078-01 as well as individual sanitary-epidemiological and hygienic requirements, which are the responsibility of the Committee Decision of Customs Union. Requirements for SanPiN 2.3.2.1078-01 are valid also in Armenia.

Usually, requirements for sanitary regulations are performed /executed during processing, import and sampling of food products. In accordance with normative requirements on microbiological safety of foodstuffs (SanPiN 2.3.2.1078-01), standardization of microbiological indicators for food safety is achieved by setting of mass (of product) in which the presence of bacteria – for example, *Enterobacteriaceae* group but also most opportunistic pathogenic as well as pathogenic microorganisms including *Salmonella* spp. and *Listeria monocytogenes* – are not allowed.

Numbers of colony forming units (cfu/g) per gram of product are also described in food safety regulations, especially total microbial counts, filamentous fungi and yeasts. Qualitative detection of opportunistic-pathogens (e.g. *Clostridium perfringens*, *Staphylococcus aureus* and *Vibrio parahaemolyticus*) does not always give a clear indication of the hazard to human health (CAC/GL 21 -1997). Lack of quantitative parameters for opportunistic pathogens (e.g. *Coliform bacteria*, *E. coli*, sulphide-reducing bacteria, *Staphylococci* spp.) prevent the proper assessment of microbiological safety of foods as well as determination of their shelf life or the adequacy of storage conditions. The absence of quantitative characteristics for opportunistic pathogens or indicators of significant microorganisms can create controversy in export of food products to the Russian Federation from developing and developed countries.

The European Commission has laid down microbiological criteria for foods in Regulation (EC) No. 2073/2005 and No.1441/2007. In setting these indicators and criteria, the Commission adhered to basic principles from Codex Alimentarius quoting 'Principles for the establishment and application of microbiological criteria for foods CAC/GL 21 - 1997' and its recommendations. Included in the document were specifications from Codex Alimentarius regarding dried milk products, baby food and other food products for children as well as histamine levels in particular fish and seafood products. In accordance with the EU Regulation No. 2073/2005 and EFSA, acceptance and validation of microbiological criteria further trade by ensuring harmonization of microbiological requirements for food products across European Union Member States, thus replacing existing national standards.

Microbiological criteria, however, are not immutable. Changes can be expected with emergence of new microbial hazards in food, changes in industrial processes, which lead to changes in microbial population, and other factors important for food safety including trade. For example, in accordance with EU Regulation 2073/2005 and 1441/2007, only histamine and pathogenic bacteria are standardized in fish and chilled fish products. Russian legislation (SanPiN 01.02.078.-01, section 1.3.1.2) specifies Coliform bacteria spp., *Staphylococcus* spp. and *Salmonella* spp. (SPC/APC cfu/g). According to EU Regulation 2073/2005, coagulase positive *Staphylococci* spp. must not exceed 10^5 cfu per gram of cheese products and where levels are higher staphylococcal enterotoxins must be determined. In cheese, *S. aureus* may not exceed 500 cfu/g, regardless of coagulase status, to comply with SanPiN 01.02.078.-01 п.п. 1.2.6.1.

There are many other examples where Russian and European regulations and laws do not match concerning just microbiological requirements. A uniform approach to ensure food safety is essential to achieve the same level of protection of human health and facilitate food trade between countries.

*Karina Grigoryan
Head of ASoFST /Armenian Society of
Food Science and Technology*

Website of GHI Ambassador in South Africa

CONGRATULATIONS Lucia!!!!

Prof. Dr Lucia Anelich, one of the GHI Ambassadors in South Africa, has launched a website and I recommend readers to take a look at <http://www.anelichconsulting.co.za>.

The website describes how Lucia is involved in the development of food safety standards and regulations nationally and, indeed, globally. There is also news that is very relevant to GHI.

Huub Lelieveld

Meeting data template

We are keen to announce relevant meetings in the GHI Newsletter and on the GHI website. To be able to do so in a useful way, appropriate information is needed. To make it easy, the following template may be copied and pasted in an email to Dr. Aleksandra Martinovic (aleksandram74@gmail.com), GHI Meetings Coordinator and GHI Ambassador for Montenegro.

Full name of the event:

Details of location:

Name venue:

Street and number:

Town:

Province or state:

Country:

Web page:

Start and time:

End date and time:

Website of the event

Titles of GHI activity*:

Start date and time of GHI activity

End date and time of GHI activity

GHI officers or members involved:

Names:

Email addresses:

Phone numbers:

*e.g. presentations, posters, working group meeting

GHI is an initiative of the European Federation of Food Science and Technology (**EFFoST**), which is the European part of the International Union of Food Science and Technology (**IUFoST**) and the International Division of the Institute of Food Technologists (**IFT**). GHI is supported by many other scientific organisations and receives support from the European Hygienic Engineering and Design Group (**EHEDG**).



International Division

GHI books

In 2010, Elsevier published ‘Ensuring global food safety: Exploring global harmonization’ in cooperation with GHI. The editors were four GHI officers: Christine Boisrobert, Aleksandra Stjepanovic, Sangsuk Oh and Huub Lelieveld (<http://www.elsevierdirect.com/9780123748454>). The book has been a success and still sells well, which is why Elsevier has asked for a second, updated edition. There have also been plans for a second book this time focusing on traditional and ethnic foods. The agreement is now to first publish ‘Traditional and Ethnic Foods’ and then edit a second edition of ‘Ensuring global food safety’.

‘Traditional and ethnic foods’ is intended to cover food from all over the globe and, therefore, has a large editorial team, viz. Vishweshwaraiah Prakash (India), Larry Keener (USA), Susanne Braun (Germany), Siân Astley (UK), Gisela Kopper (Costa Rica) and Huub Lelieveld (the Netherlands). It is intended that the book will discuss the origin of traditional and ethnic foods, how they are processed, characteristics that make them special, how safety had been achieved historically, and in what way modern processing technologies have a role in meeting current food safety requirements. It will be the task of the editorial team to identify, select and invite potential authors who are willing to take responsibility for chapters in the book, of which there will be many, as global means Africa, Asia (including large countries like China and India), Europe (from east to west and north to south), Latin America, North America, and Oceania. Food safety regulations will be compared with each other and with Codex Alimentarius recommendations on traditional and ethnic foods. Self-evidently approaches for harmonisation of applicable regulations will be discussed.

Anyone with suggestions is welcome to send these to the editors for consideration. The plan is to have the final content of the book defined before the end of this year.

The Editors

Working Group Nutrition

GHI WG Nutrition aims to launch a ‘nutrition white paper’ seeking a globally consistent nutrition policy with an action plan on nutrition and recommendations for harmonisation dietary guidelines. Specific objectives include global harmonization of labelling and nutrition and health claims and education standards for nutritional health training and, ultimately, the elimination of differences in international nutrition guidelines, regulations and legislation. Areas where this process might start are malnutrition, in particular micronutrient deficiency, under- and over nutrition, optimal nutrition, diet supplements, healthy ageing, and nutrition for vulnerable or special groups (e.g. sports, vegan, religious). Partnerships with international organizations will provide synergy and facilitate these goals, and may include funding bodies such as the European Commission as well the wider academia community and the media.

For more information or to discuss these activities, contact:

*Co-Chair of GHI WG Nutrition,
Associate Professor PhD Iuliana Vintila
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Regulatory aspects of reducing post harvest losses	Dr. Kenneth Marsh, USA
Food safety in relation to religious dietary laws	Isabella van Rijn, MSc, Netherlands and Dr. Ismail Odetokun, Nigeria

GHI AMBASSADORS



GHI Ambassadors

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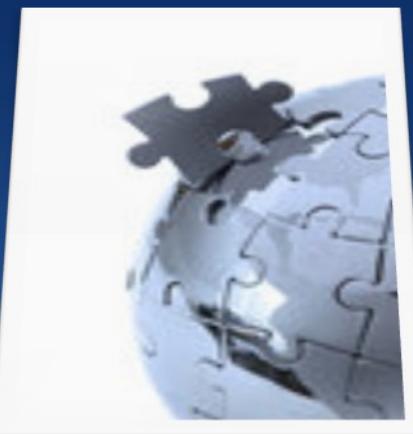
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For contact details, send an email to ambassadors@globalharmonization.net

Become a GHI Member

If you are interested in becoming a member of GHI, we invite you to take these simple steps:

1. Please visit www.globalharmonization.net and complete the Individual Membership Enrollment form. You will be asked to provide full contact information, current professional affiliations and areas of scientific expertise. There is no fee to join GHI.
2. Once your application has been accepted, you will receive notification via email, along with information from GHI regarding upcoming meetings, working groups workshops, and more.
3. For further questions on GHI membership, please send your inquiry to the attention of the Honorary Membership Director via email at membershipdirector@globalharmonization.net.



Gain an influential voice in consensus with other experts that will have a real impact on reducing world hunger, improving food safety and nutrition, and supporting new technology applications.



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