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HOW GHI MAY BE SUCCESSFUL IN IMPROVING FOOD SECURITY AND SAFETY

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Abstract

GHI can be successful if GHI produces useful material that indeed reduce food safety incidents and improve food security. GHI does this without any influence of industries or governments: GHI is impartial, with 1400 scientists. No government is going to change regulations because of GHI. GHI must show that changes in regulations may be good. With about 20 working groups, GHI attempts to show how food safety and security can be improved by effectively addressing actual serious problems. Examples are: • A proposal for a legal requirement for food companies to employ a certified food safety professional (CP), without one the company cannot operate. The CP cannot be dismissed. • Cassava, kills 100,000`s because often prepared in the wrong way. GHI develops a training programme for people who cannot read. • GHI developed an anonymous whistleblowing webpage, in 40 languages. Even GHI cannot find out who reported a food safety incident. GHI alerts local food safety authorities of real and serious incidents.

Key words*: food security, food safety, cassava, whistleblowing, certified food safety professionals.*

INTRODUCTION

The The goal of the Global Harmonization Initiative (GHI) is Achieving consensus on the science of food regulations and legislations to ensure the global availability of safe and wholesome food products for all consumers.

Establishing GHI was triggered by global news, in 2004, that people in northern Africa were starving to death - in its literal meaning - while there was food in the harbours but governments refused the import because the authorities did not trust the safety of the food. Then, discussing among colleague food scientists, it was concluded that this was not unique to Africa or to 2004, but in many places in the world frequently food is not allowed to cross borders because of differences in food safety regulations, such as the maximum acceptable level of certain substances, which could be antibiotics, pesticides, preservatives, basically everything. These differences were also convenient for governments when they needed "legal" reasons to stop import of certain types of food for economic reasons and the measures, however, were masqueraded as caring for "food safety". There appeared to be many of such examples.

GHI would try to harmonise food safety regulations globally so that food can no longer be blocked at borders for false reasons. If food safety regulations would be the same everywhere, authorities would have to admit that they do not want the food from the delivering country for other reasons than food safety and they may be bad for their image if the people need the food.

GHI doesn't want to be perceived in any way as working in the interest of a particular (group of) countries or for a particular food company or industrial federation. Therefore, GHI is completely impartial, GHI doesn't accept funding from industries or governments. Stakeholders of food safety must be sure that opinions of GHI are based on science and nothing else. That is the reason that only food scientists and scientists in topics related to food science, such as microbiologists, toxicologists, food technologies and food engineers, can join GHI. Thus, membership of GHI is individual, members do never represent their employer, be it a company, a government or a governmental organisation. The Membership Director is responsible for carefully checking if an applicant complies with this requirement and whether the applicant indeed want to join to help GHI progressing with their goal. To avoid financial hurdles to membership, there is no

membership fee. Members, however, can make voluntary donations.

GHI can be successful if it is demonstrated that GHI produces useful material that indeed reduce food safety incidents and improve food security. At the same time, it must be evident that GHI does this without influence of industries or governments. GHI is impartial, consists of about 1400 scientists and everything GHI does is based on science. This is the reason that GHI can be trusted by governments and the public.

No government is going to change regulations because GHI wants it. Therefore, GHI needs to show that changes in regulations are needed, are possible and will be beneficial, for the people and for the government.

Hence, with about 20 working groups, GHI attempts to show how food safety and security can be improved by effectively addressing actual serious problems. A rapidly increasing number of scientists seem to agree with GHI's goal, as shown by the growing number of members, from 192 in 2012 to 447 in 2017, to 1103 in 2021 and more that 1400 early 2023. These members live in 113 countries.

Activities of a number of working groups are discussed below.

CERTIFIED FOOD SAFETY PROFESSIONALS

Worldwide each year unsafe food causes 600 million cases of foodborne diseases and 420,000 deaths of which 30% are children under 5 years of age (WHO). This happens despite the many efforts by food safety professionals in the industry and by food safety authorities.

To achieve higher standards in food safety practices, the WG Ethics in Food Safety Practices of GHI has developed a proposal that all countries make “Food Safety Professional” a regulated profession, similar to medical or legal professions, setting formal requirements for education, registration and the establishment of professional bodies.

The key-features of the proposal are:

1. Global recognition of Food Safety Professional (FSPro) as a legally regulated profession in production, retail, logistics, auditing and as a consultant.
2. Establishing educational and professional requirements and responsibilities for those in such positions in the food industry.
3. To promote ethical behaviour in food safety practices.
4. The legal requirement for food producers to have a certified FSPro in charge of the design and operation of their Food Safety system. The legal consequence will be that a company is not allowed to produce if there is no certified FSPro and hence, upon dismissing their FSPro will be closed down.

The benefit is that a company owner cannot fire the FSPro because of the decision made with respect to food safety. Currently it happens too often that companies continue with malpractices against professional objections of the responsible staff member and if the latter insists, dismissal is the consequence.

A FSPro must always act professionally, i.e., in accordance with the best available scientific standards of food safety, similar to the medical oath or the certification of a notary. It might require the establishment of a professional society. As for medical doctors and notaries, education requirements need to be established, ensuring that the FSPro has sufficient awareness of what food safety is and how food safety can be ensured.

ANONYMOUS WHISTLEBLOWING REPORTING

The Companies that disregard food safety have done enormous harm to people, well known serious cases are the addition of melamine to milk and and protein concentrates, affecting 294 000 infants, of which more than 50 000 were hospitalized and at least six died. Another case is continuation of marketing of peanut butter known to be contaminated with Salmonella, causing 9 death and more than 700 people ill (McCoy, 2015). There have been cases of addition of lead oxide to paprika powder, lead chromate to turmeric, diethylene glycol to wines, mineral oil to sunflower oil and so on. These are known cases where the criminals had been identified and punished, but that did not help the victims.

In all cases such as above, there have been persons who knew what was happening. When

they objected internally and their voices were ignored, very rarely these people dared to inform authorities, because of fear of retaliation or dismissal, while after all, they had a family to feed. There have been attempts to stimulate whistleblowing by promising that the reporting a of a case would be anonymous. In reality the anonymity appeared to be just pretence, because eventually the employer found out from the authority that warned them.

Until recently, in most countries the government protected the companies and not the employees. In the EU and North America this is gradually changing and hopefully it will be common sense in the future to protect the whistleblower and hence the consumer in stead of a dishonest company management.

The GHI working group Global Incident Alert Network developed a really anonymous whistleblowing opportunity. It is now possible to use a website in such a way that GHI is alarmed but GHI cannot know who the whistleblower (WB) is and so can literally nobody else. Nevertheless, by using the site, GHI can assess the information provided and if found to be serious by an international team of food safety experts and potentially very harmful, GHI will alert the local food safety authorities, asking to investigate the case. To be able to judge whether the reported case is truthful and serious, the webpage has a form that must be completed as accurate as possible, without revealing the identity of the WB.

Thanks to GHI's ambassadors, the webpage is available in about 40 languages. In all languages the first question is: "Would you let your family eat the food that you make at work?". The forms can be accessed by going to https://whistle.globalharmonization.net and there is also a frequently asked questions (FAQ) page that explains in detail how anonymity is ensured, also is all of those languages.

PREVENTING PARALYSIS IN CHILDREN FROM CONSUMPTION OF WRONGLY PREPARED CASSAVA

Cassava is one of the most drought-tolerant crops, capable of growing on marginal soils. It is the staple food of about a billion people, mostly in Africa and Asia. Although there are two types of cassava, a sweet and a bitter variety, the bitter variety is the mostly consumed one, because it is the one with by far has the highest yield. The bitterness, however, is caused by cyanides in the plant, which protect the plant against insects, but is also toxic to humans. Linamarin is a cyanogenic glucoside in cassava that, when ingested, releases HCN that is very toxic and may cause severe disease and even death. Therefore, before consumption, cassava must be processed to break down the linamarin and remove the cyanide. Linamarin can be removed by the enzymatic activity of linamarase, present in the leaves of the cassava plant. If not sufficiently processed, linamarin will remain in cassava and release cyanide in the body. It may kill people, in particular children and if ingested in small amounts for a long time, it causes the illness konzo: The child will wake up one morning, limping or only able to crawl, a condition that will remain unchanged throughout the child's life (Scutti, 2022).

There are various processes that are used to remove the Linamarin from cassava, but they take a long time. Often the link between eating cassava and the illness it is not clear to the people preparing the food, because the effect is not immediate, may take months to develop - suddenly.

A GHI project team is testing a relatively fast method to remove Linamarin, using the enzyme Linamarase, which is abundant in the leave of the plant. The idea is that using the leaves in preparing the food, it can be made safe in a couple of hours in stead of several days or weeks. Once confirmed, the working group Education and Training of Food Handlers, led by Obadina Adewale, will produce pictorial and verbal training material to train trainers, who will in turn train more trainers, who then again will train trainers, etc., all the way to the food handlers at home. It has to be done this way because many of those who prepare food in the villages in Africa do not read and would otherwise not learn about the cause of the disease and how to prepare cassava food in such a way that the illness is prevented.

For more information, see the working group website,
https://www.globalharmonization.net/wg-food-safety-training-and-education.

CONCLUSIONS

The Global Harmonization Initiative (GHI) will be successful in improving food security and safety by showing that it is possible to do so, by initiating and then completing necessary actions. Anybody interested in contributing to such actions may contact the chairs of the relevant working groups (see https://www.globalharmonization.net/working-groups).

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