EMERGING RISK IDENTIFICATION SYSTEM
Enhancing Food Safety in New Zealand

Monthly Brief

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E/S/R Science for Communities

New Zealand FOOD SAFETY SCIENCE & RESEARCH CENTRE

New Zealand Food Safety
Haumaru Kai Aotearoa

Welcome to Issue 12. ERIS is in year two of a two-year project. Our focus is on upskilling, expanding networks and continuous improvement. We are starting to think about what a long-term system could look like and how it may be funded.

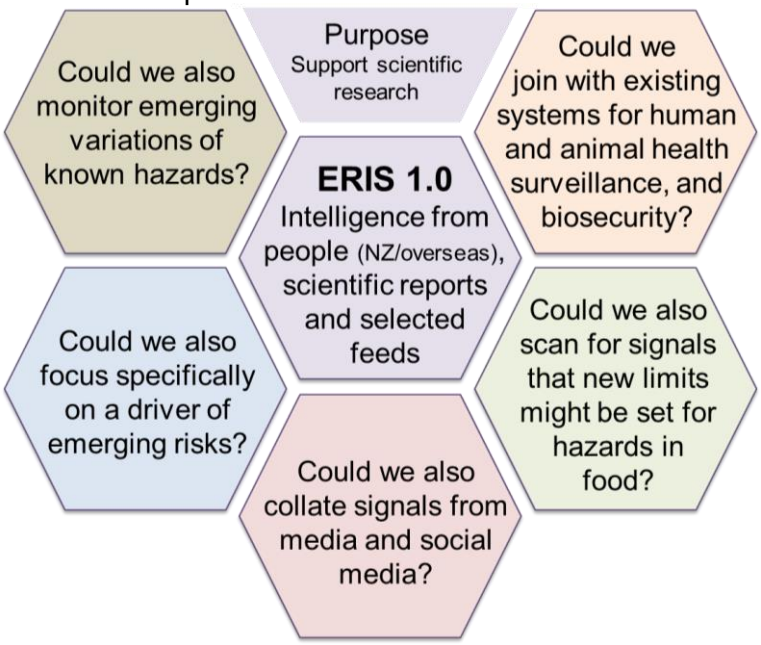
Introducing Libby Harrison

NZFSSRC Director

ERIS Role: Action Forum member.

Libby joined the NZFSSRC in July 2022 and is excited to be a part of ERIS as it continues to evolve. Libby has been in science leadership roles for over twenty years, in both the public sector and independent research organisations. In her more recent role for ESR, Libby led a large team of people who were all connected to food safety in some way, either working specifically in food safety research or the related areas of public health, environmental health and social science.

ERIS 2.0 The life of "ERIS version 1.0" ends in April 2023. Feedback from our funders and networks is clear: ERIS needs to keep going. But what should this service look like in the future, and how should it be funded? Around the world, horizon scanning systems looking for emerging food safety risks all work differently because they have different purposes. But one thing they all have in common is that they evolve – changing what they do and how they do it to meet stakeholder needs. The NZFSSRC is the home of ERIS, so food safety research remains the focus. The food industry of Aotearoa New Zealand and New Zealand Food Safety are our key stakeholders. Together we have identified lots of things we could do to improve our ability to detect emerging risks, and services we could provide alone or with others.



Does the presence of a hazard in food mean there is a risk? *Clostridioides* (*Clostridium*) *difficile* bacteria and *Candida auris* fungi are two well-known causes of illness, often appearing among vulnerable people in healthcare settings. They spread between people via faeces and contaminated surfaces. Human bocavirus causes respiratory tract infections, mainly in children, spreading between people like other respiratory viruses. Researchers have found all three of these human pathogens in foods and questioned whether foodborne transmission occurs. It is important to consider the role of food in transmitting any pathogen, to decide if it is important and needs managing. However, the presence of a pathogen in food does not mean people can become ill from eating that food. Such surveys only signal that more research is needed to provide robust evidence.

The NZFSSRC member organisations funding ERIS are:

AsureQuality Kaitiaki Kai
Westland Milk Products Hokitika · New Zealand
PIANZ
Horticulture New Zealand Ahumāra Kai Aotearoa
mia Meat Industry Association
Oceania DAIRY
Zespri KIWIFRUIT
Fonterra Dairy for life
United Fresh New Zealand Incorporated

Featured emerging risks and issues

Fluoride in soy-based beverages. Fluoride is naturally present in many foods and water can contribute fluoride to beverages. A survey in Spain found fluoride concentrations in soybean beverages were higher than had been found in other studies. They calculated that daily exposure to these concentrations could pose a health risk. Studies of soy beverages in New Zealand have not detected fluoride at concentrations that pose a concern.

***Laribacter hongkongensis* in freshwater foods.** This bacterial species was first identified in 2001 as a cause of community-acquired gastroenteritis and "traveller's diarrhoea" but routine diagnostics are unlikely to detect cases of illness. *L. hongkongesis* is not well studied, but have been found in freshwater environments and foods. Freshwater foods are considered to be a potential transmission route, noting that frog consumption might be more important than fish consumption. Newer studies show that some strains can resist antibiotics.

Summary of activities, August 2022.

New emerging risks and issues. Two emerging risks concerning food were identified in August along with one emerging issue for which the role of food was not yet clear, but the issue was considered to be important for the food industry:

Concerns food:

- Fluoride in soy-based beverages
- *Laribacter hongkongensis* in freshwater foods

Might concern food

- New zoonotic henipavirus (Langya henipavirus)

Many of these issues are likely to be important to New Zealand and briefing notes are being prepared. The Action Forum will decide if they want to undertake actions on these identified emerging risks. Briefing notes sourced from publicly available information can be provided by the coordinators to NZFSSRC members upon request.

Other assessed emerging issues. There were 19 emerging issues assessed during August that did not meet the requirement of being a foodborne emerging risk to human health. A list of these emerging issues is maintained for later review.

Some other observations. For interest, not currently in the ERIS Emerging Risks Register.

- The USDA declared that *Salmonella* in breaded and stuffed raw chicken products is an adulterant. The USDA's Food Safety and Inspection Service will also be looking at serotype-specific and dose-response risks associated with *Salmonella* in poultry. https://www.usda.gov/media/press-releases/2022/08/01/usda-announces-action-declare-salmonella-adulterant-breaded-stuffed https://www.fsis.usda.gov/science-data/research-priorities
- A study showed that the concentrations of *Listeria* and *Salmonella* in feed given to black soldier fly larvae, a novel insect food, reduced quicker in the presence of these larvae than in feed left without the larvae. This work helps to understand whether feed with low level microbial contamination could be used safely. https://doi.org/10.3390/foods11152208
- The WHO and FAO have ranked low moisture foods based on microbiological risks. After considering burden of illness, production, consumption and international trade, "cereals and grains" and "dried protein products" ranked highest. https://www.fao.org/3/cc0763en/cc0763en.pdf
- A review article highlights how the risk from allergens is affected by the food matrix. The authors encourage allergen research to focus on the allergenic potential of whole food rather than purified allergens. https://doi.org/10.1016/j.tifs.2022.07.009

Further information. This brief has been prepared for the NZFSSRC's funding and partner organisations by Nicola King (ESR), with the support of Seamus Watson (ESR) and Kate Thomas (NZFS).

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