



How to build a crystal ball – the art of Emerging Risk Identification

Tobin Robinson, EFSA





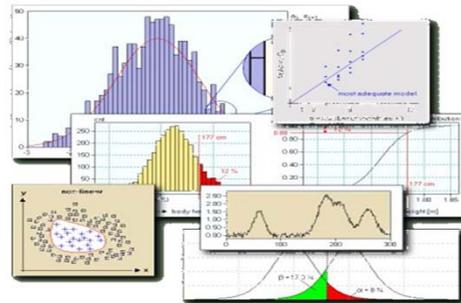
- Experience has shown that it is necessary to adopt measures aimed at guaranteeing that unsafe food is not placed on the market

FOOD LAW – ARTICLE 34

Collecting and collating



Analyse and filter



Sharing



EMERGING RISKS – WHY ARE WE INTERESTED?

- Anticipation of future risk assessment needs
- Data / Knowledge
- Risk assessment methods

- Help risk manager anticipate and even prevent future safety challenges

IDENTIFICATION OF EMERGING ISSUES


Short Early Warning


Medium Emerging Risks identification

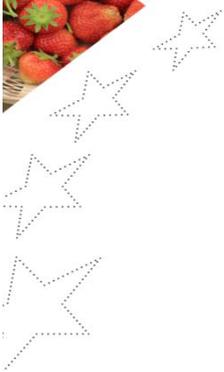
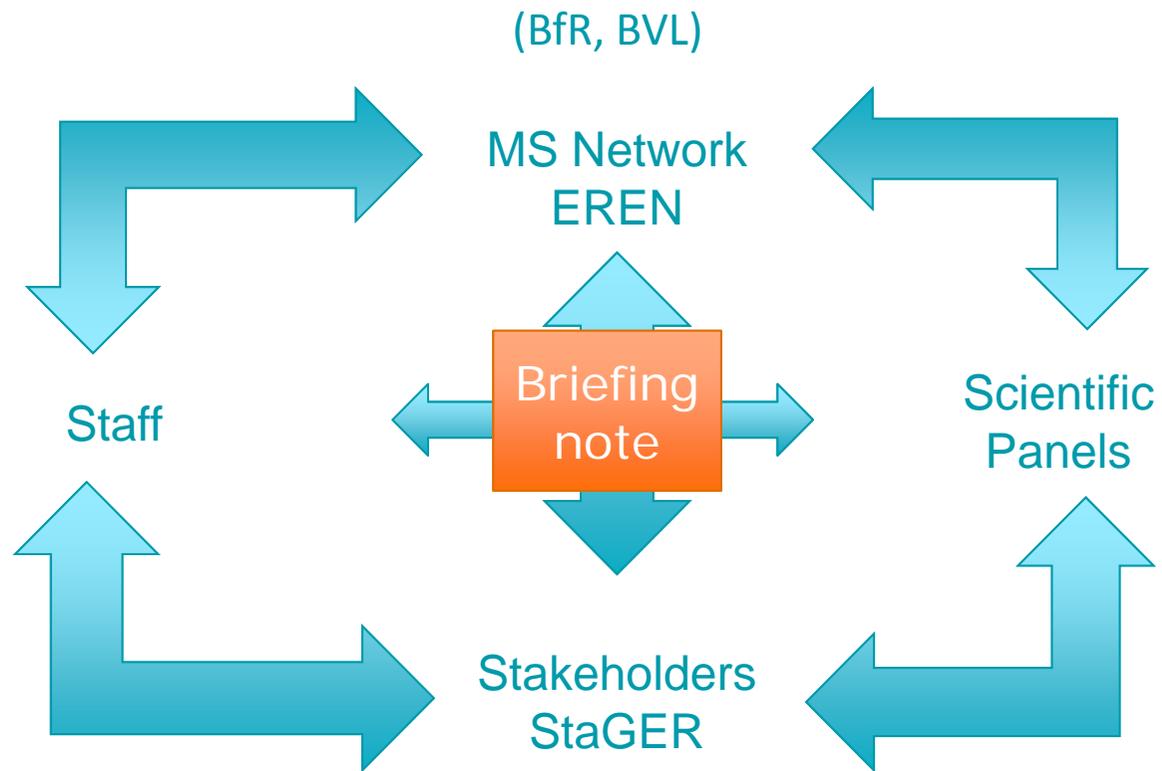

Long Foresight



SUPPORTING TOOLS/METHODS

- Analysis of RASFF, Import data, commodity price trends
- Media monitoring (MedISys)
- Text mining (TNO)
- Data mining (REACH database)
- Whole food chain analysis (Salmon)
- General Morphological Analysis
 - Need for wider expertise (economics, social sciences etc)
- Driver analysis (eg Ebola)

INTERACTING GROUPS





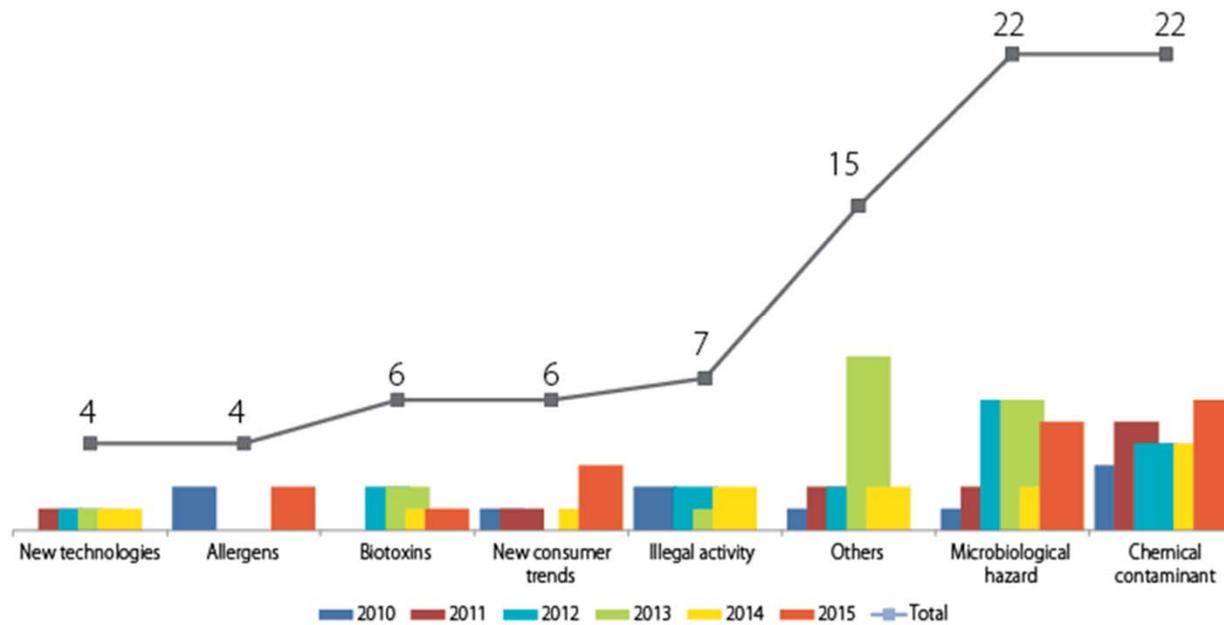
ESSENTIAL TO CONSIDER

- Aim (and defining success)
 - Early warning/crisis anticipation/future scoping ?
 - Access to data (detail, rapidity)
- How to handle uncertainty (lack of data)
- What level of information required in order to make decisions/take actions
- This is not risk assessment ! (therefore may need to use different expertise)
- Who should act on the information ?
- How to monitor/record success

TAKING STOCK

- Global System for Identifying Food-related Emerging Risks (**2006**)
- Scientific Colloquium on emerging risks in food (**2011**)
- Methodological framework for emerging risks identification (**2012**)
- Appraisal and the way forward (**2015**)

IDENTIFICATION OF EMERGING ISSUES



PRIORITIZATION – ADDITIONAL CRITERIA

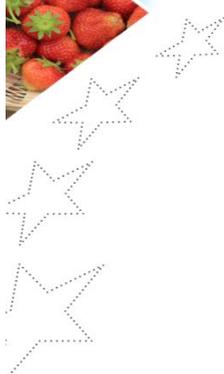
- Soundness
 - Severity
 - Imminence
 - Scale
- UNCERTAINTY**
- RISK
PERCEPTION**

EXAMPLES

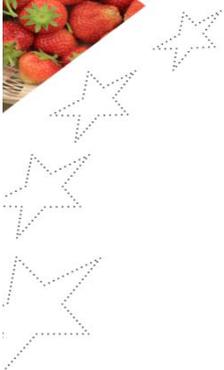


EXAMPLES

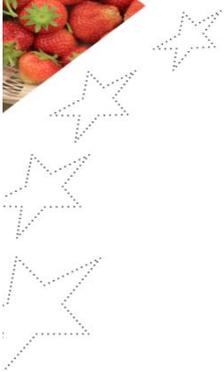
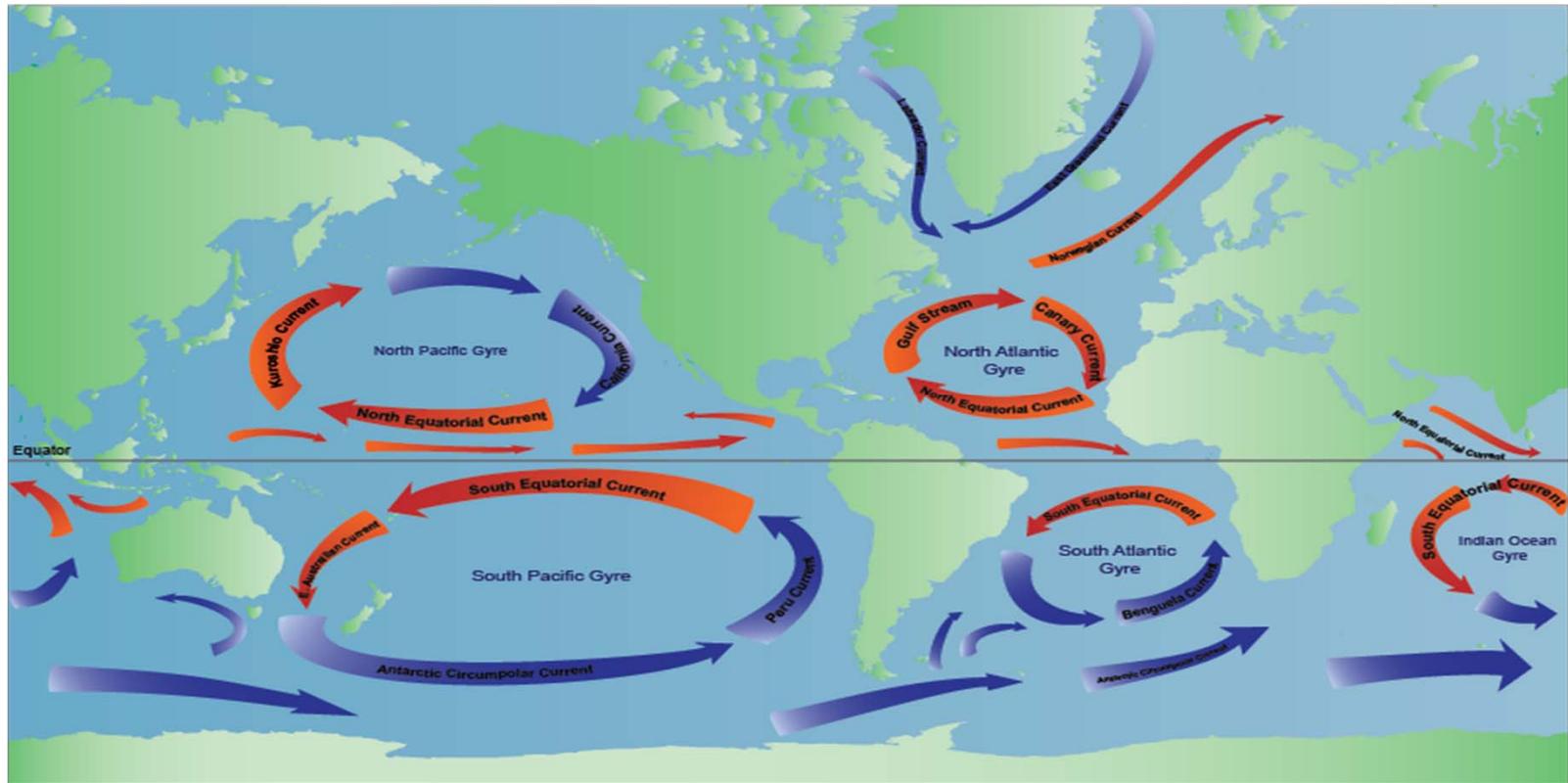


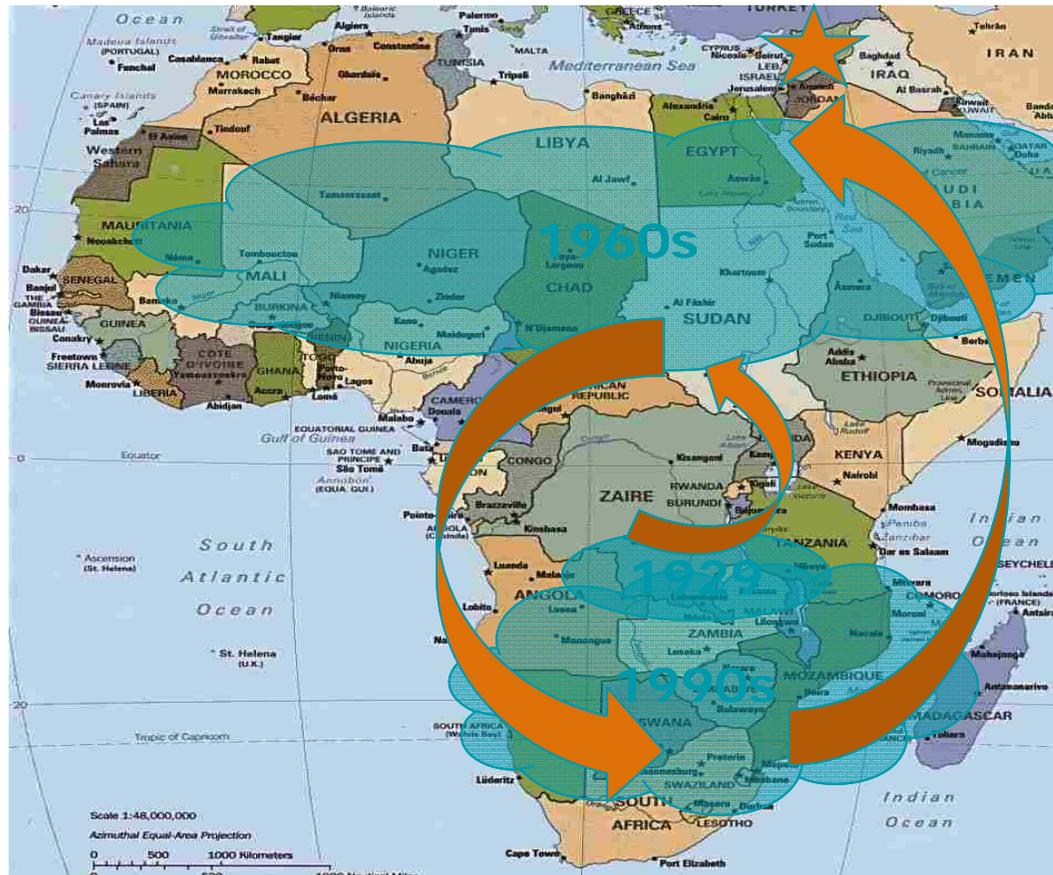


(Puypea et al 2015, Miller et al 2016)



A GLOBAL VILLAGE





A GLOBAL VILLAGE - LUMPY SKIN DISEASE

- Outbreaks confirmed in Israel in 2007 and 2012, in Lebanon and Palestinian Territories in 2013.
- and now in Turkey (2015)
-and now in Bulgaria (2015)



FINAL THOUGHTS

- Very complicated ! (food production, fraud, consumer preference, travel, waste disposal
- Never underestimate human inventiveness for good or evil !
- How does climate change play into this ? (think: invasive species, “new” diseases) – does it make us more vulnerable ?
- We cannot isolate ourselves - new food safety problems will come and find us, often through very unexpected routes
- But there’s much we could do to prepare ourselves, starting with networking with key EU /international partners – the answers may already be out there !



Issue evaluated	Follow up
Energy drinks	Mandate (scientific opinion on caffeine intake including caffeine from energy drinks)
Synthetic biology	EC SCENIHR
Chemical mixtures	Self task SC
Lumpy skin disease into EU	Mandate from EC to AHAW panel
Insects as Food and Feed	Mandate from EC to Scientific Committee
Micro-plastics	Mandate from MS to CONTAM panel

ACKNOWLEDGEMENTS

SCER- ER Team

Caroline, Raquel, Angelo,
Agnes, Tilemachos, Tobin

EFSA Staff

Marco, Camila, Sophie,

EFSA experts

Hans, Ana, Niels.....

- Emerging Risks Exchange Network
- Stakeholders discussion group
- JRC
- DG SANTE
-



THANK YOU

STAY CONNECTED!



Subscribe to

www.efsa.europa.eu/en/news/newsletters

www.efsa.europa.eu/en/rss



Engage with careers

www.efsa.europa.eu/en/engage/careers



Follow us on Twitter

[@efsa_eu](https://twitter.com/efsa_eu)

[@plants_efsa](https://twitter.com/plants_efsa)

[@methods_efsa](https://twitter.com/methods_efsa)