

ECMA Food Safety Committee

Web-meeting 18 June 2024

Participants : Michael Avemarg (Van Genechten Packaging), Sigrid Gerold (Mayr Melnhof Packaging), Mathilde Gros (Graphic Packaging), Carmine Iuvone (SEDA & Co-Chair FS Com), Paolo Minichini (Seda), Elaine Murray (WestRock), Carola Poggenpohl (Mayr Melnhof Packaging), Ashleigh Pyatt (Alexir Packaging), Christian Schiffers (FFI), Annika Schrimpf (Graphic Packaging), Caroline Seguin (Mayr Melnhof Packaging), Mike Turner (ECMA MD & Co-Chair FS Com), Helena Moring Vepsalainen (Metsa Group), Jan Cardon (ECMA)

Apologized : Eliza Konecka-Matyjek (WestRock), Dorien van den Helm (Acket)

1. Introduction and welcome.
2. Update on the bio assays screening methods to avoid genotoxicity in FCMs, by Peter Benish (Bio Detection Systems). (30min)
3. Approval minutes and short follow up from the Food Safety Committee 19/04/24.
4. Tour de table on specific food safety concerns and developments.
5. Outcome of the FERA visit (23/04).
6. Development NIAS database.
7. Testing conditions for cartons in different applications.
8. ILSI Guidance on Best Practices on the risk assessment of NIAS in food contact materials and articles.
9. Review FCM legislation.
10. Miscellaneous.

1. Introduction - Welcome

ECMA anti-trust guidelines

SUMMARY DO NOT

- . **agree** in writing or in any other way on prices or pricing policy
- . agree to restrict any other commercial conditions
- . agree with competitors to divide territories or customers (market sharing)
- . **limit** or control production, technical development or investment
- . **discriminate** between customers or suppliers
- . discriminate in the rules for joining or leaving a trade association
- . **exchange** specific information with competitors on individual purchasing prices, cost price structure, sales quantities or other trading conditions
- . **Jointly restrict** the liberty of competitors to sell and promote products at independently determined prices and conditions.
- . restrict the possibilities of competitors to use a common quality label or enter into standardisation agreements with competitors that might make entry for new commerce in the market more difficult.

2. Update on the bio assays screening methods to avoid genotoxicity in FCMs.

Meeting Amsterdam (19/07 2017)

- Not yet well accepted by customers and authorities.
 - Possible at all levels. Single substance ?
 - Cost effective.
-

- Reliable for EDC screening.
 - Method not yet sensitive enough to exclude genotoxicity.
-

Maricel Marin-Kuan (Nestlé) HPTLC

Fractionation and bioassays testing for the many fractions ...

Objectives discussion

- Update on possibility to exclude genotoxicity.
- Which bio assays screening can work for finished (printed and glued) cartons ?
- Acceptance by authorities, customers ?
- How can it fit in a best practice NIAS approach ?
- Recent experiences within converting sectors, the paper and board sector ... ?
- Much better, more cost effective as the HPTLC method



Peter A. Behnisch

Dr. rer. nat. · Director at BioDetection Systems

Amsterdam, Netherlands

99 In vitro toxicity profiling of emerging pollutants (PFAS, EDC, POPs) in water, food, plastic, wildlife & human health.

3. Approval minutes and short follow up from the Food Safety Committee 19/04/24.

1. Introduction and welcome.
2. Approval minutes and short follow up from the Food Safety Committee 19/02/24.
3. Update on the allergen presence in printing powders.
4. Tour de table on new specific food safety concerns and developments.
5. Legal developments.
 - Review FCM legislation.
 - BPA draft regulation.
 - POPs Regulation.
 - Council of Europe.
 - PPWR.
6. Obtained information from the FEICA and EuPIA analytical working groups following the meetings on 26/10/23 and 19/02/24.
7. Testing conditions LT @ RT. Statement and need for verification.
8. Discussion on how to approach the identified sector initiatives.
 - Generic NIAS lists.
 - Guidelines on how to test for NIAS.
 - IP protection on "ordering" platforms.
9. Preparation visit FERA (23/04).
10. Organisation and objectives next meeting in person. (18/06)
11. Miscellaneous.














t.b.o. Meeting with analytical experts EuPIA

4. Tour de table on specific food safety concerns and developments.

14 NOTIFICATIONS



Ref.	Category	Type	Subject	Date	Origin	Notifying	Class.	Decision	
↓ ↑	↓ ↑	↓ ↑	↓ ↑	↓ ↑		↓ ↑	↓ ↑	↓ ↑	
2024.4444	Fats and oils	food	Mineral oil components (MOSH & MOAH) in coconut oil	10 JUN 2024		Germany	information notification for attention	potential risk	Details >>
2024.3418	Herbs and spices	food	MOAH in vanilla bean from Papua New Guinea	29 APR 2024		Netherlands	alert notification	serious	Details >>
2024.3136	Confectionery	food	MOAH in puffed corn sweets with chocolate frosting	18 APR 2024		Finland	information notification for follow-up	potential risk	Details >>
2024.2843	Fats and oils	food	Wysoka zawartość MOSH i MOAH w oliwie z wytłocznin z oliwek pochodzącej z Hiszpanii // high MOSH and MOAH content in olive pomace oil from Spain	10 APR 2024		Poland	information notification for follow-up	potentially serious	Details >>
2024.2789	Ices and desserts	food	Depasire LMA Suma MOAH in prajitura /Exceeding LMA Amount MOAH in cake	9 APR 2024	---	Romania	information notification for follow-up	potentially serious	Details >>
2024.2707	Herbs and spices	food	MOAH and pesticide residues in Sichuan Pepper from China	5 APR 2024		Netherlands	alert notification	serious	Details >>
2024.2102	Fats and oils	food	Mineral oil aromatic hydrocarbons (MOAH) in palm oil from UK via the Netherlands	19 MAR 2024		Germany	information notification for follow-up	potential risk	Details >>

2024.2083	Fats and oils	food	MOAH in Palm Mid Fraction from Denmark // MOAH en aceite de Palma procedente de Dinamarca	19 MAR 2024		 Netherlands	alert notification	potentially serious	Details >>
2024.2002	Cereals and bakery products	food	Mineral oil components (MOSH/MOAH) in rice from India	15 MAR 2024		 Germany	information notification for follow-up	potentially serious	Details >>
2024.1968	Cocoa and cocoa preparations,...	food	MOAH contamination in roasted coffee	15 MAR 2024		 France	information notification for attention	serious	Details >>
2024.1398	Other food product / mixed	food	MOAH 237 ppm in fava bean protein isolate from Croatia	27 FEB 2024		 Netherlands	alert notification	potentially serious	Details >>
2024.1216	Fats and oils	food	Wysoka zawartość MOSH i MOAH w oliwie z wytoczyn z oliwek pochodzącej z Włoch // high content of MOSH and MOAH in olive pomace oil from Italy	21 FEB 2024		 Poland	information notification for follow-up	potentially serious	Details >>
2024.0755	Herbs and spices	food	MOAH (mineral oil aromatic hydrocarbons) in Vanilla powder from Madagascar	2 FEB 2024		 Netherlands	information notification for attention	serious	Details >>
2024.0666	Other food product / mixed	food	MOSH/MOAH in chickpea flour from the United Kingdom, via the Netherlands	30 JAN 2024		 Germany	alert notification	potentially serious	Details >>

5. Outcome of the FERA visit (23/04).

MEETING NOTES

**EUROPEAN
CARTON MAKERS
ASSOCIATION**

Food Safety Committee Visit FERA Laboratory

Date: 23 04 2024 **Time:** 10h30 - 16h00 CET **Venue:** York

FERA staff : Emma Bradley [EB], Claire Mckillen, Daniel Wright

ECMA Participants: Mathilde Gros (Graphic Packaging) [MG], Eliza Konecka-Matyjek (WestRock) [EK], Elaine Murray (WestRock) [EM], Annika Schrimp (Graphic Packaging) [AS], Caroline Seguin (Mayr Melnhof Packaging) [CSG], Jan Cardon (ECMA) [JC]



FERA

- UK national reference laboratory.
- Work 60% for authorities / 40 % for industry.
- Many centers of expertise, most food safety related.
- Work mainly focused on plastics.
- World class analytical capabilities. (19 LCMS, 14 GCMS ...)
- Research and method development.
- Projects for associations : can coatings, CEPI, Plastics Europe



Green transition :
Clear need for appropriate testing methodologies for paper and board and testing capacity.

- Standardized approach for assessing NIAS.
ILSI publication
Excluding genotoxicity by bio assays.

NIAS workflow starts with the development of a database.
Algorithms allow to identify potential reaction products ...
Collaborative studies needed.

Brexit impact

- UK FS legislation starts to deviate.
- FSA has to do the EFSA work ... Advisory committees established.
(BPA, PFAS, Recycled plastics ...)
- Access to EU working groups lost.

6. Development NIAS database.

Proposal FERA

FERA could well build a database with the NIAS which may appear in the materials carton makers are using, starting from what is reported by the suppliers and how some substances may react together. In such a project FERA has the appropriate knowledge to provide further scientific input from available packaging databases for public information. Such a database can remain confidential for the own sector. The outcome can be given back to the customer or kept at FERA on a confidential basis, and requires afterwards updating.

Asked for a rough quotation. (28/05-12/06)

- ECMA members share on a confidential basis with the FERA expert team, the NIAS information they get from their suppliers.
- A first expert judgement on the incoming information, may be leading to extra interaction with the suppliers ... on what is obviously missing.
- FERA classifies all obtained per type of material used (board, ink, adhesive ... + subcategories to be discussed).
- Compilation of a database with the most important NIAS to check, also taking into account the combination of the used materials. Which reactions may occur ?

Van: Daniel Wright <daniel.wright@fera.co.uk>

Verzonden: Monday, 17 June 2024 10:48

Aan: Jan Cardon <jan.cardon@ecmabel.be>

CC: Emma Bradley <Emma.Bradley@fera.co.uk>; Claire Mckillen <Claire.Mckillen@fera.co.uk>

Onderwerp: RE: VISIT FERA 23 April

Hi Jan,

I hope you are well.

I have spoken with my colleagues Claire and Emma.

In the interests of trying to provide you with a very rough indicative cost, we would look to apply a daily consultancy charge of circa £1,500.00 to support this project.

If, after discussion with your members you wish to explore this further then we can have a more in depth planning meeting between our respective teams. This will help both parties to understand the full requirements of the project, and an estimate of the number and frequency of consultancy days which would likely be required.

From a planning perspective it would be great if you can provide some feedback regarding the level of interest, following your members meeting tomorrow.

Please don't hesitate to let us know if you have any questions in the meantime.

Best regards,

Dan

Dan Wright
Business Development Manager
Fera Science Ltd.
M: 07510 477538

What will be feasible?

FERA may act as a trusted third party. Used to NDAs ...

Concentrations not needed. Just the identity of the substances.

- 1) Sharing the NIAS information obtained from suppliers combined with FERA's general composition and NIAS expertise for the concerned materials -> List of NIAS.
- 2) Sharing NIAS / Used substances for which further compliance work needs to be performed /NLS + FERA's expertise ... -> List
- 3) All restricted ... -> List
- 4) All used ... -> List

7. Testing conditions for cartons in different applications.

Comments on ECMA statement ?

New information available ?

Topic initiated in PIJITF 8/11/23 and 11/04/24

Sufficient to test cartons LT @ RT : 10days 40 °C ?

EuPIA shared in PIJITF Fraunhofer study.

Nestlé (Lionel Spack 16/05)

- Alarmed the cardboard industry many times in the past on discrepancies and strange behaviour, if plastic testing conditions are blindly applied.
- BfR 36 series of validation tests extremely obsolete.
- Need to invest in series of cardboard testing that could make sense.
- Work done by Laurence Castle about correction factors. Cardboard industry has never convinced the community about the trueness obtained with all corrections.

Harmonized and acknowledged testing conditions for cardboard and paper-based packaging are drastically missing.

22/05

- 10 days 40 °C sufficient ?
Steady state obtained ? Could be tested on several samples and published.
- With waxes on paper and board, 60 °C is fatal for the coating. Need to stay below the melting point of the wax 40°C or even 30 °C.

- Rainer Brandsch estimated carton and paper behave like a poor PE (project Migratest). Estimation does not take into consideration degradation of coating or melting of waxes.
- Carton & paper do not behave exactly like polymers and the Arrhenius theory is not fully adequate. Arrhenius theory of diffusion allowed to estimate that 10 days 60 °C simulates 12 months at 25 °C. This is not 100 % applicable to carton & paper because diffusion is not the only driving force within carton & paper. There are many interactions with the open active side of cellulose and other natural substances.
- ECMA statement on testing conditions. Summarizes the first seeds for a more comprehensive document/guidance with several more examples of structures : printed or not, laminated or not, coated with wax or not ...

If ECMA or CEPI in collaboration with ISEGA or another research institute would like to launch a larger project on assessing more correctly the migration from cartons and paper, **Nestlé will be interested** to participate. Nestlé can provide some laboratory work with the regional laboratories and if allowance from Nestlé Institute of Packaging Sciences, maybe more fundamental investigations.

Sander Koster (21/05)

- No ongoing projects on shelf lives above 1 year. Below 1 year already enough challenging.
- Limited study with 5 different fibre based materials (including 3 cartons) intended for fatty food contact.
Which simulant to use for wet and dry fatty food contact ? (Paper cups or chocolate applications)
Various simulants/conditions including 95% ethanol, isooctane and Tenax tested and also explored CEN 15519.

Nestlé did not manage to find generic conditions.

Ethanol solutions swell fiber based materials.

Leakage of migration cells, visible coloration of migration solution.

Big difference between the different samples tested and the simulant conditions applied.

Not able to conclude which conditions would be best.

Immersion in isooctane for 1 day at 20 °C seems best in terms of damage to the PB.

Comparing the results with Tenax 10 days @ 60 °C, migration observed in isooctane 10 times higher.

Still no conclusion on which conditions to use in routine testing for dry and wet fatty food contact. Some guidance (decision tree ?) from the carton sector is welcomed.

8. ILSI Guidance on Best Practices on the risk assessment of NIAS in food contact materials and articles.

Guidelines
how to test
for NIAS ?

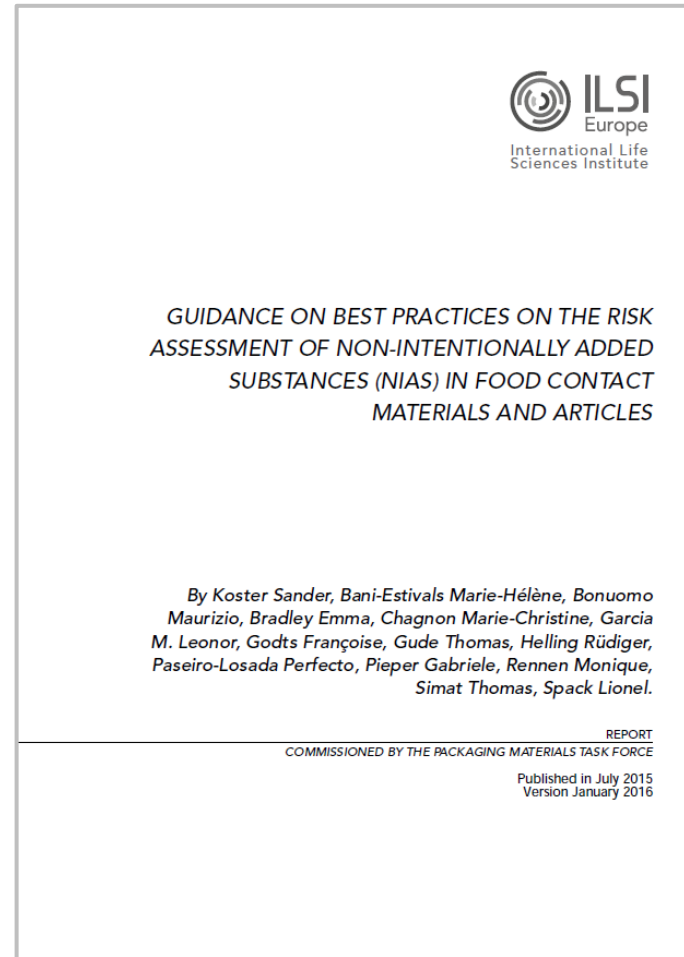
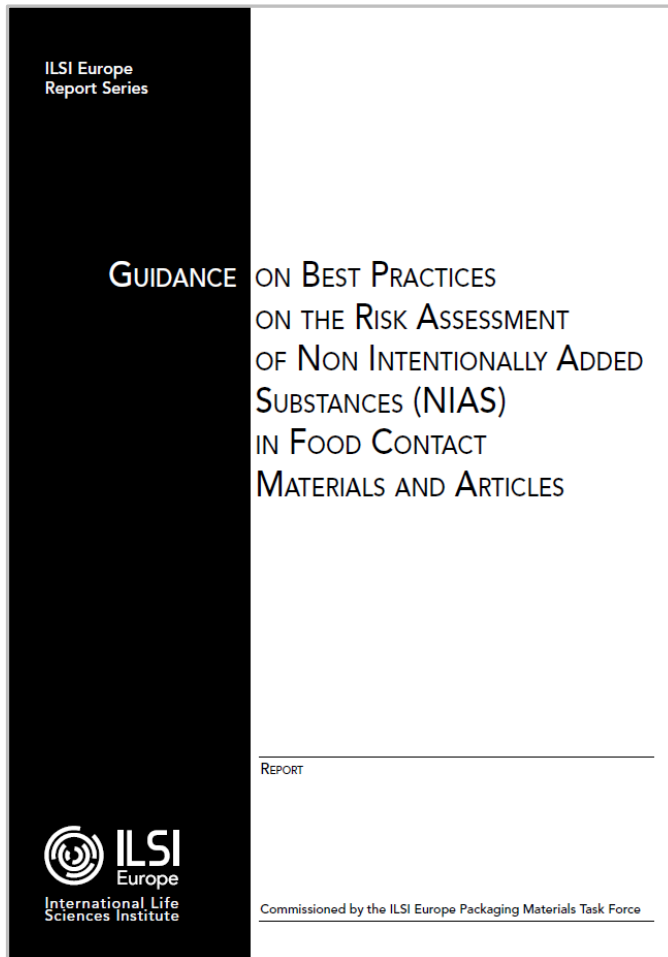
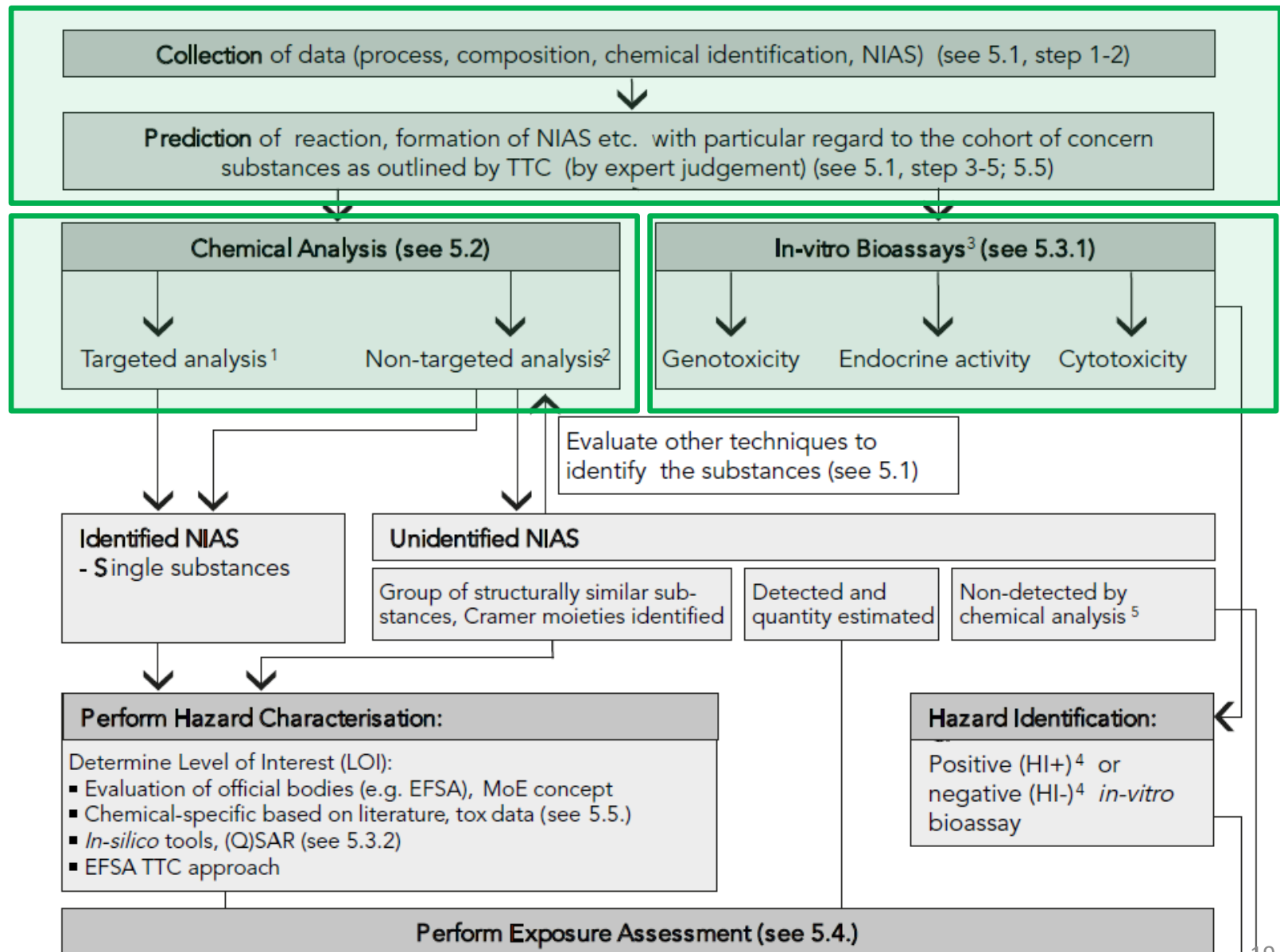
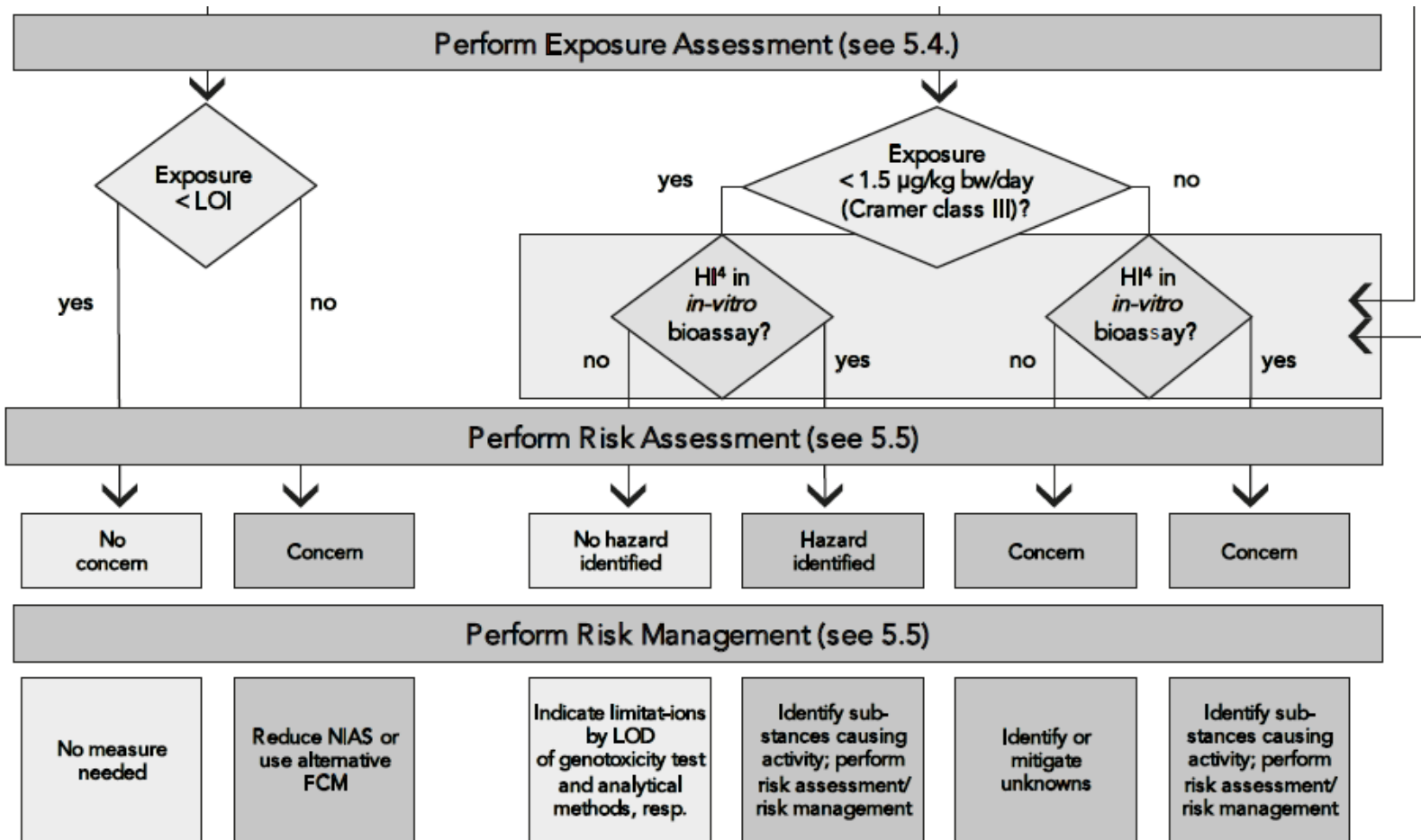


Figure 1: Flowchart for the risk assessment of NIAS (may also apply to substances other than NIAS).





¹ LOD depending on substance

² 10 ppb threshold. Target should be to exclude CMR based on expert judgment otherwise.

³ Note that the use of bioassays is not mandatory but can be used as tool assisting in the final risk assessment (see also 5.3.1).

⁴ HI+ and HI- (hazard identification 'yes' or 'no') are respectively a positive or negative conclusion based on the outcome of genotoxicity or endocrine activity assays.

⁵ I.e. substances with different phys./chem. characteristics as methods used will not be detected. These substances can however induce an effect in a biological assay.

9. Review FCM legislation.

Policy paper ?

Discussions in working groups per policy pillar.



Study on sustainability regarding food contact materials (FCM) in the context of the ongoing revision of the legislation

Inception Workshop

*10 June 2024
DG SANTE UNIT E2*


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Sustainability study

Objectives for sustainability in the framework of future EU FCM rules

Objective A: To define the understanding of sustainability when applied to food contact materials

Objective B: To identify gaps and opportunities for increasing sustainable development

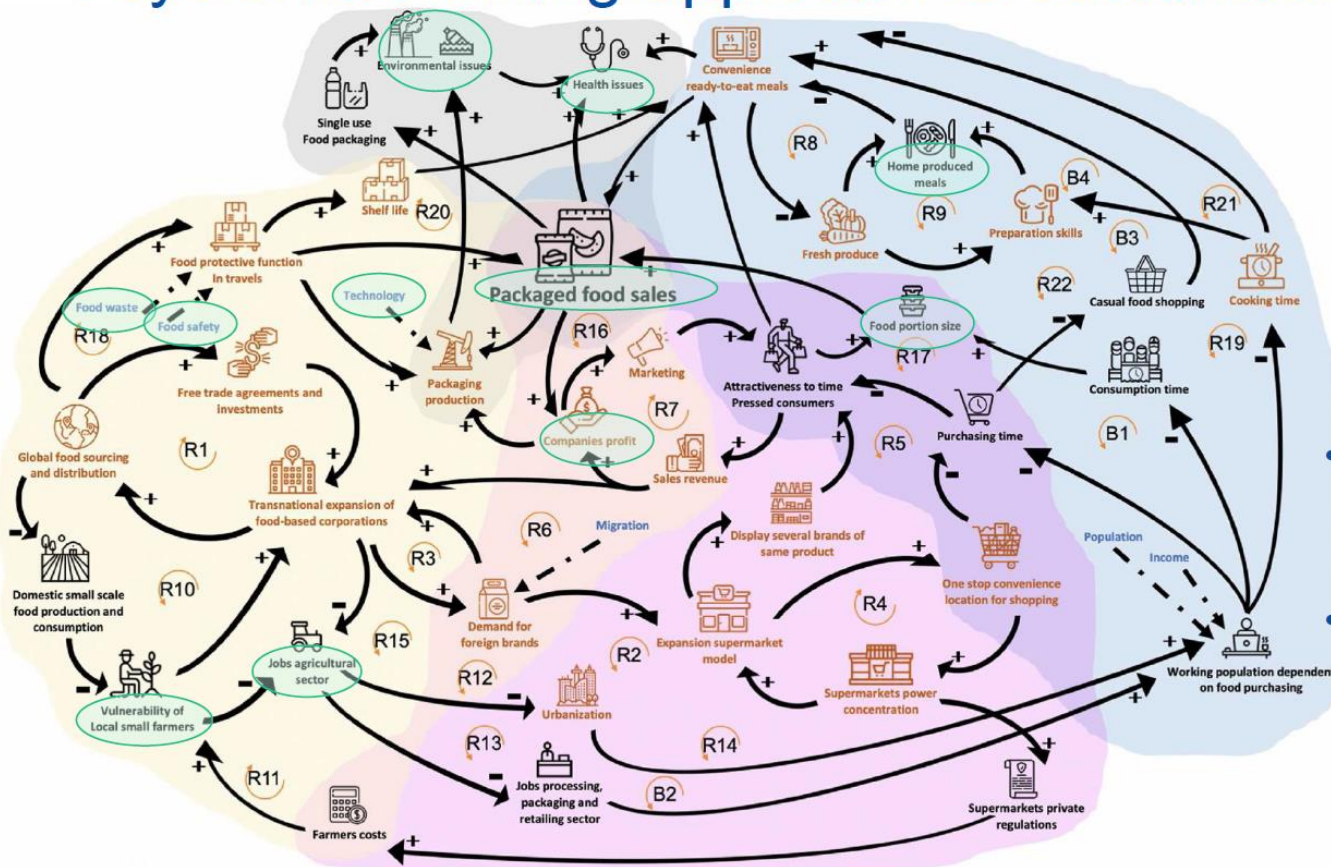
Objective C: To analyse the current and future market development of FCMs – **Market study** 

Objective D: To identify the sustainable products already on the market or under development and whether trends on specific products, newly developed production techniques or practices that contribute to sustainability can be highlighted.

Objective E: To identify policy measures that have the potential to increase the sustainability of FCM

Objective F: To characterise policy measures that may increase the sustainability of FCM and may be incorporated to the revised regulation.

systems thinking approach to sustainable FCM



- = Household subsystem
- = Supermarket subsystem
- = Globalisation subsystem
- = Environmental and health

nothing identified yet – and the system may be different

Example of potential opportunities to increase sustainability through rules on FCM – these may be very different in reality – finding them is the objective of this study

- Example
- **used here as illustration of the concept only**
- **underlying figure from:**

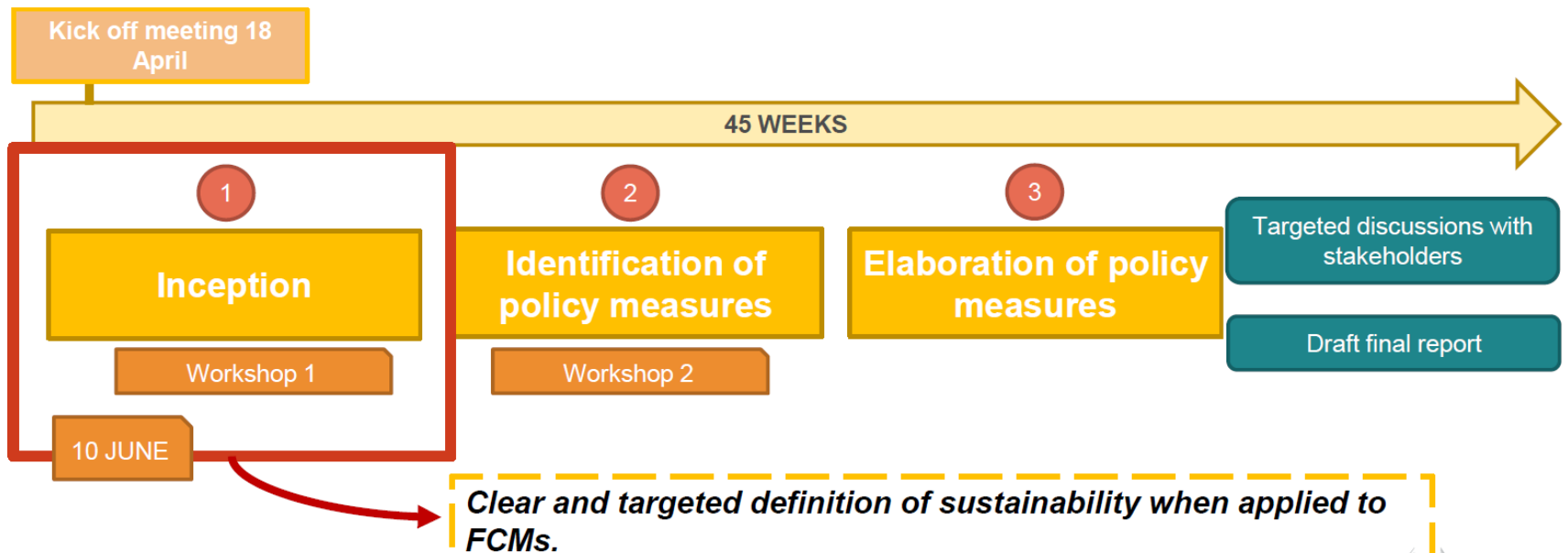
Sabrina Chakori, Russell Richards, Carl Smith, Nicholas J. Hudson, Ammar Abdul Aziz, Taking a whole-of-system approach to food packaging reduction, Journal of Cleaner Production, Volume 338, 2022, 130632, ISSN 0959-6526, <https://doi.org/10.1016/j.jclepro.2022.130632> (rights acquired 5803621416864)

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Sustainability study

Study Timeline



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Proposed definition



Food Contact Materials (FCM) contribute to sustainable development when they meet **current needs** of ensuring security of food supply and keeping food safe **without compromising** the ability of **future generations** to meet their needs.

Sustainability in the FCM context entails that FCM production, consumption and disposal stay within **planetary boundaries**, and that FCMs contribute to the overall **sustainability of the food system**.

It entails a process of **transformation of FCM design, manufacturing, marketing, usage and end-of-life**.

Such process strikes the appropriate **balance** between the impacts of FCMs, considered in par with the food they are in contact with, as needed for restoring and preserving the conditions of future generations' welfare.

Efforts towards sustainability in the FCM context shall have **no negative impact on food safety**, and no significant negative impact on **FCM functionality**.

10.Miscellaneous.

*Thank you for your
attendance and contributions !*