UNISECO

UNDERSTANDING & IMPROVING THE SUSTAINABILITY OF AGROECOLOGICAL FARMING SYSTEMS IN THE EU

UNISECO
Project Introduction

Final Conference, 18th March 2021

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Outline

Project introduction

- Background and objectives
- Key elements of the UNISECO approach
- Policy context of UNISECO

UNISECO

General Information

No.	Partner	Country
1	Thuenen Institute of Farm Economics (TI)	DE
2	Consiglio per la Ricerca in Agricoltura e l'Analisi dell'Economia Agraria (CREA)	IT
3	Agricultural University Athens (AUA)	GR
4	University of Natural Resources and Life Sciences	AT
5	The James Hutton Institute (HUT)	UK
6	The University Court of the University of Aberdeen (UA)	UK
7	Institut Superieur D'Agriculture Rhone Alpes (ISARA)	FR
8	Baltijas Vides Forums (BEF-LV)	LV
9	Baltijos Aplinkos Forumas VSI (BEF-LT)	LT
10	Forschungsinstitut fur Biologischen Landbau Stiftung (FiBL)	CH
11	Geonardo Environmental Technologies LTD (GEO)	HU
12	Luonnonvarakeskus (LUKE)	FI
13	Sveriges Lantbruksuniversitet (SLU)	SE
14	Gestion Ambiental de Navarra, S.A. (GAN)	ES
15	Asociatia WWF Programul Dunare Carpati Romania (WWF)	RO
16	Ustav Zemedelske Ekonomiky a Informaci (UZEI)	CZ
17	European Landowners Organization (ELO)	BE
18	Bioinstitut, o.p.s.	CZ

- Transdisciplinary consortium with 18 partners across 16 countries

- Project duration: 1st May 2018 to 30th April 2021

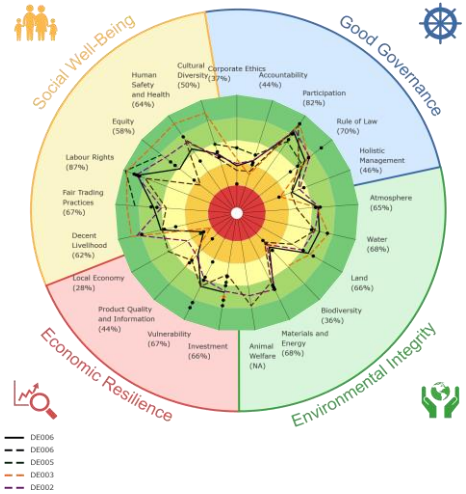
Background and Objective

Context of UNISECO
https://youtu.be/an6zI3msCmE

Background and Objective

To address the key dilemma and the related research questions, there is a need for:

- Systems-based approach to understand barriers & drivers
- Multi-actor engagement with farmers, advisors, value chain actors, consumers, and policy makers
- Range of tools / methods for co-learning and assessment



Agro-ecological Farming Systems

Agro-ecological Farming Systems (AEFS):

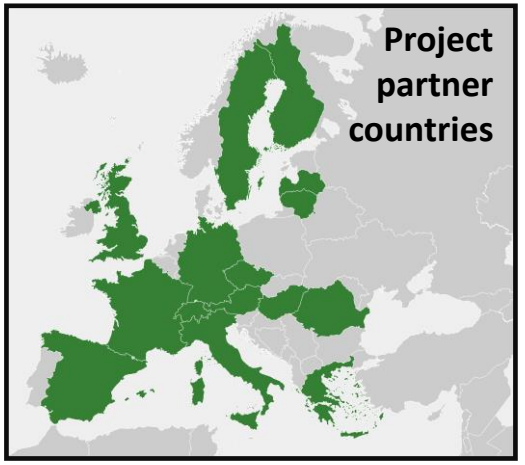
Six ecological principles for the design of AEFS which are biodiverse, energy efficient, resource-conserving and resilient farming systems (Altieri *et al*., 2017).

1. Enhance the recycling of biomass;
2. Strengthen the agricultural system through enhancing functional biodiversity;
3. Provide the most favourable soil conditions by managing organic matter and enhance soil biological activity;
4. Minimise losses of energy, water, nutrients and genetic resources;
5. Have a spatial and temporal diversity of species and genetic resources at field and landscape level;
6. Enhance beneficial biological interactions and synergies among the agro-diversity.

UNISECO: Broad scope – covering systems initiating and enhancing transitions to AEFS

Overview of Main Elements

- Setting-up, managing & monitoring **multi-actor platforms** to foster engagement and cooperation of key actors of agro-ecological farming systems (AEFS)
- Adapted **Social-ecological Systems (SES) framework** and **typology** for assessing transition pathways to agro-ecological farming systems
- Empirical data collection in **participatory case studies** and **co-construction** of knowledge, management strategies and **market and policy incentives**
  - Understanding of barriers and drivers of transitions
  - Assessing sustainability performance and trade-offs
  - Lessons learnt for practice and policy



- **Biophysical and socio-economic modelling** and scenario development for assessing sustainability of AEFS **at territorial level**
- Development of a **UNISECO agro-ecological knowledge hub**

Conceptual Foundation

- Developing a systems-based **conceptual framework** to ensure a consistent theoretical underpinning of the practice and policy recommendations; this includes:
  - **Social-ecological systems framework** for systematic analysis of external and internal socio-economic, environmental and policy aspects of farming systems
  - **AEFS typology** for the sustainability assessment of farming systems across Europe
  - To guide a **consistent case study design** and selection process with the MAPs taking into account variations in the systems and their context

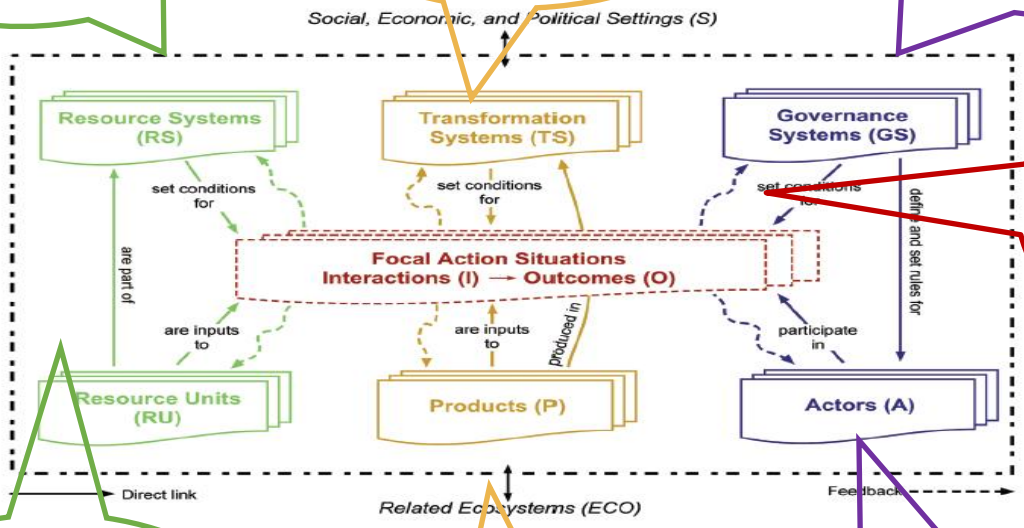
- **Examples of key deliverables:**
  - D2.1: Adapted framework and guidelines for sustainability assessment
  - D2.2: Typology of agro-ecological farming systems and practices in the EU & selected case studies

The Socio-Ecological Systems Framework

How are **farming systems** organized and managed?

How do **the food systems** work? Are farmers significant players ?

What are the **governance** systems from state regulations to collective rules



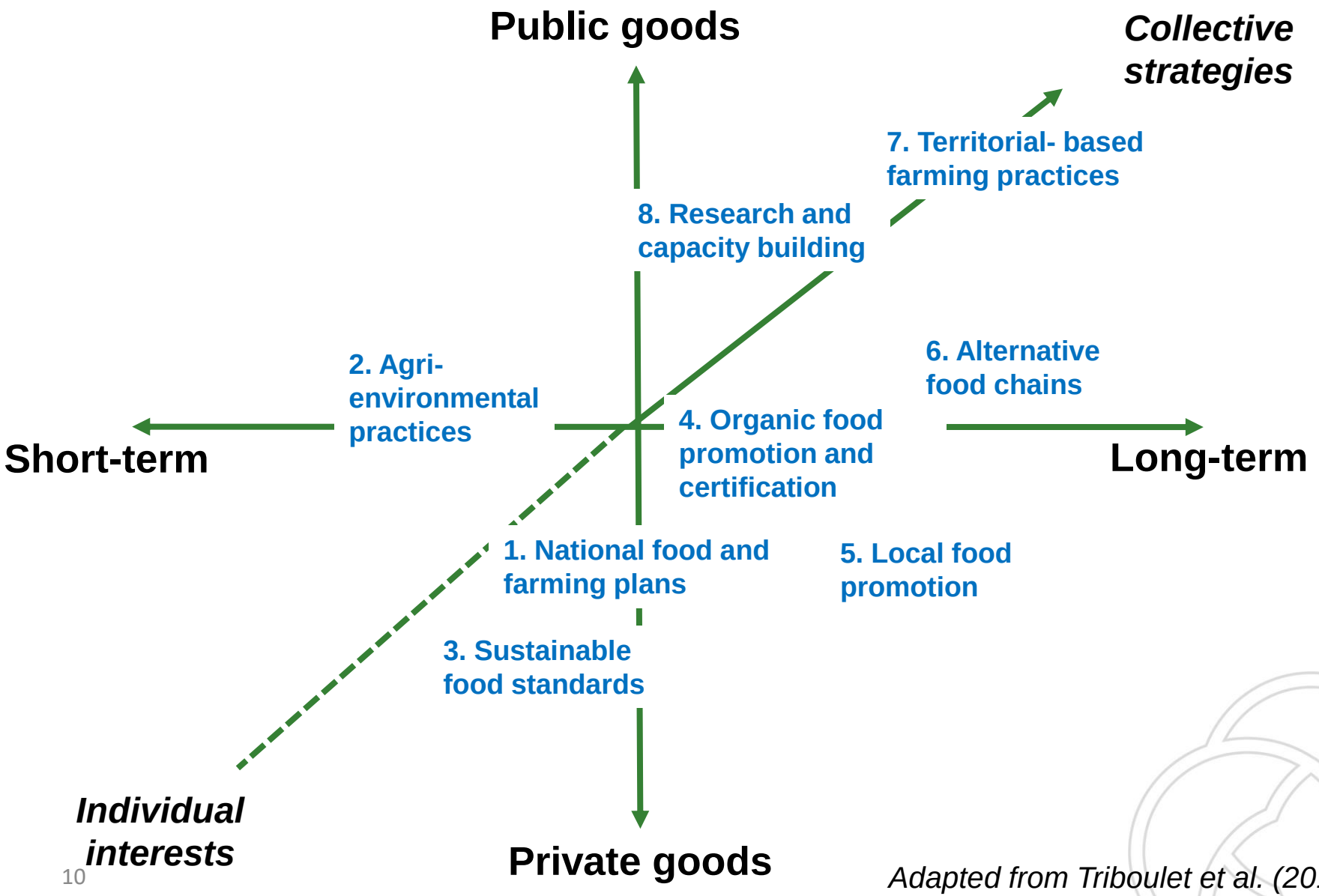
What are the **actions, rules and collective organizations towards agro-ecology?**
How do they Perform?

What are the different **agricultural products** (at farm gate)?

What are the final **marketed products**?

Who are the **actors** involved in agriculture governance?

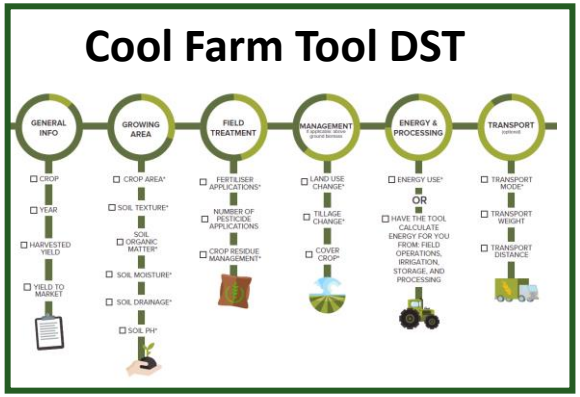
Governance Challenge



Adapted from Triboulet et al. (2019)

Key Elements of UNISECO Approach

- Empirical data collection in **participatory case studies of farming systems** and co-construction of management strategies and market and policy incentives
- Use of decision support tools, interviews, focus groups and workshops to understand…
  - **… performance** and sustainability trade-offs of AEFS
  - **… processes**, how drivers and barriers of AEFS can be addressed in local contexts
  - **… potential** of innovative market incentives and policy instruments for future policy recommendations



- **Examples of key deliverables:**
  - D5.2 Assessment of governance networks
  - D3.4 Strategies of agro-ecological transitions
  - D3.5 Performance assessment of AEFS and trade-off assessment
  - D5.4 Innovative market incentives and policy instruments

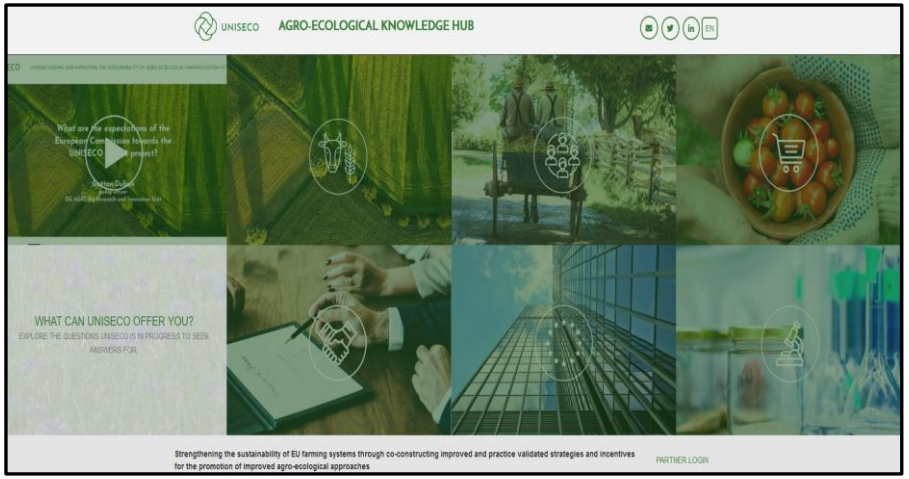
Territorial Impact Assessment

- **Biophysical and socio-economic modelling** and development of robust indicators for assessing sustainability and innovative strategies of AEFS at **territorial level**
- Territorial impact assessment including:
  - Participatory scenario development of social, economic, environmental and policy drivers at the territorial level
  - Large-scale implementation of agro-ecological practices
  - Assessment of EU-wide sustainability impacts and selected global impacts (e.g. GHG emissions)

- **Examples of key deliverables:**
  - D4.2 Participatory Scenario Development of Agro-ecological Farming Systems
  - D4.3 Territorial impacts and lessons learnt

Agro-ecological Knowledge Hub

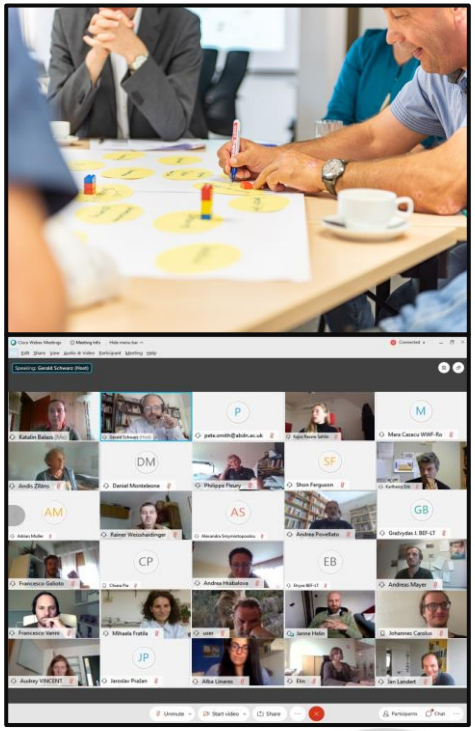
- Development of a **UNISECO agro-ecological knowledge hub** for dissemination and exploitation building on experiences of partner networks
- **Synthesis** of qualitative and quantitative analysis into a **Socio-Ecological System Interaction Tool (SESSIT)**, made available on WWF GLOBIL system with **spatial features**:
  - Consideration of different target groups
  - Consideration of different spatial levels
  - Use of story maps and visualisation of quantitative territorial results



- **Key deliverables:**
  - D6.1 Concept of the spatially explicit interactive online tool
  - D6.2 Synthesis report of the integrated sustainability assessment
  - D6.4 Methodological handbook
  - D6.5 Issue briefs for practitioners and policy makers

Multi-actor Engagement

- Managing & monitoring multi-level transdisciplinary **Multi-Actor Platforms (MAPs) to foster engagement, learning and cooperation** of key actors of agro-ecological farming systems
  - Selection pool of EU level and local MAP participants from individuals, groups and/or institutions which affect or are affected by the agro-ecological value chain
  - **Consultations and group learning processes**, integrating practical and theoretical knowledge and a **science-policy** dialogue through participatory processes
  - Monitoring and assessment of engagement
  - Project Advisory Group, effective collaboration with DG Agri Policy Officers, REA project advisor & **H2020 projects**
  - Expertise combined in the **Stakeholder Reference Group**



- **Key deliverables:**
  - D7.1 and D7.2 Guides on transdisciplinary and multi-actor framework
  - D7.3 Evaluation of transdisciplinary tools and methods

Policy Context of UNISECO

- **Farm to Fork Strategy and Biodiversity Strategy 2030**
  - Sustainable food production and consumption
  - Agro-ecological transitions and F2F targets: e.g. pesticide reduction, nutrient management, and reduction of GHG emissions
  - A significant increase in the proportion of agricultural land managed according to agro-ecological principles

- **CAP beyond 2020**
  - Green architecture: improved synergies between different environmental legislation and interventions
  - Eco-schemes: agroecology one of the four indicated flagships

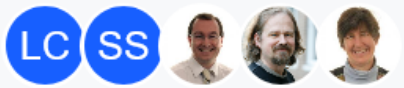
- **European R&I partnership on agroecology living labs and research infrastructures**
  - Socio-economic and policy barriers and drivers of agro-ecological transitions
  - Governance networks and key actors in farming and food systems

Conference Sessions and Booths

Schedule

Today 9:00AM–10:00AM · Stage

P-01 Welcome and conference introduction



Today 10:15AM–11:30AM · Stage

P-02 Webinar: Governance and sustainability of agro-ecological transitions – Synthesis of main findings and recommendations

Strategies of agro-ecological transitions/ EU-level sustainability implications of agro-ecological transitions / Policy recommendations

Today 11:45AM–12:30PM · Stage

P-03: Webinar: Agro-ecological knowledge hub and the SESSIT tool

Today 12:30PM–1:00PM · Stage

P-04: Introduction to the afternoon for the booths and two rounds of parallel sessions on lessons on governance and sustainability implications of agro-ecological transitions in European farming systems

Project overview and main findings

Conference Sessions and Booths

Today 2:30PM–3:30PM · Sessions

S-01: Lessons and insights from conventional and organic dairy systems (first round)

Case studies from the Czech Republic, Finland, Latvia and Lithuania.

Today 2:30PM–3:30PM · Sessions

S-02: Initiating transitions in intensive arable and livestock systems (first round)

Case studies from Austria, Switzerland, Germany and Hungary

Today 2:30PM–3:30PM · Sessions

S-03: Lessons and insights from Mediterranean perennial systems (first round)

Case studies from France, Greece and Italy.

Today 2:30PM–3:30PM · Sessions

S-04: Lessons and insights from mixed farming systems (first round)

Case studies from Romania, Scotland, Spain and Sweden

Case studies

Conference Sessions and Booths

Today 2:30PM–3:30PM · Sessions

S-05: Territorial level impacts of large-scale implementation of agro-ecological practices (first round)

Today 2:30PM–3:30PM · Sessions

S-07: Roles and experiences of Multi-Actor Platform approach in agro-ecological transitions (first round)

Today 2:30PM–3:30PM · Sessions

S-06: SESSIT: Socio-ecological system interaction tool (first round)

Territorial level analysis, SESSIT and Multi-Actor Platforms

Conference Sessions and Booths

Information booths with story maps and other material

Partners

UNISECO

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THÜNEN

crea
Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria

AGRICULTURAL UNIVERSITY OF ATHENS
ΓΕΩΠΟΝΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ

BOKU
University of Natural Resources and Life Sciences, Vienna

The James Hutton Institute

UNIVERSITY OF ABERDEEN

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AGRO SCHOOL FOR LIFE

BEF LATVIA

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GEONARDO
STATE OF THE ART AND BEYOND

Luke
NATURAL RESOURCES INSTITUTE FINLAND

SLU
SVERIGES LANTBRUKSUNIVERSITET

Nafarroako Ingurumen Kudeaketa, S.A.
Gestión Ambiental de Navarra, S.A.

WWF

IAEI
INSTITUTE OF AGRICULTURAL ECONOMICS AND INFORMATION

ELO
European Landowners' Organization

BIOINSTITUT

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#UNISECOresults https://uniseco-project.eu

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European Union's
Horizon 2020 Programme
GA N° 773901

UNISECO
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18-19
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2021

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