Bringing Science to Society through Co-Innovation and Co-Creation – The Soil-Health and Food Mission

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What indicators do we need and who defines them - CAP?

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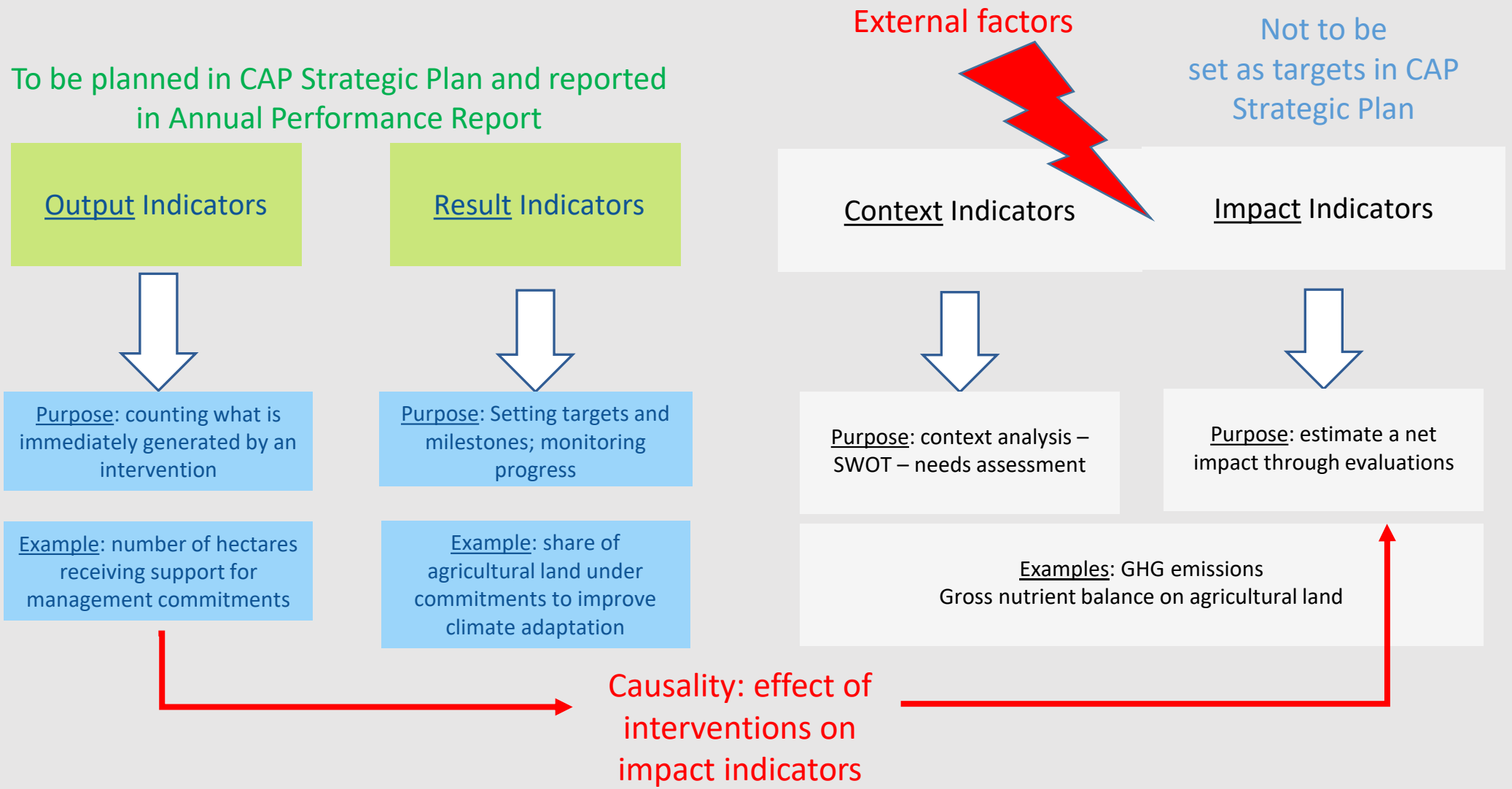
OUTLINE

- CAP Indicators basic concepts
- Period 2014-2020: CMEF
- Period 2023-2027: PMEF
- 3 examples to highlight challenges and management opportunities on environmental practices - indicators
  - A farming practice: agroforestry
  - An environmental issue and its indicators: soil
  - How to measure biodiversity? Landscape features
- Some conclusions

CAP INDICATORS – BASIC CONCEPTS



THE CAP 2014-2027

- Indicators organized in the Common Monitoring and Evaluation Framework
  - Legal basis is in secondary legislation (Implementing act)
  - Technical fiches for methodology
  - Output – result indicators strongly based on measures and schemes, separately for each part of the CAP (Direct Payments and Rural development)
  - 200 main indicators → more than 900 sub-indicators
  - But still many gaps existing: data availability, delayed data collections, areas with few indicators available (biodiversity – water)

- Dissemination: indicators collected from 2014 for the first time in a common DG AGRI database, still with a lot of manual interactions, but improving year by year

A SHIFT FROM COMPLIANCE TO PERFORMANCE

- CAP Period 2023 – 2027: a stronger focus on performance

- The Performance Monitoring and Evaluation Framework
  - PMEF indicators are in Annex 1 of the CAP strategic plans regulation:
    - Higher visibility
    - Methodologies developed within the Commission and with Member States from the beginning
  - Continuity with the framework (and experience) in the previous period
  - Adapted to the new delivery model: result indicators with targets based on CAP objectives – related issues

DISSEMINATION AND KNOWLEDGE BASE

Improved tools

- AGRIVIEW data warehouse
  - Agri food data portal CAP indicators dashboards (including Data explorer for full dataset) https://agridata.ec.europa.eu/extensions/DataPortal/cmef_indicators.html
  - Analytical factsheets by MS (soon to be transformed in a dynamic dashboard) https://ec.europa.eu/info/food-farming-fisheries/farming/facts-and-figures/performance-agricultural-policy/agriculture-country/cap-specific-objectives-country_en

- Synthesis of scientific literature/knowledge to improve agri environmental farming practices intervention logic - indicators measurement: results published on a wiki website shared between the Commission and Member States

EXAMPLE OF A PRACTICE: AGROFORESTRY

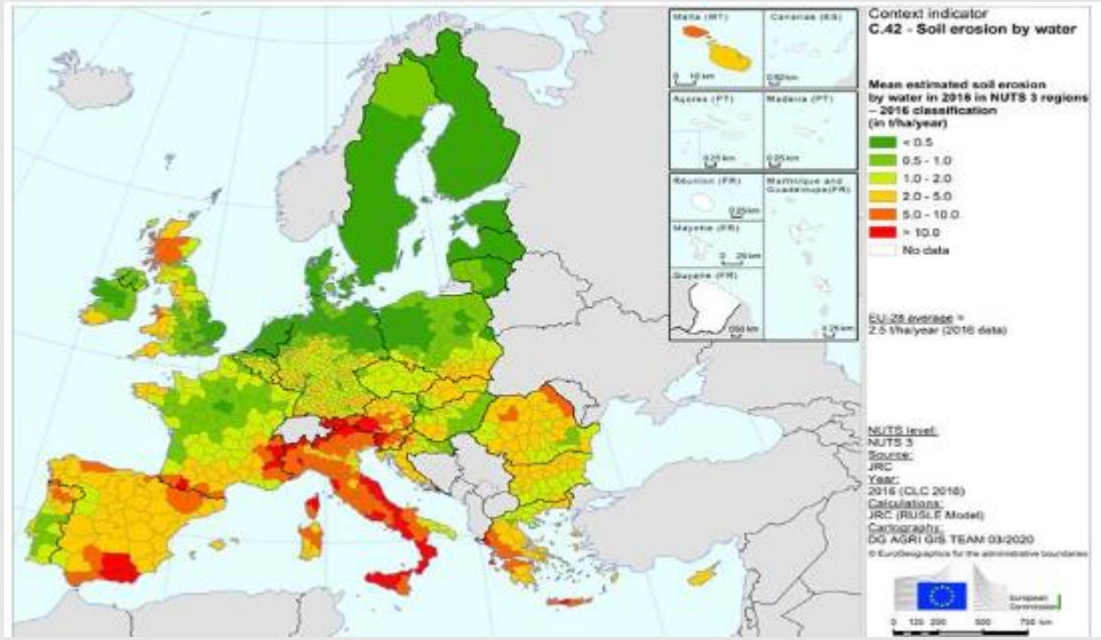
- Agroforestry: growing crops – livestock together with trees on the same parcel

- **Challenges**
  - Definitions: difficult, compared to different contexts and similar land uses
  - Holistic approach: multiple impacts on mitigation, adaptation, resilience (economic – environmental), biodiversity, soil
  - Traditional practice (dehesas – montados in ES - PT), very difficult to expand its uptake in other areas
  - Level of detail: RD measure include together agroforestry, afforestation on agricultural areas, forest management
  - How to improve measurement:
    - Basic quantification missing (linked to definition)
    - Knowledge gaps: less research in EU compared to sub tropical areas
    - Data collection: LUCAS survey with dedicated codes, but need to obtain area estimations

EXAMPLE OF INDICATORS: SOIL

- Main CAP context indicators, both calculated by JRC (https://esdac.jrc.ec.europa.eu/)
  - Soil organic carbon in agricultural land
  - Soil erosion by water - Percentage of agricultural land in moderate and severe soil erosion

- **Challenges**
  - Soil change locally: modelling approach
  - Ground data necessary → LUCAS as a main EU level source
  - Difficult to extend the same methodology and involve other subjects (i.e. Member States)
  - Causality: organic carbon evolve very slowly in the soil, difficult to measure improvement from CAP interventions
  - External factors: erosion depends very much from slope, rainfall and soil characteristics
  - Need to highlight hotspots: peatland and wetland account for most of emissions, but detailed mapping still ongoing



HOW TO MEASURE BIODIVERSITY? THE CASE OF LANDSCAPE FEATURES

- **Challenges**
  - Definitions and typologies change depending on the context
  - Many different elements scattered on the territory with different densities
  - Basic quantification (areas) vs biodiversity value
  - Link presence of landscape features to agricultural areas/activities

- **Context: remote sensing vs field approach**
  - Remote sensing: Small woody features Copernicus layer
    - Satellite information more efficient for area quantification (but detection issues)
  - Field approach: LUCAS - EMBAL
    - Field survey necessary for ecological/qualitative information

- **CAP Implementation**
  - National choices (definitions) on both GAECs and EFA
  - Quantification available only for EFA

SOME CONCLUSIONS

- Environmental objectives: **each environmental issue is different** and have to be measured by different means
  - Inputs (fertilisers – pesticides – water): need to get hard data at farm level
  - Biodiversity: local phenomenon vs global measurement
  - Soil – emissions: mostly from models, causal relationship very important for quantifications
- Acknowledge the **multiple effects** of CAP interventions, not only on environment
- The **level of detail** of both indicators and interventions have to be adequate
- Focus on **quantifications**: methodologies have to be pragmatic and hard data must be available
- **Data use**:
  - wide dissemination through dashboards
  - microdata for evaluations and models (i.e. impact assessment)

SOME CONCLUSIONS

- Improve the framework on a **long term perspective**
  - Coordination and synergies: share goals and resources
  - Informative needs (e.g. new areas such as pollinators or animal welfare)
  - Fill data – knowledge gaps
  - Improve data collections
    - Confidentiality issues: collect detailed data, disseminate statistics
  - Improve data management
    - Policy communication (tables EU-MS level) vs detailed datasets (microdata - maps)
    - More resources on automation and analysis