

EURAGRI



Wrap-up: a (tentative) synthesis of key messages

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The challenges (interconnected)

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- **Population**
- Resources (energy, materials, water, land, ...)
- Climate change
- Rising economic powers; multipolar/apolar economy (**competition for resources**); BRICS+MINT(+MENA)
- **Price** volatility
- Poverty/Malnutrition (incl. Obesity)
- Political instability (N.Africa, Middle East, RUS/UKR, ...)

The challenges in the Mediterranean Region

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- **Population:** large (40% of EU-28), growing and young!
- The future of the Med. Countries is **relevant for all Europe**
 - ✓ Economy and political instability
 - ✓ Poverty, lack of jobs, immigration
 - ✓ Health (animal health and zoonoses)
- EU-Med cooperation as a **model** and testing ground for a broader geographic area (see EU-Africa cooperation):
 - ✓ Multilateralism, scientific diplomacy
 - ✓ Policy and intercultural dialogue
 - ✓ Networking, promote south-south interactions (**e.g. Arimnet**)
 - ✓ Strengthen local AKIS and knowledge



- *'Is agricultural research too serious a matter to be left to agricultural scientists?' (G.Clemenceau, mod.)*
- Social awareness/responsibility of researchers, of research funding and performing Institutions, of industry; social consequences of innovation
- **Break the boundaries**; innovation occurs at the borders between knowledge fields (e.g. genomics, precision agriculture, robotics, nutrition)
- New competencies needed: integrators, brokers ('silos breakers'), **transdisciplinarity** built into academic careers
- **Sustainability** from concept to science (metrics?); *'Sustainability Readiness Level' (?)*
- **Bioeconomy**: still a fuzzy concept (different meanings for different sectors); here to stay or 'the latest buzzword'?



- **Uncertainties**

- ✓ What do we take for granted that might be changed? What is just an extrapolation of current trends? (e.g. convergence of diets, meat consumption, ...). Think 'out of the box'.
- ✓ Social acceptance (GMOs, Synthetic Biology, Nanotech, Diets).

- **Dilemmas/contradictions**

- ✓ Food vs Feed vs Energy vs Materials vs Ecosystem services vs ...
- ✓ Efficiency vs Diversity
- ✓ Global vs Local, Interdependence vs Self-sufficiency
- ✓ Robustness vs Resilience, Long- vs Short-term priorities

The role of research (1)



- **Balanced** approach between challenge-based research and curiosity-driven research (for positive spill-overs)
- Science to provide **convincing evidence** to support desirable transitions (agroecology, ecological intensification, sustainable food systems, ...)
- **Broaden focus** from food 'availability' to include 'accessibility', 'acceptability', 'appropriateness' and 'agency' (Cecilia Rocha's, CSFS, '5 As' of food security)
- **From trade-offs to synergies** (e.g. N fertil. vs proteins in wheat); the good choice the easy choice; more crop per drop (N.Modi); reduction of waste; ecological intensification: **excellent science needed!**
- Anticipate/guide consumers' needs/expectations; consumers' habits as a key driver; **sustainable diets**

The role of research (2)



- **Global view**; international scope of national initiatives; avoid the risk of autarchy (a temptation when national financial resources are under stress)
- North-South **cooperation** (close the wealth gap, close the knowledge gap); East-West cooperation (**coopetition?**); global issues are common
- Cherry-pick the best from everywhere (waste treatment, diets, environment protection); **learn from best practices**; no need to reinvent the wheel
- **Complexity** (*chaos theory*); unpredictability of very complex systems (*chaos theory*); be prepared for the 'black swan'.

Is the perfect storm out there? Are its occurrence and consequences predictable from previous experience or by available data?



- Priority on joint initiatives
 - ✓ ERA-Net, JPI, JTI, KIC, JRS (e.g w. China)
 - ✓ ... but 'who coordinates the coordinators?' Still a high level of overlapping, duplication, parallel efforts
- Coherence with high-level priorities
 - ✓ evaluation systems, holistic approach, transdisciplinarity, multi actor research; from projects to programmes
 - ✓ balance industry competitiveness with access to knowledge; proprietary vs shared knowledge; global companies do affect national policies (lobbying, jobs, delocalization)
 - ✓ public/private collaboration at 'variable geometry'; **TRL (MRL) as a guiding concept?** Research for the public good
- Restructuring national R&I systems (with a 'smart specialization' logic)



- Central role of 'foresight' exercises to provide ground for policy development; best knowledge (educated guess) of possible futures
- Central role of AKIS in bridging the gap between research and innovation, lab and industry, knowledge and economy (knowledge, entrepreneurship, social acceptance, ...); not linear, not bidirectional but interactive (many to many) process
- EIP (based on OG) as a model; local vs international dimension (?): 118 Rural Development Programmes in 28 MS
- EURAGRI to improve visibility, knowledge sharing



- Agriculture (incl. Food/Feed, Forestry, Blue sector, BBI, ...) at the centre of the scene
- Bioeconomy (KBBE!) Knowledge makes the difference in a flat world: research and education keys to stay afloat and prosper
- Sense of urgency: change of approach to production, consumption, processing, storage, recycling and disposal of bio-resources
- The Big Data + Broadband + Processing capacity revolution. Open Data for Agriculture (G8 + G20 + GODAN + ...)
- Genomics+Big Data: food vs genome vs human biome.

Knowledge is probably the only resource that grows with use



The future
is biodiverse

CINCOVA
4.90 K