European Agroforestry in Global Context:
An AGFORWARD Roadmap to December 2017

A Mini Workshop at AGFORWARD General Assembly
MAICh, Chania, Greece
23 – 27 June 2015

- Global Trends in Agroforestry: A Quick Overview
  – PK Nair
- Lessons from the North American Experience
  – Shibu Jose
- Discussion

Global Trends in Agroforestry: A Quick Overview

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(AGFORWARD External Advisory Panel)

Workshop @
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The Coming of Age of AF…

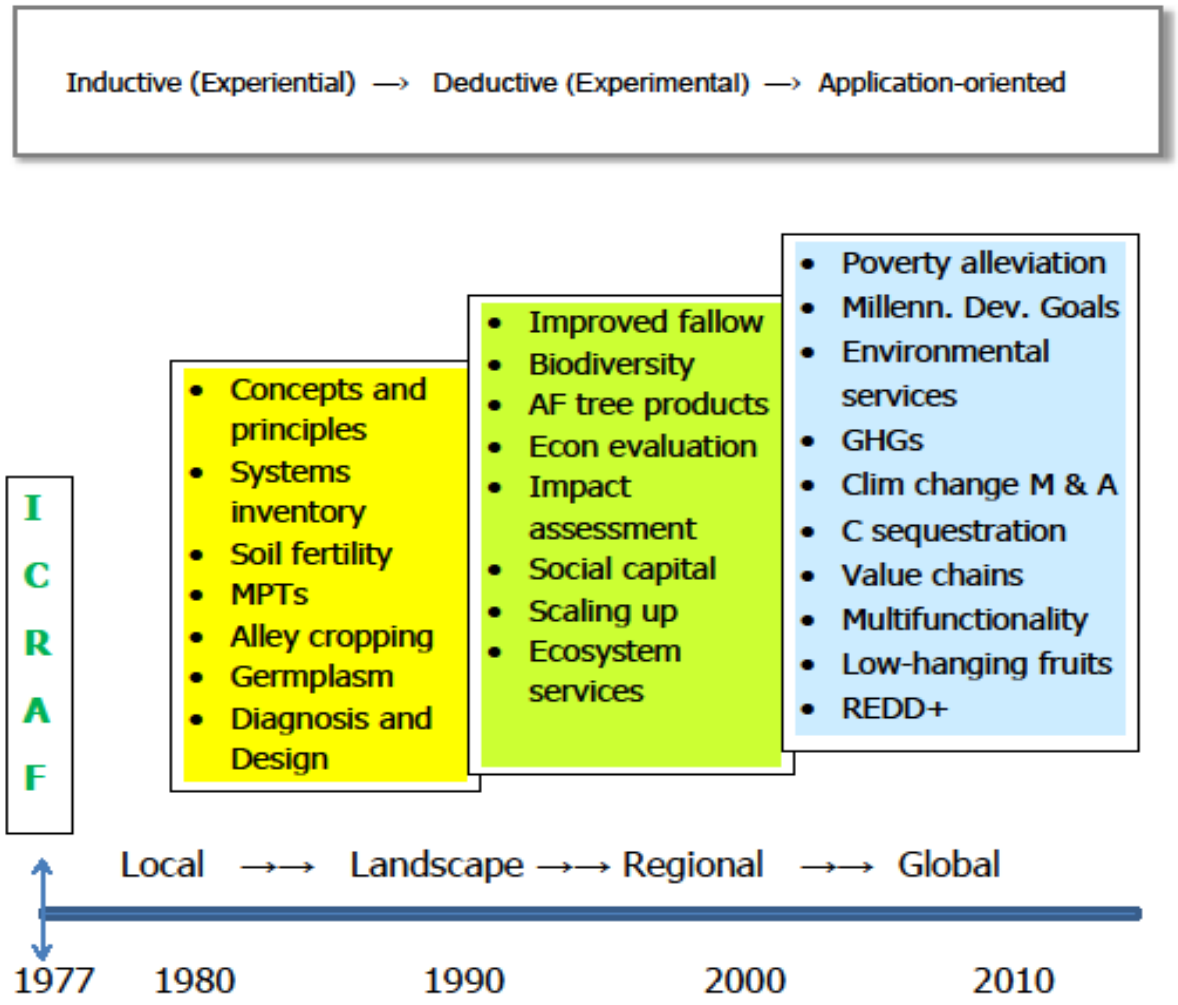
During the past 35 years

- Transformation of AF from a vague concept to a robust science-based land-use discipline.
- Clear demonstration of its role:
  - ✓Sustaining crop yields
  - ✓Diversifying farm production
  - ✓Realizing ecosystem services
  - ✓Ensuring environmental integrity

Represents an example of transforming traditional practices into science-based technologies to address land-management problems especially of poor farmers.

AGROFORESTRY

Three decades of Research and Development Programs, Paradigms, and Sound-bites



Nair (2012)

Agroforestry and the Top Ten Land-Use Challenges

- Poverty
- Food Insecurity
- Deforestation
- Fodder- and Fuelwood Shortages
- Land Degradation
- Environmental Concerns
- Climate Change
- Biodiversity Decline
- Water Quality Deterioration
- Lower Quality of Life

Agroforestry: A Major Component of Development Paradigms

- Agroecology
- Agroecosystem mgt
- Biological corridor
- Climate smart agriculture
- Conservation agriculture
- Ecoagriculture/Ecofarming
- Evergreen agriculture
- Forest farming
- Holistic land management
- Integrated natural resource management (NRM)
- Integrated watershed mgt
- Landcare
- Multifunctional agriculture
- Organic agriculture
- Permaculture
- REDD/ REDD+/ REDD++
- Satoyama (Japanese)
- Social forestry
- Sustainable agriculture
- Sustainable intensification

Agroforestry figures prominently in the concept of all these and many other similar paradigms

Current Global Issues Related to Land Management

- Climate Change
- Ecology – Economy Divide
- Organic – Chemical Divide
- Sustainability
- Ecosystem Services

Sustainability …

- A large variety of explanations, objectives, and aspirations...
- All are related to human survivability on planet Earth
- The WCED (1987) definition is still widely used:

  Meeting the needs of the present generation without compromising the ability of future generations to meet their own needs

- S*ustainability* encompasses the interconnected domains of ecology, economics, and social issues

Climate Smart Agriculture

- An integrative approach to addressing the interlinked challenges of food security and climate change
- Three objectives:
  - ✓ Sustainably increasing agri productivity to support increases in farm incomes, food security and development
  - ✓ Adapting and building resilience of agri and food security systems to climate change at multiple levels
  - ✓ Reducing greenhouse gas emissions from agriculture (including crops, livestock and fisheries)

  At different scales: from farm to landscape, from local to global, and over short- and long time-horizons.
- FAO's Climate Smart Agri Discussion Group: csa@dgroups.org
- FAO video on CSA: http://bit.ly/FAO_CSA_Video

Ecology–Economy Relationship

- Remarkable growth in global economy during 1950–2000:

  Seven-fold increase ($ 6 trillion to $ 43 trillion) and the rise in living standards of people around the world.

- The Problem: Economy in conflict with Its Support Systems:

  The price we had to pay in terms of ecological destruction caused by the economic boom has not been calculated.

- Historical Lesson:

  When economy outgrows the natural base, both will suffer.

- The need: Environmentally sustainable economy (Eco-economy):

  Economic policies should be within the framework of ecology.

Economy should be a subset of the environment

Ecosystem Sustainability is a *Must*, not an *Option*

Organic – Chemical Divide

- No doubt, fertilizers can increase crop production.
- Long-term (over)use in fragile soils and low-rainfall conditions can lead to serious problems
- Fert. availability: a major issue in many places
- Fertilizer subsidies: can distort development agenda
- In many poor countries, the agri devpt paradigm is oriented to high-input “green-revolution” thinking
- Scant consideration of ecologically better options

It is NOT a question of “either – or”

Ecosystem Services: The Valuation Quagmire

- No proper methods for valuation of ecosystem services
- Most comparisons between org. and industrial agri are narrow and short-term; they do not account for negative externalities of industrial agri and positive externalities of organic agri.
- When such issues are considered, the results become highly convincing in favor of organic agriculture (Crowder and Reganold, 2015)

AF Research and Knowledge Gaps

- Our knowledge base on AF systems is still rudimentary
- What we do not know far outweigh whatever little we know.
- “Good science” and “Bad science”
  - All reported results are not trustworthy
  - Shoddy experiments, flawed procedures, poor analyses… No problem; can still get published
  - The peer review process has lost some of its shine
  - Cherry picking of results
  - Negative results are not favored in publications

How do we get there?
An AGFORWARD Roadmap to Dec. 2017

- Positioning European AF in Global Context
- Enhancing the “image” of AF through high-quality, scientific publications
- Innovative research: basic and applied
- Influencing the policy and policy makers for greater share of resource allocation for AF
- Effective publicity campaign: spreading the AF message through PR and extension outlets