



Policy Debate

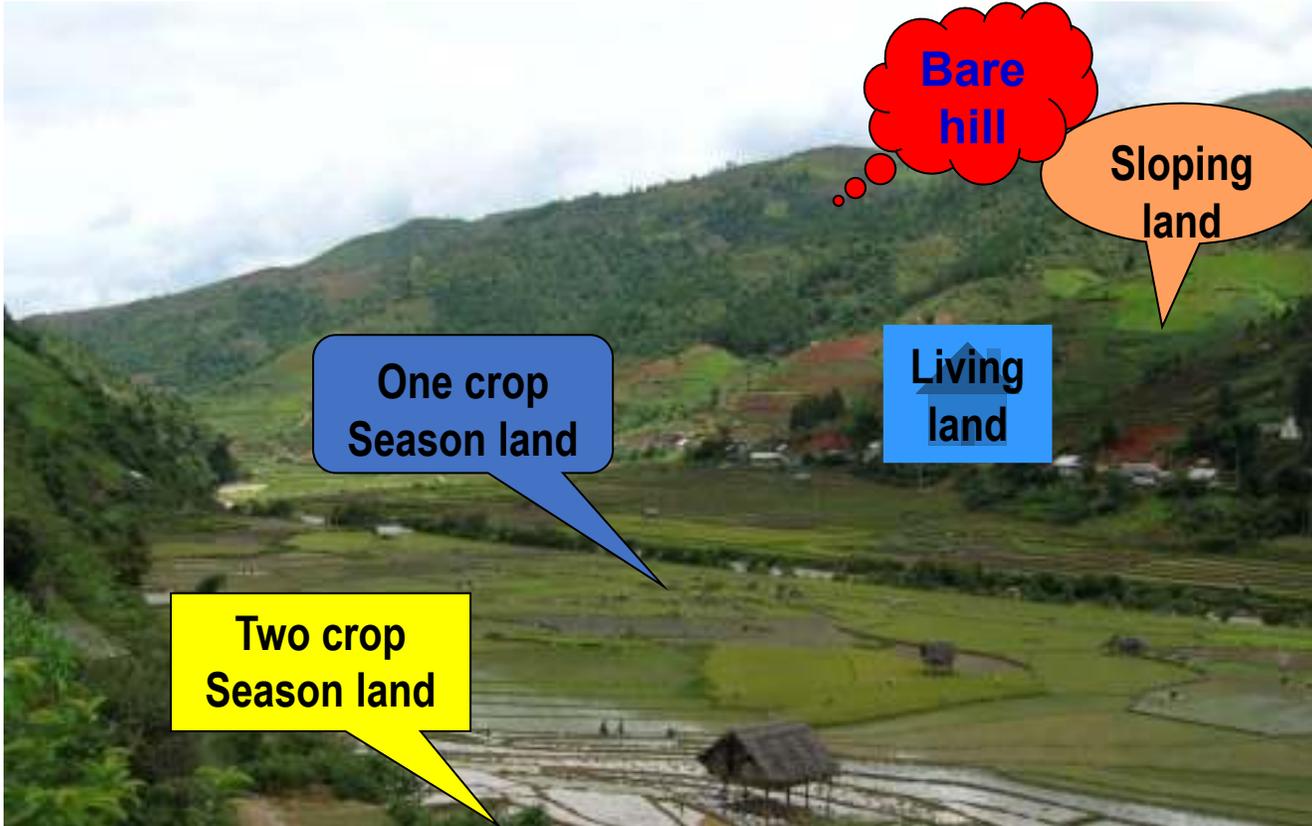
**From agroecological practices to policy approach:
Challenges and lessons learned from NOMAFSI**



VAAS, tháng 11 năm 2021

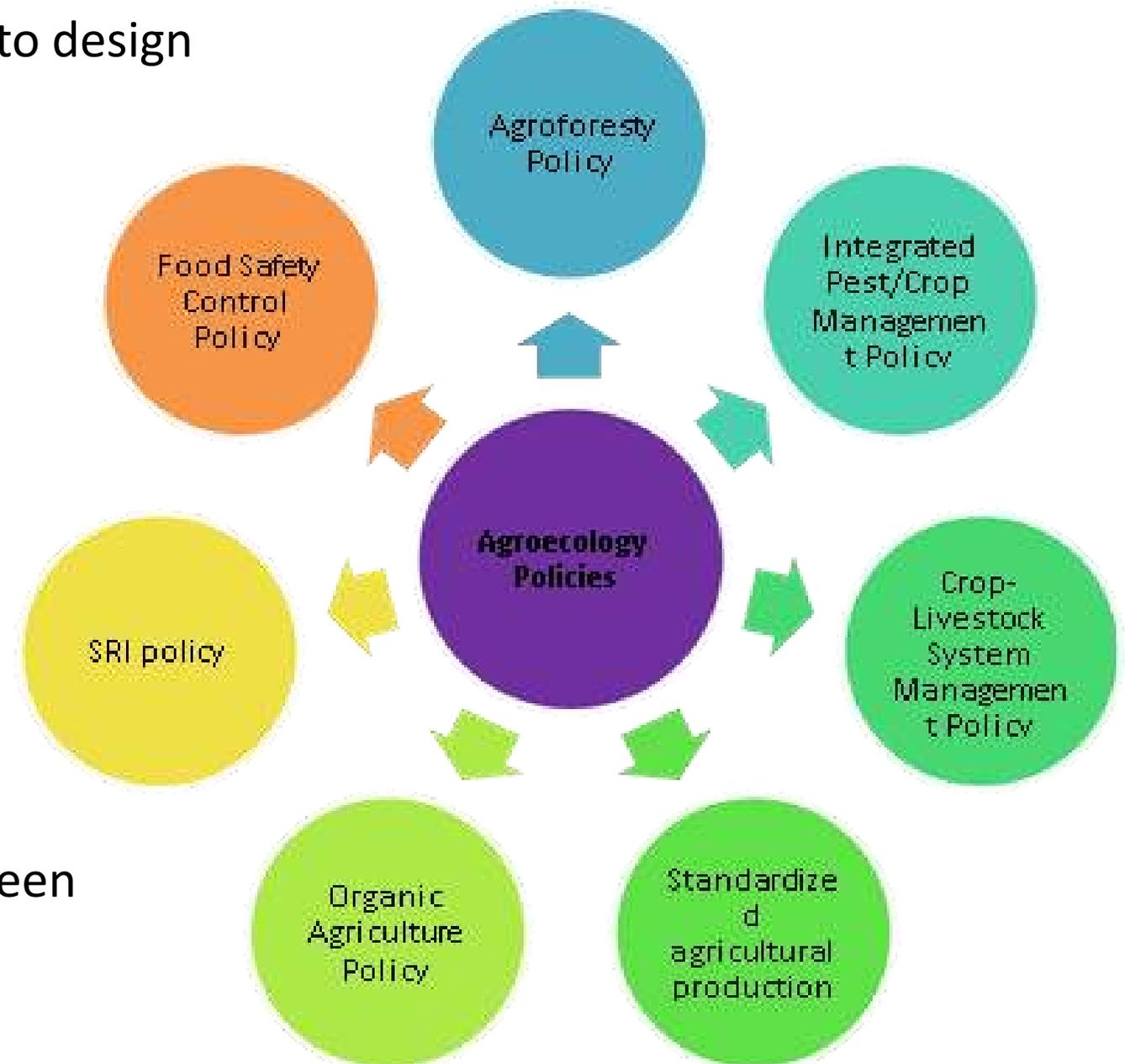
LANDSCAPE OVERVIEW

NMR



- Total land area: 33.1 million ha,
- Agricultural lands: 7.3 mill ha (21%).
- Sloping lands: 25 million ha (75%),
+ 4,5 million ha with slope less than 25%.
+ 20,5 mill. ha slope higher than 75%.
- Ethnic and poverty rates are the highest

- Application of ecological principles to design and manage agriculture sustainably



- Ecological principles: interaction between living and non-living components

AE development and policy process for NOMAFSI

- Project trial/demos
 - Identify the AE practices
 - Small scale

- Project models (KN, P)
 - Demonstrate the AE practices
 - Large scale

- Project modeling
 - Validate the real results
 - Large scale

- Project technology transfer
 - Local extension participation
 - ToT, trainings, field days; study tours

- Project technology transfer
 - Protocol
 - Policy brief

- Policy advocacy
 - Policy local influence
 - Policy integration



NOMAFSI's mission on AE

- + Research for identifying the potential Agroforestry systems
- + Actively provide technical support for building Agro-forestry model at household or landscape level
- + Developing and promoting market-based agroforestry and forest rehabilitation options



AE development from NOMAFSI

- **Mulching for maize cultivated on slopping land:** Reduce erosion 50-90%; Yield increase 20-60%
- **Mini-terrace and DMC:** Reduce erosion 65-99%; Yield increase 30-60%.
- **Maize intercropped with legume:** Economic efficiency increased 20% - 30%
- **Cassava intercropped with legume:** Soil fertility improvement
- **Fruit intercropped with cover crop (Arachis pintoi)**



AE development from NOMAFSI

- **Building capacity for farmers:** VietGAPs, safe area production: safe for the users, safe for food products and, safe for the environment
- **Agroecological pest controls (ACP):** Pheromone, biochemical pesticide development,
- **Agroforestry:** Evaluate the benefit of shade trees and/fruit tree on the areas of Arabica coffee, tea
- **Vegetable systems:** Diverse varieties, less chemical use, more market approaches



AE development from NOMAFSI

- Testing and cultivating improved forages and legumes on sloping land for cattle feed: New forages (grasses and legume) intercropped with timber and fruit farms.



Main results

- Increase in crop and livestock productivity, quality and safety
- Additional income and local livelihood
- Resilience (nutrition recycle, pests interactive functioning, soil water, biogas) to climate change
- Reduce soil erosions, soil nutrient losses/protect soil fertility and reduce water contamination
- Social network strengthen, gender improvement and ethnic inclusion

4. CHĂM DƯỠNG THỰC VẬT MỀM
Mục tiêu chăm sóc thực vật mềm là giúp cây có 1 thân khỏe để chịu được các tác động của sâu bệnh và hạn hán. Các công việc chăm sóc thực vật mềm bao gồm:
- Làm cỏ dại: thường xuyên
- Làm 2-3 lần tưới nước
Thường xuyên kiểm tra sâu bệnh, đặc biệt là bệnh nấm hại thực vật mềm. Nếu phát hiện bệnh, cần phun thuốc diệt nấm ngay lập tức.
Bệnh thối rễ do dịch khuẩn Fusarium gây ra. Bệnh thối rễ do dịch khuẩn Fusarium gây ra. Bệnh thối rễ do dịch khuẩn Fusarium gây ra. Bệnh thối rễ do dịch khuẩn Fusarium gây ra.
5. THU HOẠCH
Thu hoạch thực vật mềm khi đã đủ lớn. Sau khi thu hoạch, cần xử lý thực vật mềm ngay lập tức để tránh ô nhiễm môi trường.
Chú ý: Khi thu hoạch, cần đeo khẩu trang và găng tay để tránh tiếp xúc trực tiếp với thực vật mềm.
Liên hệ: 0903 000 000 hoặc 0903 000 000



Extension and communication in policy support

- Conferences, forums, workshops:
 - 3rd CA conference in Southeast Asia (2012, Hanoi)
 - EA stakeholders' workshops, schools (2017 in Hanoi, Can Tho, My Tho)
 - Brisbane conference 2014
- Network CANSEA and AliSEA; organizations: VAAS network, ACIAR, ICRAF, CIRAD, CIAT, Aus4Innovation
 - Exhibition “Conservation Agriculture and Direct Seeding in Mulch-based Cropping Systems in Southeast Asia and the World” in Hanoi, 2011
 - Showing film and discussions on CA sustainable intensification, in Hanoi, 2013
- Trainings: farmers and extension officers
 - Agro-ecology and agroecological control of crops (ACP)
 - Conservation agriculture(CA): NOMAFSI & SFRI researchers; NOMAFSI became the leading institution in CA R4D in Vietnam
- Communication documents
 - Policy brief (cassava)
 - Protocols (sloping land cultivation technique); safe tea protocol
 - Technical reports

AE challenges for NOMAFSI missions

- Understand success achieved remains fragile:
 - Unsustainable adoption of project practices (case of Agroforestry/ADAM)
 - Unsustainability of project results to scale out (case of ACIAR maize and other)
 - No direct policy on agroecological practices
 - Driving force of market dynamic, climate change and local culture interest
 - AE practices are unclearly proving the effectiveness/complicated/
 - Internal project design systems exclude the policy advocacy
 - Role of DARD in transferring AE practices



Causes of unaccepted/limited AE adoption

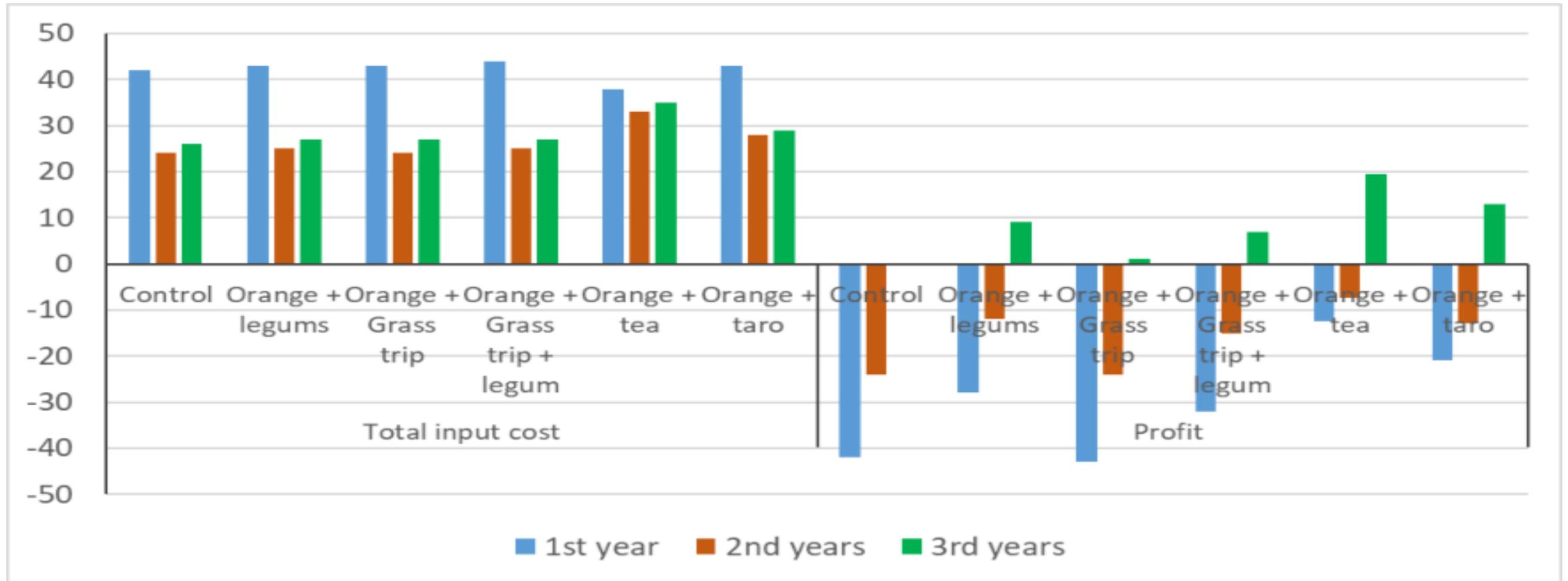
- Limited and complicated/difficult for application
- High input costs, high risks
- Unforeseen the immediate effectiveness and likely to have in a long term
- Required more labor
- Do not have markets/branch names of agroecological products, prices are not different
- Consider local cultural context in conducting agroecological practices
- Small scale: household scales/farmer groups scale, difficult to compliant with standards (VietGAP, GPS...)
- Do not have agroecological practices integrating in province/national policies
- Equipment and tool are not suitable and need to improve

Labor pressure

Practices/items	Year 1 (man-day/ha)	Year 2 (man-day/ha)	Year 3 (man-day/ha)	Total (man-day/ha)	Increased (%)
Control (mono-orange)	120	140	160	420	0%
Orange + legums	140	192	207	539	28,3%
Orange + Grass Grass trip	130	170	185	485	15,48%
Orange + Grass Grass trip + legum	145	190	210	545	29,7%
Orange + tea	130	140	170	440	4,7%
Orange + taro	130	180	200	510	21,4%

Labor required on agroforestry practices are all higher (4.7%-28%) than conventional practices

Economic benefit



- Economic benefit from agroforestry demos in Van Chan Yen Bai show higher input costs and negative economic benefit at the first 2 years while only starting having positive profit from the third year

Unsuitable innovative tool



Innovative equipment and tools are not suitable and need to improve

Recommendations

Agroecological practices are required:

- Develop agroecological policy/integrating to local/national policies to support
- Have agroecological markets/standards/branch to support agroecological products
- Practices in landscape levels/community approach
- Co-funding are recommended from Central-local-NGO-private sectors to leverage the funding resources and effective transfer to end-users
- More hand-on participatory research and trainings
- Incentives for agroecological practices
- New introduced techniques should be integrated between agriculture and livestock (cycle system)



Customer trust

Thank you

