

Socialist Republic of Vietnam*c) Finalizing national strategy*

Based on priority technology action plans in the sub-sectors, a national strategy and action plan for the technology development targets are presented in Table 30.

Table 30 - National Strategy (technology transfer and development for adaptation)

	0-5 years	5-10 years	10-15 years
Large-scale, medium and short-term technology			
Shifting from rice to upland grains			
Creating a network of experts on agriculture, hydrology, industrial and fruit crops	X		
Locating areas that needs shifting triple cropping to double cropping plus shrimp/fish/poultry farming	X		
Increasing the leading role of the central and local governments	X		
Raising awareness of agricultural extension agencies on climate change	X	X	
Analyzing the advantages of the technology	X		
Introducing crop varieties with higher value than rice crops	X	X	
Multiplying the proven success modal	X	X	
Public awareness raising	X	X	X

1.4.2.2 Brief summary of project ideas for international support (Annex 3)

1.4.3 Shifting from triple cropping to double cropping plus shrimp/fish/poultry farming

1.4.3.1 Technology action plan for shifting from triple cropping to double cropping plus shrimp/fish/poultry farming

a) Aggregation and rationalization of measures identified for technology acceleration

Similar to the above section, the list of measures identified for formulation of a national strategy to accelerate the development and transfer of technologies can be seen in Table 31.

Table 31 - Aggregation for strategy formulation

Strategic measure	Accelerating innovation RD&D	Accelerating deployment	Accelerating diffusion
Creation of Network			
Creating a network of experts with expertise on agriculture, hydrology, plant protection and livestock veterinary	X	XX	XX
Policies and Measures			
Locating areas that needs shifting triple cropping to double cropping plus shrimp/fish/poultry farming	X	X	X

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Support policies for the deployment of the technology	X	X	X
Organizational/behavioral change			
Increasing the leading role of the central and local governments	X	X	X
Raising awareness of agricultural extension agencies on climate change	X	XX	XX
Rules and mechanisms for coordination between sectors and organizations	X	XX	XX
Market support actions			
Creating market outlets for new products			
Planning and building appropriate infrastructure	X	XX	XX
Multiplying the proven success modal	X	X	X
Skills training and education			
Public awareness raising	XX	XXX	XXX
Mainstreaming into the official educational system	X	XX	XX

* Note: see Note under [Table 25](#).

b) Prioritization and characterization of technology acceleration measures

Similar to above, the measures were prioritized and characterized through a detailed process for an action plan, as seen in [Table 32](#) below.

Table 32 - Prioritization and characterization of technology acceleration measures

Sector: Agriculture							
Specific Technology and category: Shifting from triple cropping to double cropping plus shrimp/fish/poultry farming/ Small scale, long-term							
Innovation stage: Deployment – Diffusion							
Measure (grouped under core elements)	Priority	Why is it important?	Who should do it?	How should they do it?	Time-scale	Monitoring, reporting and verification for measure	Estimated costs (1,000 USD)
Creation of networks							
Creating a network of experts with expertise on agriculture, hydrology, plant protection and livestock veterinary	1	There is a need for inter-sectoral coordination in assessing adaptive capacity of rice and fish/waterfowl	MARD, MOST	Select experts of various principles Create a network and define the role of the stakeholders	3 years	MARD	86
Policies and measures							
Locating areas that needs shifting triple cropping to double cropping plus shrimp/fish/poultry farming	1	There is a need for relocation of suitable areas for technology application	MARD	Investigate, assess the water scarcity and economic efficiency of triple cropping Locate areas the need the new technology	5 years	MARD	192
Support policies for the deployment of the technology	1	There is no appropriate support policy for technology diffusion Helps to facilitate the deployment of research outcomes in production	MOST, MARD, MOF, MPI	Demonstrate the science and necessity of the technology Develop and bring into force appropriate policies and tax incentives to diffuse the technology	3 years	MOF	48

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Organizational/behavioral change							
Increasing the leading role of the central and local governments	1	Uniform instruction from the central through to local levels is the determining factor in the technology development	MARD, provinces	Integrate the technology into action plan at the national and local levels Form multi-sectoral taskforces and steering committees	4 years	GoV	480
Raising awareness of agricultural extension agencies on climate change	2	Agricultural extension agencies have limited understanding of climate change Agricultural extension agencies is the responsible organization for adaptation technology transfer	MARD	Prepare materials on climate change and adaptation measures Organize training courses for agricultural extension officials	5 years	MARD	240
Rules and mechanisms for coordination between sectors and organizations	3	Coordination between relevant agencies is weak. There is a need for a coordination mechanism to strengthen the implementation	MARD, MONRE, People Committee	Review existing legal documents Consult with stakeholders to make appropriate, feasible policies Develop and bring into force new coordination mechanism	2 years	GoV, National Steering Committee for Climate Change	5
Market support actions							
Creating market outlets for new products	2	Helps to ensure the market outlets for new products	MARD, MOIT, MOF	Research the market and create linkages with business organizations Organize marketing campaign for the product Create a new market for the product	5 years	MARD, MOIT	48
Planning and building appropriate infrastructure	1	Helps to ensure sustainable development Facilitate the deployment of the	MPI, MARD, MOC,	Investigate, design and develop investment plan for each period according to the priority level.	5 years	MPI, MARD	4,798

Part II – Technology Action Plans

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		new technology	Provinces	Plan and implement according the planning.			
Multiplying the proven success modal	2	Because of the long-standing traditional cultivation practices, people may not accept the new technology	MARD	Integrate into annual plans Conduct study tours to learn about existing modals	5 years	MARD	240
Skills training and education							
Public awareness raising	1	Because of the long-standing traditional cultivation practices, people may not accept the new technology	MARD	Organize training courses and workshops to introduce about the technology and share experience	10 years	MARD, MOST	144
Mainstreaming into the official educational system	2	Helps to prepare required human resources ready for the innovation and transfer of the new technology	MOET, MARD	Prepare teaching materials and textbooks Increase extracurricular activities	5 years	MOET, MARD	24

* Note:

See Note under [Table 26](#)

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Based on priority technology action plans in the sub-sectors, a national strategy and action plan for the development targets of shifting from triple cropping to double cropping plus shrimp/fish/poultry farming are presented in Table 33.

Table 33 - National Strategy (technology transfer and development for adaptation)

	0-5 years	5-10 years	10-15 years
Large-scale, medium- and short-term			
Shifting from triple cropping to double cropping plus shrimp/fish/poultry farming			
Creating a network of experts with expertise on agriculture, hydrology, plant protection and livestock veterinary	X		
Locating areas that needs shifting from triple cropping to double cropping plus shrimp/fish/poultry farming	X		
Support policies for the deployment of the technology	X		
Increasing the leading role of the central and local governments	X		
Raising awareness of agricultural extension agencies on climate change	X	X	
Rules and mechanisms for coordination between sectors and organizations (Multi-stakeholder platforms from local to national level) with possible links to regional and international institutions for backward and forward links for innovation and market respectively	X	X	
Creating market outlets for new products		X	X
Planning and building appropriate infrastructure	X	X	
Multiplying the proven success modal	X	X	
Public awareness raising	X	X	X
Mainstreaming into the official educational system		X	X

1.5 Summary

The national technology action plan for agriculture will be as follows:

From now to 2025: Continue assessing the potential for technology application as well as ongoing and future climate change and its impacts in Vietnam. Facilitate international cooperation in sharing experience and knowledge of management, especially between countries with the same level of development and similar climate conditions as Vietnam and other countries in the region. Develop plans to enhance human capacity through revising educational curricular and to support the improvement of local innovation and application capacity of the proper adaptation technologies for Vietnam. There are needs for researches on application of agricultural technologies and pilot several technologies in certain areas to test their efficiency. Continue the development and innovation the technology. Make appropriate support policies and mechanisms for research of priority agricultural technologies. Develop guidelines on technical requirements and mandatory procedures for relevant projects.