

Table S3. The role of stakeholders in promoting sustainable transformation in agriculture in China and the EU.

Stakeholder		China	EU
Government	Central government	<ul style="list-style-type: none"> ● Design and formulation of development routes and targets ● Reconciling regional development imbalances ● Monitoring the implementation of local government policies 	<ul style="list-style-type: none"> ● Consultation mechanisms and cross-compliance ● Aligning national interests ● Monitoring national implementation
	Local government	<ul style="list-style-type: none"> ● Implementing central government policies ● Promoting effective links between the various actors in the region ● Monitoring of the legal production of the various actors 	<ul style="list-style-type: none"> ● Policy implementation ● Over-disaggregation of responsibilities and inefficiencies due to the complexity and heterogeneity of countries
	Service companies	<ul style="list-style-type: none"> ● Promoting the transformation of digital technology services into market-led agricultural production services ● Training for farmers in digital technology diffusion ● Play an analytical and influential role for agricultural information 	<ul style="list-style-type: none"> ● Digital technology outreach training for farmers ● Increased agricultural versatility ● Promotes the development of productive agricultural services
Market	Technology companies	<ul style="list-style-type: none"> ● Promote the development and use of agricultural information resources ● Improve the process of agricultural digital industrialization 	<ul style="list-style-type: none"> ● Reduces the cost of access to agricultural information ● Promotes the development and use of agricultural information resources ● Improves production efficiency and protects the environment
	Scientific research institutions	<ul style="list-style-type: none"> ● Providing technical and data support for digital technology services ● Developing new technologies to drive digital transformation in agriculture 	<ul style="list-style-type: none"> ● Technical and data support for digital technology services ● Highly segmented to provide commercial services to different actors
Society		<ul style="list-style-type: none"> ● Raising the issue of public services in rural China ● Presenting gaps in China's social management legislation 	<ul style="list-style-type: none"> ● Support for the sustainable transformation of agriculture for each subject
	Social organizations	<ul style="list-style-type: none"> ● Raising public awareness of the digital transformation of agriculture 	<ul style="list-style-type: none"> ● Providing data technology advice and services ● Promote the latest research findings on sustainable agriculture ● Promote policy implications

Farmers	<ul style="list-style-type: none"> ● Optimizing planting patterns ● Improving production efficiency ● Improving food safety ● Promote sustainable transformation of agriculture ● Breaking down information barriers 	<ul style="list-style-type: none"> ● Proactive technical advice ● Optimize planting patterns ● Improving production efficiency ● Promote sustainable transformation of agriculture
Farmers' organizations	<ul style="list-style-type: none"> ● Play the role of the last mile off agricultural extension ● Promote the professionalization of farmers ● Reducing information asymmetry 	<ul style="list-style-type: none"> ● Improve farmers' technological management ● Enhance farmers' capacity for innovation, democratic awareness and cooperation ● Facilitate communication and cooperation between different actors
Media	<ul style="list-style-type: none"> ● New media brings changes to agricultural information dissemination ● Promoting agricultural economic development 	<ul style="list-style-type: none"> ● Focus on information disclosure ● Promoting information transparency ● Communicating emotional and ethical standards