Regional Brief

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STRENGTHENING THE ROLE OF PUBLIC EXTENSION AND ADVISORY SERVICES IN ASIA

CONTEXT

Asia-Pacific is home to 63% of the global population, i.e., 4.9 billion people (ESCAP 2021). By 2030, Asia's population is projected to increase by approximately 250 million. About half of the world's undernourished and food insecure people live in the Asia-Pacific region, with more food-insecure individuals in Southern Asia than in any other subregion (FAO 2023). The agricultural sector, that includes agriculture, livestock, forestry, and fisheries, is one of the most important sources of income for many developing countries in Asia. The sector struggles with low productivity and income levels, leading to high prevalence of poverty in rural areas. Higher food, fuel, fertiliser and animal feed prices are exacerbating the problems of malnutrition and food security (FAO 2023). In Asia, agricultural production faces even more challenges due to shrinking rural populations as people migrate to cities, leaving behind older workers and women. Additionally, climate change, persistence of unsustainable farming practices, increasing pressure on natural resources, and market distortions have made agricultural development more complex in Asia.

Despite that, in Asia the agricultural sector has seen a structural transformation with an increase in high-value crops due to changing diets and export opportunities. The capital and resource intensity of agriculture has also increased. Rural households derive less than half of their income from farming, and non-farm employment has grown across Asia, especially in South Asia, providing jobs for the growing young population (Bresciani et al. 2019). Therefore, enhancing productivity of the agricultural sector is crucial for poverty reduction and economic transformation (ADB 2021). Extension and Advisory Services (EAS)[1] are crucial for this transformation, providing farmers with advice, facilitating innovations, and managing risks (Blum et al. 2020; Davis et al. 2020).

In 2022, the Rural Development Administration (RDA) of the Republic of Korea through its Asian Food and Agriculture Cooperation Initiative (AFACI), launched a project "Improvement of Rural Agricultural Technology Extension System in Asia (RATES)" to strengthen extension systems in 12 Asian countries.[2] The Global Forum for Rural Advisory Services (GFRAS) is a partner in this initiative and its regional network in Asia, the Asia-Pacific Islands Rural Advisory Services (APIRAS) is supporting the implementation of the RATES project. One of its early activities was to make an assessment of the EAS system in these countries. This brief is based on the assessment of EAS, especially focussing on the role of public EAS in these countries, the challenges they face, and identifying some of the potential ways forward to enhance the contributions of EAS.

EXTENSION AND ADVISORY SERVICES (EAS) IN ASIA

Though EAS has become pluralistic in Asia with increasing participation of the private sector, NGOs and Producer Organisations, the public sector EAS plays a dominant role, especially in South Asia and South East Asia (Yang and Ou 2022). The public

[1] Extension and Advisory Services are all the different activities that provide the information and services needed and demanded by farmers and other actors in rural settings to assist them in developing their own technical, organizational, and management skills and practices so as to improve their livelihoods and well-being.

[2] Bangladesh, Bhutan, Cambodia, Indonesia, Laos, Mongolia, Nepal, Philippines, Sri Lanka, Thailand, Uzbekistan and Vietnam.

sector EAS is represented by the Ministries/ Departments of Agriculture in most countries. Public EAS is often operating at three-four levels, viz., Central (national), Provincial (regional), District (county, commune) and in some countries even up to village level. At each level, public EAS performs different activities.

At the *central level,* the staff are involved in developing policies, programmes, strategies, guidelines, and manuals; planning development interventions; setting targets; maintaining databases, monitoring and evaluating service delivery; and coordinating activities with varied stakeholders as well as external donors. At the *provincial or regional level*, the main roles performed by EAS include formulating provincial level extension programmes and policies in line with national extension programmes and policies, stakeholder engagement, monitoring, supervision, coordination and capacity building of extension staff and lead farmers. At the *district, county and commune levels*, the staff are involved in implementing field extension programmes that involve demonstration of new technologies, mobilising farmers into groups, training farmers, and supporting distribution of subsidised inputs and financial incentives.

The public sector EAS personnel working at the field level in these countries are mainly occupied in implementation of agricultural development programmes that involve distribution of inputs (seeds of new varieties, farm machinery at subsidised rates, etc.,) and organising extension programmes aimed at creating awareness on new technologies and educating farmers on use of these. In some cases, public sector EAS are also involved in organising farmers as groups (user groups to manage natural resources or as farmer interest groups formed around specific commodities). In reality, more time is spent by the field extension personnel on distribution of subsidies and subsidised input, leaving only limited time for organising extension activities. Public sector EAS in most countries also face several challenges (which are discussed in detail later in this brief) that affect their performance.

In Central Asian countries, a robust, state-run agricultural EAS system is often missing or weak (Kazbekov and Qureshi 2011; Mirzabaev et al. 2009; Mogilevskii et al. 2017). In these counties, EAS is provided by Non-Government Organisations (NGOs) and private consulting companies, as seen in the case of Turkmenistan, Kazakhstan, and Kyrgyzstan. In 2021, Uzbekistan created a new Agricultural Knowledge and Innovation System (AKIS), combining education, applied agricultural research, and transfer of information and technologies to advisory services for farmers. The National Centre for Knowledge Innovation under the Ministry of Agriculture supports the provincial AKIS and district level agricultural advisory services using the existing premises of the agri-centres built by private entrepreneurs through Agrobank loans. In Mongolia, the National Agricultural Extension Centre (NAEC), was demolished in 2021 and this has weakened the delivery of public extension services to farmers.

Beyond public sector EAS, several other actors are providing EAS in Asia (Box 1). Agribusiness companies are increasingly providing extension support to farmers either to enhance the use of their inputs or to procure good quality produce needed by the industry/consumers from farmers. With climate change adversely affecting value chains, many agribusiness companies are trying to support farmers to climate proof their value chains and to meet their sustainability commitments. Many of them see EAS as a tool to enhance productivity and resilience of farmers (ISF Advisors 2020). NGOs and farmer groups in several Asian countries, especially in South-East Asia, are promoting agroecology by organising farmer trainings on minimising the use of external inputs in farming and enhancing networking and cross learning among farmers.

A pluralistic EAS is essential as it provides different types of knowledge and services according to farmers' needs. They are more effective and efficient if they are well-coordinated and managed, which is often not the case. A study by IFAD (2022) identified three key areas for governments in enabling a sustainable pluralistic extension in

Asia and Africa: establishing, coordinating and monitoring pluralistic extension systems that can help match the demand for and offer of services; providing initial or permanent investments, incentives and revenue streams; and quality assurance.

Box 1: Pluralism in EAS provision in Asia

In Nepal, apart from the public sector EAS, such as Departments of Agriculture and Livestock, several international and national NGOs offer extension support to farmers (Timsina et al. 2023). In Mongolia, the Mongolian National Crop Farmers Association (established in 2018 as an umbrella organisation for all farmer associations in the crop and horticulture sector) offers a range of information, advice and trainings to farmers. Apart from this, agribusiness firms (machinery and input traders, and processors) are increasingly delivering extension services to farmers.

In Sri Lanka, beyond the Department of Agriculture, the Mahaweli Authority of Sri Lanka and the Commodity Boards, EAS is provided by private sector (mainly agri-input companies) and agricultural cooperatives (Wanigasundera 2015). In 2017, Vietnam's agriculture sector was transformed into a pluralistic system involving farmers, the private sector, and NGOs. Apart from the government, research institutions, universities, private extension providers, and non-governmental organizations also provide extension services (Ngan et al. 2015).

In Laos, apart from the varied units under the Ministry of Agriculture and Forestry, private actors (for profit and non-profit associations), and farmer organisations provide extension support to farmers. The for-profit sector often operates mostly in more productive agriculture zones and work more with large farmers, whereas non-profit associations, which implement programmes with external donor support, work with poorer farmers (Jones et al. 2012). In Cambodia, the organizations delivering extension services include government extension workers (from MAFF, PDAFF, and CEW), faculty and researchers (RUA, CARDI and others), the private sector (East West Seed, CP, NIRAS, etc.), and NGOs (Chou et al. 2023a).

EAS APPROACHES

A range of approaches are used to provide EAS in the region. Organising demonstrations, trainings, field days and exposure visits are the most important approaches used by EAS providers in the region. Asian countries have a long history of promoting Farmer Field Schools (FFS), a group-based learning process that help in bringing about technological changes in agriculture. Though originally used for promoting integrated pest management (IPM), FFS is currently used to deal with a number of challenges including supporting transition to agroecology. A few countries are using fields/sites of lead/volunteer farmer to train other farmers and to demonstrate new technologies at the village level. These sites are called as Learning Sites for Agriculture in the Philippines, *Posluhdes* (Village Extension Centre) in Indonesia, and Agricultural Learning Centre (ALC) in Thailand.

Mobile phones are increasingly being used by public EAS to share information on weather, market prices, etc., as SMS/voice messages. Farmers are using social media, especially WhatsApp, Telegram and Viber to discuss problems and learn about potential solutions. Similarly, YouTube is emerging as an important source of learning on agricultural technologies by young farmers. Chou et al. (2023b) noted that in Cambodia, the Philippines, and Vietnam, digital extension methods encompass webpages, YouTube, mobile apps, social media, SMS, phone calls, media platforms, and ICT centres. However, several challenges still persist: slow internet connectivity, limited app usage due to registration requirements, farmers' digital literacy gaps, gender disparities, inadequate app responsiveness, and distrust of information from digital sources. Government extension workers also lack the necessary competence for digital services.

POLICY ENVIRONMENT FOR EAS

Overall, in Asian countries there is an enabling environment for agricultural development and increasing recognition of the importance of investing in agriculture. In 2022, Asia was the primary driver of global public spending in

agriculture. In nominal values, Asia accounted for 77% of the global agricultural expenditure, even though its share in global total expenditure was only 32% (FAO 2024). Almost all countries in Asia have a public sector EAS. Ideally an effective EAS system necessitates a national policy framework but only a few countries, such as Bangladesh, have developed specific extension policies. Some of the countries have specific extension strategies. These include Bhutan (Agriculture Extension Strategy 2019-2028), Nepal (Agricultural Extension Strategy 2007), and Philippines (Philippine Agriculture and Fisheries Extension [AFE] Strategic Plan for 2023-2028). The Indonesian public extension system is governed by Law No. 16, 2006; Law No. 23/2014; and Presidential Regulation No. 35/2022. In Sri Lanka, there has been talk about bringing a comprehensive national extension policy since the 1990s, but it has yet to materialize.

Central Asian countries have no national policy framework for the development of agricultural EAS, which could ensure the political and financial commitment of the government and other stakeholders (Kazbekov and Qureshi 2011). In most Central Asian countries, non-governmental organizations (NGOs) have been set up to provide extension services that were formerly provided by research institutes. In some countries, ministries of agriculture are attempting to take the lead role in developing extension systems (FAO 2020). In 2021, Uzbekistan created AKIS, a new Agricultural Knowledge and Innovation System, combining education, applied agricultural research and transfer of information and technologies to advisory services for farmers.

Though national policies and strategies exist, public EAS faces several challenges in providing effective EAS support to the majority of smallholder farmers in the region. These are discussed in detail below.

CHALLENGES FACED BY THE PUBLIC EXTENSION SYSTEM IN ASIA

The public EAS system in Asia faces several challenges which constrain them from providing better service delivery to farmers. These include:

Lack of sufficient human resources: The public extension system is largely understaffed in many Asian countries. Being public servants, extension personnel belonging to the public sector have to perform other duties often resulting in deviations from their focus on extension work. For instance, in Nepal, there are very few frontline extension staff and around 38% of provincial level positions and 30% of local level positions are remaining vacant (Timsina et al. 2023). Similarly, Bhutan also faces work overload and attrition of extension staff. In Cambodia, the limited staff and work overload keeps staff away from promoting new knowledge among farmers (FAO 2021). The agricultural extension system in Vietnam suffers from limited human resources in terms of both quality and quantity (Le Thi Hoa et al. 2023). In Indonesia, the government's target is to provide one extension officer per village, but this still remains short by more than 20,000 or 28.5% of the total number of extension officers required. In addition, the number of extension officers has decreased year to year, so there is need for additional reinforcement (Rusliyadi et al. 2018).

Insufficient funding: While public agricultural EAS systems in most countries rely on government funding as their primary source, the available funds – largely at the national level – are often inadequate to maintain overall functionality and efficiency of the entire public EAS system (Yang and Ou 2021). Chronic under-funding and reluctance to increase investments in these systems have become persistent challenges in strengthening EAS (Place 2020). For instance, in Vietnam, the EAS activities at the district and commune level are adversely affected by very limited funding. In Nepal, at the local level, resources are either limited or are not properly channelled for extension and given the limited number of staff, the major chunk of the budget allocated for agricultural programmes could not be spent (Ghimire et al. 2021). In the Philippines, the 1991 'Devolution of resources and responsibilities for extension' from the national government to the provincial, city, and municipal governments resulted in inadequate and low salaries for extension staff, disparity in remuneration between high- and low-

income municipalities, and inability to discharge functions of extension workers properly due to lack of funding (Cidro and Radhakrishna 2020). In Bangladesh, many public sector actors involved in EAS do not always have sufficient operational funds to effectively implement programmes, with the bulk of funding going toward salaries and capital costs. The limited resources result in farmers in remote areas, such as the riverine islands, not having the same level of access to EAS as compared to those in other parts of the country (Huber and Davis 2017).

Lack of capacities: Though all countries in Asia have established some kind of capacity building infrastructure and a few programmes to enhance capacities of its public extension service providers, significant gaps in capacities exist among EAS personnel. As systematic efforts to undertake capacity needs assessment are not undertaken, the gaps in capacities are not recognised carefully. For instance, in Bhutan, the agriculture extension supervisors are generally diploma holders and they do not have the capacity to meet the needs of educated youth who take to commercial farming. Moreover, these extension supervisors do not have adequate platforms to update their skills and capacity. Similarly, in Lao PDR, the technical extension centres are not strong enough to serve farmers, especially the ones in remote rural areas. Extension professionals of Uzbekistan noted that they are not gaining much from the training organized because of its short duration seminar format (2-5 hours). In Nepal, though extension professionals at all levels have basic degrees in their technical field, they lack adequate training on soft skills that are critical to connect with and effectively train beneficiaries. Opportunities for refresher and in-service training are limited and this prevents them from updating the knowledge needed to boost their performance (Ghimire et al. 2021).

In most countries, there is a need for training EAS staff on protected cultivation (especially for vegetables and fruits), use of digital technologies for EAS delivery, and organic agriculture. Efforts are underway with the ongoing AFACI project to develop technology manuals to support EAS staff. However, there is a need to strengthen training of trainers and organise more learning events to enhance capacities of EAS personnel. In most countries, EAS personnel have very limited access to overseas training and opportunities to learn from experiences in other countries in the region. To support learning and network of extension staff in the Asia-Pacific Region, the Asia Pacific Islands Rural Advisory Services (APIRAS) is supporting establishment of country networks and sub-regional platforms. However, more efforts are needed to strengthen these initiatives.

In several countries, there is increasing interest in supporting capacities of EAS personnel through digital extension platforms. In the Philippines, the Agricultural Training Institute (ATI) initiated the e-Extension Program for Agriculture and Fisheries (https://elearn.e-extension.gov.ph/) and this platform offers 74 free online courses on various sub-themes of agriculture and fisheries, such as crops, livestock, marine and fisheries, social technology, sustainable agriculture, urban agriculture, etc. Such initiatives are needed in other countries too. In Indonesia, the use of digital technologies by EAS staff are adversely affected by the ever-growing complexities of digital technologies, availability and accessibility of digital infrastructure, and lack of adequate training to enhance digital literacy (Savitri and Rafani 2024). An assessment of capacity gaps among EAS providers in four South Asian countries (Bangladesh, Nepal, India and Sri Lanka) revealed several gaps in capacity of EAS providers at the individual (field level, middle management level and senior management level) and organisational level (Sulaiman and Mittal 2016).

Weak linkages among varied stakeholders involved in agricultural development: Historically, research extension linkages have been problematic in most countries. Though several efforts have been made to improve linkages (e.g., research-extension workshops at regular intervals, etc.), EAS receives only very limited technical backstopping and problem-solving support from research. In Vietnam, due to poor research-

extension linkages, the EAS could make very little contribution in setting priorities in research or in refining technologies based on field performance. To address most of the new challenges in agriculture, EAS also needs strong linkages with other actors involved in agricultural development representing public, private, NGOs and producer organisations. However, interactions with these actors are also weak in most cases. For instance, networking between interrelated institutions, research and extension entities, and the market system is either weak or entirely absent in Cambodia (FAO 2021). In Nepal, under the present federal structure there are no functional linkages – both administrative and programmatic – among the three levels of government (federal, provincial, and local). The ineffective coordination among the three tiers of government on agricultural development programmes and activities has contributed to overlaps, duplications, and gaps (Timsina 2023). Weak linkages between research, extension, and other agro-support services is a critical challenge affecting the performance of EAS in Sri Lanka (Herath et al. 2021).

WAYS FORWARD

EAS can play a major role in supporting transformation of the agricultural sector in Asia, if they are sufficiently strengthened to meet the new challenges faced by farmers and other stakeholders. While public sector EAS does play a major role in Asia, other actors belonging to the private sector, NGOs and producer organisation also play a significant role in supporting farmers. Though this brief discusses more on strengthening public EAS, there is a need to recognise the pluralism in EAS delivery and strengthen capacities of public EAS to coordinate pluralism. The three most important aspects to be considered in strengthening EAS in Asia are discussed below.

Assessing the performance and outcomes of EAS at the national level: There is very limited data on the role and contributions of different EAS providers and no real efforts are being taken to assess the performance and outcomes of pluralistic EAS at the national level. This is adversely affecting the planning of EAS interventions and coordination of EAS interventions by varied actors. Methodologies and tools to understand pluralism and assess the performance and outcomes of EAS are currently available (Sulaiman et al. 2022a; Sulaiman et al. 2022b; Grovermann et al. 2022) and using these tools can help establish a baseline on EAS, support planning, monitoring and evaluation of EAS interventions at the national level, and help develop a national extension policy or strategy.

Enhance funding for EAS: Though data on investments made by pluralistic EAS is not available, EAS is under-funded is almost all countries and this has affected its performance adversely. Under-funding is also one of main reasons for lack of adequate human resources especially at the field level and also lack of adequate training of EAS personnel to enhance their competencies. Moreover, lack of effort to document and promote the outcomes and impact of EAS has also led to negative perceptions on the contributions of EAS. EAS decidedly needs more investments from national governments, donors, private sector, philanthropists, NGOs and farmer organisations. Developing a financing plan for EAS, supported by impact stories from EAS interventions, may help in boosting investments in EAS.

Assess capacity gaps and develop a capacity development plan for EAS: Capacity gaps exist at all levels (at individual, organisational and enabling environment) in EAS. The first step in enhancing capacities is to systematically assess the capacity gaps among EAS by using tools such as Facilitators Guide for Assessing Capacity Needs of EAS providers (Mittal et al. 2016). Based on the priorities identified, efforts should be made to develop training modules and train the trainers. Use of digital platforms for training EAS staff should also be considered. A roster of trainers on each identified topic may also be developed. A Human Resource Development plan for EAS with specific budgets allocated for capacity development can go a long way towards strengthening capacities of EAS providers.

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