

Technology holds key to green growth

GMS countries need to encourage innovation and make full use of advances that meet their clean development priorities

By PAVIT RAMACHANDRAN

In the last 20 years, rapid economic growth in the Greater Mekong Subregion (GMS) has reduced poverty and brought prosperity to many of its 420 million people.

Much of the growth has relied on natural resources, which generate up to half of total wealth in some GMS countries. But the “grow now, clean up later” approach has worsened environmental degradation due to air, water and soil pollution, deforestation, overuse of natural resources, and production of vast quantities of waste.

All six GMS countries — in China, specifically the southwestern Yunnan province and South China’s Guangxi Zhuang autonomous region — have improved their management of natural resources and ecosystem services. (The Lancang-Mekong River runs through China, Myanmar, Laos, Thailand, Cambodia and Vietnam and serves as a natural bond that links these countries together.)

For example, all are shifting from using fossil fuels for energy. China is phasing out coal plants and generating far more energy from renewable sources such as wind,

solar and water than any other country. Thailand has the largest solar capacity in Southeast Asia.

In 2006, the Core Environment Program (CEP) was launched under the GMS Economic Cooperation Program administered by the Asian Development Bank (ADB). The CEP has so far invested \$50 million to help GMS countries improve environmental policies and planning processes, build climate resilience, and reduce greenhouse gas emissions from freight transport. It has also raised \$98 million for biodiversity conservation and helped create 2.6 million hectares of biodiversity corridors.

Still, much more needs to be done. We have yet to turn the tide on environmental degradation and pollution. A changing climate makes that challenge even harder.

Technology holds the key. The “fourth industrial revolution” is already under way. Artificial intelligence, big data, machine learning, robotics, nanotechnologies and other exciting advances are rapidly reshaping economies and communities.

Their emergence makes it more important than ever that GMS countries ensure their policies not only keep pace with technological

developments but encourage them.

Emerging technologies can help ensure that future growth is “green” — a win-win for the environment and the economy. These technologies are more affordable, and many green policies will eventually pay for themselves. They are cleaner and help countries use natural resources, including land, water and energy, more efficiently. The result will be more sustainable infrastructure, reduced pollution and better waste management.

For example, recent advances have reduced the price gap between renewable and fossil fuel-derived energy, making renewables more competitive. Localized renewable energy mini-grids and enhanced battery capacity have proven more effective in delivering electricity than large power distribution networks requiring large capital investments and higher maintenance costs.

Modern communications can now reach remote areas at relatively low cost, connecting communities with services, and producers with customers.

New and emerging technologies are already improving environmental management. Drones, remote sensing and Web-based geographic

information systems (WebGIS) are being used to ensure fishery and forestry activities are sustainable. In Vietnam, plans to scale nationally a WebGIS platform for forest monitoring will better protect millions of hectares of important forest areas.

Farm management software is being applied in countries including China and Myanmar to improve productivity through efficient use of land and water. Early warning and simulation data analytics, based on information from satellites and drones, are making communities better prepared for disaster.

Waste and pollution — byproducts of the subregion’s rapidly expanding cities — can be tackled by electric vehicles, fuel-efficient technologies and automated traffic management systems, which also help countries achieve their greenhouse gas-reduction targets. Technologies to transform solid waste into usable energy sources are advancing rapidly and will help clean up the subregion’s urban centers, reduce pollution and mitigate climate change.

The challenge facing GMS countries is how to scale up the emerging technologies that meet their development priorities. Private

sector involvement and financing will be crucial. But governments can pave the way by ensuring their policies and regulations encourage innovation and welcome technological change.

Technology is not the only ingredient of green growth. More traditional approaches such as biodiversity conservation and environmental governance must also be scaled up and enhanced.

The traditional and the technological can go hand in hand as the GMS shifts toward cleaner, greener growth.

The GMS Core Environment Program will play an important role under its new five-year strategy that has prepared a pipeline of environmental projects and prioritized two regional green growth investment projects totaling \$540 million. It is also creating a new marketplace for the exchange of ideas and expertise on green practices and technologies.

By working together, the subregion and its development partners can build even greater prosperity at reduced cost to the environment.

Pavitt Ramachandran is a principal environment specialist at the Asian Development Bank.

Farming reforms bearing fruit

China’s agricultural modernization is improving rural residents’ living conditions and narrowing income gap with cities

By LI GUOXIANG

Since the 19th National Congress of the Communist Party of China in October first advanced the rural revitalization strategy, the Central Rural Work Conference has accorded high priority to the strategy’s implementation. And this year’s No 1 central document has prescribed measures to facilitate the implementation of the strategy in an all-round way.

Thanks to rural and agricultural modernization in China, rural residents’ production capacity and living conditions have been continuously improving. In particular, after the 18th Party Congress in 2012, China’s agricultural development entered a new phase, with new types of agricultural operations growing and a new agricultural industry developing rapidly. Also, the urban-rural income gap has been narrowing, and the poverty alleviation campaign has achieved great results,

with the infrastructure in rural areas upgraded and rural basic social services remarkably improved.

But rural and agricultural development in China still has a lot of room for improvement. The competitiveness of the agricultural industry is relatively weak, and the quality of agricultural products can hardly meet people’s ever-growing needs for a better life. Agricultural pollution remains a serious issue, and the problems of “left behind” senior citizens, women and children in rural areas are yet to be solved. Also calling for improvement are cultural construction in rural areas and rural governance.

To implement the rural revitalization strategy and to make the countryside more beautiful and harmonious, the authorities need to make the agricultural industry more efficient and competitive, better integrate primary, secondary and tertiary industries, and strengthen environmental management and protection, expedite cultural con-

struction and improve governance in rural areas. Measures should also be taken to enhance the sense of gain among farmers, who have an intrinsic right to share the fruits of China’s development.

Besides, the authorities should continue according high priority to agricultural and rural development, establish an integrated development mechanism for urban and rural areas, and deepen reforms to overcome institutional obstacles, so as to resolve issues related to agriculture, farmers, and rural areas as a whole. The idea should be to turn agriculture into a promising industry and farming into an attractive profession, and make rural areas prosperous.

The goal of the rural revitalization strategy is in line with the Two Centennial Goals set out in the 19th Party Congress report, namely that China is committed to building a moderately prosperous society by 2021 and a fully developed and powerful nation by 2049. The Central Rural Work Conference, on its

part, said the rural revitalization strategy should get a basic institutional framework and policy system by 2020, and will help achieve basic agricultural and rural modernization by 2035, and all-round rural revitalization by 2050.

For the rural revitalization strategy to succeed, China should increase public investment and improve public services in rural areas, as well as accelerate integrated development to narrow the gap between urban and rural areas in terms of basic social services.

Moreover, rural land system reforms should be deepened, for example by separating ownership rights, contract rights and management rights, and extending the second-round land contract period by another three decades. This will promote the free flow of the rural workforce, integrate small farmer households into modern agriculture, and accelerate the establishment of a new type of farming system.

China will remove institutional

barriers to ensure reasonable land supply for the successful implementation of the rural revitalization strategy, improve the rural financial system suitable for agricultural and rural development, promote innovations in financial services, and establish a rural financial credit system, in order to overcome financing difficulties and provide better financial services for rural residents.

China will also reform the financial subsidy policy, pay greater attention to structural adjustment, and resource and environmental protection, as well as scientific and technological research and development.

And it will reform the grain purchase and storage system, and price mechanism to reduce direct market intervention, protect producers’ reasonable revenue, and create an environment for fair competition for rural industries.

The author is a researcher in rural development at the Chinese Academy of Social Sciences.