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Agricultural Growth Corridors and the Potential for CGIAR Research

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Patterns of agricultural production in Africa—that is, who is farming, and what, where, and how they are farming—are changing, thanks in part to a new focus on growth corridors and other spatial development initiatives. These changes have implications for agricultural research, both now and in the future, especially given the lead time needed for the fruits of research to reach farmers' fields. Accordingly, in 2015 the CGIAR Independent Science and Partnership Council (ISPC) commissioned a study called Agricultural Growth Corridors: Mapping Potential Research Gaps on Impact, Implementation, and Institutions.

The study was designed to (1) synthesize what is already known about development corridors, growth clusters, and similar spatial development initiatives in the context of agricultural development in Africa; and (2) analyze the potential implications for internationally funded agricultural research and CGIAR research priorities.

Conclusions and recommendations from the study were discussed at a workshop[1] in Durban in 2015 that brought together CGIAR researchers and representatives of major existing corridor projects. The ISPC Council also provided its own commentary on the study's findings; both the study and the commentary are described in a 2016 ISPC publication, *Agricultural Growth Corridors*.

WHY CORRIDORS? WHY NOW?

During the last decades of the 20th century, African agriculture stagnated. Yields of major commodity crops stalled or even declined in many countries. When growth did occur, it failed to keep pace with population growth, reducing per capita availability of food. In the past decade, agricultural growth has resumed in many African countries, but yields of most crops are still far below potential levels: African farmers have the potential to produce 6 tons of maize per hectare, but actual yields across the continent average less than 2 tons per hectare. In this context, conventional development assistance and government programs for agriculture have achieved at best small incremental improvements in productivity.

1 Held in collaboration with the New Partnership for Africa's Development (NEPAD)/Comprehensive Africa Agriculture Development Programme (CAADP) and the European Centre for Development Policy Management (ECDPM).

MAIN POINTS FROM THE ISPC COMMENTARY ON THE CORRIDORS STUDY

When the ISPC commissions strategic studies, ISPC Council members review the study's findings and provide a commentary on those findings and their relevance to the CGIAR research agenda. The ISPC commentary on the Corridors study includes the following main points:

First, the ISPC study raises a key issue for the CGIAR: the extent to which a two-tier farming system might emerge with (1) increased prosperity for farmers who practice modern agriculture and are integrated with markets in areas served by corridors, and (2) further marginalization of subsistence farmers in the hinterlands who are not able to benefit from infrastructure developments. In many cases, subsistence smallholders in hinterlands would face a precarious future, with little alternative but to abandon agriculture and move to urban areas or seek employment as workers on farms in more favored areas. There are now anecdotal accounts of daily paid wage laborers on commercial farms having higher incomes than independent smallholders in adjacent areas. The CGIAR will need to reflect on its role in addressing the research needs of those who are "left behind." Emphasis should be given to the impacts of agricultural growth corridors on both smallholders and the environment and how CGIAR research can address them to change from a win-lose to a win-win scenario.

Second, the commentary points out that the ISPC study identifies a potential need for CGIAR research in at least four major areas: (1) stronger work on connecting smallholders to value chains in areas with corridors and spatial development initiatives, (2) work on land tenure institutions to maintain and enhance the degree to which smallholders benefit from corridor development, (3) integrated and interdisciplinary research on corridor approaches and their impacts on food and nutrition security, poverty, and sustainability, and (4) foresight analysis of potential agricultural transformation scenarios—especially in Sub-Saharan Africa—and to identify an appropriate research agenda to support smallholders in hinterlands.

A different approach is now gaining currency in Africa. Spatial development initiatives, such as growth corridors, involve making coordinated investments in transport infrastructure, power, communications, and markets in particular regions. They link regions and countries along a physical backbone of transport infrastructure. Proponents of development corridors and other spatial development initiatives argue that the provision of integrated packages of support could trigger transformational change in agriculture, closing yield gaps and generating an increase in crop outputs to serve Africa's growing populations and for export.

Both governments and the private sector have been investing in growth corridors, and more than 30 such corridors are being developed or planned across Africa (Weng et al. 2013). Moreover, these formally designated growth corridors represent only a small fraction of the total ongoing or planned infrastructure expansion in Africa. Many areas with agricultural potential that are at present occupied by subsistence farmers achieving low yields are soon likely to be connected to markets (Gálvez Nogales 2014).

POTENTIAL CONSEQUENCES OF GROWTH CORRIDORS

The characteristics of growth corridors vary by region. In Southern Africa, for example, corridors are driven mainly by the private sector and are narrowly focused on the logistical efficiency of linking production centers to markets and ports. In Central and West Africa, they are designed to meet more ambitious goals of economic integration and are subject to more regulation and planning by governments and aid agencies.

In all of these situations, agricultural productivity is likely to rise, as corridors give farmers better access to inputs and markets—but the ISPC study indicates that potential impacts on smallholders are difficult to assess. On the one hand, smallholders may lose their land to investors or in-migrants

from other areas, especially in areas with unclear or unenforceable land and resource rights, or find themselves unable to compete with large commercial farms in commodity crops such as maize. More efficient production systems could push down the prices of commodity agricultural products, favoring net purchasers of food but disfavoring small-scale producers. On the other hand, smallholders may be able to capture the benefits of market access or profit by moving into more specialized markets for tree crops or vegetables.

Development corridors present both risks and opportunities for the environment. They may facilitate migration into remote natural areas with associated expansion of agriculture, mining, logging, and potentially other illegal activities. At the same time, closing the yield gap by intensifying agricultural production along growth corridors may reduce the pressure for extensive agriculture in remote areas.

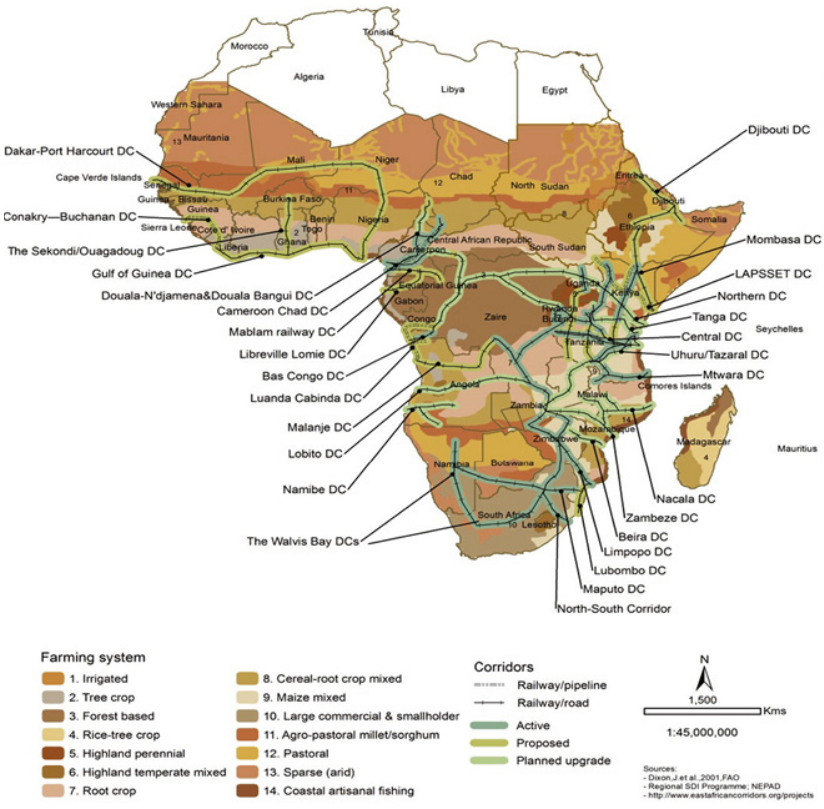
IMPLICATIONS FOR CGIAR AND ITS RESEARCH

There is agreement that if spatial development initiatives and growth corridors spread widely, they will have profound implications for CGIAR research. They could trigger transformational changes in agricultural production systems and remove major barriers to the impact, adoption, and scaling of CGIAR research technologies and products.

The commissioned study frames its analysis of the potential risks and opportunities of corridors and spatial development initiatives by proposing three broad areas of research: (1) impact, (2) implementation, and (3) institutions.

The first area, research on impact, would focus on corridors' effects on the social, economic, and natural environment, such as on poverty, agricultural transformation, ecological services, and natural resource management. This stream of research would look at the impact of corridors on the people living in the areas affected by it—both those close to the corridor and those in the hinterland. It might, for example, study the effects of large-scale commercial farming stimulated by corridors on the food and nutrition security of local smallholder farmers and small entrepreneurs. It might also examine the impacts of corridor approaches on those outside the target area, given the fear that corridors will shift resources away from the most needy. **Figure 1**, which shows the overlap between farming systems and current and planned corridors, shows the potential scope of this research.

Figure 1: Farming Systems and Development Corridors in Sub-Saharan Africa



Source: Weng et al. (2013).

Second, implementation research would respond directly to African authorities' demands for policy options to make corridors more effective, inclusive, and sustainable. It would identify the economic, technical, social, and environmental constraints and opportunities arising from corridors and would support smallholders' and local authorities' efforts to create sustainable agricultural growth hubs connected with the corridors. It would also consider how to design and implement public-private partnership initiatives in a way that serves both private and public interests. Although agricultural research for development increasingly involves partnerships with the private sector, such partnerships have risks and opportunities that need to be identified and weighed.

The third area consists of research on the broader institutional and policy environment. This work is key for understanding when, where, and why agricultural policy can be effectively implemented and how agricultural research might support agricultural growth corridors. Institutional research might consider how the partnership between CGIAR and the Comprehensive Africa Agriculture Development Programme (CAADP) can help improve the impact and inclusiveness of corridor approaches and what combination of policy incentives will do the most to attract private investment. Other questions might include. How can policies strengthen land tenancy, land rights, and integrated water management and help prevent land grabs? What is the political economy context for corridors and spatial development initiatives, and what are the drivers and constraints of policy reforms around agricultural corridors?

In its commentary on these findings (see Box on p. 2), the ISPC notes that the commissioned study provides a useful summary of corridor expansion in Sub-Saharan Africa, but does not necessarily provide clear guidance on the implications of these changes for the CGIAR research portfolio. Because the impacts of corridors and spatial development initiatives will be highly context specific, it is difficult to draw generalizable conclusions on implications for the CGIAR.

REFERENCES

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