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## IAASTD, agroecology and new ways forward

Amidst accelerating and converging health, climate, ecological, economic, financial and food system crises, the need to radically reconceive and change our approach to agriculture and even more fundamentally, our relationship to the earth, has become paramount. Just over a decade ago, the International Assessment for Agricultural Knowledge, Science and Technology for Development IAASTD began to move the global conversation in UN and other international policy circles in this direction.

### **Agroecology: paths towards equitable and sustainable food systems**

With its publication in 2009, the IAASTD concluded that agroecology offers highly promising pathways to enable progress towards “equitable, socially, environmentally and economically sustainable development.” These findings represent the results of analyses presented in the IAASTD’s Global, Latin America and other regional reports (see box).

### **Agroecology in the IAASTD**

Agroecology was addressed in unique ways by the Global and Regional Reports of the IAASTD. The Global Report (GR) reflected on the central role of Indigenous people, as well as subsequent interactions between farmers, researchers, scientists and civil society, in the development of agroecology, while noting its scientific and practice-based contributions to multifunctional agriculture, to innovation and knowledge generation, and to improving livelihoods and equity (GR chapters 2, 3 and 6). The Latin America & Caribbean report (LAC) discussed agroecology explicitly and in depth, recognizing its multiple dimensions that both draw on and contribute to a diversity of sciences, practices and social movements, with socio-economic, health, cultural, spiritual and political implications (LAC chapters 1, 2, 4 and 5). The North America & Europe report (NAE) focused on agroecology’s scientific contributions to innovation (NAE chapter 6); the Sub-Saharan Africa report (SSA) addressed the practical benefits of applying agroecological methods to farming and pastoralism (SSA chapters 2, 3 and 5); and the East & South Asia and Pacific report (ESAP) pointed to the productivity and stability of “integrated and holistic agroecosystems” and agroecological practices that mimic natural systems, often rooted in Indigenous knowledge and able to reduce poverty and malnutrition, improve livelihoods, conserve biodiversity and offer an alternative to pesticide dependence (ESAP chapters 2, 3 and 5). Together, the IAASTD reports discussed a variety of policy options to build capacity in agroecology in the regions, while identifying measures to overcome systemic and structural obstacles impeding its spread.

The IAASTD discussed agroecology primarily in terms of its scientific and practical dimensions (McIntyre et al. 2009a-d), while also recognizing that agroecology “stems from the interaction of scientific and traditional knowledge,” rooted in profound respect for the environment and Mother Earth, “as well as [people’s] traditions, culture and history” (McIntyre et al. 2009e). As a movement, agroecology has the ability to join others – food sovereignty, Indigeneity (Figueroa-Helland et al. 2018) – in suggesting “a dialogue of different ways of knowing” (McIntyre et al. 2009e) that challenges assumptions behind dominant approaches to “development” (Mignolo 2020). Drawing on empirical evidence, the IAASTD found that agroecology contributes to:

- **Increased ecological resilience and reduced risk** in weathering changing climate and environmental conditions;
- **Climate change mitigation and adaptation** through reduced reliance on fossil fuel and fossil fuel-based agricultural inputs, increased carbon sequestration and water capture in soil;
- **Conservation of biodiversity and natural resources** and protection of ecosystem services;
- **Improved health and nutrition** by providing diverse, fresh and nutritious diets and reducing incidence of pesticide poisonings;
- **Economic stability** from diversified sources of income, a more even spread of labor requirements and production benefits over time and reduced vulnerability to commodity price swings and rising costs of purchased inputs; and
- **Increased social resilience and institutional capacity**, including shared knowledge and collectively managed economic and social support networks.

On a practical level, the IAASTD affirmed that agroecology inspires innovations that are knowledge-intensive, productive, profitable, culturally, socially and environmentally beneficial, and readily adaptable by small and medium-scale producers (McIntyre et al. 2009a-d, PANNA 2009). Meanwhile, social movements challenging entrenched power imbalances in food and agricultural systems have also perceived the emancipatory potential of agroecology, which frees producers from dependence on corporate-controlled inputs such as patented seeds and agrochemicals (McIntyre et al. 2009e).

### **Policy options to advance agroecology**

The IAASTD identified numerous concrete policies to promote agroecology and systems transformation. These include the following “options for action”:

- **Build capacity in agroecological research, extension and education:** encourage farmer-to-farmer learning and horizontal collaboration among farmers, Indigenous peoples and scientists;
- **Support small and medium-scale farmers and their organizations:** strengthen community organizations’ capacity to develop and adapt agroecology to meet local priorities, particularly for food, land, seeds, water, health, livelihood, self-

determination and the right to organise; center farmer and Indigenous leaders in national, regional and international decision-making processes;

- **Establish supportive economic policies, financial incentives and market opportunities to overcome structural barriers:** evaluate and internalise the social, health and environmental costs of external input-intensive production systems; remove perverse incentives that continue dependence on hazardous inputs and industrial-scale monocropping; and incentivize ecological practices that provide public, environmental and ecosystem health benefits; and
- **Strengthen institutional supports:** implement comprehensive agrarian reform that ensures equitable and secure access to, control over and ownership of productive resources by peasant and small-scale farmers and Indigenous peoples; revise intellectual property rights to uphold farmers' rights to save, breed and exchange seed and disallow land, gene and water grabs by corporations; and establish equitable trade arrangements that enable farmers to meet their food and livelihood security needs.

### Moving forward: agroecology after IAASTD

Both in terms of its substantive findings and the institutional innovation in multistakeholder governance that it introduced (Ishii-Eiteman 2009), the IAASTD set the stage for a decade of growing recognition in international policy circles of:

- a) the need for transformative change of our food and agricultural systems;
- b) a key role for agroecology in such a transformation;
- c) the necessity to overcome entrenched structural obstacles to change; and
- d) the imperative to center the knowledge, participation and leadership of front-line, peasant and Indigenous communities in moving towards systems transformations.

The contribution of agroecology to the pluriverse of solutions needed to overcome today's crises and its alignment with values of reciprocity, harmony, equity and solidarity is increasingly recognized and valued by farmers, social and biophysical scientists, health professionals and sustainable economies and human rights experts alike (See Anderson & Anderson, page 169 and Wezel, page 140 in this book). Alternative visions that build on these and other complementary notions have been well-articulated by proponents of *buen vivir* (and of *sumak kawsay*, *suma qamaña*, *Ubuntu*, *swaraj* and *de-growth*), who are already in many parts of the world enacting and embodying these new-old ways of being (Gonzales & Mignolo, page 157 in this book; Khothari et al. 2015).

Unsurprisingly, industries and governments with vested economic interests in maintaining corporate industrial models of agriculture have fiercely opposed these calls for transformation. Despite this resistance, agroecology has continued to gain momentum and recognition on the global stage, supported by far-sighted policymakers, an expanding body of scientific research and the knowledge, experience and determination of peasant and family farmers and Indigenous

peoples who are co-creating not only the agroecological but also the liberatory epistemic systems to nourish their communities and sustain life on the planet.

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