RESEARCH BRIEF

Peasants facing economic, political and climatic changes: Adaptation or transformation in the Colombian Andes?

Research by Giuseppe Feola

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Key messages

• Climatic change and variability have been observed in Colombia, and peasants and smallholders in the Andes are among the most vulnerable populations.

• Economic changes such as trade liberalization compound climatic change and variability, and affect the livelihoods of peasants in the Andes.

• Peasant communities in the most marginal Andean regions are pushed towards agro-business development models that are hardly suitable to the local physical environment and that clash with peasant tradition and culture.

• Adaptation to climate change and variability and a sustainable rural development in these marginal rural places should recognize the cultural, economic and environmental diversity of these places and include bottom-up, participatory approaches to enhance the capacity of peasant and smallholders to pursue desired and sustainable rural futures.

The impacts of climatic change and variability on Colombian agriculture

Climatic change and increased climatic variability are already occurring in Colombia, and they are likely to be exacerbated in the coming decades. In the Colombian Andes, it is expected that temperatures will increase, freshwater availability will decrease, extreme events –such as droughts – will become more frequent and intense, and precipitation patterns will become more erratic.

The expected impacts of climatic change and variability on Colombian agriculture are mostly negative. They include changes in crop growth cycles, flooding, changes in the distribution of pests and diseases, loss of plant genetic resources, and loss of crop and pasture suitability and productivity. In some parts of the Colombian Andes, it is expected that the suitability for some typical crops – such as potato – will increase due to more favourable (warmer) temperature at higher altitudes. However, this may encourage the occupation of high mountain conservation areas, where highly biodiverse *páramo* ecosystems, which are critical in regulating the regional water cycle, may be negatively impacted by agricultural production.

FIGURE 1. Paramo de Siscunsí (Sogamoso, Boyacá). The conservation of this valuable high mountain ecosystem has been implemented with little consultation of local peasants, in a top-down intervention that many residents felt as imposed by external actors, and as disrespectful of local knowledge and land uses. Source: Giuseppe Feola, 2014.

Multiple pressures

Climatic change and variability are important for farming in the Andes, but they cannot be considered in isolation from other important pressures, particularly the liberalization of agricultural trade, and the legacy of violent conflict and post-conflict resolutions. Climatic and economic changes and violent conflict can interact in a complex fashion, and therefore they represent a challenge for policies aiming to enhance adaptation to climatic changes and sustainable rural development. For example, the crop varieties that are more requested in the global agricultural market may be those that are locally more exposed to climatic change. Similarly, some of the crops with the highest export potential may be those that are farmed in regions that are still under active violent confrontation between the Colombian Army and various illicit groups. Moreover, while violent conflict in parts of the Andean region has decreased significantly, or stopped altogether, its legacy in terms of forced displacement, access to land and weakening of the social fabric is still widespread and is one of the main factors of vulnerability of peasant populations in the Colombian Andes.

The integration of peasants in the global market through trade liberalization has induced crop and socio-cultural homogenization in response to market demand. Homogenization can lock peasants into particular farming techniques and practices, and therefore reduce their capacity to manage climatic and economic risks through diversification of activities and crops, and to adapt to an increased range of climatic conditions. More generally, there is a need to mediate between distinct sets of economic, political and environmental policy priorities and to consider the trade-offs between the goals of economic liberalization, conflict resolution, and adaptation to climatic change.

Research and policy implications

The vulnerability of peasant communities in the Colombian Andes cannot be tackled solely through technology and economic measures. The causes of vulnerability often lie in deeply rooted social and political arrangements such as inequitable access to land, poor living conditions, marginalization, and political and social exclusion, rather than in the lack of technology or knowledge. These issues have persisted for decades due to lack of, or unsuccessful action, which has contributed to an increasing social, cultural, economic, and institutional gap between rural and urban areas in the Colombia.

Enhancing the capacity of peasant communities to pursue desirable and sustainable rural futures requires policies that balance top-down, sectorial, technical measures with bottom-up, holistic and

socially transformative ones. By acknowledging peasant knowledge systems, and the role of peasant as active subjects rather than mere recipients of interventions, policies can open-up spaces for social learning and self-determination. Those processes, in turn, will empower peasants to define problems in their own terms and to develop locally suited solutions. Thus, to open up such spaces for social learning and self-determination, and to successfully eliminate the causes of vulnerability, policymakers need to be willing to transform current socio-political structures rather than focusing merely on technology transfer, financial support, or knowledge-exchange.

FIGURE 2. Potato parcels in vereda Las Cañas (Sogamoso, Boyacá). Under combined economic and climatic pressures, peasants have turned to subsistence agriculture and substantially reduced the area under cultivation. Subsistence agriculture is not a socially or economically desirable livelihood option, and many people have migrated to the nearest cities in the past two decades. In turn, the local social network is weakened, and the capacity to pursue desired rural futures is reduced. Source: Giuseppe Feola (2013).

Research is also required to contextualise pressures – such as economic and environmental –in order to recognise the trade-offs or synergies that may exist between actions in response to different, yet simultaneous, pressures. That research and analysis will support policy-makers to work across traditionally separated policy fields such as agriculture, environment, infrastructure, and social policy.

FIGURE 3. Social services are often barely intermittent and infrastructure poor in the rural Colombian Andes. In Las Cañas, health services visit the community once per month (left), and access to the community is via a narrow unpaved road (right). Poor health and education services are limiting factors in the capacity to adapt to climatic and socio-economic changes, while also making life in the rural community more difficult, and therefore less attractive, thus fuelling outmigration to the city. For example, poor road infrastructure, locally and at province level, causes high transport costs that contribute to decreasing competitiveness of agricultural production in this region. Source: Giuseppe Feola (2013, 2014).

Social and political recognition of the cultural, economic and environmental diversity of the Colombian Andes and its people are essential in order to design and implement effective policies that will bring about holistic and long-lasting change. In order to enhance the capacity of peasant communities to pursue desirable and sustainable rural futures, policies should allow space for diversity and for models of development that do not conform to agro-industrialism. Such models are crucial because ago-industrialism is not suitable for many marginal places in the Colombian Andes and may clash with local traditions, thereby undermining social cohesion and sustainability of peasant communities.

Further reading

Cárdenas, M., and Rodríguez, M. (Eds.), 2013. *Desarrollo Económico y adaptación al cambio climático*. Bogotá: Frescol and Foro Nacional Ambiental.

Feola, G., 2013. What (science for) adaptation to climate change in Colombian agriculture? *Climatic Change*, 119 (3-4), 565-574.

Feola, G., 2015. Societal transformation in response to global environmental change: a review of emerging concepts. *AMBIO*, 44(5): 376-390.

Feola, G., 2017. Adaptive Institutions? Peasant Institutions and Natural Models facing climatic and economic changes in the Colombian Andes. *Journal of Rural Studies*, 49:117-127.

Feola, G., Agudelo, L.A., Bamón, B.C., 2015. Colombian agriculture under multiple exposures: a review and research agenda. *Climate and Development*, 7(3):278-292.

Forero, J., 2010. *El Campesino Colombiano: Entre El Protagonismo Económico y el Desconocimiento De La Sociedad*. Bogotá: Pontificia Universidad Javeriana.

IDEAM, 2010. *Cambio climático en temperatura, precipitación y humedad relativa para Colombia sando modelos meteorológicos de alta resolución (Panorama 2011–2100)*. Bogotá: IDEAM.

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