



FAIRTRADE
INTERNATIONAL



Climate Change and Fairtrade Bananas



A recent published [scientific study commissioned by Fairtrade with EU funding](#) shows how climate change is expected to impact the agricultural production of different crops, including bananas, in different regions. While impacts are not distributed evenly, when production is threatened, its effect has implications for the entire value chain, from producers to traders and even consumers.

The researchers, from Vrije University Amsterdam and Bern University of Applied Sciences, used three indicators of climate change impact: warm spell duration index (heatwave, heat stress risk), consecutive dry days (drought risk) and heavy precipitation days (water damage, erosion, pest risk). They also looked at tropical cyclones and depleted water basins. The researchers used a moderate (low-emissions) and an extreme (high-emissions) scenario to calculate a lower and upper range of potential climate impacts for each crop.



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Production of bananas is highly vulnerable to climate change. With a requirement of a narrow temperature range and humid climate for banana production, bananas are easily and constantly exposed to climatic stressors, and this emphasizes the importance of addressing adverse effects of climate change on banana production. Fairtrade calls for action to all supply chain actors, including brands, to support producers in setting up projects to equip them to adapt to the climate change risk.

The facts on Fairtrade banana production worldwide

- Bananas are projected to experience large-scale shifts in the areas suitable for production – almost half of existing production areas are projected to become unsuitable
- Increased temperatures will reduce precipitation which is imperative for banana growth
- Higher temperatures and lower precipitation (specially in colder periods) promote the growth of “black sigatoka” fungus which causes foliar disease and is the most damaging banana disease
- Maximum temperature in the warmest months and driest periods will reduce banana growth due to moisture deficits
- Banana growth and production costs are likely to be affected as a result of increased number of dry periods due to increased facilitation of better irrigation
- Extreme events, such as tropical cyclones, have been proven to considerably impact banana production

Impact on Fairtrade banana production

Certain Fairtrade bananas producing areas are expected to be severely impacted in face of climate change, mainly due to increased number of hotter and drier days, increased spread of pests and pathogens, and damage by tropical cyclones.



More warm spells:

Under extreme climate change, areas where Fairtrade bananas are grown will be exposed to an average of 42.1 additional days with extremely high temperatures compared to one of the highest maximum daily temperatures recorded between 1980-2010. As can be seen in Fig. 1, this will be most prominent in the Caribbean and Central American Fairtrade banana producing countries of St. Vincent and the Grenadines, St. Lucia and Nicaragua, but will also see some effect in:



South America: Ecuador and northern Peru in South America,
West Africa: Ivory Coast
South and East Asia: Sri Lanka

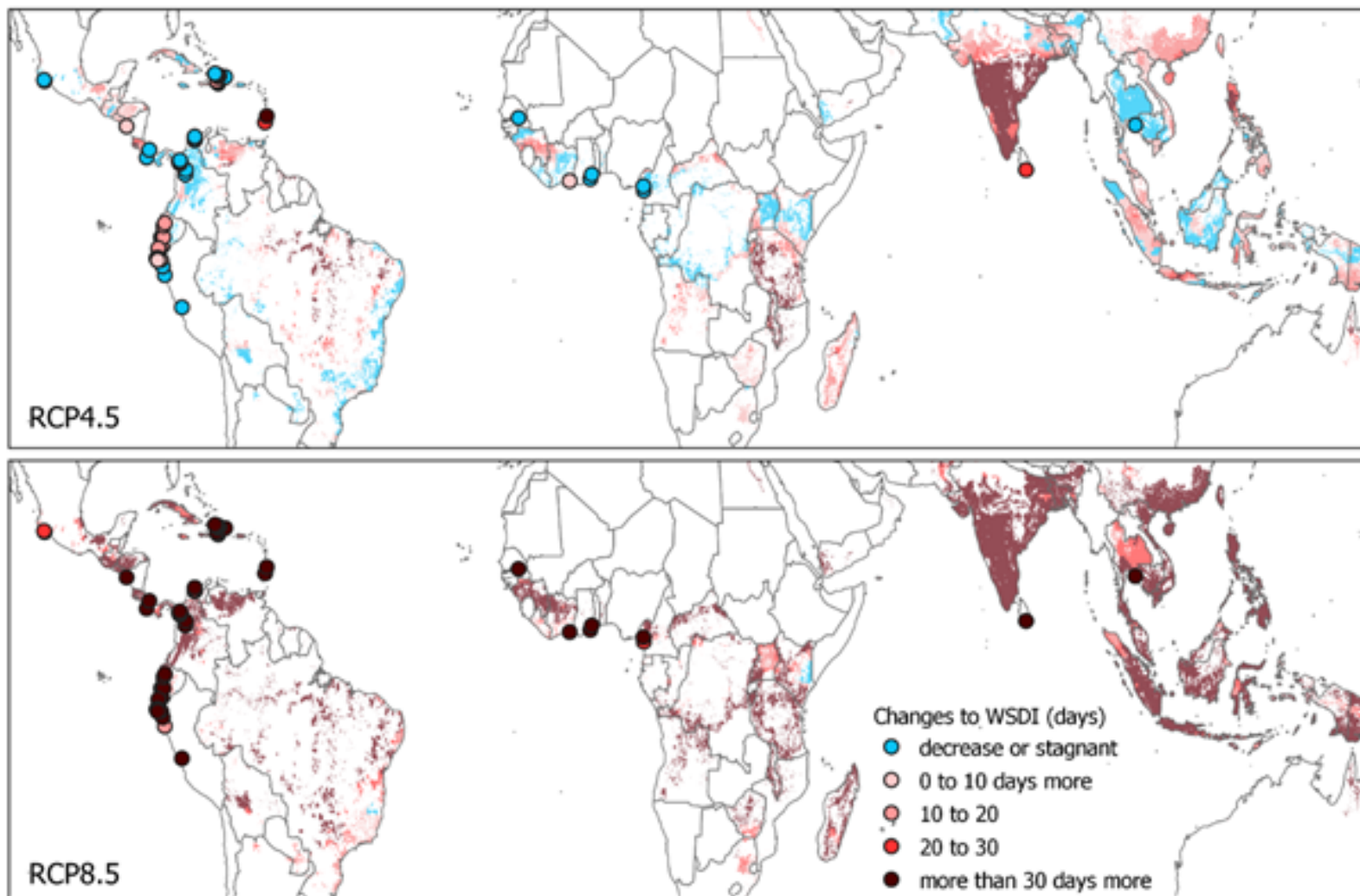


Fig 1: Changes to the warm spell duration index (WSDI, in days) in banana producing regions (surfaces) and Fairtrade banana producers (points).



More consecutive dry days:

: The Caribbean and Central American region, one of the most important banana producing regions, and the West African region will experience considerably more dry periods, and its largest impacts. These changes are likely to be more eminent in the following countries, as is also shown in Fig. 2:



Caribbean and Central America: Costa Rica, Dominican Republic, Mexico, St. Vincent and the Grenadines, Nicaragua
West Africa: Ghana and Senegal

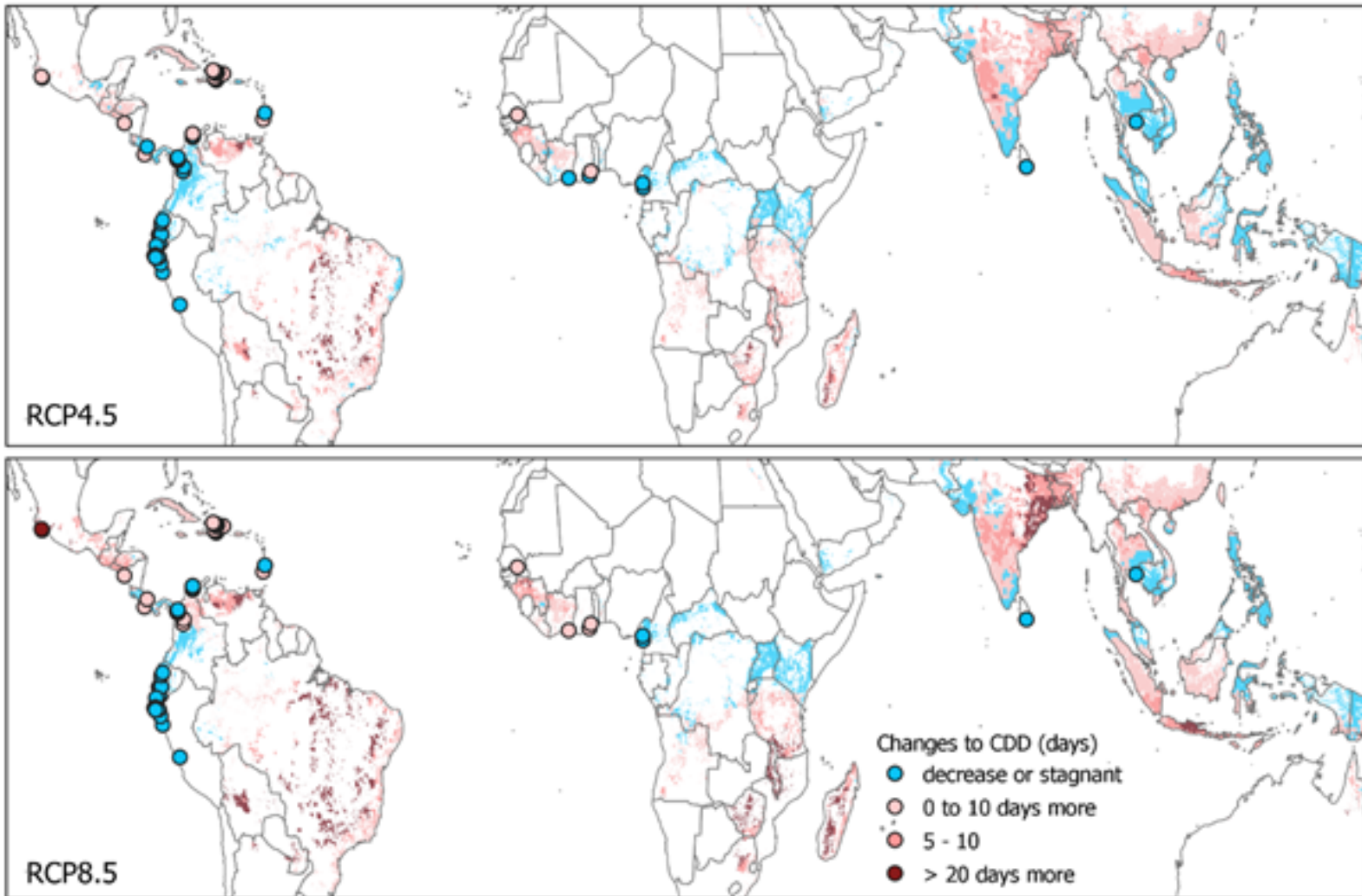


Fig 2: Changes to consecutive dry days (CDD, in days) in banana producing regions (surfaces) and Fairtrade banana producers (points).

Most of these areas will experience a combination of both more heatwaves and more consecutive dry days highlighting the severe impact of climate change on key Fairtrade banana producers.



Occurrence of more tropical cyclones

There will be an increased likelihood of tropical cyclones specially in Southeast Asia and Oceania and island states in the Caribbean region. These cyclones are also likely to be stronger in magnitude under extreme climate change scenario.



Where most volumes are at risk

Areas of significant production volumes of Fairtrade bananas that will be most impacted by future heating and drought:



West Africa: Ghana

Caribbean and Central America: Dominican Republic, St. Lucia, Panama

South America: Colombia



Where most producers will be affected

In terms of the number of farmers producing bananas, the Caribbean and Central America regions will be heavily impacted, specifically, Dominican Republic, St. Lucia, St. Vincent and the Grenadines.

Fairtrade's contribution to addressing climate change

Fairtrade adopts a project-based approach in supporting producers and farmers in adapting, mitigating, and becoming more resilient against the challenges of climate change. The focus of such projects is varied across the system depending on the urgency in need of support and level of vulnerability of farmers within a region to climate change. For the small-scale producers of bananas in Latin American countries, Fairtrade facilitated forming schools of young leaders that focused on advocacy, training, and communications around climate change. This project (Exchange Regional Project for Advocacy and Leadership on Climate Change) stimulated increased knowledge and awareness of climate change related topics and aimed at extending small-scale farmers' capabilities in adapting to the effects of climate change. Farmers who participated in this exercise received technical education on adaptation practices, and training in leadership schools on climate change.

Beyond that, Fairtrade has entered into a partnership with the French supermarket chain, Carrefour, to support small-scale organic Fairtrade banana producers in Peru and the Dominican Republic in an attempt to encourage adoption of organic farming systems. Approximately 1,059 people are projected to gain from this project as organic fertilizer micro-factories are intended to be built and diversification field schools are planned to be set up to increase farmers' resilience to climate change. To read more on Fairtrade's efforts in addressing climate change topics, please view the [Learning by Experience report](#).



Moreover, Fairtrade producers receive a Fairtrade Premium and Fairtrade Minimum Price when selling their products as Fairtrade certified, proceeds of which can be used to address priorities which farmers decide to invest in, including climate change measures. Minimum Prices for bananas depend on the country of origin and level of sale (Ex Works or Free on Board). For example, at the moment for conventional bananas from Dominican Republic the Fairtrade Minimum Price FOB is set at 11 US Dollar per banana box (of 18.14 Kg). For organic the price for the same origin is 13.6 US Dollar per box. For both organic and conventional bananas an additional Premium of 1 USD per box is applicable for Dominican Republic. All Fairtrade Minimum prices and Premiums for all origins can be found here: <https://www.fairtrade.net/standard/minimum-price-info>.

Fairtrade intends to build on the existing work by increasing adaptation and mitigation projects and by promoting good agricultural practices (GAPs) (including, but not limited to organic farming) through participatory, farmer-centered approaches.



What more can be done?

Against the major threat of climate change to the future of banana production, Fairtrade recognizes that more needs to be undertaken and at a larger scale with producers to promote sustainable practices and organic production. This includes reviewing the Standards (especially when it comes to environmental criteria), but also further research and more training on locally adapted good agricultural practices, diversification, more advocacy and building new partnerships, where partnerships can be most efficient, for example, to address deforestation through remote sensing.

While Fairtrade and the producers are aware of the immense challenge and need to step up existing efforts to address the massive challenges posed by the global problem of climate change, it would not be fair nor realistic to let the burden of costs fall on producers alone. Fairtrade therefore invites commercial partners to join us in supporting Fairtrade projects aiming at adapting to and mitigating climate change impacts to banana production, building on Fairtrade's extensive network of producer network staff in producer countries. Both financial contributions to existing projects as well as collaborative project development – hand in hand with Fairtrade and the producers – are concrete options that can support producers to reduce negative climate change impacts, which is in the interest of all value chain actors. This could be combined with establishing projects under the Fairtrade Climate Standard which would generate Fairtrade Carbon credits suitable for offsetting carbon emissions along e.g. Fairtrade bananas supply chains.

For more information on how to work with Fairtrade and support farmers in building a more sustainable and fairer future, contact partnerships@fairtrade.net or contact your regular Fairtrade contact.

