



Climate Change and Fairtrade crops in India



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 in different regions, including India. 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.



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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.



Bern University of Applied Sciences BFH
School of Agricultural, Forest and Food Sciences HAFL

India is identified as one of the 'hotspots' of climate change within the Fairtrade system, mainly because it will be heavily influenced by the negative effects of climate change and will pose a threat to key Fairtrade crops risking the livelihoods of many producers. India's inapt potential for adaptation makes it challenging to cope with these changes and requires our attention. Fairtrade calls for action to all supply chain actors, including brands to support producers in setting up projects to equip them to adapt better to the climate change risk.

The facts on Fairtrade crop production in India

- Farmers in India have been affected by climate change events in the past 10 years, specifically by increased number of floods, extreme temperatures and water scarcity
- Pests and diseases occur more frequently in coffee cultivation
- Some farmers have had to change production to other crops as a result of climate change impacts
- Farmers perceive high temperatures and high risk level to changing precipitation patterns and availability of water as medium to high risk factors that they will likely have to deal with in the future
- About 60 – 80 % of tea farmers plant shade trees as a strategy to improve their tea yields

Impact on Fairtrade crop production in India

Certain Fairtrade tea producing areas are expected to be severely impacted in face of climate change, mainly due to increased number of hotter and drier days, and sensitivity to rapidly changing extreme seasons.



More warm spells:

Under extreme climate change, almost all Fairtrade coffee and tea producers in South India will be exposed to an average of more than 30 additional days with extremely high temperatures than one of the highest maximum daily temperatures recorded between 1980-2010.



More consecutive dry days:

South Indian coffee and tea producers are projected to experience up to 10 more days of consecutive dry days under extreme climate change in the future.

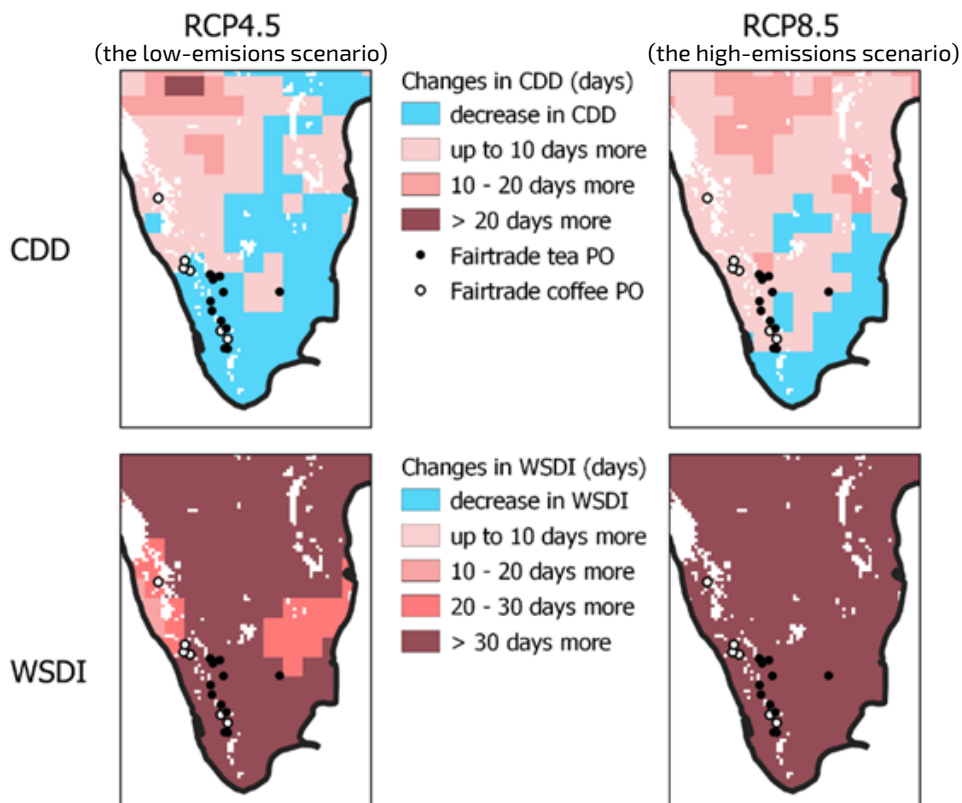
Generally, these areas will experience a combination of both more heatwaves and more consecutive dry days highlighting the severe impact of climate change on Fairtrade producer organizations in India.



Heavy precipitation days:

Both coffee and tea producers will experience an increase in days with heavy precipitation due to climate change.

Fig. 1 highlights areas that will experience warm days, consecutive dry days and heavy storms.



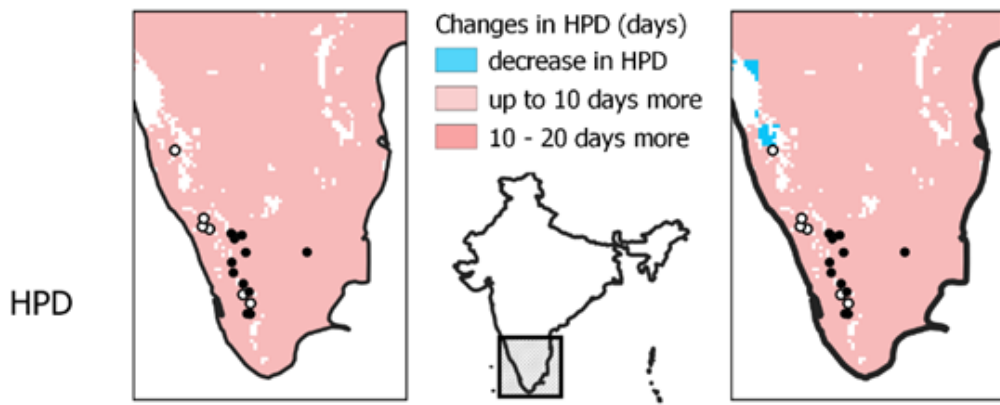


Fig 1: Changes in consecutive dry days (CDD), warm spell duration index (WSDI) and heavy precipitation days (HPD) for the coffee and tea producing areas in Southern India.

How farmers are adapting to these changes

While farmers have resorted to using several techniques to protect their yields, such as mulching, irrigation, harvesting rainwater, protecting water bodies and planting trees, these efforts are not enough and do not resolve the challenges they are facing. Tea producers also rely on buffer zones and agroforestry systems to minimize the negative effects of climate change. Again, their efforts to adapt are merely workarounds to tackle these climatic stressors.

Fig. 2 reflects the responses of tea and coffee farmers reporting the mitigation techniques they use to protect their yields from severe effects of climate change.

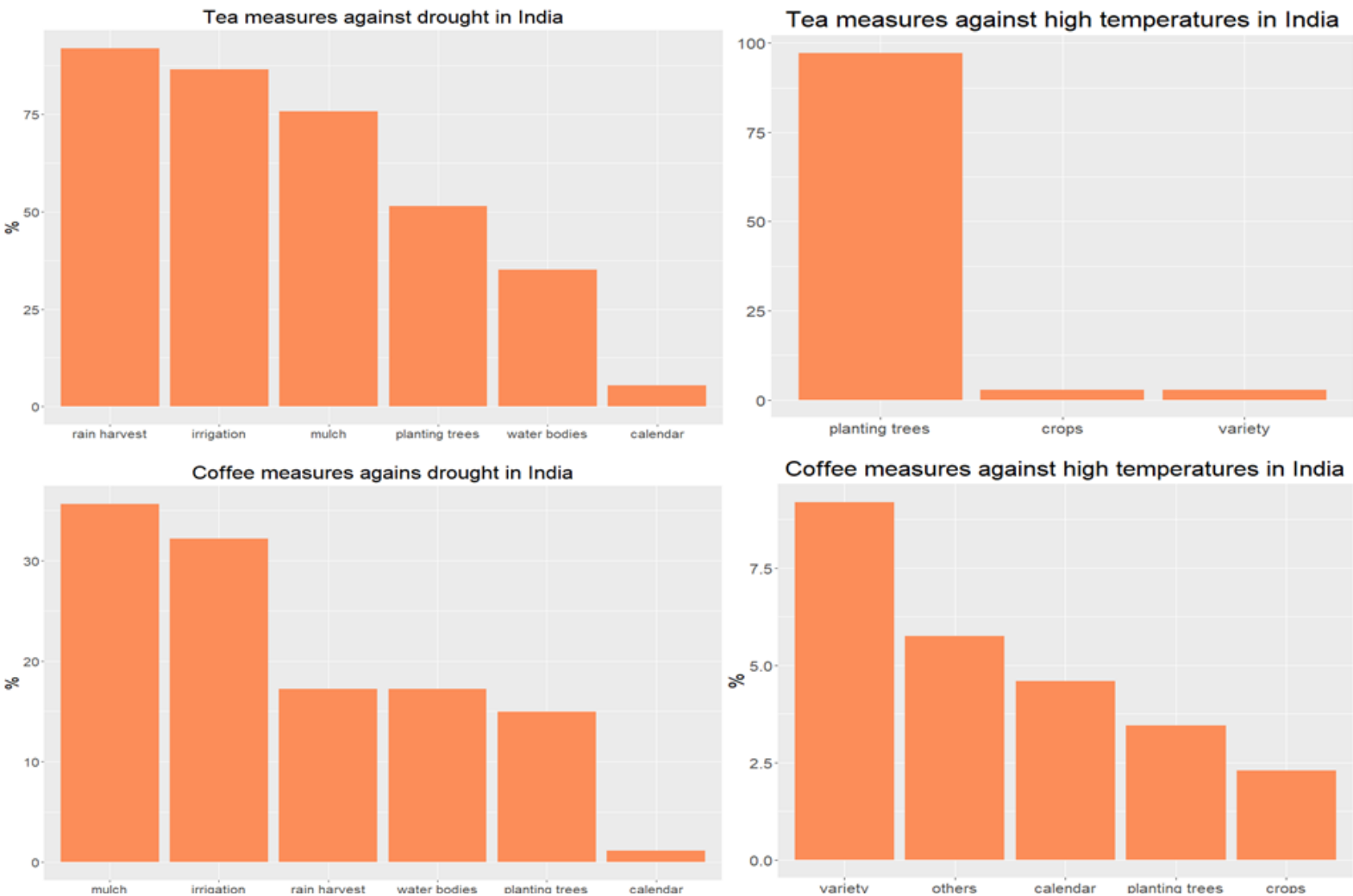


Fig 2: Measures taken by tea and coffee farmers in India to mitigate the effect of droughts and high temperatures.

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. To read more on Fairtrade's efforts related to climate change, please view the [Learning by Experience report](#).

Moreover, Fairtrade producers receive a Fairtrade Premium when selling their certified products, proceeds of which can be used to address priorities which farmers decide to invest in, including climate change measures or improving production practices.

Finally, in light of the recent EU draft directive on deforestation-free crop supply chains, Fairtrade acknowledges the European Commission's proposal to create a market for deforestation-free products, but believes that the fight against deforestation must include enabling smallholder farmers by engaging them in the process of constructive climate action rather than banning imports of crops from smallholder families. Fairtrade encourages efforts needed to build capacities and systems that enable smallholders' cooperatives to play their role in retaining the market access to the EU, and intends to build on this by increasing adaptation and mitigation projects further by promoting good agricultural practices (GAPs) (including agroforestry and organic farming) hand in hand with producers, building on local knowledge and realities through participatory, farmer-centered approaches.



What more can be done?

Our goal is to raise awareness and to protect the supply chain from drastic effects of climate change, which will be critical for our producers and at the same time reduce the risk that commercial partners will be faced with potential supply shortages in the future.

This includes from our side regularly reviewing the Standards, but also further research and more training on locally adapted good agricultural practices, such as agro-forestry, more advocacy and building new partnerships, where partnerships can be most efficient, for example in addressing 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.

This calls for action, and this is why we invite commercial partners to join us in supporting Fairtrade projects that help mitigate climate change risks with our farmers, supported by our producer networks in producer countries. 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.

