

## Climate Change Adaptation Strategy Recommended for the Conservation of Biodiversity in Western Ghats, India

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**Abstract :** Climate change Adaptation strategy (AS) is a scientific approach to dealing with the impacts of climate change (CC). Efforts are being made to contain the global emission of greenhouse gas within threshold limits, thereby limiting the rise of global temperature to an optimal level. Global Climate change is a spontaneous process; therefore, reversing the damage would take decades. The climate change adaptation strategy recommended by various stakeholders could be a key to resilience for biodiversity. The Indian Government has constituted the panel to synthesize the climate change action report at the federal and state levels. This review scavenged the published literature on the Western Ghats hotspots. And highlight the adaptation strategy recommended by diverse scientific actors to conserve biodiversity. It also reviews the grey literature adopted by state and federal governments and its effectiveness in mitigating the impacts on biodiversity. We have narrowed the scope of interest to the state action report by 6 Indian states such as Gujarat, Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu, which host Western Ghats global biodiversity hotspot. Western Ghats(WGs) act as the water tower to the peninsular part of India, and its extensive watershed caters to the water demand of the Industry sector, Agriculture and urban community. Conservation of WGs is the key to the prosperity of Peninsular India. The global scientific community suggested more than 600+ Climate change adaptation strategies for the policymakers, stakeholders, and other state actors to take proactive actions. The preliminary analysis of the federal and the state action plan on climate change in the wake of CC indicate inadequacy in motion as per recommended scientific adaptation strategies. Tamil Nadu and Kerala state constitute nine effective adaptation strategies out of the 40+ recommended for Western Ghats conservation. And other four states' adaptation strategies are deficient, confusing and vague. Western Ghats' resilience capacity will soon or might have reached its threshold, and the frequency of severe drought and flash floods might upsurge manifold in the decades to come. The lack of a clear roadmap to climate change adaptation strategies in the federal and state action stirred us to identify the gap and address it by offering a holistic approach to WGs biodiversity conservation.

**Keywords :** adaptation strategy, biodiversity conservation, climate change, resilience, Western Ghats

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