# 5IF *NQBDU PG $MJNBUF $IBOHF PO 1MBOU 1S &DPTZTUFN

Wendu Kebede Gemeda*

*Ethiopian Forestry Development, Addis Ababa, Ethiopia*

## Abstract

Climate change is a pervasive and growing global threat to biodiversity and ecosystems .Climate change impacts DUH H[WUHPHO\ H‡HFW RQ SODQW SURGXFWLYLW\ E\ UHGXFLQJ ZDWHU XVH HˆFLH DQG GLVWXUELQJ WKH VRLO KHDOWK &OLPDWH FKDQJH DOVR D‡HFWV ELRGLYHU SKHQRORJLFDO E\ UHGXFLQJ VSHFLHV DEXQGDQFH GLVWULEXWLRQ DQG ELRGLY ZHOOEHLQJ LV PHDVXUHG E\ WKH HFRV\VWHP VHUYLFHV DOWHUDWLRQ FDXVHG (FRV\VWHP VHUYLFHV KDYH YLWDO SOD\ DQ LPSRUWDQW UROH LQ WKH EDODQFH GHYHORSPHQW DUH VX‡HULQJ IURP GHJUDGDWLRQ FDXVHG E\ KXPDQ DFWLYLWLHV

## Salinity stress

Salinity stress is an important yield-limiting factor that poses a signi cant threat to agriculture worldwide. Salinity is considered as one of the leading limiting factors responsible for growth and production decline of agricultural crops throughout the world principally in arid and semiarid regions [3,4]. Furthermore, it is strongly evident that higher concentration of salts' ions in soil negatively e ects on plant growth and productivity the uptake of other necessary ions which plants require for several metabolic and enzymatic activities.

## High temperature stress

Climate change-led rises in local and global temperatures pose a signi cant threat to plant growth and crop production. Heat stress can damage all stages of plant growth from germination to reproduction, limiting the productivity of major staple food crops. e plant reproductive organs and processes leading to seed set are very vulnerable to increasing temperatures. e current information and understanding of the molecular mechanisms that contribute to this temperature sensitivity are ably discussed by, who summarize them regulation of male and female reproductive organ development and fertilization, together with heat-induced abnormalities at owering.

## Impact of climate change on biodiversity

### Behavior and morphology change

One way that organisms cope with changes in their environment is by changing their behavior or morphology. Behavioral responses to climate alteration can result from changes in temperature and manifest before changes at the population and species level, such as distribution changes or population decrease. Behavioral responses include seeking shade or refuge, altering feeding times, changing site use, and shi ing

and growing risk to biodiversity, ecosystems, and ecosystem services. Climate changes are shocking the world by hampering agriculture and its products. Poisonous gases and Industrialization cause global warming, which ultimately disturbs the world's environment. Climate change has destructive e ects on plant growth and yield. Abiotic stresses are the major type of stresses that plants decline growth. Climate change impacts the extremely e ect on individuals, populations, and species through changes in behavior and morphology, phenology, and