

# Recommendations



# What we need to do to combat Climate Change via promoting CSA

- Timing of MNS-CSA Conference was perfect:
  - **Monday** : IPCC SR 1.5C released – a wake-up call
  - **Tuesday**: Nobel Prize to Climate Change Economists William Nordhaus & Paul Romer “for integrating climate change and technological change into macroeconomics”
- Connect local farmers to global (carbon) markets via a green and clean Pakistan
- Think global, act local, and support Pakistan societies' overall welfare via implementation

# Government and Administration

- Promote **Tree plantation** to control temperature increase / increase precipitation / sequester carbon to mitigate climate change
- Installation of more **Weather monitoring, forecasting and advisory systems** for early warning about climate disaster like heat wave, cold wave or floods (agro-meteorology – phenology and -pest models)
- Construction water reservoirs/storage to reduce drought impacts
- Investment on **research and development** sector e.g establishment of climate change study centers in each region/division for development of climate smart agricultural tools and dissemination of knowledge
- Encourage **carbon certification/organic farming schemes** to connect local action to global carbon markets/ organic product markets
- Must launch a move for assessing the **health vulnerabilities of communities** in vulnerable areas (diversification of food resources & home gardening)
- **Knowledge transfer**: Investment on awareness, capacity building and efficient extension system for translation of research messages in to common man language
- After 18<sup>th</sup> amendment we need provincial agriculture and climate policy. So govt. must pay attention to this deficiency

# Scientists: Research and Development

- Exploring zone specific **alternate crops and their varieties** keeping in view the site specific issues and challenges
- **Redefining of crop zoning** in advance on the bases of global climate models predictions and downscaling using RCMs using Representative Concentration Pathways
- Use of biotechnological tools to incorporate stress (heat, drought, salt) tolerance in crops
- Development of varieties which will be able to accumulate micronutrient especially Zn and Iron in edible parts to combat malnutrition
- Disseminate climate smart production technologies to ensure food and nutritional security under changing climate
- Development of efficient water use technologies like deficit and drip irrigation, bed sowing of crops
- Research institutes should introduce climate smart products using remote sensing, crop models and publish the specific informative material in local languages on local issues which can strengthen local capacities towards adverse effects of climate change

# Farmers and Communities

- Crop rotation to break pest cycle, green manuring and use of biochar to increase soil fertility
- Conservation agriculture can reduce global CO<sub>2</sub> emissions, degradation land, improve fertility and reduce cost of production.
- Diversification of bread basket by inclusion of stress-tolerant and versatile pseudo cereals and coarse grains like millets, quinoa, cheena
- Legume crops (Mungbean, cow pea, sesbanina) can be successfully adjusted in summer gap (from last week of April to mid-July) for getting fodder, grain and biomass for green manure.
- Climate smart agriculture through models of bio-gas plants and use of solar dryers for fruit and vegetables processing, solar operated hand pumps and donkey pumps can be energy efficient
- The activities performed by CSOs like Doaba Foundation could be helpful for sustainable crop production in changing climatic conditions of Pakistan
- Being a responsible citizen we must discouraging use of plastic bags, and promote use of public transport, use of bicycles, adopting renewable energy source

- **G+A:** Promote Tree plantation to control temperature increase / increase precipitation / sequester carbon to mitigate climate change;
- **R+D, F:** Adjustment of sowing time in wheat delayed planting to avoid terminal heat stress so that grain filling occurs during cooler temperatures
- Weather monitoring, forecasting and advisory systems