CLIMATE CHANGE-READY
TECHNOLOGIES FOR RICE AND RICE-BASED FARMING

Tool/Technology/Practice	Description
Rice Varieties	Rice varieties with some resistance to climate-related stresses
Drought-tolerant varieties PSB Rc14 PSB Rc68 NSIC Rc9 NSIC Rc222 NSIC 2011 Rc272 (Sahod Ulan 2) NSIC 2011 Rc274 (Sahod Ulan 3) NSIC 2011 Rc278 (Sahod Ulan 5) NSIC 2011 Rc284 (Sahod Ulan 8) NSIC 2011 Rc286 (Sahod Ulan 9) NSIC 2011 Rc288 (Sahod Ulan 10) NSIC 2013 Rc346 (Sahod Ulan 11) NSIC 2013 Rc348 (Sahod Ulan 12)	Varieties adapted to drought-prone areas; good for conditions where the crop is dry- seeded or when rainfall maybe nil or delayed.
Water submergence-tolerant varieties PSB Rc18 (Ala) NSIC Rc194 (Submarino 1) PSB Rc68 (Sacobia)	Varieties that can recover when submerged in water during floods/typhoons PSB Rc 18 can withstand 4 days of complete submergence to flood during recent typhoons that hit the country. NSIC Rc194 (Submarino 1) can survive, grow, and develop even after 10 days of complete submergence at vegetative stage Aside from drought resistance, PSB Rc68 also has some degree of submergence tolerance trait
Saline-resistant varieties NSIC Rc182 (Salinas 1) NSIC Rc184 (Salinas 2) NSIC Rc186 (Salinas 3) NSIC Rc188 (Salinas 4) NSIC Rc190 (Salinas 5) NSIC 2011 Rc290 (Salinas 6) NSIC 2011 Rc292 (Salinas 7) NSIC 2011 Rc294 (Salinas 8) NSIC 2011 Rc296 (Salinas 9) NSIC 2011 Rc336 (Salinas 16) NSIC 2011 Rc390 (Salinas 19)	These varieties can grow in saline areas with moderate salinity level
Water-saving technologies	Technologies that can be used during drought periods
Controlled irrigation or Alternate wetting and drying (AWD)	Developed by the International Rice Research Institute, AWD is a water-saving technology that lowland (paddy) rice farmers can apply to reduce their water use in irrigated fields. In AWD, irrigation water is applied to flood the field for a certain number of days after the disappearance of standing water. Hence, the field is alternately flooded and dried. Results of PhilRice studies on AWD showed that it also minimizes greenhouse gas emissions from paddy fields.

Low-cost drip irrigation system	Recommended for irrigating rice-based crops (vegetables for instance) for efficient utilization of limited amount of water particularly during drought conditions
Fossil-free technologies	Technologies that help reduce dependence on fossil products thus also help reduce GHG emissions
Rice hull gasifier-pump system	For pumping water (for irrigation and other purposes) using rice hull as fuel in place of gasoline or diesel. This can be used during drought conditions recommended for rainfed areas
Windmill- pump system	For pumping water (for irrigation and other purposes) using wind energy in place of fossil fuel; applicable in areas where wind energy is abundant
Rice hull stove	Stove designs that utilize rice hull as fuel instead of fossil-based fuels. Two stove designs are available: 1.Maligaya rice hull stove 2.Rice hull gasifier stove
Rice hull carbonizer	A device for processing of rice hull into biochar. Biochar is popularly used as soil conditioner and as main ingredient in the producing organic ferilizers. Incorporating biochar into the soil is a simple way of carbon sequestration
Diversified system of farming	Technologies for diversifying sources of income as a strategy for enhancing farmers' resilience to climate change
Palayamanan plus	A highly integrated and diversified system of farming where rice is grown with other crops and livestock and makes productive use of agricultural waste
Rice-duck system	Growing rice with ducks to diversify farmers' sources of income. Unlike the conventional rice-duck farming where duck density is low (around 100 ducks per ha), the current system uses 1,000 ducks per ha thus generating higher income without requiring additional area
Floating gardens	Growing vegetables in floating beds, applicable in swampy and flood-prone areas, to enhance household food security

Harvest/Postharvest technologies	Technologies that help prevent harvest and postharvest losses during typhoons or periods of continuous rains
Mini rice combine harvester	Allows fast and timely harvesting and threshing of rice to evade possible damage due to forthcoming typhoons
Flatbed paddy dryer	Allows drying of wet paddy during typhoons/ rainy days
Hermetic seed storage (SACLOB)	Ensures quality preservation of paddy seeds against the harmful effects of high humidity during the rainy season

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