

MANaging Risk and uncertainties (MARITIES)

understanding forecast uncertainties

This module is based from the activity “Seasonal Forecast Game” of the Red Cross Red Crescent Climate Center. For more information you may visit <http://www.climatecentre.org/resources-games/games> or send an email to climatecentre@climatecentre.org

OBJECTIVES

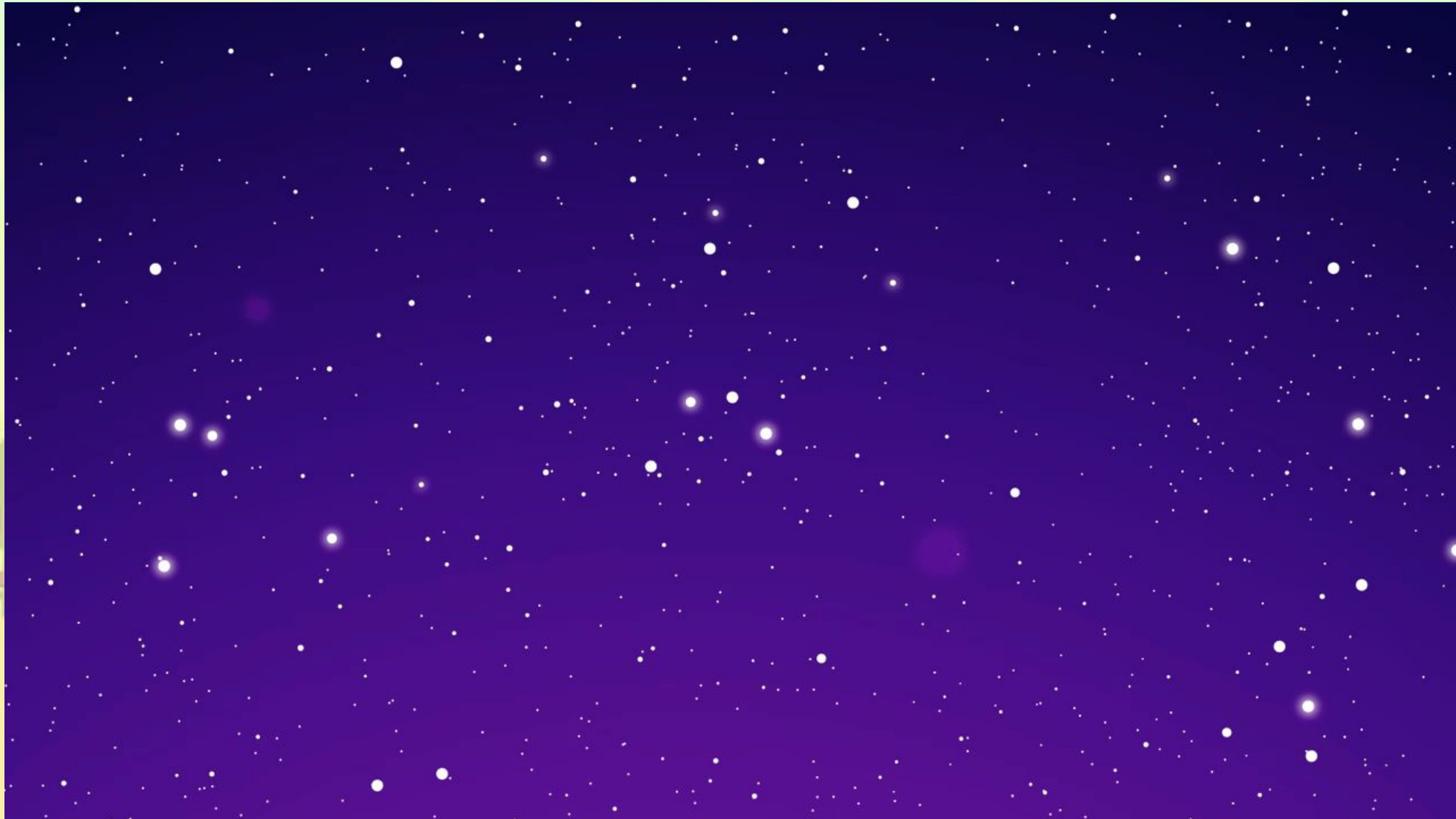


to understand forecast uncertainties



to be able to create decisions based on different seasonal forecast uncertainties

MECHANICS



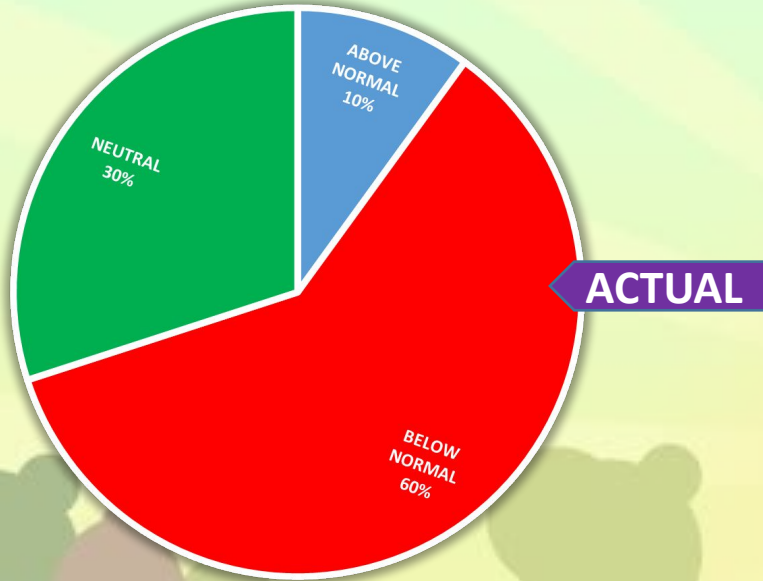
MECHANICS

1. EACH PARTICIPANTS WILL BE GIVEN AN INITIAL FUNDS OF PhP 20,000.
2. 5 SCENARIOS WILL HAVE THE FOLLOWING INFORMATION:
 - TYPE OF SECTOR
 - CURRENT ENSO CONDITIONS
 - PROBABILISTIC FORECAST
 - TARGET SEASON
 - ACTIONS TO BE TAKEN
3. EACH PARTICIPANT WILL DECIDE WHAT ACTIONS TO TAKE ON EACH SCENARIOS WITH CORRESPONDING DEDUCTION ON THEIR INITIAL FUNDS.
4. ACTUAL CONDITION WILL BE DETERMINED USING A ROULETTE, CORRECT DECISIONS WILL GAIN PROFIT OTHERWISE PENALTY WILL BE DEDUCTED TO THE INITIAL FUND.

CONDITION	POINTS
FORECAST = ACTUAL	+4K
FORECAST ≠ ACTUAL	-6K

SCORING

PROBABILISTIC RAINFALL FORECAST



SAMPLE ACTIONS

ACTIONS		INVEST
A	ACTION 1	-2
B	ACTION 2	0
C	ACTION 3	-2

RESULT

CONDITION	POINTS
FORECAST = ACTUAL	+4PTS
FORECAST ≠ ACTUAL	-6PTS

SAMPLE

COMPUTATION

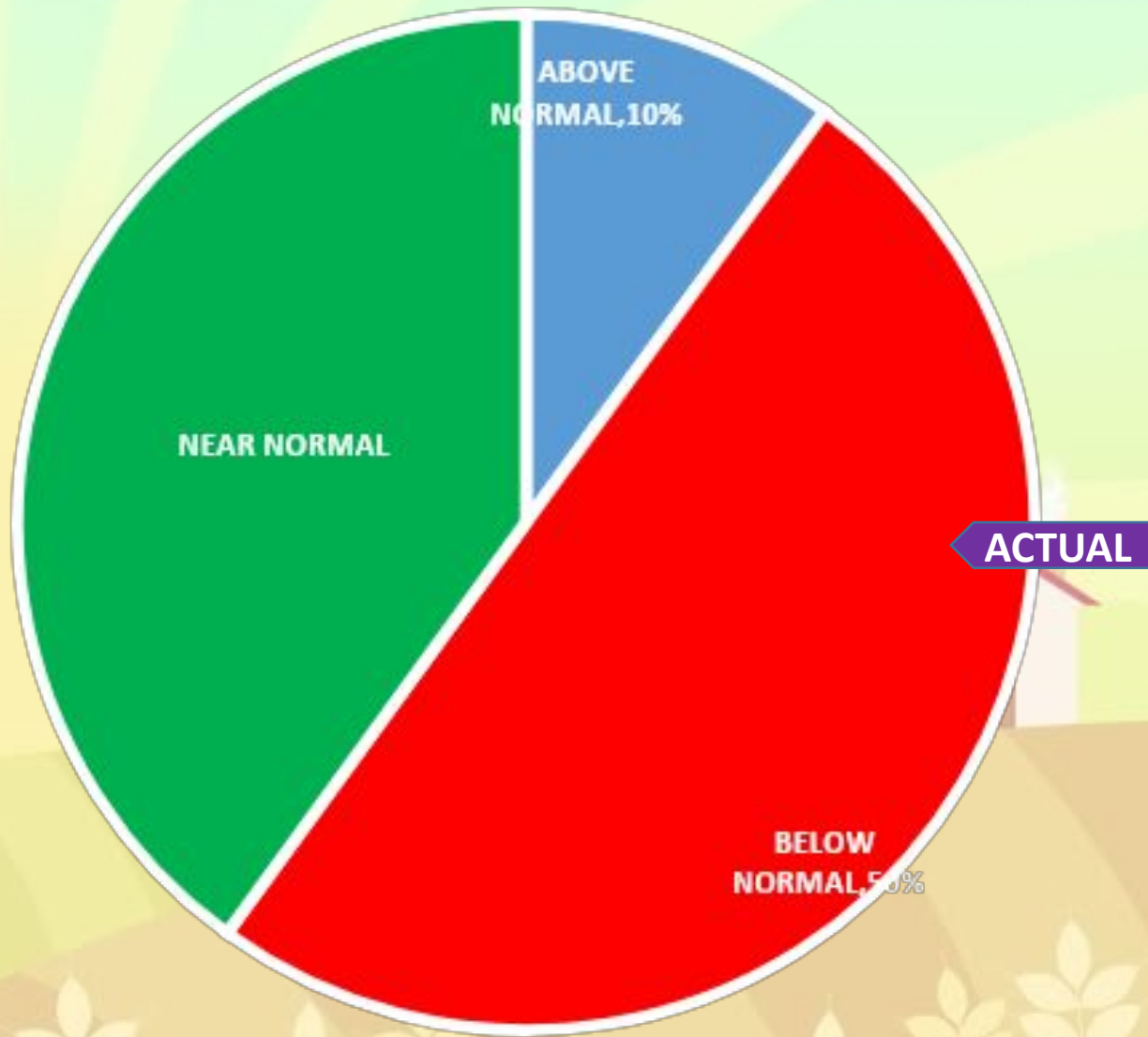
FUNDS	SCENARIO1	SCENARIO2	SCENARIO3	SCENARIO4	SCENARIO5	GRAND TOTAL
20	2	4	-6	-8	2	14
20						

SCENARIO 1

PROBABILISTIC RAINFALL FORECAST

SECTOR	WATER
ENSO CONDITION	EL NIÑO YEAR
SEASON	OCT-NOV-DEC

ACTIONS		INVEST
A	LIMIT WATER ALLOCATION	-2K
B	MAINTAIN CURRENT OPERATION	0
C	MAKE DAM PREPARATION FOR SPILLAGE	-2K

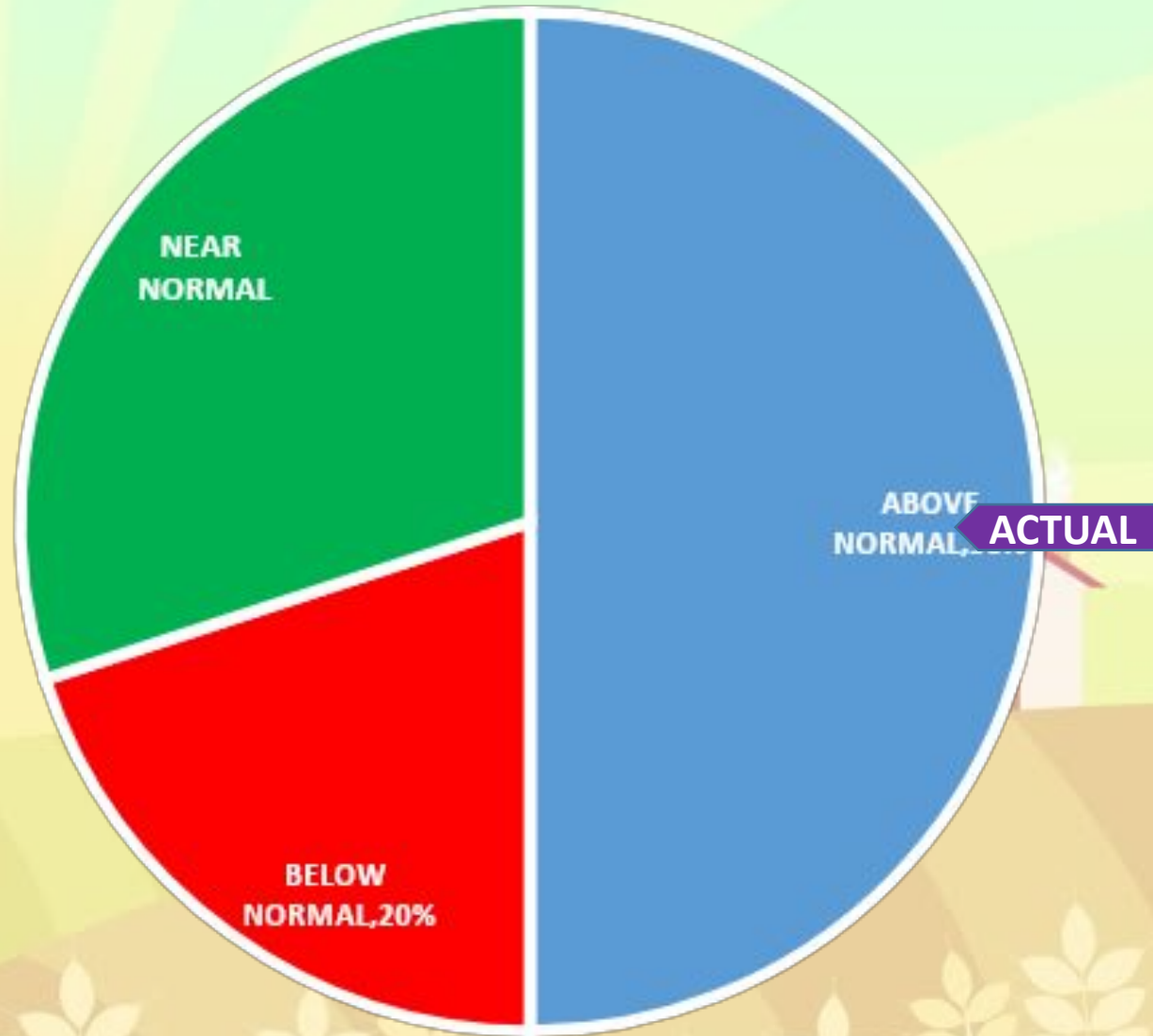


SCENARIO 2

SECTOR	DRR
ENSO CONDITION	LA NIÑA YEAR
SEASON	SEP-OCT-NOV

ACTIONS	INVEST
A MAINTAIN CURRENT OPERATION	0
B CONDUCT DECLOGGING OPERATIONS AND SEWAGE MAINTENANCE ACTIVITIES	-2K
C PURCHASE ABOUT 80 POLYVINYL CHLORIDE (PVC) RESCUE BOATS	-2K

PROBABILISTIC RAINFALL FORECAST

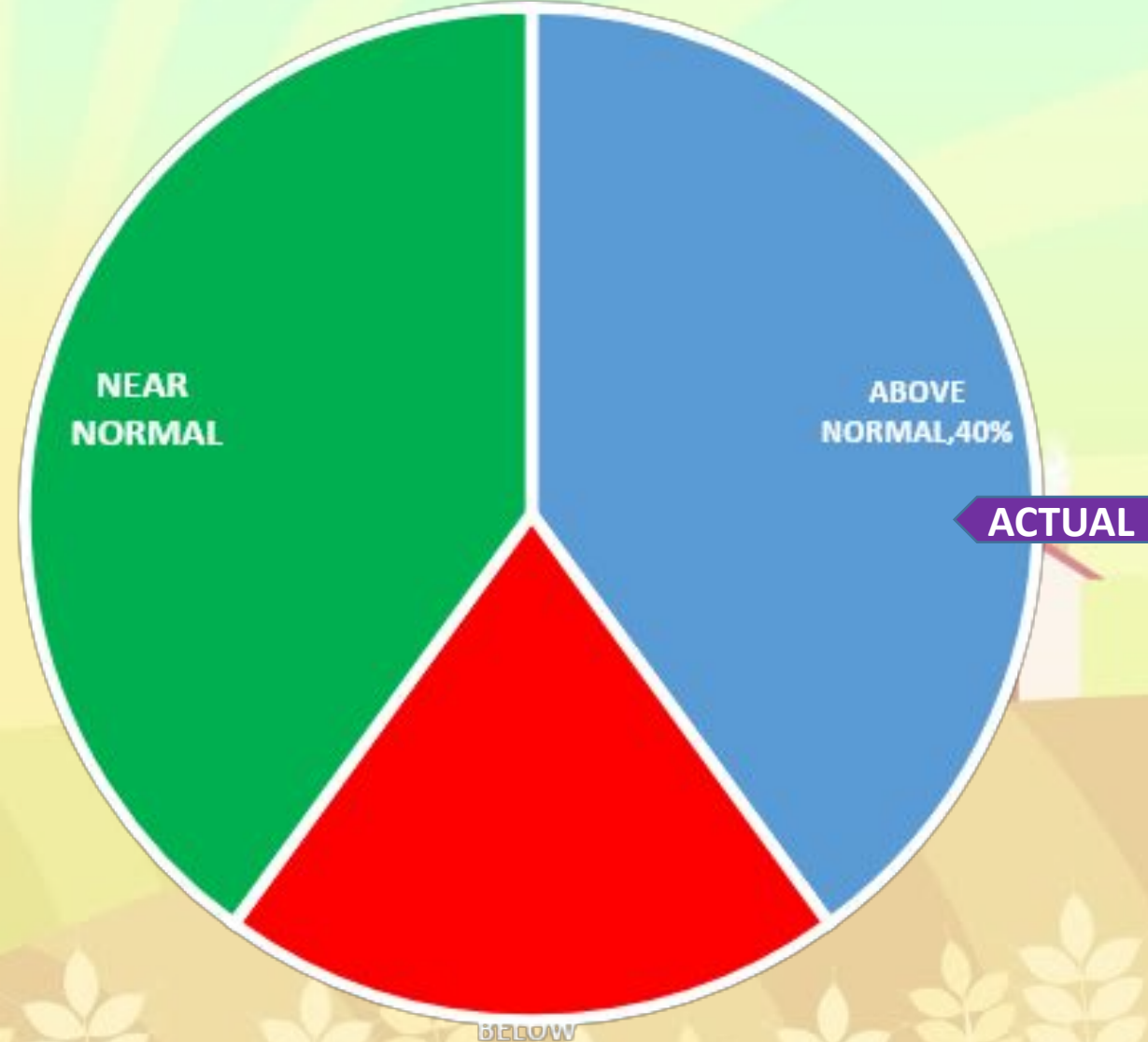


SCENARIO 3

SECTOR	AGRICULTURE
ENSO CONDITION	NEUTRAL YEAR
SEASON	MAY-JUNE-JULY

ACTIONS		INVEST
A	DELAY CROPPING SCHEDULE	-2K
B	MAINTAIN CROPPING SCHEDULE	0
C	ADJUST CROPPING SCHEDULE TO EARLIER DATE	-2K

PROBABILISTIC RAINFALL FORECAST

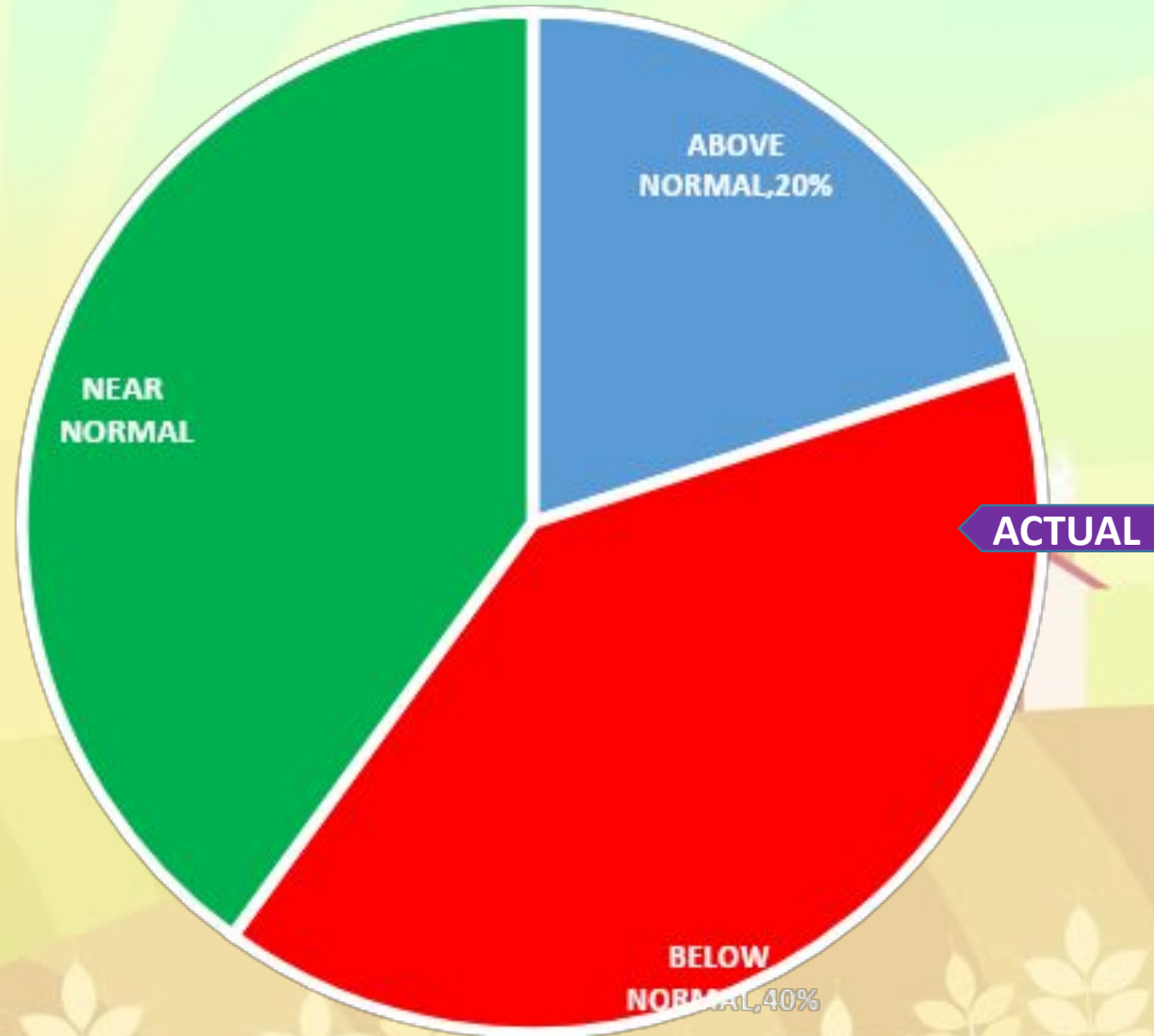


SCENARIO 4

SECTOR	AGRICULTURE
ENSO CONDITION	EL NIÑO YEAR
SEASON	MAY-JUNE-JULY

ACTIONS		INVEST
A	CHANGE CROP VARIETY TO LESS WATER DEPENDENT	-2K
B	MAINTAIN CROPPING VARIETY	0
C	CHANGE CROP VARIETY TO MORE WATER DEPENDENT	-2K

PROBABILISTIC RAINFALL FORECAST

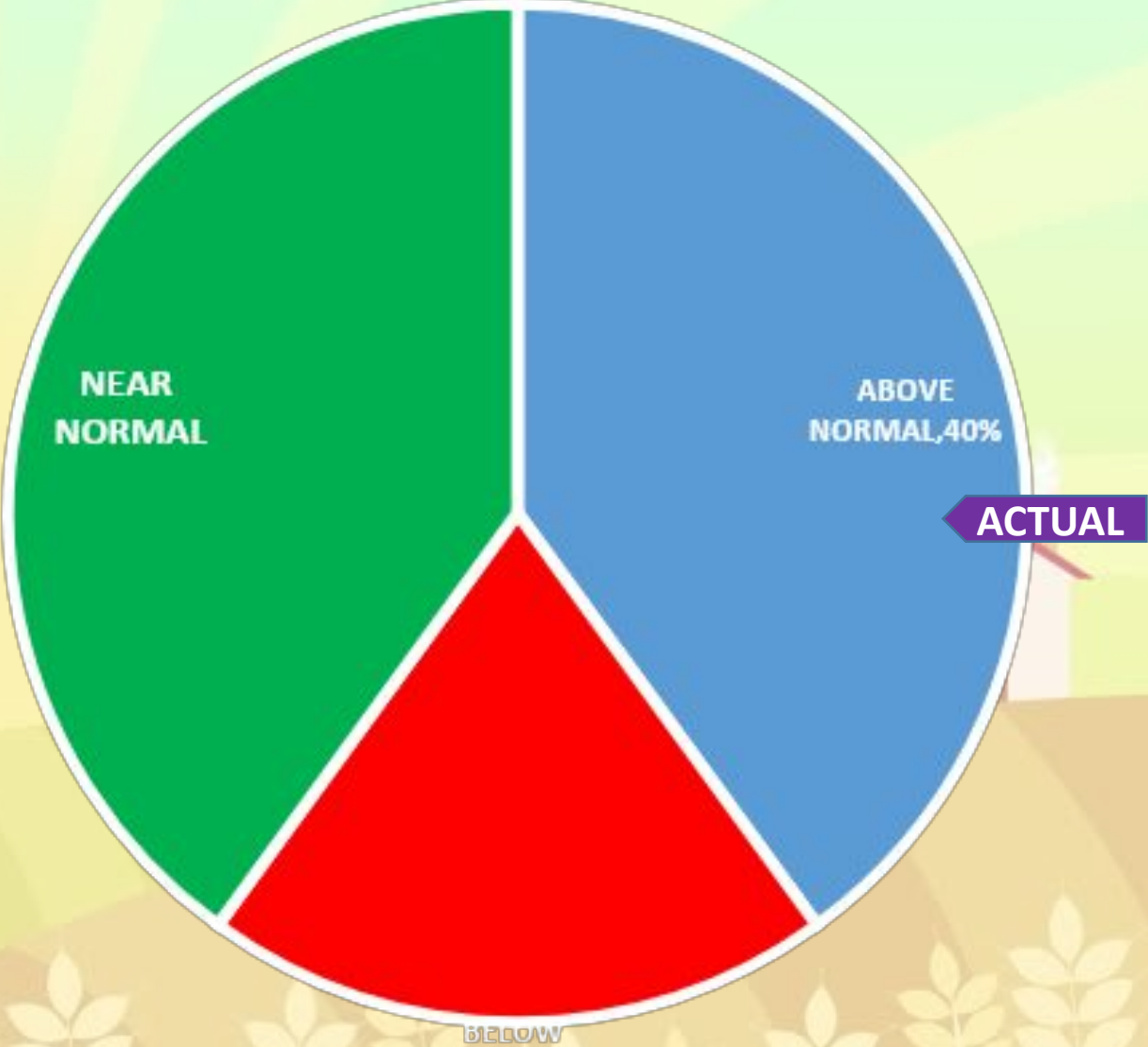


SCENARIO 5

SECTOR	AGRICULTURE
ENSO CONDITION	LA NIÑA YEAR
SEASON	SEP-OCT-NOV

ACTIONS	INVEST
A INVEST IN POST HARVEST FACILITY	-2K
B MAINTAIN HARVEST SCHEDULE	0
C SCHEDULE FOR EARLIER HARVEST	-2K

PROBABILISTIC RAINFALL FORECAST

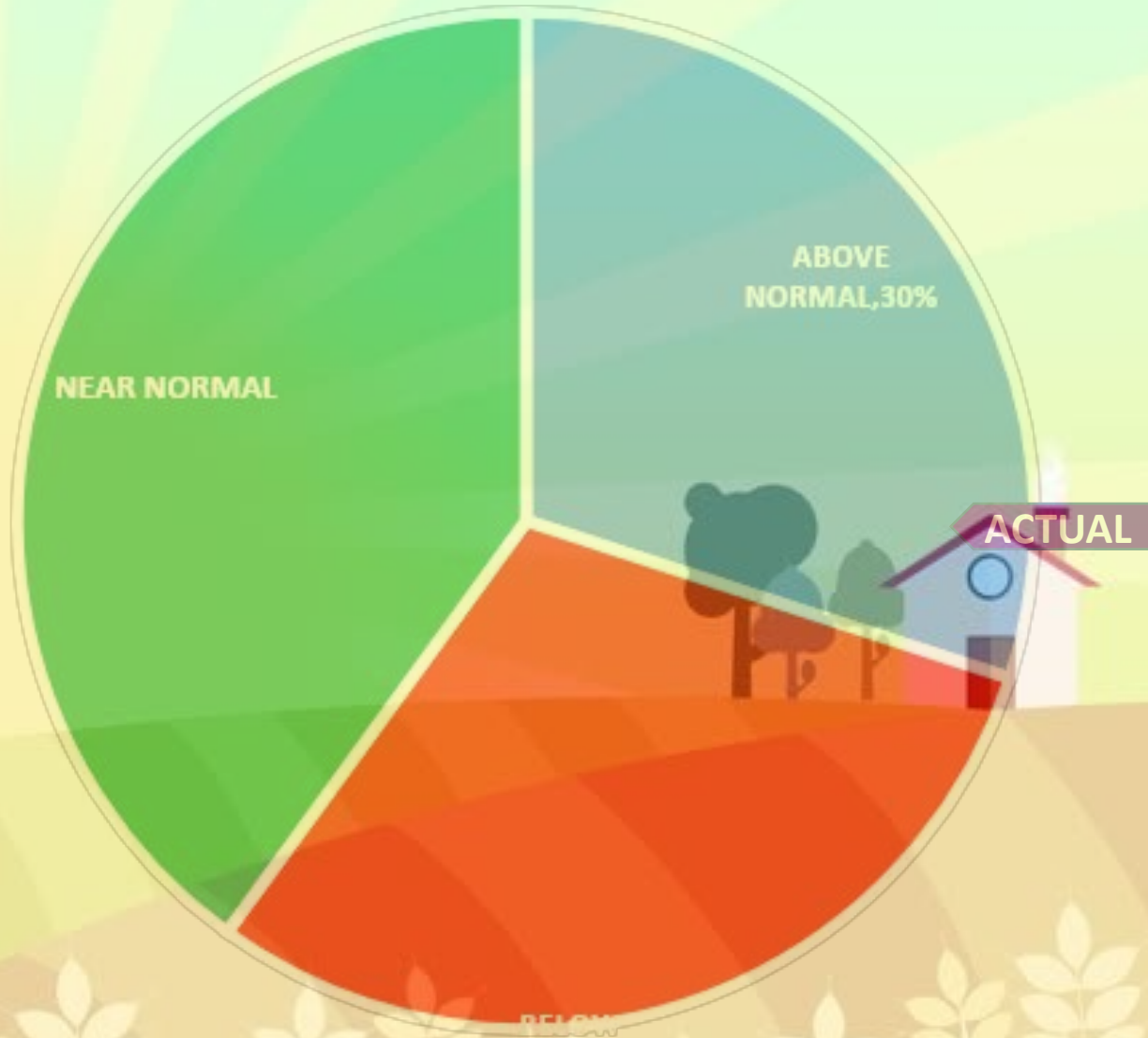


SCENARIO 6

SECTOR	FISHERIES
ENSO CONDITION	NEUTRAL YEAR
SEASON	JUN-JUL-AUG

ACTIONS	INVEST
A MAINTAIN SCHEDULE	0
B DELAY HARVEST SCHEDULE	-2
C EARLY HARVEST SCHEDULE	-2

PROBABILISTIC RAINFALL FORECAST



SYNTHESIS



Player	SC1	SC2	SC3	SC4	SC5	GRAND TOTAL
EDRIC	6	6	6	6	6	50
MAYANG	4	4	4	4	4	40
GER	4	-6	6	-8	4	20
NESTOR	-6	-6	-6	-6	-6	-10
JUAN	-8	-8	-8	-8	-8	-20

→ Best Case Scenario

→ Feasible case

→ Worst Case Scenario

“There is no right decision in life, because every decision we make is new and unpredictable.”

— M.F. Moonzajer

“Don’t take the right decisions. Take decisions and make it right.”

— Ratan Tata

REFERENCES:

This module is based from the activity “Seasonal Forecast Game” of the Red Cross Red Crescent Climate Center. For more information you may visit <http://www.climatecentre.org/resources-games/games> or send an email to climatecentre@climatecentre.org

