**Part 9 of the Report- WASH**

The first input will always be:

* The Area Councils that have been affected by the Cyclone
* The Category of Cyclone for each Area Council
* The tables outlined below show every administrative boundary: National (Vanuatu), Province (Torba, Sanma, Penama, Malampa, Shefa, Tafea), and the Area Councils underneath their Province. However, the report should show the National, and only the Provinces and Area Councils affected by Cyclone.

Analysis:

* The analysis is four steps:

1. Baseline
2. Estimate Damage from Cyclone
3. Resources Needed to be Sent to Those Affected
4. Estimate Financial Damage from Cyclone

* The analysis will be carried out at the Area Council level as the primary unit.

1. Provincial figures will be generated by summing the results of all Area Councils within each province.
2. National figures (Vanuatu) will then be produced by summing the results across all provinces.
3. **Number of households with drinking water and toilet type**

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| **Region** | **Drinking water** | | | **Toilet type** | | | |
|  | **Piped** | **Well** | **Tank** | **Pit Latrine** | **VIP** | **Flush** | **Water sealed** |
| Vanuatu |  |  |  |  |  |  |  |

1. **ESTIMATING DAMAGE: Number of damaged drinking water and toilet facility**

* Inputs:

1. Number of households (HHs) by Area Council (AC) and drinking water source (piped, well, tank).
2. Number of households (HHs) by Area Council (AC) and toilet type (flush, water sealed, VIP, pit latrine).
3. Cyclone category (with corresponding damage multiplier, e.g., Cat 5 = 0.8, Cat 4 = 0.7).

* Formulas:

1. Damaged drinking water facilities = (Number of HHs by water source × Damage multiplier).
2. Damaged toilet facilities = (Number of HHs by toilet type × Damage multiplier).

* Example:

1. Cyclone Category 5 in Torres (multiplier = 0.8).
2. Cyclone Category 4 in Ureparapara (multiplier = 0.7).

* Torres (5 HHs with tanks, 1 HH with well, 12 HHs with piped water; 1 HH with flush toilet, 10 HHs with water sealed, 0 HHs with VIP or pit latrine):

1. Damaged drinking water:
2. Tank = 5 × 0.8 = 4.0
3. Well = 1 × 0.8 = 0.8
4. Piped = 12 × 0.8 = 9.6
5. Damaged toilets:
6. Flush = 1 × 0.8 = 0.8
7. Water sealed = 10 × 0.8 = 8.0
8. VIP = 0 × 0.8 = 0
9. Pit latrine = 0 × 0.8 = 0

* Ureparapara (1 HH with tank, 3 HHs with well, 30 HHs with piped water; 5 HHs pit latrine, 2 HHs VIP, 12 HHs water sealed, 0 HHs flush):

1. Damaged drinking water:
2. Tank = 1 × 0.7 = 0.7
3. Well = 3 × 0.7 = 2.1
4. Piped = 30 × 0.7 = 21.0
5. Damaged toilets:
6. Pit latrine = 5 × 0.7 = 3.5
7. VIP = 2 × 0.7 = 1.4
8. Water sealed = 12 × 0.7 = 8.4
9. Flush = 0 × 0.7 = 0

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| **Region** | **Drinking water** | | | **Toilet type** | | | |
|  | **Piped** | **Well** | **Tank** | **Pit Latrine** | **VIP** | **Flush** | **Water sealed** |
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1. **RESOURCES NEED TO BE SENT TO THOSE AFFECTED**

* Formulas:

1. Bottled water = (Population × Cyclone multiplier × Litre intake per person per day × # of days)
2. Tanks = (Number of villages × Cyclone multiplier × 1 tank per village)
3. Water purifier tablets = (Number of households × Cyclone multiplier × tablets per household)

* Example Scenario:

1. Cyclone Category 5 (multiplier = 0.8) hits Torres.
2. Cyclone Category 4 (multiplier = 0.7) hits Ureparapara.

* Torres (Population: 200 people; 5 villages; 20 households):

1. Bottled water = 200 × 0.8 × 1L × 14 = 2,240 litres
2. Tanks = 5 × 0.8 = 4 tanks
3. Water purifier tablets = 20 × 0.8 = 16 tablets

* Ureparapara (Population: 150 people; 3 villages; 15 households):

1. Bottled water = 150 × 0.7 × 1L × 14 = 1,470 litres
2. Tanks = 3 × 0.7 = 2.1 ≈ 2 tanks
3. Water purifier tablets = 15 × 0.7 = 10.5 ≈ 11 tablets

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| **Region** | **Drinking water** | | |
|  | **Bottled Water** | **Tank** | **Water Purifier Tablets** |
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1. **ESTIMATED FINANCIAL DAMAGE FROM A CYCLONE**

* Formula:

1. Financial Damage per drinking water type = (Number of facilities × Unit cost × Cyclone multiplier)
2. Financial Damage per toilet type = (Number of facilities × Unit cost × Cyclone multiplier)

* Inputs Needed:

1. Number of households/facilities (by drinking water type: piped, well, tank; by toilet type: flush, water sealed, VIP, pit latrine) in each Area Council.
2. Unit cost (replacement value) of each facility type:

* Example values (to be confirmed by engineering/sector standards):

1. Piped connection = 50,000 VT
2. Well = 100,000 VT
3. Tank = 150,000 VT
4. Flush toilet = 200,000 VT
5. Water sealed = 150,000 VT
6. VIP = 100,000 VT
7. Pit latrine = 50,000 VT
8. Cyclone category multiplier (e.g., Cat 5 = 0.8, Cat 4 = 0.7).

* Example Scenario:

1. Cyclone Category 5 in Torres (multiplier = 0.8).
2. Torres has 12 HHs with piped water, 1 HH with well, 5 HHs with tanks; and 1 flush, 10 water sealed, 0 VIP, 0 pit latrine.

* Calculate per type:

1. Drinking water:
2. Piped = 12 × 50,000 × 0.8 = 480,000 VT
3. Well = 1 × 100,000 × 0.8 = 80,000 VT
4. Tank = 5 × 150,000 × 0.8 = 600,000 VT
5. Toilet facilities:
6. Flush = 1 × 200,000 × 0.8 = 160,000 VT
7. Water sealed = 10 × 150,000 × 0.8 = 1,200,000 VT
8. VIP = 0 × 100,000 × 0.8 = 0
9. Pit latrine = 0 × 50,000 × 0.8 = 0

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