

## Project Assignment 3 –Detailed Climate Characteristics of your Island/Country

**Total 25 points – Due Thursday 10/29/15**

### Instructions to turn in:

- 1) These assignments must be TYPED
- 2) Student information: Name, student ID, MET 102 Fall 2015, Date all on their own line - in the upper Right Hand Corner
- 3) Title as described in the assignment (replace “your Island/Country” with the actual name of your Island/Country.
- 4) Times New Roman
- 5) 12 pt font
- 6) 1 inch margin
- 7) Page numbers in the lower Right hand Corner

### 1. (8 points) Geographic location and the impact on regional temperature in your Capital or Largest City

- a) (1 pt) What is your Capital/Largest City and what is its latitude and longitude? *Refer to your last assignment.*
- b) (2 pts ) Which of the “controls on temperature” mentioned in class apply to your Capital/Largest City? (Hint: these include land vs. water, altitude, cloud cover, etc.)
- c) (4 pts) For each of the temperature controls you listed in part b) above describe how the control on temperature affects your city (i.e. keeping it warmer than it would otherwise be or keeping it cooler or making annual fluctuations smaller or larger.) Refer to the notes for ideas.
- d) (1 pt) Do any of the “temperature controls” discussed in class not apply to your city? Make sure to mention which one and the reason why it is not a regional control on temperature for your city.

### 2. (9 points) Location and Global Wind – Based on the readings and diagrams showing general circulation of the atmosphere, including the polar easterlies, westerlies, and trade winds answer the following questions about your country:

- a) (1 pt) In which hemisphere (North or South) is your country located?
- b) (1 pt) In which of the three “atmospheric cells” does your country reside?
- c) (1 pt) In which wind belt does your country reside?
- d) (1 pt) What is the prevailing wind direction? (*Hint: Winds are named for the direction they come from*).
- e) (1 pt) Is your country near a main pressure belt (Low or High)? If so, which one? How would this affect your countries climate (temperature and precipitation)?
- f) (1 pt) Is your country located near any “special” areas such as the doldrums or the horse latitudes? If yes, which one(s)? If no, write a sentence explaining why not.

g) (1 pt) What are the latitude and longitude ranges for your entire country (e.g. what are the maximum and minimum latitudes and longitudes you would need to locate your country in a box drawn on a map)? *You'll need four numbers for this answer. For chains of islands make sure to include all of them!*

h) (2 pts) Find a global wind map online and circle where your country is located. Include the image with your assignment. (*Hint: You can use "Insert" and then "Shape" to draw a box in Word. Ask for help if you need it.*)

**3. (5 points) Local Winds** – Based on your country's geographic location and topographic characteristics determine what types of local winds can be experienced your country.

a) Describe (name and define) the types of breezes or winds that are associated with mountains and coastlines?

b) Does your country have mountains? If yes what are the names main ranges? If no, describe what type of island it is (e.g. one of the types discussed the first week of class).

c) Does your country have coastlines (silly question, I know)?

d) Based on your answer to a) does/can your country experience any of these winds? Which ones?

e) For your capital/largest city, what is the most common local wind that you would experience if visiting?

**4. (3 points) Elevation** - Elevation plays a role in temperature, tourism, agriculture and risk. It's good to have an idea what the local elevations are in your country. An example for why we would care is the 9/17/2015 Tsunami Watch from the Chilean 8.3 earthquake. It's good to know what areas are susceptible to changes in sea level, whether from climate change or from other events like earthquakes.

a) What is the average elevation of your country?

b) What is the maximum elevation of your country?

c) How would you describe, in your own words, how a change in sea level would affect your country?