ENVIRONMENTAL SCIENCE

POPULATION

**POPULATION** is a group of individuals of a single species that live in a particular area and interact with one another.

**POPULATION ECOLOGY**  - The study of how population change in given environment. Whether these changes are long term or short term.

* **SIZE** – the total number of individuals. Population size influences the chances of a species surviving or going extinct.
* **DENSITY** – the average number of individuals in a population per unit of area or volume.
* **AGE STRUCTURE**- the proportions of individuals at different life stages within a population, and it is an important indicator of population status.
* **DISTRIBUTION PATTERN**- how individuals in a population are spread out.

**PATTERN OF POPULATION DISTRIBUTION**

**1.** Random

**2.** Clumped

**3.** Uniform

# **PRINCIPLES OF POPULATION**

An individual is born once and die once, but a population continues to change in size depending on the birth rates, death rates and immigration.

1. **Birth Rate (Natality) –** the production of individuals over a given period of time.

**2.** **Death Rate (Mortality)** – the loss of individuals over a given period of time.

**3. Biotic Potential** – the maximum reproductive capacity of an organism under optimum conditions. Under ideal conditions (unlimited food, absence of disease, lack of predators etc.) the size of population would increase indefinitely.

**Factors affecting the biotic potential of a population (Richard Brewer, 1999)**

* Number of offspring per breeding period.
* Survival up to and through the reproductive age.
* How long the reproductive age of the organism lasts.
* Age at which reproduction begins.

**4. Mating System –** Refers to the production of individuals through the union of two opposite gametes.

* Monogamy
* Polygamy
* Promiscuity

# **POPULATION INTERACTIONS**

The goal of every living organism is to survive and attain maturity. However not all environmental condition is favorable to the growth and survival of life.

**1. Competition –** when populations or even an individual compete for food resources.

**2.** **Predation –** when one entity hunts another animal to suffice its nutritional requirements.

**3.** **Commensalism –** an interaction wherein one entity benefits while the other is neither harmed or benefited.

**4.** **Parasitism-** a symbiotic relationship in which one organism benefits at the expense of another.

**5.** **Mutualism**

**MANUEL L. QUEZON, 1935**

**NATIONAL DEFENSE ACT of 1935**

- passed on *December 21, 1935*

- the purpose of this act was to *create an independent Philippine Military*.

**Executive Order no. 207**

- ROTC *compulsory in all colleges and universities*

National Service Training Program

-started with the passage of Commonwealth Act NO. 1 aka National Defense Act

**National Defense Act**

- provide *National Defense of the Philippines* penalizing certain violations therof appropriating funds therefore and for other purposes.

**Commonwealth Act NO. 1** requires:

-*College Students, specifically males*

-Finish *2 years of 4 Semesters of Military Training* to be reserved cadets of the National defense of the country.

**ROTC IN WORLD WAR II -1942**

-the products of ROTC were called to *the colors in 1942* and, during the occupation, proved their worth on the battlefield.

**POST-WAR TRAINING**

**Executive Order No.59**

- made *mandatory for all colleges and universities*

-the *inclusion of the ROTC Course in their respective curricula.*

**NATIONAL SERVICE LAW**

-*August 8, 1980*

-the *Commonwealth Act No. 1 was amended to give existence PRESIDENTIAL DECREE NO. 1706* (NATIONAL SERVICE LAW)

**NATIONAL SERVICE LAW**

- mandates *compulsory national service to all citizens of the country*. - -Composed of *three main component programs*, namely:

-*Civic Welfare Training Service (CWTS)*

*- Law Enforcement Services (LES), -Military Service*

College students were given an option to choose these components to comply as a requirement of *tertiary education*.

**FERDINAND E. MARCOS SR**

-*10th Pres. of the Philippines*

*-21 years of Presidency*

*-December 30, 1965-February 25, 1986*

**POST MARCOS ERA**  - The CMT Years Citizen Military Training replaces ROTC. The Return of ROTC Republic Act 7077, or the AFP Reservist Act.

**PRESENT DAY**

-ROTC Crisis of 2001 Student protests threaten the very existence of ROTC. Mandatory No-More The end of mandatory ROTC in the Philippines, and *the establishment of the National Service Reserve Corps (RA 9163).*

**CORAZON AQUINO**

Implementation of National Service Law except the provisions of Military Service was suspended by:

-Presidential Memorandum Order No.1

- It became the BASIC RESERVE OFFICER TRAINING CORPS (ROTC)

`-Effective SY 1986-1987

**In the year 1991**

The Implementing Rules and Regulations of Republic Act 7077 modified the *BASIC ROTC Course to EXPANDED ROTC Program*.

-composed of *military subject in the first year*

*- MTS, CWTS, LES* in the *Second Year Curriculum*

**On March 18, 2001**

- *Mark Welson Chua*

*- 19 yrs old*

- found wrapped in a carpet and floating in the Pasig River

- Engineering Student

- University of Santo Tomas (UST)

- a victim of *illegal ROTC practices*

Since then*, Expanded ROTC program morphed into NATIONAL SERVICE TRAINING PROGRAM (NSTP)*

LESSON 2: REVISED IMPLETING RULES AND REGULATIONS OF **THE REPUBLIC ACT NO. 9163**, OTHERWISE KNOWN AS **THE NATIONAL SERVICE TRAINING PROGRAM ACT OF 2001**

- An act establishing the NSTP for tertiary level students*, amending the purpose of RA 7077 and PD 1706*

NSTP is designed to develop and enhance consciousness and defense preparedness among the Filipino youth by developing the ethics of service, nationalism, and patriotism.

**3 PROGRAM COMPONENTS**:

1. **Reserve Officer Training Corps (ROTC)**

- military training

- aims to motivate, train, organized and mobilize for national preparedness.

2. **Literacy Training Service (LTS)**

- Students to become teachers of literacy and numerical skills

3. **Civic Welfare Training Service (CWTS)**

-contributory to general welfare and betterment of life for the members of the community.

**CONSTITUTIONAL BASIS OF NSTP**

-Section 4,5, and 13

**PREAMBLE**

- We, the sovereign Filipino people, Imploring the aid of Almighty God, In order to build a just and humane society, and establish a Government that shall embody our ideals and aspirations, promote the common good, conserve and develop our patrimony, and secure to ourselves and our posterity, the blessings of independence and democracy under the rule of law and a regime of truth, justice, freedom, love, equality, and peace, do ordain and promulgate this Constitution.

**RULE 1- GUIDING PRINCIPLES**

**SECTION 1. RESPONSIBILITY OF ALL CITIZENS**

While it is *the prime duty of the government to serve and protect the people*, the Constitution also provides that it shall *be the responsibility of all citizens to defend the security and promote the general welfare of the State*.

**SECTION 2. ROLE OF THE YOUTH**

a) In recognition of *the vital role of the youth in nation-building*, the State shall promote *civic consciousness and defense preparedness* among them and shall develop their *physical, moral, spiritual, intellectual, and social well-being.* It shall *inculcate the ideals of patriotism, nationalism, volunteerism, and advance* *their meaningful involvement* in public and civic affairs.

b) As the most valuable resource of the nation, the youth shall be *motivated, trained, organized, and mobilized in civic, military, literacy, welfare programs*, and other similar endeavors in the service of the people.

**NATIONAL SERVICE**

**-** refers to the civic consciousness and defense preparedness service rendered by all the citizens of the Philippines.

**CITIZENSHIP** training is given emphasis

**-*Love for Country***

***-Love for Countrymen***

***-Love for Environment and Its Resources***

Core Values- **Maka- Diyos, Maka-tao, Makakalikasan, at Makabansa**

**PANATANG MAKABAYAN**

Iniibig ko ang Pilipinas, aking lupang sinilangan tahanan ng aking lahi, kinukupkop ako at tinutulungang maging malakas, masipag at marangal. Dahil mahal ko ang Pilipinas, diringgin ko ang payo ng aking mga magulang, susundin ko ang tuntunin ng paaralan, tutuparin ko ang tungkulin ng mamamayang Makabayan: naglilingkod, nag-aaral, at nananalangin nang buong katapatan. Iaalay ko ang aking buhay, pangarap, pagsisikap sa bansang Pilipinas.

**PANUNUMPA SA WATAWAT NG PILIPINAS**

Ako ay Pilipino buong katapatan nanunumpa sa watawat ng pilipinas at sa bansang kanyang sinasagisag na may dangal, katarungan at Kalayaan na pinakikilos ng sambayanang mka diyos makakalikasan,makatao at maka bansa.

**NATIONAL SERVICE RESERVED CORPS(NSRC)**

**-**Graduates of CWTS and LTS

**NATIONAL SECURITY**

**-** peoples way of life are protected and enhanced.