



peru 2.0

*Designing Affordable Solutions for
the World's Rural Poor*
Project Plan

USA

Population: 303,824,640 (July 2008 est.)

Population growth rate: 0.883% (2008 est.)

USA_Infant mortality rate:

total: 6.3 deaths/1,000 live births

male: 6.95 deaths/1,000 live births

female: 5.62 deaths/1,000 live births (2008 est.)

GDP (purchasing power parity):

\$14.58 trillion (2008 est.)

GDP (official exchange rate):

\$14.33 trillion (2008 est.)

GDP - real growth rate:

1.4% (2008 est.)

GDP - per capita (PPP):

\$48,000 (2008 est.)

GDP - composition by sector:

agriculture: 1.2%

industry: 19.6%

services: 79.2% (2008 est.)

Labor force:

155.2 million (includes unemployed) (2008 est.)

Labor force by occupation:

farming, forestry, and fishing 0.6%, manufacturing, extraction, transportation, and crafts 22.6%, managerial, professional, and technical 35.5%, sales and office 24.8%, other services 16.5%

note: figures exclude the unemployed (2007)

PERU

Population: 29,180,900 (July 2008 est.)

Population growth rate: 1.264% (2008 est.)

Infant mortality rate

total: 29.53 deaths/1,000 live births

male: 32.02 deaths/1,000 live births

female: 26.93 deaths/1,000 live births (2008 est.)

GDP (purchasing power parity):

\$249.5 billion (2008 est.)

GDP (official exchange rate):

\$131.4 billion (2008 est.)

GDP - real growth rate:

9% (2008 est.)

GDP - per capita (PPP):

\$8,500 (2008 est.)

GDP - composition by sector:

agriculture: 8.4%

industry: 25.6%

services: 66% (2007 est.)

Labor force: 10.05 million (2008 est.)

Labor force by occupation:

agriculture: 0.7%

industry: 23.8%

services: 75.5% (2005) *

*=From CIA's World Fact Book

<https://www.cia.gov/library/publications/the-world-factbook/geos/pe.html>

“ **38% of the population in Peru live below the poverty line**
2.7 million people die prematurely due to smoke and toxic emissions from wood burning (2008)

3.1 million people died as a result of diarrhea related diseases which are contracted from polluted water; 90% of whom were children. (2002)”

1.0 Abstract

As of 2008, about 39% of the population in Peru live below the poverty line. An estimated 2.7 million people die prematurely each year due to smoke and toxic emissions from wood burning. Around 3.1 million people died in 2002 as a result of diarrhea related diseases which are contracted from polluted water; 90% of whom were children. Out of 792 million people suffering from malnutrition, 5 million children die each year. 4 out of 5 of these 792 million people do not have access to needed fruits and vegetables. We hope to identify projects that are crucial to the quality of life of the inhabitants of Peru and address them this semester.

For the past five semesters, IPRO 325 has focused on designing projects that would help solve some problems of the world's poor. This semester, the goal is to design a new project and field manual that best fits the current need in Peru. The team has already worked on past projects in Sincape, Peru during January 2009, and summer 2008. The team plans on surveying and improving on any results from previous projects, in addition to noting the work done this semester in Summer 2009.

2.0 Background

There are many issues concerning the health and well-being of the inhabitants of third-world countries. Many groups have identified problems and developed projects that were implemented in a poor rural location. IPRO 325 has produced many projects that are not only a means of creating a healthier lifestyle, but projects that are also sustainable for the people of the community.

Previous semester work of IPRO 325 was; a barrel-rocket stove that would help control the ingestion of air-borne particles caused by open flames, a composting toilet that would help to prevent feces from contaminating the drinking water, an evaporative cooling system that would help to increase the life span of perishable foods, and a water pre-filtering system that would help to improve the quality of drinking water in order to decrease water-borne diseases, all of which were built and implemented in our target sites in Peru.

Throughout the course of multiple trips to Peru, various members of the groups have identified other concerns that need to be acknowledged in order to help to promote a healthier lifestyle for Peruvians. In our IPRO 325 subgroup, Peru 2, we hope to research and define possible projects addressing these observations. Currently the projects that we have identified are; possible soil restoration projects to aid in community agricultural needs, mango preservation due to the spoiling of mangoes, bicycle micro enterprising because of its ease in transportation in the village, bamboo as clothing due to the abundance of bamboo in Peru, urban development in the city slums of Peru, or designing an energy efficient home or manipulating an existing home in the Andes to protect the inhabitants from cold winds that they experience every year. We hope to continue brainstorming various ideas and then identifying a project that needs to be addressed and focusing our efforts on responding to that project.

3.0 Objective

The IPRO 325's Peru 2 sub-team will research and identify various problems concerning multiple sites in Peru and address one of these problems to design and implement in order to promote a healthier lifestyle.

4.0 Methodology

This semester the Peru 2 subgroup will be focusing on major issues with regards to our main objective:

Research and identify possible projects to be implemented in Peru based on the needs of the people.

Create a flexible design so that it can be adopted outside the limits of one single village.

Designing a solution that will be accepted by the people who we are aiming to help.

Ensuring that the design will be sustainable for the target users.

There are many resources available to us on the iGroups website. We intend to take full advantage of these resources in order to help aim our focus, and build off of work done in previous semesters. We intend to have open communication with students from previous semesters and various contacts from other groups on the same mission in order to develop a solid list of ideas that can eventually be refined to one idea.

The foundations for this project have been laid by students of the past. We hope to build on those ideas by:

Using the students as a resource.

Thoroughly researching project possibilities

Maintain relationships with the contacts that have been previously involved with IPRO 325.

The results of our research will be recorded and uploaded to the iGroups website. We will make it a priority to clearly label our findings so that future IPRO groups, as well as our teammates, will be able to easily access and understand the basis of our research and have a good foundation to be able to maintain the project.