**Chapter 4 Three Gorges Dam Case Study:**

**Red- Political**

**Green- Economic**

**Purple- Social**

**Blue- Environmental**

In 2009 the Chinese government finished the construction of the Three Gorges Dam. It is over 2 km long and 100 m high. The lake is over 600km long.

* In order to build the dam over 1 million people had to be moved. This can lead to social dislike towards the dam.
* Many towns had to be flooded in order to build it.
  + Much of the resettlement land is far above sea level, colder and it has infertile, steep sloped soil. This means that those who are relocated are unable to produce as much crop as they could in the past.
    - This can lead to a decrease in standards of living, or on a more dramatic scale, it can lead to hunger or malnutrition.

The Three Gorges Dam will generate up to 18,000 megawatts.

* By producing their own electricity China will not have to rely so much on coal. This also makes them more independent as a nation in that they have to import less energy sources.
  + By decreasing their dependency on coal they are decreasing the pollutants that are producing during the burning of coal. This includes the pollutants that cause smog.
    - Places that still rely on smog in china are known to face health risks such as difficulty breathing.

It will protect 10 million people from flooding, a serious environmental issue for the area.

* By raising the water levels by 90 m and turning the rapids into a lake, the dam will enable shipping above the Three Gorges Dam. This lowers the costs of transportation for nearby industries.
* Thousands of jobs will also be generated by the dam.
  + The port at the head of the lake may become silted up as result of increased deposition and the development of a delta at the head of the lack.
    - Making up for all of these difficulties will cost as much as $70 billion.
      * The money spend here can arguably be better allocated by helping the poor in the area.

The dam interfered with aquatic life- the Siberian crane and the white dolphin are threatened with extinction.

* Archaeological treasures have already been drowned, including the Zhang Fei temple.

**Chapter 4 Micro-Hydro Nepal Case Study:**

**Red- Political**

**Green- Economic**

**Purple- Social**

**Blue- Environmental**

Nepal ranks as one of the ten poorest countries in the world

* 90% of the population depends on farming for their income. In fact, a lot of the farming is only subsistence farming.
  + There are low levels of education and high birth rates in order to accommodate for the labor demands of farming.

About 20 years ago, two local engineering workshops began to build small, steel, hydro-power schemes for remote villages.

* By building small scale power schemes, rather than a single small one, the project is able to help people in remote villages, rather than just those are large urban areas. The range of help increased.
  + By choosing to use hydro-power, the environmental impacts are minimal. Unlike burning bio-fuel, this does not produce significant pollution.

The process of harnessing the water is done by using water wheels, which can be used for grinding corn. This means, that the efficiency for milling has been improved.

* Women, who traditionally would have to mill the corn by hand, can now do it in seconds through the use of this technology. This gives them more leisure time and allows them to increase their social status.
* Electric power is also generated by the system, and it is distributed to houses in the village. This raises the standard of living for people.
  + By using this, rather than firewood, they are decreasing the traditionally high rate of deforestation. In addition, they decrease greenhouse gas emissions from burning the wood.
    - A reduction in lung disorders will also be noticed due to the decrease in wood smoke inhaled in homes.