#### Rainwater Harvesting for Irrigation

#### In many parts of the world, rainwater collection systems are commonly utilized to provide for the agricultural, industrial and household necessities of the society.  In the U.S. Virgin Islands, Bermuda and New Mexico, the law requires that all new constructions must include rainwater collection systems that are adequate for the residents. In Sri Lanka and United Kingdom, usage and collection of rainwater is strongly encouraged by the government.   In Myanmar, locals rely on rainwater ponds for potable water during dry seasons.  China and Brazil, also installed rooftop collection systems used for irrigation and drinking.  In Tamil Nadu, India rainwater harvesting was even made compulsory for every building to prevent ground water depletion, after that a 50% increase in water level was observed.

#### While in Colorado water rights laws almost completely restricted rainwater harvesting.  Rainwater is that important, collecting it was banned in Colorado. And is only made available to residents that obtain a permit to install a rooftop precipitation collection system given that they follow certain set of criteria

As seen, rainwater harvesting in urban and rural communities and municipalities is now made available and possible worldwide. What’s stopping the Philippines from widely implementing these rainwater systems here in the Philippines?

Philippines is located near the Pacific Ocean, making it an entry and exit point of different tropical cyclones.  There are approximately 19 typhoons that enter the Philippine area of responsibility, and 6 to 9 typhoons make land fall. On an annual basis, typhoon activity reaches a minimum during February and constantly increases through June, and expectedly to rise rapidly from July until October. September is considered to be the most active month for typhoons in the Philippines.

Rainwater collection systems are generally created to capture fresh rainwater from the roofs of houses, buildings and institutions.  Collected water is then transported through gutters and pipes which will then be stored into the water tanks or containers for easy access.   The water stored can then be used to irrigate crops especially during summers or dry periods.

According to a Research in Columbia University, “Predictability of Rice Production in the Philippines with Seasonal Climate Forecasts”, “Rice is the most important crop for the people of the Philippines. Because the fluctuation in domestic rice production has direct impacts on food security, especially for the poorest people, the stabilization of domestic rice production is a critical concern for the Philippines in terms of its food security”. Philippine weather is highly variable, and this strongly affects rice crops because rice crops are highly sensitive to climate change.

Rice production in the country is not only affected by weather it can also be affected by the technology and innovations accompanied to the production process. Usage of rain water harvesting systems are good ways to improvise the irrigation process. Farmers can build various types of rain water harvesting systems depending on their location, soil types, and other requirements. This can not only benefit them the irrigation systems, but there is also higher yield expected as compared to pure rain fed farms. Lesser floods and erosion could also be expected. The drought in farming lands will also be aided, and reforestation can progress. Water constraint could be causes of future water shortages in the country. These water shortages can affect our food supply and through the implementation of the rain water harvesting systems, water shortages can be sidestepped in order to help protect our food supply.

(2012, June 12). Typhoons in the Philippines. In *Articlesbase*. Retrieved April 29, 2013. From <http://www.articlesbase.com/weather-articles/typhoons-in-the-philippines-4895190.html>

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